

# PRIVATE HEALTHCARE IN EMERGING MARKETS

## An Investor's Perspective

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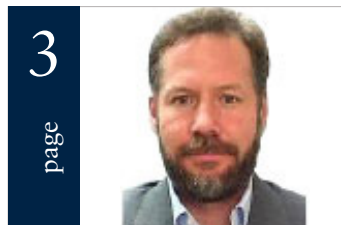
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# Creating Value in Health Systems

IFC GLOBAL PRIVATE HEALTH CONFERENCE  
BARCELONA, SPAIN | MAY 16-17, 2017

**A**s many health systems move toward Universal Health Coverage (UHC), there is a growing focus on how to improve access to affordable and appropriate services that add value and improve outcomes. The 7th IFC Private Health in Emerging Markets conference brings together key global stakeholders, providing a platform for relevant conversation and debate on how UHC and other emerging trends will have an impact on private sector health service provision. Discussion panels are planned on the following topics:

- **Creating value in health systems:** How will health systems need to evolve to achieve UHC? How can better value be realized through the health service delivery chain? What role can the private sector play?
- **The impact of social and private health insurance:** Social and private health insurance in emerging markets will expand significantly in the next decade. Which models are sustainable? How does it affect the private sector?
- **The future of medical devices in BRICS:** Given the ever increasing demand for affordable health services and the importance of timely access to health services, where is the medical technology market heading in BRICS countries?
- **Health provider case studies:** Investment insights and case study stories from private health service providers. What have been the secrets of success? How to work with and keep investors happy.
- **Ripe for Disruption:** The future is technology—a look at how medical technology and digital trends are changing how health service is delivered.
- **What patients want:** Value through quality—a drill down into how a focus on quality will benefit patient outcomes, experience, and overall care provision.
- **Market dynamics of the pharmaceutical distribution supply chain:** A discussion on the degree of consolidation—manufacturing, wholesale, and retail level—in the pharmaceutical sector, touching on regulations and drug price comparisons.
- **Innovations in the supply of skilled health personnel:** This session will outline workable solutions for the training and development of health professionals in emerging markets.

- **Better value manufacturing:** What are the latest trends and success stories that demonstrate the creation of value in pharmaceutical and medical technology manufacturing?
- **Looking to the future and building trust:** A fun and interactive session that takes a 15-20 year leap forward. The panel will assess how to create sustainable health system structuring and service delivery, and what future lies ahead for public-private collaboration.

## SHOWCASE PRESENTATIONS

The conference will feature presentations from the top three entries in the IFC 2017 Quality & Value Impact Showcase. This is an opportunity for IFC clients to submit case studies outlining how they have been able to increase delivery of quality service in the markets they serve and demonstrate improved clinical outcomes that offer better value for money. Entries will be evaluated by an independent team under the following categories: clinical governance and leadership; ethics and patient rights; equity and access for the poor; quality measurement and improvement; patient safety; facility safety; medical technology innovation; supply chain distribution; information management and knowledge sharing; and best practice for pharmaceutical and medical device manufacturing.

More details about this showcase and how to enter will be released via the conference website in late November and early December.

## SPONSORSHIP OPPORTUNITIES

Sponsoring the IFC Global Private Health Conference is an effective way of increasing your visibility among a wide range of healthcare executives and thought leaders from developed and emerging markets. We expect more than 500 delegates to attend, at least 65 percent at senior executive level, representing at least 250 organizations from more than 60 countries.

Our menu of sponsorship levels and options comprises: Diamond, Dinner, Platinum (2), Gold (3), Silver (5), Lunch (2), Coffee Break (3), Breakfast (2), WIFI, Cellphone Charging Stations (2) and IFC Health Magazine Ad (Full and Half page). To learn more, contact Charles Dalton +1 (202) 473-7236, [cdalton@ifc.org](mailto:cdalton@ifc.org) or Macarena De Martini +1 (202) 458-0167, [mdemartini@ifc.org](mailto:mdemartini@ifc.org). Registration opens late November.

## LOOKING FORWARD



Chris McCahan  
Global Lead for Health

IFC's health investment and advisory activities are expanding, and we have a number of new initiatives underway aimed at reaching more types of clients through increasingly innovative financial products and services and by expanding our offering of advisory services and impact measurement tools. Our goal this year is to selectively invest over half a billion dollars in healthcare companies that are making a strong developmental impact, improving the health systems in which they operate, and bringing down costs to patients—whether through innovative solutions and technologies, lower cost provision of health services, or more efficient distribution of drugs and devices.

Many of the emerging markets in which we operate are facing the dual burden of persistent communicable disease and rising non-communicable disease, such as cancer, diabetes, and heart disease. The public sector alone is ill-equipped to deal with this crisis. However, the private sector can be part of the solution through a “mixed systems” approach. IFC, through its support of sustainable private sector clients, aims to strengthen public health systems and accelerate the implementation of Universal Health Care across the globe.

Over the years, IFC has evolved from a provider of long-term project finance to a true solutions provider, offering our healthcare clients products and services better tailored to their needs, advice for entering new markets and strategy, deep sectoral and country knowledge, and matchmaking with other leaders in the industry. This year, we expect to launch blended and concessional finance products to encourage our clients to broaden their reach to the poorest, most difficult-to-reach populations and expand the boundaries of health markets.

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Over the years, IFC has evolved from mainly a provider of long-term project finance to a true solutions provider.

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We are developing new tools for clients to promote quality and measure performance. In 2010, IFC launched a “Self-Assessment Guide for Healthcare Organizations” based on the principles of JCI accreditation. We will update this guide and roll it out through our advisory arm in a more systematic way to help healthcare providers gauge and track their clinical governance, ethical guidelines, patient and facility safety, and quality standards. We are also developing a robust set of

development indicators to track the access, affordability, and quality provided by our clients.

This year will also see the expansion of IFC's TechEmerge program, which links promising new medical technologies with leading emerging market health service providers. The program was launched in January 2016 in India, and of the 330 applications received from around the world, the best 20 tech companies were matched with Indian providers to conduct pilot projects. We will now roll it out to a broader set of countries and beneficiaries. Visit [www.techemerge.org](http://www.techemerge.org) for more info / subscribe to newsletter.

Through all of this hard work, our network of relationships is ever-widening and IFC is now recognized as a major convener within the private healthcare world. To this end, we will host clients, friends, and partners at the 2017 IFC Global Private Health Conference in Barcelona, May 16 and 17. There, we will discuss topics related to the creation of better value in health systems and how we can all work together to strengthen the delivery of effective and appropriate healthcare to all.

This all bodes well for an exciting and eventful year ahead!

## BROADENING ACCESS TO QUALITY HEALTHCARE IN SUB-SAHARAN AFRICA

### INTERVIEW:

Alex Alexander, Managing  
Director of CIEL Healthcare  
Africa Limited

**Q:** *IFC and CIEL Healthcare have joined forces to expand availability of health services in Africa. What are the greatest opportunities in this market?*

Given the demographics, Sub-Saharan Africa is truly the last frontier for development.

Sub-Saharan Africa accounts for 11 percent of the world's population, which is growing at a much faster rate than any other continent. Yet, it carries a quarter of the world's disease burden. Health spending is incredibly low—approximately 1 percent of global health expenditure. However, incomes are growing and there is vast unmet demand for healthcare.

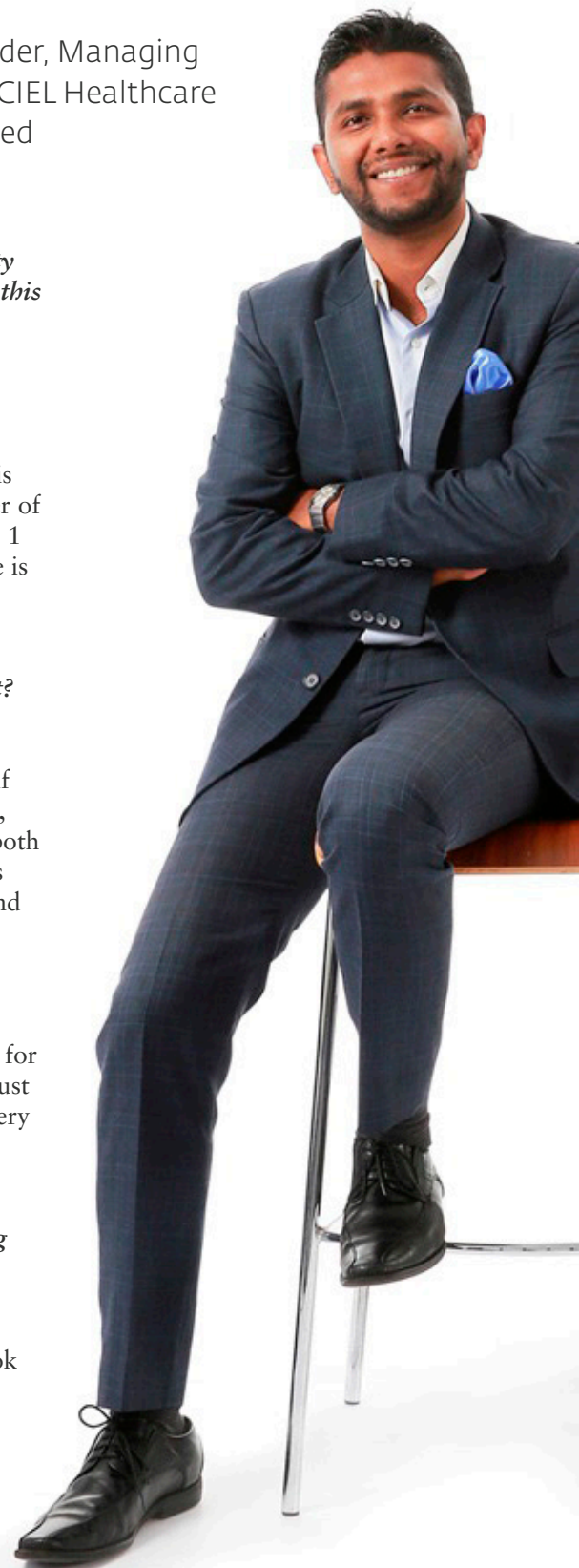
**Q:** *Given this market potential, what are the challenges to realizing it?*

The extreme under-investment in healthcare is an opportunity, but also in itself a big challenge. There is a significant shortage of qualified personnel—doctors, nurses, and paramedics. There is a huge shortage of investment in this sector both in terms of the public health systems and in the private sector. Infrastructure is extremely inadequate. For example, there is an average of one bed per thousand people; 2.5 is recommended and 6.3 is the norm in Europe.

The private sector is hugely fragmented. There are really no large providers outside South Africa and maybe Kenya, and this makes it difficult to get equipment at reasonable rates. Economies of scale are very difficult to achieve for small providers. Meanwhile, the regulatory framework around healthcare is just weak. There is a lot of talk of implementing Public Private Partnerships, but very little implementation and we are yet to see a successful model.

**Q:** *How does CIEL Healthcare work around these challenges to bring value to health investments?*

Our model is currently focused around aggregating existing players. If you look at our investment in International Medical Group (IMG) in Uganda, as well as our investment in Hygeia Nigeria Limited (HNL), both these organizations are established brands in their respective countries. IMG was established 20 years ago, and Hygeia goes back 30 years. What you often see is that one entrepreneurial doctor has decided to build up a healthcare system.





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Over a period of time, as the organizations have grown, the doctor has run short of funding, and there is only so much that any one person can stretch. And with the operations scaling up, they require not only funding, but also increased management bandwidth and medical talent.

We have the requisite partnerships in place to help grow these companies a lot faster, given our association with Fortis Healthcare, and the fact that we have the capital. This is the reason that CIEL Healthcare took a conscious decision to set up a management company, which has agreements in place to manage CIEL Healthcare's investee companies. Our partners, Fortis Healthcare, have grown to a network of 54 hospitals in the past 15 years. They have built a very good system. And through them we get access to a fantastic talent pool, and this is important not just for clinical talent, but also management talent. We also benefit from larger economies of scale and from their supply chain management and project expertise (commissioning and construction phases).

For example, before we took over 'MSCL' (The Medical and Surgical Centre Limited in Mauritius), the hospital was stuck in a debt trap. All the cash was going toward servicing debt. We injected fresh capital and Fortis brought in a management team, who took the time to understand local context. Over the years, we have added and built up specialties and trained the staff. In the last five years alone, this private hospital has shown Revenue CAGR of c.10 percent. Being listed on the secondary market in Mauritius, the value of this company has grown four-fold. In our opinion, it is a top medical facility in the region in terms of quality. Really a huge success story that took a lot of operational excellence and financial discipline. Similarly, with IMG in Uganda, the CIEL Group was a minority shareholder through its private equity fund in 2012. The partnership brought along Fortis and in just under two years, the operations were turned around by just being more efficient and expanding and strengthening the services.

Our partnership with Fortis enables us to help our investee companies grow financially and expand in terms of services offered, while generating decent returns for its shareholders. Once we establish ourselves—maybe over the next five years—we may consider greenfield investments, where adequate healthcare services may not exist.

**Q:** *As you noted, Africa's health landscape is fragmented with many small companies. How does consolidation promote lower costs and better value for patients?*

The African business culture is very similar to the Asian business culture in that it is driven by relationships. This is not one continental market, but 54 countries. We are taking a regional approach. Our investment in Mauritius serves the Indian Ocean and Southern Africa. Through our investment in Uganda, we serve East Africa and through our investment in Nigeria, we expect to cover West Africa. Our intention is to build these investments into hubs for the regions, thereby providing services to neighbouring countries. A network such as ours will also bring in cross fertilization. Doctors in Mauritius can now travel to Uganda, and from Uganda to Nigeria, and so on... to exchange ideas and expertise. We also benefit from other synergies. Now, we can approach GE, Philips, or Siemens and say that we don't require just one Cath Lab, but need several, which helps us in better pricing and servicing. These are just a couple of examples of the benefits of scale.

Also, if we can continue to drive more volumes into our hospitals, we can also then help bring down the cost of treatment and make it a lot more accessible. Affordable healthcare requires scale. As we continue to consolidate, with more patients, we will be able to provide our services to a much broader population base.

**Q:** *Which segments of the health market are most underdeveloped and in need of financing?*

The most pressing health problems in Africa are combatting infectious disease and in the area of maternal and child health. These are two areas where something needs to be done urgently. Given the underdeveloped healthcare market in Sub-Saharan Africa, I believe at this stage, there is potential for investment in any sector in health, whether it be primary care or secondary care, and we are far, far away from adequate access to tertiary care. Further development of the pharmaceutical supply chain, diagnostic, and health insurance is also critical. There is a wide gap between



Photo@cielgroup.com

demand and supply in pretty much all areas of health in Sub-Saharan Africa.

**Q:** *How would you like to see the role of the public sector evolve?*

The private healthcare market in Sub-Saharan Africa has an estimated value of \$21 billion, which is projected to double over the next 10 years. So you can imagine that to build the healthcare market in Sub-Saharan Africa, a huge contribution would have to come from the government. We need to see more public and private interaction. If the public system can't run hospitals properly, they should consider leveraging private healthcare players willing to come in. Unfortunately, not many private players are willing to take the risk to come into certain markets. If governments can offer more certainty around the contract and make it more viable for private companies, then you could see a lot more players coming in. It's not just about the money. The private sector will only venture in if they have a reasonable expectation that the government will adhere to their obligations. There is a lot of talk around policy in this area, but at this point it's just talk.

One of the big successes—the reason the Kenyan health sector is so evolved—is the success of the NHIF (National Hospital Insurance Fund). Kenya has a population of about 46 million people. Out of this 46 million, 6 million are insured by this scheme and approximately 2 million are insured by the private sector. Thereby, NHIF makes it possible for more people to access healthcare facilities.

But if you look at the markets where we have invested—Uganda and Nigeria—the big challenge here is that the health insurance markets are so small. Uganda has no similar insurance scheme and in Nigeria, there is, but on a very small level. Out-of-pocket expenditure is sitting at about 80 percent and it is difficult for most people to pay. A fee scheme might not be sustainable for governments, but some kind of a contribution scheme could help subsidize costs for the poor. I am hopeful these schemes will take off and the public sector can make them work. Of course, it means a lot more access to healthcare for a lot more people, and this could only help.

We approached IFC to help take us into Africa and assist in developing our strategy, primarily because it has a presence in almost every country—a geographical presence we don't have.

**Q:** *What made IFC an attractive partner for your strategy of expanding in Africa?*

We approached IFC to help take us into Africa and assist in developing our strategy, primarily because it has a presence in almost every country—a geographical presence we don't have. In fact, IFC is the one who connected us with Hygeia. When one looks at the magnitude of the Nigerian economy, and the fact that healthcare is an underserved market, with an outflow of 1 billion on medical value travel per annum, we realized that investing there in partnership with IFC would definitely work well for us and that we would be able to establish a solid footprint.

Lastly, I would just add that we find the capital structuring guidance from IFC invaluable.

## MEDICINA CLINIC IN RUSSIA: FULL SUITE CANCER CENTER HELPS LOWER MORTALITY RATES



Dr. Grigory E. Roytberg,  
President of Medicina Hospital

Last December, Yuri Gusev started feeling discomfort while swallowing food. After a gastroscopy, the 57-year-old from southern Russian city of Voronezh, was shocked to learn that he had a six-centimeter malignant growth in his esophagus. Doctors told him he had stage-four cancer, the most advanced phase.

Unable to find the treatment he needed locally, Yuri made the 400-mile trip to Moscow to visit the Sofia Oncology Center at Medicina Hospital. A PET-CT scan showed that Yuri's cancer had already spread to his stomach and lungs. Acting on the recommendation of the Center's board of oncology experts, Yuri underwent eight courses of chemotherapy.

A subsequent PET-CT scan brought positive news—the growth had shrunk in his esophagus and stomach and disappeared entirely in his lungs. In July, the clinic performed surgery to remove Yuri's stomach and lower esophagus. Post-surgery tests show that there is no longer any cancer in his body.

### ADVANCED TREATMENT CAN OVERCOME ADVANCED CANCER

Yuri's story shows how a patient's life can be saved even when they are in the advanced stages of cancer. The key is for patients to get prompt access to the most advanced diagnostics equipment, to expert medical advice, and to multiple treatment options, namely, surgery, chemotherapy, and radiotherapy. Medicina is remarkable among hospitals in Russia in having built a capacity to provide a high-quality 'full suite' service to cancer patients: from the initial visit to a generalist all the way to successful treatment, leading hopefully to the cancer's remission or removal.

It is estimated that 2.8 million Russians are cancer sufferers out of a population of 143 million. Every year, 300,000 cancer patients die. Cancer of the lung, stomach, and prostate are the most common forms among men, while for women, it is breast cancer. Worryingly, cancer rates have increased

by 18 percent over the past decade in Russia—or almost 2 percent a year. Russia has a low cancer survival rate, just 40 percent, compared to 64 percent in the United States and 60 percent in France.

### EARLY DIAGNOSIS SAVES LIVES

Late diagnosis is a major cause of Russia's high cancer mortality rate, according to Valeriy Chissov, former Chief Oncologist at the Ministry for Health and Social Development. When a patient describes cancer-like symptoms to a general practitioner, the chances are that the doctor would have had a mere 70 hours of training in oncology as a medical student. As a result, nearly half of all cancer sufferers will only get diagnosed at late stages. By this time, their chances of survival plummet to 56 percent at stage 3 and 12 percent at stage 4. By comparison, for those diagnosed in stage 1, their survival rate is 92 percent, and 76 percent for stage 2.

Early diagnosis would go a long way toward lowering cancer mortality rates, but so would better access to the spectrum of most technologically advanced treatments commonly available in developed countries. Many, like Yuri, need a combination of treatments. Further, the ability to provide comprehensive diagnosis and multiple forms of treatment at the same hospital, rather than having to shuttle patients between various facilities, gives them a sense of comfort and security during this traumatic period in their lives.

### IFC MEDICINA PARTNERSHIP—HELPING TO CURE CANCER

Medicina's Sofia Oncology Center, which opened in March 2013, is a national leader in diagnosing and treating cancer. The Center treats all forms of cancer apart from leukemia. It is staffed with internationally renowned oncologists, including radiation specialist, Professor Zvi Fuchs from the Memorial Sloan Kettering Cancer Center in New York, and chemotherapy specialist, Hans Schmolla from Martin Luther University in Halle.

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Cancer rates have increased by 18  
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Russia—or almost 2 percent a year.

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Dr. Roytberg with Medicina staff

IFC helped finance the clinic by providing a \$35 million equity to Medicina JSC for constructing the building and purchasing high-tech medical equipment. Total investment, including Medicina JSC's own funds, was \$145 million. Medicina's relationship with IFC has helped the hospital to create new connections with global healthcare industry leaders, such as Johns Hopkins Hospital in the United States. It has also led to the strengthening of the company's board of directors and putting in place appropriate corporate governance practices.

Experienced doctors and the diagnostics center's PET-CT and SPECT devices have increased the rate of early diagnosis of malignant tumors by 15-20 percent and reduced recurrence rates five to eight times. Across Russia, the average lifespan of a cancer patient after diagnosis is four years. Medicina has set itself a goal of increasing the average lifespan of its patients to at least 12 years.

The clinic's doctors are pioneering innovative treatment techniques in Russia that can reduce costs over time and enable patients to recover faster. For instance, to cure lung cancer, a single session, high-dose radiotherapy has been developed that may eliminate the need for complicated surgery and long periods of hospitalization and convalescence that surgery entails. The new radiation therapy, by being more precise at targeting cancerous cells and avoiding normal cells, helps to reduce the negative impact on the rest of the patient's body.

Throughout emerging markets, we see that diseases like cancer and diabetes are rapidly overtaking communicable diseases as a leading cause of death. However, many health systems are still geared toward treating contagious diseases and are underequipped to handle diagnosis and treatment of more complex non-communicable diseases. The challenge for the future will be to develop facilities and treatment systems that better align with today's health challenges.



Yuri Gusez had stage-four esophagus, lung and stomach cancer when he arrived at Medicina. Following radiotherapy and surgery, the cancer was removed.



## REFORM OF CHINA'S HEALTHCARE SYSTEM

**M**ore than 40 percent of China's hospitals are privately run, up from 3 percent in the 1990s, according to a [report](#) co-produced by China, the World Bank, and World Health Organization. Chinese authorities continue to encourage greater participation of private players in the healthcare sector to meet the rising demands from patients. However, there remains disagreement among policymakers about the precise role the private sector should play. "Consensus has yet to be formed across government agencies on whether the private sector should be complementary, supplementary, or integral to the public delivery system," the report says.

Privately run, for-profit facilities comprise around a quarter of the nationwide total. China had 6,403 hospitals and 220,462 primary healthcare clinics in 2012 that were private-for-profit. Because private hospitals tend to be smaller than public ones, private facilities—both for-profit and not-for-profit—comprise a smaller share of total beds: 17 percent.

### REGULATORY OBSTACLES

While Chinese central authorities support more private sector involvement, private players have to overcome a raft of regulatory obstacles, especially at local government level. These include:

- A decentralized system for licensing private facilities. In many localities, this results in cumbersome, unpredictable and costly procedures.
- Tax policies that continue to favor public providers. For instance, private providers can be required to pay 17 percent VAT both when they import healthcare equipment and when they provide services with that equipment.
- Social insurance systems that give preference to the reimbursement of public facilities. That said, the latest reforms point toward a trend of more equitable treatment of private providers.

Private sector continues to expand, but policy lacks clear direction, the report says.

- Employment policies effectively steer healthcare workers, of which there is a shortage, toward the public sector rather than the private.

### REPUTATIONAL CHALLENGE

One non-regulatory challenge flagged up is reputational: there is a widely held belief in China that private providers are more likely than public to engage in false advertising, over-treatment, and fraudulent billing. However, there are exceptions where private facilities have earned a reputation for high quality. Aier Eye Hospital, a network of 100 hospitals in more than 26 provinces, which is an IFC client (see case study: [www.ifc.org/health](http://www.ifc.org/health)) is highlighted as one such exception. Another problem that needs to be addressed is the lack of direct interactions between healthcare policymakers and private providers.

### EIGHT LEVERS

The role of private operators is singled out as one of eight 'levers' that should be utilized to help overhaul China's healthcare system in the years ahead. The other seven are adopting a more people-centered, integrated care system; ensuring continuous quality improvement; giving patients greater understanding of the system; adapting the role of hospitals from 'one-stop-shop' to being part of a network; switching from a fee-for-service financing model to a capitation-based one; raising the status and compensation of healthcare workers; and making capital investments that are more regional, epidemiological, and demographic-specific.

### AGEING + NCDS = PRESSURE POINTS

China is following the trajectory of OECD economies in having an increasingly ageing population and non-communicable diseases (NCDs) are now responsible for 85 percent of deaths. Other facts and figures highlighted in the report include:



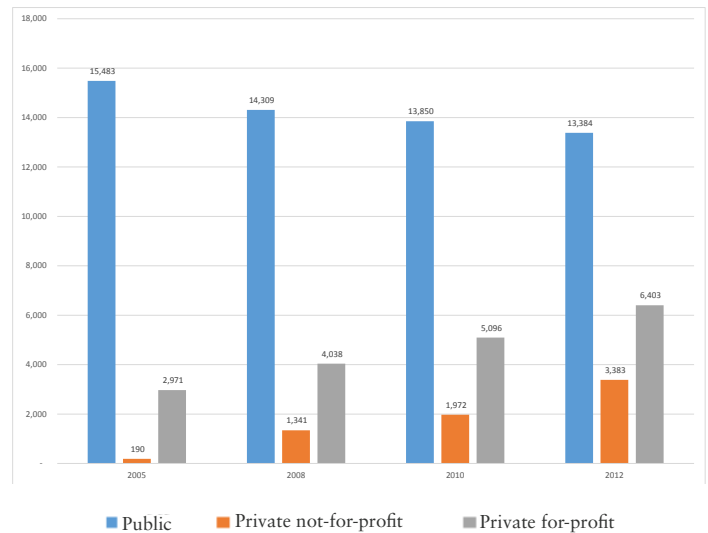
Aier Eye Hospital

- Life expectancy in China has risen to 76 years. A child in China today can expect to live more than 30 years longer than a child born in China 50 years ago.
- In 2013, 15 percent of China's population was aged 60 or older. This share is forecast to increase to about a third of the population by 2050. To put this in perspective, what China will experience in ageing over the next 26 years equates to what France experienced over the course of 115 years.
- Healthcare spending per capita in China is increasing at a rate of 20 percent per year, compared to the OECD average of 3 percent.
- Almost 50 percent of Chinese males aged 15 years or older are daily smokers, more than twice the OECD average.
- Cardiovascular disease is the single biggest killer in China, accounting for 45 percent of deaths. Cancer is number two at 23 percent, with chronic respiratory disease in third place at 11 percent.

The report underscores how China remains committed to developing a strong private sector component in its healthcare system to enable the country to meet the growing and changing demands of its people. But the report makes equally clear that complex discussions lie ahead on how private healthcare interfaces with the public sector.

The role of private operators is singled out as one of eight 'levers' that should be utilized to help overhaul China's healthcare system in the years ahead.

Growth of Hospitals in China by Ownership



## ALLIAR CASE STUDY: DETECTING DISEASES WITH PERSONALIZED RADIOLOGY

Ann Casanova  
Health and Education Consultant

**A**deni Almeida was 57 years old and had a history of suspicious nodes in her left breast. Eight years ago, the nodes had been surgically removed at the State Center of Oncology (Cican) in Salvador, Bahia, but in 2015 new nodes appeared that could be potentially cancerous and her doctor ordered a stereotactic biopsy. The difficulty was that the Cican did not have the equipment to perform the test and there was a long wait at the hospital for surgery.

For a year and a half, Adeni appealed to three hospitals in Salvador—without success. She approached the private health system, but couldn't afford the amount charged, of about R\$1,400 (\$415).<sup>2</sup> She did not have private health insurance and was reliant on the public health system, just like 75 percent of all Brazilians. She lamented, "I felt abandoned, suffering from a problem that could not wait that long. I would leave early in the morning, crying, trying to get this exam while fearing that the disease was getting worse."

It was mid-2016 when Adeni was finally able to have the procedure performed—after Alliar, through its subsidiary, the Brazilian Diagnostic Network (RBD), had established a new diagnostic imaging center at the Cican. The new center was made possible through the first ever Public Private Partnership (PPP) for diagnostic imaging services in Brazil. In February 2015, Alliar's consortium established an 11.5 year PPP with the State of Bahia to build, operate, and staff new diagnostic imaging centers in 11 hospitals across the state and establish one tele-radiology center. The PPP allows Alliar to provide quality diagnostic services to low-income patients covered by the Sistema Único de Saúde (SUS), the universal healthcare system in Brazil. The PPP has already had a huge positive impact on Bahia's public healthcare system. It was a game changer for patients who had experienced a lot of stress while enduring long waits.

Following the PPP investments, Adeni noticed improvements in services. "For several months now, things have evolved, the equipment is better, the tests are fast. I felt real changes in patient care—greater patient care. It is wonderful!" Emphasizing the importance of access to advanced diagnostic methods in the public sector, she exclaimed, "This is very important for those of us who cannot afford it! I won my life back!"

Fernando Terni, President and CEO of Alliar explained, "We expanded care, reduced costs to the state and improved the service with more precise diagnostics that enables us to produce rapid results." This modernization strategy has resulted in a seismic shift in increasing access for patients. Dr. Juan Cevasco, the Chief Medical Officer illustrated, "Prior to the PPP, a simple cholecystectomy (surgical removal of the gallbladder) procedure would take about 35 days to turnover hospital beds, in large measure because the hospital did not have access to imaging. Now with imaging services, it was reduced to five days, just as it is supposed to be everywhere else in the world." The ability to rapidly turnover beds has shortened waiting time for patients like Adeni and increased access to healthcare for thousands of patients. A year into the PPP, Alliar has conducted 183,000 exams for Bahia's network of public hospitals. Once fully implemented, it should serve about 6 million SUS-dependent patients over 11 years.

Alliar Centro de Imagem Diagnosticos, SA is among the three largest diagnostic imaging companies in Brazil. The company promotes access to better quality healthcare through two main business lines (1) diagnostic imaging, and (2) on-site medical laboratory testing. For radiology, Alliar offers a broad array of modern diagnostic imaging exams and tests including Magnetic Resonance Imaging (MRI), Computed Tomography (CT) scans, ultrasound, mammography, and X-Rays.<sup>3</sup> In addition, the company has recently begun to co-locate laboratories at its centers, thereby promoting greater convenience for its patients.

Alliar is a privately held, for-profit, holding company that was established in 2011 with the merger of four leading diagnostic companies from Bello Horizonte, Campo Grande, Juiz de Fora and São José dos Campos. The company expanded rapidly through a series of mergers and acquisitions that led to an increase in revenues of about 40 percent per year. In only five years, it has established a network by acquiring 24 companies, and managing 1 PPP, all of which are operating under 25 different, established brands. As a result of the company's growth trajectory, it currently has 125 MRI scanners in 117 Patient Service Centers (PSCs) in 41 cities and in 10 states. It even has a PSC in Para in the Amazon—a three-hour flight from the nearest big city.



Photos © Alliar

In 2012, IFC played a catalytic role in the growth of Alliar by providing a US\$50 million loan for expansion through organic growth and acquisitions. Additionally, IFC's funding was used to make existing centers more efficient. Alliar has successfully expanded to underserved regions and contributed to the increase of the availability of MRI exams in Brazil by opening 30 new PSCs and installing 42 new MRI scanners in five years, particularly targeting cities or areas that lacked access to MRI. The growth of the network has enabled it to serve 4.3 million patients since it was founded in 2011. Alliar's growth has been good news for women, who represented 67 percent of Alliar's patient population in 2015. Expansion has generated new jobs and by mid-2016, the company had 5,200 employees, of which 75 percent were female. It has about 1,000 medical doctors, of which about 60 percent are female. The increase in capacity and the number of patients served has led Alliar to generate revenues of over R\$1 billion (\$296 million) in 2015.

## KEY SUCCESS FACTORS

The key factors that have contributed to the company's success are a focus on high productivity through innovation, excellence in quality, and partnerships.

### High Productivity Through Innovation

Alliar is a company that is driven by increasing the number of patients that have access to diagnostic imaging services. It achieves this by constantly reviewing and reducing costs, and increasing productivity, largely through technology. The company has digitized all its operations enabling diagnostic images to be easily transmittable across the country in real time. This has permitted Alliar to implement its tele-medicine strategy which helps to tackle the radiologist shortage in Brazil because radiologists do not need to be located in the same city as the patient. By eliminating the need of the radiologist to travel to multiple clinics, cities that lack radiologists can also be served. This approach has helped to triple the number of patients a radiologist can serve. Alliar also leveraged technology to pioneer the world's first MRI "Command Center" where its most experienced technicians

remotely operate multiple MRI scanners in different cities. Technicians are very productive and can operate multiple MRI scanners at a time. Each Command Center runs about 55,000 scans a month. The overall increase in productivity dramatically increases patient access to scarce specialist medical skills.

### Excellence in Quality

Alliar places great importance in cultivating a culture of medical excellence. The company's logo "Alliar – Médicos à Frente," meaning "Alliar— Doctors at the Forefront" emphasizes that doctors are in charge of the company. Alliar ensures excellence by acquiring the leading radiology companies in the local market. Then, it leverages the local brand to open new PSCs in nearby cities. It invests in state-of-the-art equipment that is appropriate to the disease profile, utilization and affordability for its new PSCs. The latest technology produces high-quality images that allows radiologists to provide a more accurate analysis of an image and provides faster results.

### Partnerships

Partnerships have been fundamental to Alliar's success, especially the partnerships forged with the doctors of the acquired companies and the equipment suppliers. Firstly, as a rule, the doctors who owned the acquired companies continue to be shareholders in Alliar. They play a fundamental role in medical decisions taken by the company and ensure that medical quality is of paramount importance. This is critical to Alliar because it wants to continue to acquire the top radiology practices and is a distinguishing feature when compared to the competition. Secondly, equipment suppliers are essential for innovation. Without them, it would not have been possible to establish the Command Center where it operates MRI scanners centrally. Thirdly, the company has been able to reduce capital expenditure (capex) costs through volume discounts with partnering suppliers.

Read the full case study at [www.ifc.org/health](http://www.ifc.org/health).

## VALUE-BASED HEALTHCARE

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**H**ealthcare costs are rising around the world. This is happening in both developed and developing countries. Importantly, they are rising faster than growth of GDP and income. Extrapolated far enough, this would mean that eventually the world economy would consist of nothing but healthcare! Clearly, that's not going to happen, so the current path we are on is unsustainable.

So, what controls cost in many other industries? Competition. But for rational competition to occur, purchasers of a good or service must be able to compare prices and the quality of the goods and services they buy in order to make a purchasing decision. This mostly doesn't happen in healthcare for several reasons. Prices are difficult to set because of the lack of data on the costs of delivering a desired health outcome. Meanwhile, lack of access to information on the quality of outcomes delivered by health providers—what really matters to patients—inhibits information needed to make good choices. Thus, payers, whether patients, insurance companies, or public health systems, are largely flying blind when making purchasing decisions. Payers and providers of care may know prices, but not actual costs, and costs are rarely directly related to outcomes.

Just over a decade ago, this issue attracted the attention of Professor Michael Porter at Harvard University and Professor Elizabeth Teisberg at the University of Virginia (now at the University of Texas at Austin). They framed the core issue in healthcare as the value of healthcare delivered.

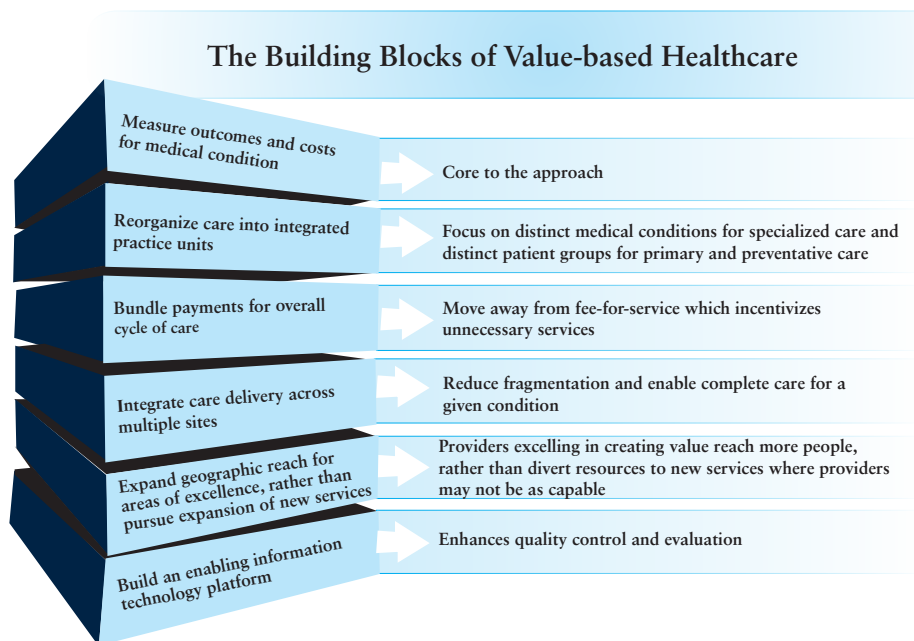
Value is expressed as:

$$\text{Value} = \frac{\text{Health outcomes that matter to patients}}{\text{Costs of delivering the outcomes}}$$

This equation lies at the heart of value-based care because delivering high quality and improving value for patients is the fundamental goal of healthcare. Improving value is the only real solution to spiraling healthcare costs, and value

is the only goal that can unite the interests of the system's participants: patients, payers, and providers of care.

So, given this, then the most relevant question is how



to design a healthcare delivery system that dramatically improves patient value.

Measuring outcomes and costs are at the core of value-based care, so how can this be done?

First, patient health outcomes must be defined by what matters to patients, not the classic clinical outcomes defined by doctors in the past, and then outcomes must be measured. For example, if an arthritis patient has an artificial joint replacement, the surgeon might define a good outcome as the joint is well positioned in the bone with no infection or post-operative complication, and the patient has a good range of movement of the joint. A patient might define a good outcome a bit differently: the recovery was fast and not terribly painful. The patient returned rapidly to work and could walk, dance or hike—activities the patient might have enjoyed in the past before his or her own joint degenerated.



Photo@World Bank: Punta Pacifica Hospital, Panama City

To make it possible to compare value among different care providers, the defined outcomes need to be standardized. A non-profit organization, the International Consortium for Health Outcomes Measurement (ICHOM), was established to define standard outcomes. Co-founded by Harvard University, Sweden's Karolinska Institute, and the Boston Consulting Group, ICHOM has developed standardized outcomes covering just over 40 percent of the burden of disease in developed countries. Much of that work is relevant for a lot of developing countries too. ICHOM's goal is ultimately to have such standard outcomes for the entire burden of disease worldwide. These standardized outcomes for measuring are available free on ICHOM's website, [www.ichom.org](http://www.ichom.org).

Having considered health outcomes, we must look at the costs to achieve those outcomes to understand the value equation. A well-established methodology for determining costs known as Time-Driven Activity-Based Costing (TDABC) has been widely used in other industries. But its application in healthcare service delivery is much more recent, explaining why most health providers do not know their true costs for treating specific conditions.

Instead, many health providers just know their total costs. They make crude guesses to allocate costs based on what they get paid. For example, if a hospital earns 25 percent of its revenue from cardiac surgery, then it allocates 25 percent of its costs to that. But in reality, that service might be generating 40 percent of the hospital's costs and not be profitable at all. Or maybe it generates 15 percent of costs and is extremely profitable, making room to reduce prices, gain market share from competitors, and enhance profits yet further. Most providers simply have no clue. They get by because their competition is no better at determining actual cost. And insurers agree prices with the providers and pay anyway because there is nothing better.

TDABC is not complicated, but it is labor intensive. A lot of the work (though not all) can be done by people with basic math skills.

So how does it work in healthcare? It starts with listing all the job types of the people who work in patient care

at a health provider, such as doctors (and their grades—specialist, resident, etc.), nurses (and their grades—registered nurse, enrolled nurse, etc.) and therapists, technicians, administration staff, etc. This could be a small clinic, a large hospital, or a large, multi-site healthcare system. Next, all total annual costs associated with each person are calculated—not just their salaries and benefits, but including all the equipment they use, the space they occupy for their work, ongoing training costs. Next, their total time worked is calculated and total cost divided by total time to give a cost per minute.

Next, patient care pathways are mapped and the amount of time that a patient gets from each of the staff is determined. All that time is multiplied by the per-minute cost and a total cost is calculated. This is typically done in spreadsheets, using basic arithmetic in 3-4 columns of data—definitely not rocket science. However, the rows may run to a very large number! That's what makes this labor intensive. Also, this exercise must be carried out for the full cycle of care. For a joint replacement—it starts from when a patient is diagnosed with a problem requiring surgery and tracks them through to an agreed endpoint, say one-year post surgery. Importantly, the unit of measure is the overall care cycle required to reach an outcome. It is not simply a particular procedure as in the fee-for-service model.

Armed with this information, it becomes possible to calculate bundled total payments for total care cycles and to charge insurers and other payers for the delivery of an agreed outcome or set of outcomes, which has been standardized.

So, if this is so wonderful, its use must be growing rapidly, right? This is a very promising approach to developing better health systems and managing their cost, but it is also still being pioneered. At this point, only a relatively small number of leading institutions in developed countries have undertaken value-based healthcare initiatives. It requires senior executives to champion it and significant mind shifts toward a whole new level of transparent accountability that many in healthcare have not been used to. The approach is labor intensive, but value-based healthcare appears set to become a very important part of how we think about and allocate resources for healthcare.

# PRIVATE HEALTHCARE IN EMERGING MARKETS

## An Investor's Perspective

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