India Pre-Visited:
New Frontiers in Healthcare Innovation

Indo-Swedish Health Week 2010

New Delhi and Hyderabad - Jan 31 to Feb 5

Information package for the Leading Health Care Program

Introduction

On January 31st until February 5th, 2010, the Swedish academic think tank Leading Health Care together with the ACCESS Health Initiative will together host one track of the government delegation traveling to Andhra Pradesh in India. From the Swedish side, this is part of a larger delegation comprised of government, healthcare and business interests with the aim of celebrating the first year of the Memorandum of understanding between India and Sweden. The objective of the visit is to encourage knowledge exchange and cross-learning efforts, supported by the Indian and the Swedish government. The delegation is coming to India to observe the country's rapidly developing healthcare landscape, and to learn about the many new solutions and opportunities for inspiration and collaboration. The visiting group further includes representatives of the knowledge and innovation chain within the Swedish healthcare system.
During the first part the delegation will reside in Delhi and then the Leading Health Care venture within the areas of healthcare management, organization and governance will make their way over to Hyderabad, Andhra Pradesh, to spend the 3rd to the 5th of February at the Indian School of Business, as well as doing site visits to inspiring healthcare providers and organizations in the region.

This compilation of write-ups is given to you as a delegate, in preparation to the meetings and discussions to be held once arrived in India. We hope to provide you valuable background information with the goal to reach further and deeper in the round table sessions, as well as to spur questions to be raised during site visits and when meeting with the healthcare management in the selected local organizations.

We hope you enjoy the material and if any further questions rise while reading this, please do not hesitate to ask upon arrival.

Very best,

William A. Haseltine
Founder and President
ACCESS Health Initiative

Hans Winberg
Secretary General
Leading Health Care Foundation

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Leading Health Care

Overview of Indo-Swedish Health Week 2010

New Delhi and Hyderabad January 31 – February 5

India and Sweden have signed a Memorandum of Understanding within healthcare to promote and strengthen areas of mutual interest. ***Indo-Swedish Health Week 2010*** highlights the first anniversary of the signing of the MoU and aims to broaden and further develop the activities initiated during 2009.

Leading Health Care has participated in the planning of the Indo-Swedish Health Week held on the 1st birthday of the MoU. Aiming to strengthen and formalize co-operations established during this first year, the Swedish delegation to India January 31 – February 5, 2010, will be lead by the Minister for Elderly Care and Public Health Ms Maria Larsson and the Leading Health Care track to Delhi and Hyderabad by State Secretary Ms Karin Johansson. The delegation further includes representatives of the knowledge and innovation chain within Swedish healthcare system. Areas of expertise and particular interest include infection control, e-health, primary care, and healthcare management.

The delegation is coming to India with the objective to observe the rapidly developing healthcare landscape, and to learn about the many new solutions and opportunities for inspiration and collaboration. The trip focuses on the structure of the Indian health system, its organization, management and financing. Together with the State Secretary Karin Johansson and the Minister for Elderly Care and Public Health Maria Larsson, the delegation will participate in round table discussions in both New Delhi and Hyderabad, as well as partake in various site visits. The objective is to meet with healthcare providers, innovators and entrepreneurs, as well as government representatives to bring further light to the areas of mutual interest. Emphasis will be on healthcare delivery, IT components and systems, and healthcare delivery in extremely resource scarce settings. While in Hyderabad, the delegation will be hosted by Dr. William A. Haseltine and the ACCESS Health Initiative, at the Indian School of Business.

The delegation trip is a component of the overall knowledge exchange and cross learning efforts, supported by the Indian and the Swedish Governments.

Visit our website www.leadinghealthcare.se

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Project Cooperation India-Sweden: Innovative organization of healthcare systems

Background

Sweden has a well-developed healthcare system that covers the entire population, yet there are still significant potential to improve the efficiency of the healthcare delivery through new ways of working. India on the other hand, has a less developed healthcare infrastructure, but has taken steps to try new and innovative ways of organizing and delivering healthcare to the population. This realization of this picture is the grow ground for the knowledge exchange between the two nations.

What are the project objectives?

The overall focus of the project is *How to organize efficient and inclusive health systems*. The initiative may include parties such as governments, governmental agencies, regional and local governments, knowledge and private sector institutions, commercial actors and civil society institutions. This involves collaboration between academic and research institutions, exchange of information, documentation and results of research.

Outcomes

As a part of the project, bi-lateral meetings and symposia will be arranged; participation of experts, advisors and other concerned partners from the parties in such meetings; coordination and consultation, as required, on Global Health issues of common interest; and other form of cooperation to ultimately facilitate the exchange of knowledge and best practice.

High-level dialogue opportunities will be fostered through the delegation visit in India, through round table discussions and plenary sessions, where longer-lasting relations between different bodies within the systems are expected. Overall, the aim is to identify how to create healthcare processes with high quality and efficiency.

Participants

Leading Health Care (LHC) will be the coordinator of the initiative. The parties involved in the think tank LHC include most of the functions seen as necessary for a knowledge gathering from the Swedish side. On the Indian side, Leading Health Care has further established a network of partnering organizations and initiated a working relationship with the Indian-based organization the ACCESS Health Initiative, based at the Indian School of Business in Hyderabad.

Leading Health Care

Program ***Indo-Swedish Health week 2010***

Sunday, January 31

Agenda		
Time		**Activity**
14-16	Ayurvedic centre	Presentation of Indian health care system
16-18	Ayurvedic centre	Possibility to participate in Yoga session
Evening		Social Activity

Monday, February 1

Agenda		
Time		**Activity**
10-12	Delhi	Visit to Apollo Hospital private top of line hospital chain one of the largest health care groups in the world innovative approach and at the technical front line
14- 18	Embassy / Delhi	Launch of Care of Sweden Platform Exportrådet (or visit to government quarters , New Delhi)
Evening		Reception at the Swedish Embassy

Tuesday, February 2

Agenda		
Time		**Activity**
10-13	Embassy	High Level Round Table Discussion Health systems and central challenges, new ways forward Indian Minstry of Health and Family Welfare, Karin Johansson, LHC participants, National and academic institutions
13-14	Embassy	LHC summing up and reflections
16 +	Airport	Travel to Hyderabad

Wednesday, February 3
Overview, Introduction to the ACCESS Health, Care Hospital

Agenda		
Time		**Activity**
9- 10	Indian School of Business, ISB	Welcome and Opening session Welcome, introductions and review of logistics and agenda.
10-11.30	ISB	Introduction to ISB, CEMS and the ACCESS Health Initiative Presentation of vision, mission and current activities. - Dr. Haseltine, Ms. Bergkvist
11.30-12	ISB	Discussin and implications LHC and participants
12.00-14.00		Lunch
14.15		Leave for Care Hospital

15:30-19	Care Hospital	Care Hospital – Innovative health care organization Site visit and discussions/workshop Efficient health care with limited resources. Innovative ways of organizing and performing health care.
19:30		Dinner / Reception

Thursday, February 4 – Discussing opportunities in Organizing Health Care

Agenda		
Time		**Activity**
9-10	ISB	Technology and the Future of Health care Presentation by Ms. Reddy (Apollo Hospital)
10-11	ISB	The Role of Public Health in Health Systems - NHS and Collaborations Presentation by Ms. Rao (IIPH)
11-11:30		Coffee/Tea Break
11:30- 13	ISB	High Level Round Table Workshop and Discussion Local Government with invited guests - Ms. Johansson, Dr. Haseltine, Ms. Reddy, Ms. Rao, Mr. Subramanian (or his colleague), Leading Health Care, ACCESS Health Initiative, government representatives
13:00-14:30		Lunch
14:30-16	ISB	Plenary session Continued Workshop and Discussion
19-22		Dinner / Reception

Day V: Friday, February 5 - IT and innovative health

Agenda		
Time		**Activity**
10-13	HMRI	Health Management and Research Institute (HMRI) – Innovative health care organization Presentation of activities, demonstration of the mobile health units and the health stations. Discussion on how to reach the last mile, out into the villages. Innovative IT-solutions.
13-14.30		Lunch
15-16		Closing session, LHC health week 2010 Summary and discussion of cross-learnings Conclusion of ideas for next steps, action points and joint learning activities
16		End of program

Leading Health Care

What is Leading Health Care

The scope of work held by the Swedish think tank Leading Health Care includes bringing stakeholders together in dialogue, with the objective to increase the mutual understanding and the chance of finding solutions which challenge the established structures in the Swedish healthcare organization. In short, Leading Health Care is a catalyst for the various interests and actors that together make up the healthcare sector. The creation is an independent arena for in-depth dialogue on the future of healthcare. This in itself is not a new idea, but now manifested in a completely new form. The overall objective of the think tank is to create value between actors in the health sector, as well as to challenge and develop the debate on the healthcare of tomorrow.

Organization

The Stockholm School of Economics IFL and EFI (the Economic Research Institute) have created this academic think tank, Leading Health Care, in order to provide and nourish a forum where knowledge and interest will be put to test through dialogue rather than negotiation. The healthcare of the future is the common denominator for discussions and events hosted by the organization, and the aim is to maintain an open platform where related ideas are tested and further analyzed.

Leading Health Care provides research experience as well as extensive experience of working with development through further education. The think tank itself is only a part of the solution, whereas its member organizations provide their unique perspectives and opinions to the table. The withstanding point on the think tank's agenda is bringing together its members; organizations and companies, industry associations and interest groups, suppliers of pharmaceuticals, technology, service and logistics etc., trade unions and authorities and other academic institutions, members of IFL's networks and alumni, all within the healthcare sector. By bringing these actors and organizations together, the discussion is nourished with insights about the fundamental conditions under which they operate. This raise the awareness about existing obstacles, as well as encourage the group to find solutions that challenge the established structures.

Focus area

The healthcare sector is a central part of our society, often in focus and often questioned. The sector is difficult to govern and conservative whilst rapid technical development challenges the ability of organizations to adapt. To a great extent, the organization of the healthcare sector is anachronistic and potential improvements spread slowly if at all. In recent decades, the Swedish debate on reforms has revolved around the same issues, and we have seen a series of proposals aimed at boosting efficiency through better financial control or market-inspired reforms. In short, it is a complicated equation, where the central issues seem to persist. Understanding the elements of organizing, managing and governing, have central implications for developing tomorrow's healthcare systems and the focus is further on underlying mechanisms and positions. Furthermore, there is also unanimity that demographic trends, with a growing number of old people and less scope for more resources, which present us with a complicated equation for the future. However, Leading Health Care has the objective to bring out general issues that are important to

all systems and all societies, and to focus on similarities and common issues rather than local specific problems. With this said, the organization emphasize that all action is local and that there are no blue prints which can be copied without having translated them to existing local circumstances.

Scope of work

With the recognition that there is no individual actor or solution that can single-handily create value in the healthcare sector, getting to the very essence of the problem requires in-depth dialogue based on fundamental knowledge. This realization has led to the development and establishment of Leading Health Care Foundation, the academic think tank aiming to influence the reform debate. It is founded by the Stockholm School of Economics, IFL Executive Education. Part of the unique characteristic of the organization its aim to let academia meet practice in the context of further education and to create genuine and close contact between research and the challenges of day-to-day practice.

Furthermore, the parties in the healthcare sector are usually given labels, sometimes without much thought, such as private or public, professional or bureaucratic, national or local, profit generating or administrative, which are all assumed to explain their character. While deeper analysis of the various players, and the ideal combination thereof, is rarely carried out. Leading Health Care aim to go beyond superficial labeling and simple solutions, in order to challenge the structural core of the system.

The fact that there is little or no scientific basis for managing and controlling the health sector and its organization has long been a matter of discussion, spurs Leading Health Care in its ambition to change this. This will be done first and foremost by identifying what is actually known by collating the knowledge that exists, knowledge that has been tested in real life for almost two decades, in meetings with hospitals, pharmaceutical companies and county councils, amongst others.

In short, the organization strives to aggregate, analyze and disseminate knowledge on healthcare management. This knowledge is brought forward through a number of meetings held each year, some which are in high-level settings reserved for members of the think tank, others public. The meetings serve as forums for reflection and evaluation, as well as providing a catalyst for future topics and solutions. They also present a unique opportunity to forge contacts with a variety of actors in the healthcare sector on neutral grounds. Seminars, workshops and conferences are some of the activities planned to sustain the forum and platform for knowledge exchange. These meetings will in turn result in new research projects, as well as new collaborations in a variety of constellations.

Website

www.leadinghealthcare.se

ACCESS health initiative

ACCESS Health Initiative

Vision and Mission

The vision of ACCESS Health Initiative is that all people, no matter where they live, have access to high quality, affordable healthcare services. The mission of the organization is to improve the delivery of high quality, affordable health services in low, middle and high-income countries.

Organization

The ACCESS Health Initiative is a program of the not-for-profit organization William A. Haseltine Foundation for Medical Sciences and the Arts, Inc. It was founded in 2005 by William A. Haseltine and John-Michael Lind. The organization has its headquarters at the Indian School of Business in Hyderabad, India.

ACCESS Health Initiative and the Centre for Emerging Markets Solutions, at the Indian School of Business, have come together with the mutual interest of identifying healthcare solutions to benefit greater number of people around the world. The joint work aim at analyzing best practices and facilitate implementation of high quality, affordable and efficient healthcare systems.

Activities

The activities are linked to provision of access to knowledge, expertise, research and funding. The services include identifying, analyzing and documenting models of healthcare delivery, healthcare financing and contextual policies. The organization is actively facilitating knowledge transfer and implementation of identified best practices.

In short, the ACCESS Health Initiative:

- Identifies and compares best practices in healthcare delivery, financing and policy for high-quality, affordable healthcare
- Transfers knowledge of best practices of high-quality, affordable healthcare systems, to governments and healthcare providers in low, middle and high income countries
- Facilitates implementation of best practices in healthcare delivery and finance.

In terms of projects related to the categories above, some previous and current examples of activities are described below.

Identifying and documenting models and policies

- The ACCESS Health Initiative did, in 2008, a screening of innovative healthcare delivery models in India. One of the findings was that there are many interesting models with a great potential to scale or to be customized and implemented in other regions. In addition, it was realized that there are many more models evolving and that there is a lack of information about what works and what does not.

- In 2009, ACCESS Health Initiative looked closer at the health sector reforms in the State of Andhra Pradesh, to identify and highlight the motivators, challenges and opportunities of such reforms. One finding was how the government in recent years has engaged the private sector in provision of care to the low-income population. The government has developed models of contracting existing providers and supported creation of new private providers for healthcare delivery. The main enabling factor was strong political support.
- ACCESS Health Initiative has been awarded a grant from the Rockefeller Foundation to support health market research activities in South Asia and contribute to a global network working to systematically document and analyze health market innovations in the developing world.

Knowledge transfer:

- The ACCESS Health Initiative is bringing practitioners together to learn from each other. One example is the "Joint Learning Workshop: Moving Toward Universal Health Coverage", held in February 2010. This is a practical workshop designed primarily for health insurance policymakers and practitioners from Ghana, India, Indonesia, the Philippines, Thailand, and Vietnam.
- A course in Health Systems and Entrepreneurship is being developed with partners. The course will be based in business cases and the target group is management, public health and medical students.
- Hosting of focus group meetings, workshops, delegations and events, such as the "Indo-Sweden Week 2010". This particular event includes a government delegation trip, co-hosted with the Swedish think tank Leading Health Care, with the objective to encourage knowledge exchange and cross-learning efforts, supported by the Indian and Swedish government.
- Findings have been published in books, articles and are continuously shared on the website.

Facilitation of implementation:

- Best practices of drug distribution in India are analyzed and the identified providers give support to improve the distribution of pharmaceuticals in Afghanistan.
- The ACCESS Health Initiative is to ensure healthcare provision for new low cost households in industrials zones in India.
- The Centre for Health Market Innovations is analyzing models in India and builds a database of benchmarks. Organizations that are being analyzed will also be given recommendations to improve the efficiency.

Innovation and Individuals

The ACCESS Health Initiative is managed by Sofi Bergkvist, who is a graduate of the Stockholm School of Economics and who has studied at the MBA program at McGill University in Montreal. Her previous experience related to the start-up of the organization, has been in the sphere of health economics and health finance. She has been a healthcare analyst for an asset management company with investments in India, and has worked in management consulting in Sweden, where she focused on outsourcing of public sector services. Prior to that she was with the UNFPA in Malawi and carried out a cost-effectiveness study of a program for reduced maternal mortality. In addition to this, she has worked as an advisor to the European Commission's Delegation to the United Nations on sustainable development issues.

William A. Haseltine, founder of the ACCESS Health Initiative, has for many years shared insights of efficient healthcare delivery in India. William A. Haseltine met Hans Winberg, now the Executive Director of Leading Health Care, in Washington DC and initiated discussions about how Sweden can learn from efficient healthcare delivery in India. Collaboration has now been initiated by the two organizations to achieve common goals of improved healthcare delivery, realizing the greater impact by knowledge sharing between the health system in India and Sweden. The partnership aims to create case studies, arrange workshops and encourage collaborations between healthcare providers and policymakers in the two countries.

Why included in the project

With links to Leading Health Care and the common agenda, to strengthen health systems around the world, the Indian based organization ACCESS Health Initiative will be your host while in Hyderabad.

Website

www.accessh.org

Indian School of Business (ISB)

The Indian School of Business (ISB) is a premier management institution established in 2001. In a short span of seven years, the ISB has successfully pioneered several new trends in management education in India and has established itself as a leading business school across the world. The ISB has a strong pool of research oriented resident faculty and invites high calibre international faculty from reputed business schools to teach in its Post Graduate Program in Management/Executive Education Programs as well as to participate in collaborative research with the resident faculty. The ISB has academic associations with the Kellogg School of Management, The Wharton School and the London Business School.

Website

www.isb.edu

Centre for Emerging Markets Solutions (CEMS)

Emerging markets have generated a lot of interest in recent times with BRIC economies (Brazil, Russia, India and China) poised to take over as the world's largest economies in the next 25-50 years. The Indian economy has witnessed rapid growth, averaging over 6 percent in the last decade. The benefits of economic growth however are restricted to a small portion of the population, and trickle-down is unlikely to happen quickly enough in large economies like India to counter the economic and political consequences of such disparities. The necessary growth of these economies has to be more inclusive and its benefits more diffused through all segments of society, especially the marginalized and the poor. The Centre for Emerging Markets Solutions (CEMS) has been set up as an inter-disciplinary think tank at the Indian School of Business (ISB) with the explicit mandate to investigate these issues.

CEMS has been set up with the conviction that market-based solutions exist for a large number of the developing world's problems, as long as new products and services are developed, proof-of-concept demonstrated, and capital is made available from a variety of sources. It is also important to note that the socio-economic problems of developing countries are fundamentally interlinked and cannot therefore be addressed in isolation. There are real market opportunities in addressing the problems of developing economies. Thus, CEMS promotes the idea that the next 800 million in India and 4 billion globally be seen not as a burden but as a great opportunity.

Though CEMS has begun its work by focusing on India, its mandate is broader and stretches across all emerging markets. CEMS will act as a lab where solutions to emerging market problems are developed and then ported to other emerging markets.

CEMS takes a systems approach to economic development and focuses on six interrelated foundational elements: Small business and Finance; Affordable Housing and Urbanization; Education; Healthcare; Energy; and Philanthropy. Urbanization enables the efficient and affordable delivery of infrastructural services through scale, scope and agglomeration economies to populations across the economic spectrum. CEMS appreciates the links between education, businesses, and financing on the one hand, and income and employment generation on the other, and promotes the use of innovative solutions in them. For example, education and healthcare are absolutely vital to ramp up productivity. As productivity increases, the Small and Medium Enterprise (SME) sector creates large-scale employment opportunities. CEMS seeks to influence public policy necessary for economic growth by creating an enabling environment for the imaginative use of appropriate technologies and solutions.

In short, the department focuses on rapidly evolving economies and to generate market driven solutions that create an impact on these emerging markets. Identifying the solutions and innovations in India is step number one, bringing the results from India to be replicated elsewhere is the following stretch. In addition, the CEMS has a tie-up with the TED Conferences and hosts TEDx Salons at the Indian School of Business.

Collaboration with the ACCESS Health Initiative

CEMS has structured its healthcare focus through the collaborating with the ACCESS Health Initiative. The two organizations are together creating a comprehensive database of best practices in the delivery of high quality affordable healthcare. The delivery models are presented with the aim to investigate their unique characteristics and how they address the issues around the provision of care, in terms of e.g. access and availability, affordability, monitoring and quality assurance, sustainability, scalability and replication, technology, human resources, governance and management. Enabling government policies and payment practices are also identified and analyzed. The goal is to create strong cases of transformative models for implementation within and outside the country. ACCESS Health disseminates findings by publishing the results, by holding conferences, by participating in international meetings, by preparing curricula for both public health and management programs and hosting site visits. The operational research also links healthcare providers with funding opportunities to scale the services.

Website

www.isb.edu/cems

CARE Group

The CARE Group is interesting from multiple points of view, whereas we have highlighted a few points for further emphasis. The CARE Group is, among other things, recognized for their corporate responsibility, cardiac care, high focus on clinical governance, advancement in lean thinking, process orientation and quality, building of alternative healthcare structures and the creation of value-based healthcare platform. We will here describe the organization briefly and hope to touch on all of the above topics both through our field visit and discussions with the management of the organization.

Mission

CARE was founded with core mission objectives to address *quality*, *cost*, and *access*, in the realm of healthcare. The organization live by mantras such as "Patients' interests above our own" and "To practice medicine as it should be", which constitute the underlying theme of its strong value systems.

Organization

CARE adopted an integrated model of healthcare *delivery*, *education*, and *research* to achieve its mission objectives. The group has trifurcated in to three entities; Care Hospitals, CARE Foundation, and Relisys Medical Devices, formerly Care Polymed, to represent the three components of the model. The model attempts to evolve solutions in a holistic way and in a physician-driven model.

In short, the CARE Group stands for access to affordable quality care, which is reached through process innovation and high volumes. Care Hospitals is built on a team-based approach and encourages continuous learning and research. The CARE Foundation focuses on technology, education, training and charity. The organization has addressed the aspect of access through piloting the rural healthcare program and an extensive telemedicine network.

CARE is one of the fastest growing hospital chains in India, engaged in providing primary as well as tertiary healthcare services. It is a hospital chain that is founded and managed by professionals with a mission and a passion for providing healthcare for people in need.

Philosophy

Care Hospitals' philosophy revolves around cost control; the costs of single procedures are monitored but they also emphasize cost-consciousness for the society. Accurate diagnosis and recommendations to minimize costs are emphasized; clinical processes have been developed to mitigate unnecessary expensive invasive procedures. Conversion rate of out-patient consults to invasive diagnostic procedures and invasive diagnostic procedures to invasive treatment procedures reflects the evidence-based medical practice. The conversion rates are significantly lower than other hospitals reflecting the emphasis of CARE on correct medical practices to optimize costs.

The core of the philosophy and strategy is a team-based approach with highly skilled physicians committed to CARE's methods and processes. Care Hospitals aim to create an environment of continuous learning; research is encouraged and the teams of doctors are regularly meeting to share experiences that promote discussion and knowledge transfer. The model is based on simple principles known to the employees such as the right to serve everyone irrespective of ability to pay, ethically driven transparent medical practices, as evidenced in weekly mortality and morbidity meetings, teamwork and encouragement of second opinions.

A physician centric approach

The team-based approach, which is built on specialist groups, promotes ethical practices, peer review, continuity of care, and sub-specialization. Doctors are encouraged to endorse the model through involvement in ownership and management. Inputs are actively sought in various strategies, policies, and plans. The participatory environment creates ownership. Ownership and commitment is furthermore built through CARE Associates Welfare Trust where employee stock options and donations are pooled to benefit the employees and award performance. Fee-per-service systems worldwide have resulted in physician behaviors more towards procedures and less towards preventive and rehabilitative care. Care Hospitals is evolving a unique model of compensation that ensures minimum comfort levels with additional incentives designed for entire teams based on performance. This model is aimed at providing basic comfort while encouraging teamwork.

The team-based approach encourages learning and sharing of best practices, facilitates research and motivates innovation. The doctors in the network hospitals participate in weekly mortality and morbidity conferences to discuss specific cases, seek inputs and extract lessons learnt. The meetings facilitate transparency and openness within Care Hospitals. It furthermore enables best practices to be uniformly communicated and reinforced amongst the participating physicians. The teams of physicians within one specialty, which can be seen as departments, do also have budget responsibility.

Scale

Beginning as a 100-bed cardiac-specialty hospital, CARE has been evolving in to a Networked Healthcare Delivery System encompassing different levels of care; from primary to quaternary, different geographies, and different populations – rural and urban. While the organization has been in the process of scaling up its tertiary care hospitals across different States of India (13 hospitals in 5 states with approximately 1700 hospital beds), CARE has been piloting delivery models (Care Rural Health Mission, telemedicine, Care Clinics, Care@Home, Care Urban Community Care etc.), to reach people with focus on operational effectiveness, scalability and financial self-sustainability. At CARE, the growth has been phenomenal. Through the years, CARE has emerged as the single largest team of cardiologists and cardiac surgeons in the country. The patients treated at CARE Hospitals classify in the percentage of: Low end 25%, Middle 50% and High end 25%.

Recognition

CARE has been ranked in the top five healthcare providers in terms of size, revenues, and patient satisfaction. Cardiology forms its core strength as a founding entity and accounts for 50 percent of its patients. The organization has carved a niche for itself by garnering a strong reputation amongst the local masses, for its humanitarian and selfless services. Armed with high standard facilities in areas of education, research, patient care and highly qualified professionals, CARE endeavors to match global benchmarks and conquer healthcare market in the second decade of its establishment.

Reaching rural populations

CARE has designed a 4-pillar pilot model for its rural healthcare mission. The pillars are *Human Resource* (Village Health Champions), *Technology* (Hand-held point of care wireless device), *Supply-Chain* (drugs, samples and health utilities), and *Finance* (Micro-insurance products for preventive and primary care). The organization has further developed and adopted telemedicine solutions to reach remote areas. A network of partners (public-private and private-private) is being developed, for primary and secondary care, in order to tap into the existing delivery network in a complimentary fashion.

Cost of care and Cost-efficiency

CARE has been addressing the *cost* in terms of "cost to patient" and "cost to hospital". The model is built in a fashion not to deny care to any patient just on the basis of affordability, while attracting affordable patients on the basis of quality of care. The real cost of healthcare is addressed in capital planning and operational efficiency. CARE is further evolving clinical practice guidelines that are cost-effective and safe.

As part of the efforts, CARE has succeeded in developing cost-effective indigenous technology solution for various medical devices, including cardiac stents and catheters at its sister concern, Relisys Medical Devices.

A participatory budget process for cost-consciousness and accountability

Care Hospitals has also developed a participatory budget process that includes heads of nursing, the teams of physicians, medical directors, marketing representative etc. It is a bottom up and top down approach where the finance department under the leadership of the Chief Finance Officer is coordinating a budget team including a representative from marketing to bring in knowledge on demand creation, a representative from business development to ensure new initiatives are considered and representatives from accounting to share historic data on number of cases and financial performance. The budget team visits all the hospitals and meets with the key cost drivers together with the medical director of the specific hospital along with the hospital administrator. All the members are educated on cost-analysis based on historic data. The exercise is to educate employees on financial aspects in the operations and to build cost-consciousness. Many doctors are not confident or open to discuss financial numbers so the process is initiated with a patient centric approach where number of patients treated is discussed. The specialist teams of physicians are encouraged to estimate maximum capacity in terms of surgeries based on e.g. intensive care unit beds and doctors available, which also helps the team identify the bottle necks. They are thereafter setting targets for the coming financial year in terms of patients treated. Historic data is taken into consideration and discussions on cost reduction and efficiency improvements are encouraged. The representative from the marketing department is present to estimate communication costs to reach the targets.

Creating affordability

Care Hospitals' commitment to treat every patient, irrespective of ability to pay is achieved in multiple ways. Charges to the poor are cross-subsidized at cost price through a tiered fee structure. For those who cannot afford even the subsidized costs, the sister organization, CARE Foundation, works with the patient to make up the difference from a Care Relief Fund with individual donations and also identified sources from the State and Central government programs. Professional philanthropy with doctors not charging for the services provided is another crucial component. As with all aspects of the operations within Care Hospitals, physicians are an integral part of the process in identifying and assessing patients in need of financial support.

As mentioned earlier, Care Hospitals is working towards affordability through the development of indigenous technology as of medical devices and disposables, whereas the most recognized being the original Kalam-Raju stent. The group has created the separate entity Relisys Medical Devices, to develop and manufacture various medical devices, including stents and all polymer based catheter products. The facility also provides a platform to undertake translational research.

Care Hospitals has also taken an active role in influencing public policy on universal health insurance in the State of Andhra Pradesh, which has culminated in the Rajiv Gandhi Aarogyasri Health Insurance scheme for people below poverty line, based on capitation method of reimbursement for selected procedures. Care Hospital's model which is based on high quality at low cost is highly geared to meet the challenge posed by the scheme. It is innovating in various processes to make the scheme financially viable for the hospitals.

Vision

The CARE Group's vision is to evolve within an integrated healthcare system model in the country. The mission objectives of *quality*, *cost* and *access* in relation to healthcare provision have become concerns of healthcare globally. In this regard, CARE hopes that some of its developed innovations can be introduced in a broader sense, with the aim to offer global solutions.

Website

www.carehospitals.com
www.carefoundation.org.in
www.relisysmedicaldevices.com

HMRI

Health Management and Research Institute (HMRI)

The Health Management and Research Institute (HMRI) is an organization known for its integrated health information and high-tech service solutions, but also due to its organization structure. Some of the highlighted components which we will pay special attention to, range from: Reaching the last mile, Public Private Partnership structure and Integrated health information and high-tech service solutions, to the creation of a ground breaking database of electronic health records. We will take a closer look at all of the above through our site visit and discussions with the management of HMRI.

Mission

The Health Management and Research Institute's mission is reflected in the listed targets; 1) to increase penetration and to enhance the reach of healthcare services in rural and remote areas, 2) to reduce the cost of access to healthcare services for the population (wage loss, travel costs etc) and 3) to provide access to regular preventive health check-ups and health education.

Organization

HMRI is a non-profit organization working in partnership with the government of Andhra Pradesh and the National Rural Health Mission towards improved access and quality of healthcare services for all. The organization is funded by the government (with support from the National Rural Health Mission of the Government of India) where the government funds 95 percent and the remaining 5 percent is supported from other sources. The organization was established in 2008.

Services

HMRI is leveraging state-of-the-art information and communication technologies and modern management practices to transform healthcare delivery by creating one of the world's largest integrated digital health network. The current target is to reach the 80 million population of the State of Andhra Pradesh through the integrated digital health network, including a 24/7 dial-a-doctor service, a network of more than 5,000 employees and 39,000 volunteers, and 474 mobile health units for outreached healthcare delivery.

In brief, HMRI provides an easily accessible digital health platform, integrating a medical advice hotline, a mobile medical outreach component and telemedicine solutions. As of coverage, the organization serves 80 million people in the State of Andhra Pradesh, with plans to scale up their medical advice services nationally. The mobile medical services cover approximately 39 million people per month, focusing on rural areas.

Virtual health information platform – The '104-Advice" medical hotline

After success of the Emergency Management and Research Institute model, Andhra Pradesh's existing Health Information Hotline was restructured as HMRI to provide better access to and quality of services for the most vulnerable segments of society. To do so, HMRI and the government of Andhra Pradesh worked together to establish a 24/7 digital health platform. The HMRI program is built around two core components; technology and public education, both effectively leveraged to create citizen-centered health services at no cost to the consumer.

The HMRI '104-Advice' operates as a free 24/7 virtual medical advice hotline. The call center averages 50,000 calls per day, with most originating in small villages with no permanent medical facilities or staff. The service offers health information and advice in three languages – English, Hindi and Telegu – on all health delivery services across the State as well as counseling for HIV/AIDS, matrimonial discord, depression, and chronic diseases. For service improvement in both public and private hospitals, patients can file complaints through the helpline.

The service employs specially trained counselors and proven state-of-the-art telecommunications equipment and technology. All calls are routed to the appropriate medical personnel (doctor, nurse practitioner, psychologist, or other) or incase of an emergency, linked to the EMRI emergency service. The 104-Advice services are based on 110 directories, more than 550 algorithms and 83 disease summaries. The virtual platform also serves as a contact center for field workers in monitoring epidemics and disease outbreaks.

Reaching the last mile with mobile medical units

The fixed day service is an innovative, technology-enabled solution that takes quality healthcare to the doorstep of the rural populace, bringing the healthcare the last mile. It primarily addresses the problem of poor health coverage by improving the accessibility, availability and affordability of healthcare in rural areas. The service enhances the demand for quality healthcare facilities while eliminating the exorbitant access costs incurred by the rural poor.

Registration process in the village of Naganpalle, in Andhra Pradesh. Patients of all ages and with varying health status line up for their monthly check-up. A patient's electronic health record is either pulled up from the existing database, found through fingerprint technology, or registered anew at the point of contact with the mobile health team.

The pharmacist at his desk among the lined up health stations and the Accredited Social Health Activist (AHSA) worker talking to us about her experiences with the HMRI work.

HMRI's 104-Mobile service provides healthcare services to communities in underserved rural areas using well-equipped mobile van units that include medical equipment and a team of seven staff (three auxiliary nurse midwives, a pharmacist, a lab technician, a data entry operator and a driver). The mobile medical units perform routine monitoring of children and pregnant women, as well as dispense medicines for chronic ailments. The HMRI team is further linked with a local village health worker, the Accredited Social Health Activist (ASHA) worker, appointed by the government. The ASHA workers further report on disease outbreaks in the villages and register important events such as birth, marriage, and death in their area. They are the local anchor, bringing the village population together for the monthly HMRI outreach visit. The HMRI 104-Mobile service currently covers the entire State of Andhra Pradesh.

Telemedicine services
HMRI's 104-Telemedicine service uses new information technology, tele-communication, and medical electronics to conduct virtual physical examinations through video conferences between patients in rural areas and healthcare professionals at HMRI to determine diagnoses and formulate treatment plans. Electronic health records for all patients are then filed in a central repository and made available for future reference and treatment. Currently, HMRI runs a telemedicine centre in Vallabhi, in the Khammam district.

Innovation lab
HMRI's innovation lab continues to work on many cutting-edge technologies. An example is the Dox-in-Box, a device that integrates six commonly used physician friendly PC interfaced devices into a portable multi-functional device. The organization's plans also include launching a television channel and a radio network that provide comprehensive healthcare information and advice in different languages.

Database of electronic health records
As of today, HMRI has one of the world's largest electronic health record databases, with more than 21 million electronic patient records. The records are created through the medical advice helpline or when the patients are at the point of contact with the mobile health units. With all of this information at hand, compiled in the electronic database, the organization has the potential to tailor the health interventions according to predictions in health seeking behavior, disease outbreaks etc.

Impact

- Integrating and strengthening preventive, curative and emergency health services across India to save millions of lives every year.
- Increasing the reach of healthcare services in rural and remote areas.
- Reducing the cost of access to healthcare services (such as lost wages, travel costs, and the like).
- Providing increased access to regular preventive health checks and health education in remote communities.

- Increasing the potential to build more trust in the healthcare system as a whole.
- Strengthening the overall healthcare delivery system, by supporting the referral system and links between government hospitals and private healthcare providers.

Website
www.hmri.in

Public Health Foundation of India (PHFI)

The Public Health Foundation of India (PHFI) is the parent organization of the Indian Institute of Public Health, with a mandate to strengthen public health capacity in India and putting emphasis on research and education. It is a Public Private Partnership (PPP)-based foundation, working with health system issues and houses good knowledge of the overall health system, its challenges and strengths.

Mission

The Public Health Foundation of India (PHFI) was conceptualized as a response to growing concern over the emerging public health challenges in India. The organization aims to redress the limited institutional capacity in India and to strengthen training, research and policy development related to public health.

Organization

PHFI is an autonomously governed Public Private Partnership, launched in March 2006, and has collaboratively evolved through consultations with multiple constituencies including Indian and international academia, State and Central governments, multi-and bilateral agencies and civil society groups in the country.

Approach and Strategy

Structured as an independent foundation, PHFI adopts a broad, integrative approach to public health, tailoring its endeavors to Indian conditions and bearing relevance to countries facing similar challenges and concerns. The PHFI focuses on broad dimensions of public health that encompass promotive, preventive and therapeutic services, many of which are frequently lost in sight of policy planning as well as in popular understanding.

PHFI recognizes the fact that meeting the shortfall of health professionals is imperative for a sustained and holistic response to the public health concerns in the country, which in turn requires healthcare to be addressed not only from the scientific perspective of what works, but also from the social perspective of who needs it the most.

The PHFI is working towards building public health capacity by:

- Establishing around ten new institutes of public health in India
- Establishing strong national networks and international partnerships for research
- Generating policy recommendations and developing vigorous advocacy platform
- Facilitating the establishment of an independent accreditation body for degrees in public health which are awarded by training institutions across India
- Assisting the growth of existing public health training institutions

Activities

Some examples of the organization's activities are listed below.

Research initiatives

- Human resources in Health – World Bank supported study
- Examining the Interaction between Global Health Initiatives and Local Health Systems in India – WHO (World Health Organization)/ Harvard Medical College supported study
- Can Doctors be replaced? Evaluating Incentives and Performance of different cadres of Primary Health Care Providers in rural India – World Health Organization (WHO) supported study
- Polio resurgence in India – A systematic review –supported by Ministry of Health and Family Welfare (MoHFW)
- Development of training modules to incorporate tobacco control in the National Rural Health Mission - (WHO South East Asia Regional Office (SEARO))
- Evaluation for Short-Burst Media Campaign (supported by International Union Against Tuberculosis & Lung Diseases, (IUATLD))
- Technical Assistance to the Govt. of Jharkhand to operationalise FR Use- MCH-Star USAID supported project
- Economic Analysis of Pneumo-coccal vaccine among adults in India- supported by MSD India
- Access to Medicines in India-supported by Oxfam GB
- Understanding Causes and Seeking Interventions for Child Deaths - A case study of Adilabad – National Commission for Protection of Child Rights/WHO
- Legal Empowerment of the Urban Poor-Funded by World Justice Project
- Assessment of Implementation of the Pre-Conception and Pre-Natal Diagnostics Techniques (PCPNDT) Act - National Human Rights Commission and UNFPA

Short-term trainings

- Under the Integrated Disease Surveillance Project (IDSP), Field Epidemiology training programs are being currently undertaken for 60 District Surveillance Officers by PHFI
- Other short-term training programs in collaboration with NVBDCP on training District Malaria Officers as well as with the Government of Meghalya are on the Anvil.

Interventions under Advocacy and Health Communication

- International Conference on "New Directions for Public Health Education in Low and Middle Income Countries" supported by Rockefeller Foundation, WHO India and Welcome Trust
- Indian launch of World Cancer Research Forum – report on Diet, Nutrition and Cancer
- Global Consultation on Research for Improved Policy – Global Forum for Health Research Application of GIS in Public Health
- Addressing Management Issues in Delivering Maternal Health Services and New Born care
- Implementing an Integrated Approach to health promotion in India within NRHM

Website

www.phfi.org

Indian Institute of Public Health (IIPH)

This is a fairly young organization, which is linked to the Public Health Foundation of India and has its vision on the system and future developments, as well as makes good efforts in educating the new generation. It is also interesting to look closer at because of its leadership and its influences from the NHS in the UK.

Organization

The Indian Institute of Public Health (IIPH), Hyderabad was the first Institute to be established by the Public Health Foundation of India (PHFI) in 2008. Its main objective is to implement the vision and mandate of the PHFI to build public health capacity in India. The Institute has already established an active program of training and research. It is also engaged in supporting the development of public health policy mainly in Andhra Pradesh, and joining public health policy, practice, teaching and research to achieve a cohesive and coherent response to India's public health challenges.

IIPH is the hub of teaching, research, sharing knowledge and experiences in areas at the cutting-edge of public health. The organization was established by the PHFI with the aim of making education and research activities relevant to the nation in content and context while attaining standards qualitatively comparable with the best in the world. Three IIPHs, in Hyderabad, Delhi and Gandhinagar, have been launched and are operational to date, under the aegis of the PHFI and at least four more institutions are to be launched in the coming years. Each IIPH is expected to become a nodal point for public health education, advocacy, research and practice in the future.

Scientific and educational collaborations have also been developed with other academic schools, NGOs and development agencies in order to facilitate active participation in community-based research, learning and service.

Vision and Mission

The IIPH institutes will provide multi-disciplinary education, which will impart a broad appreciation of the multiple determinants of health (especially social determinants) and the skill-sets needed for designing and implementing a wide range of multi-sectoral action required to advance the public health. The IIPHs will push the mandate of equity in public health, applying strategy, resources and networks to the issues and practice of public health in the country.

History in Hyderabad

The first institute to be launched was the Indian Institute of Public Health, Hyderabad, which commenced its activities in July 2008 when the Director, Dr. Mala Rao took up her position. It has since established a

strategy for the delivery of public health education to participants from diverse disciplines, research, advocacy and support to policy development. There is a strong emphasis on joining up public health policy practice training and research and ensuring that the institute's programs are linked to the public health priorities of the State of Andhra Pradesh and the rest of the country. The institute has built a highly qualified and diverse faculty of nationally and internationally trained and highly motivated public health academics and practitioners. It aims to create an environment that supports excellence in instruction, research and service.

The Director's story

Professor Mala Rao joined the first Indian Institute of Public Health (Hyderabad) at the invitation of the Public Health Foundation of India as its Director in July 2008. Prior to this, she was Head of Public Health Workforce and Capacity at the Department of Health, London for five years, having led the public health capacity building strategy for England. She was previously a Director of Public Health in the UK NHS for many years during which she established the first cancer network in England. Mala published the landmark UK Public Health Skills and Career Framework in 2008 and was one of the main architects of the newly created specialty of sexual and reproductive healthcare in the UK. Throughout her career, she has been committed to developing multi-disciplinary public health, and bringing public health teaching, research, policy and practice closer together.

At the Indian Institute of Public Health, her activities have included the establishment of a Diploma program in Biostatistics and Data management, with the first batch of students graduating in July 2009, completing a rapid review of the Andhra Pradesh state Rajiv Aarogyasri Community Healthcare Scheme at the request of the Government, as well as embarking on a range of other public health teaching, research and advocacy programs. In August 2009, she established a one year Diploma program in Public Health Management for mid career medical staff in the public health delivery system, in response to the Government of Andhra Pradesh (AP) making attendance on this program a condition of career progression. AP is the first state to link public health training to career progression for its doctors.

Mala has launched a patient safety initiative in the healthcare organizations of AP, with the support of the UK National Patient Safety Agency. In response to the Government of AP's priority of patient safety, she has also established a guideline development group for obstetric care, in association with the UK National Institute for Clinical Excellence.

Mala is also a member of the British Medical Journal supported Council for Climate Change and Health, and has been active in raising awareness of the links between climate change, sustainable development and health. She has co-edited a book, '*The Health Practitioner's Guide to Climate Change',* published in September 2009 and regarded by Earthscan, the leading publisher on climate change as one of the most important books they will have published to date. She was a member of the independent Committee of Inquiry into *Radiation in Medical Research Council supported research in the 1950s and 1960s* and the Welcome Trust's Public Health Sciences Working Group which published *Public Health Sciences – Challenges and Opportunities* in 2004.

Further, Mala has championed the involvement of professions such as town planning and pharmacy in public health, and was Joint Chair with the Chief Pharmaceutical Officer for England, of the *Choosing Health through Pharmacy* strategy published in England in 2005. She has also contributed for many years to undergraduate and postgraduate teaching, her closest connections being with Cambridge, Essex and Anglia Ruskin Universities. She was the 2009 recipient of the prestigious Rustom Ranji award for outstanding leadership in health, awarded by the internationally recognized L V Prasad Eye Institute; Hyderabad in consultation with a number of Hyderabad based organizations and leaders. She was also

awarded honorary fellowship of the Faculty of Sexual and Reproductive Healthcare of the UK Royal College of Obstetrics and Gynaecology in 2009.

Mala Rao is a wholeheartedly engaged woman who has created the stamina and core of the IIPH in Hyderabad. She is personally truly insightful and has much valuable experience to draw upon in her new role.

Vision on the system and future developments

The vision of IIPH is to help implement the mandate of the Public Health Foundation of India. The institute is achieving this by:

- Providing a strategic focus on the public health issues most relevant to Andhra Pradesh as a first step
- Conducting research to address challenges faced by the State and surrounding regions and the country as a whole
- Helping to develop policy recommendations and a vigorous advocacy platform
- Providing direct and easy access to quality multi disciplinary education for the personnel in the State's health related bodies and other stakeholder organizations to advance multi-sectoral action for public health

The institute is a fledgling organization and will continue to strengthen its training and research programs for the next few years. A specific area of development that Mala Rao is particularly keen to progress is strengthening South-South collaboration for public health and the delivery of Millennium Development Goals.

Snapshot on activities

IIPH, Hyderabad is involved in various research initiatives, short-term trainings and also in advocacy and health communication. A sample of these initiatives:

Research initiatives

- Development of Guidelines of Postpartum haemorrhage in the Indian context, in collaboration with National Institute of Clinical and Health Excellence (NICE), UK
    - Evaluation of Medak model project implemented by Academy of Nursing Studies
    - Climate change research and advocacy
- Evaluation of Rajiv Aarogyasri Health Insurance Scheme
- Systematic Evaluation of the Integrated Diseases Surveillance Program to assess the impact of SMS based reporting
- Study to assess Patient Safety culture in selected hospitals
- Evaluation of the Public Health Field Leader Fellowship Program

Workshops

- Healthcare and Patient Safety Initiative
- Indian Confederation for Healthcare Accreditation (ICHA) Patient Safety Initiative - Workshop to accelerate the implementation of global patient safety in India
- National Institute of Clinical and Health Excellence (NICE), UK workshop on how to improve patient safety in Andhra Pradesh
- A rapid assessment of the state of preparedness to address the health impacts of climate change - in collaboration with Department for International Development (DFID), India

- Blood Security

Training

- Training of Rapid Response Teams to manage disease outbreaks
- State level training workshop for Data Triangulation for HIV/AIDS
- Leadership Development Program for the Senior Managers of NHS, UK

Academic Programs

The institute is conducting two regular academic programs for the year 2009-2010:

1. **Post Graduate Diploma in Biostatistics and Data Management:** The Diploma is a one-year residential program designed to equip participants with modern tools of data management and applied biostatistics that would lead them to a career as practicing biostatisticians and epidemiologists in the areas of medical research and public health. The first cohort of Biostatistics and Data Management students graduated in 2009 and have all been recruited by various national and international institutions.

2. **Post Graduate Diploma in Public Health Management:** This course is designed as a 1-year PG Diploma program focusing on management of public health services. The disciplines included in this program focus on management of public health, biostatistics, demography, epidemiology, behavioral and social sciences, health communication and promotion, human resource management, finance management, health economics and policy, equity and health management information system. A major strength of the programme is in providing participants with opportunities to apply learning directly within the community setting. The applied research component serves to ground trainees in "real world" public health management applications. Medical officers, civil surgeons, deputy civil surgeons, civil assistant surgeons and self-sponsored students constitute the participants of the course.

The institute also conducted various short-term courses in public health research methodology and epidemiology during the summer of 2009.

Establishing public health collaboration

The UK Government published its global health strategy in 2008, and the strategy highlights the need to build health collaborations and relationships that benefit shared learning, with the developing world. With this as the background, Mala Rao has built on her vast experience of and networks in the National Health Service (NHS) in the UK, to progress the shared learning agenda. Establishing public health collaboration between the NHS, the Indian Institute of Public Health (IIPH) and partner organizations in Hyderabad has been the focus. Some examples of shared learning programs Mala Rao has established in this spirit are described below.

1. At her invitation the UK National Institute for Clinical Excellence (NICE) launched its work in India at a workshop on 1-2 August 2009. NICE is the national organization that develops cost and clinical effectiveness evidence based guidelines for health delivery for the NHS. Following the workshop, with NICE support a guideline development group has been established in Hyderabad to develop “indianized”, locally appropriate, guidelines and standardizations for postpartum haemorrhage, the cause of 39 percent maternal mortality in India. Additional guideline groups for cardiovascular and cancer care, are in the pipeline.

2. At Mala Rao's invitation the UK National Patient Safety Agency has supported a major patient safety initiative in Andhra Pradesh healthcare organizations. The top two priorities of the WHO for patient safety – clean care is safe care and the surgical safety checklist are being introduced into practice.

3. 14 Senior NHS managers attending a leadership program offered by the NHS Institute for Innovation and Improvement undertook their one-week international elective in Hyderabad under the supervision of Mala Rao. They were introduced to many inspirational examples of entrepreneurship, innovation, professional leadership, successful Public Private Partnerships and efficient use of resources. Feedback from the elective has been excellent and the program may be repeated for NHS leadership programs in 2010.

Website
www.phfi.org

Rajiv Aarogyasri Community Health Insurance Scheme

Aarogyasri is a unique community health insurance scheme being implemented in the State of Andhra Pradesh. The scheme provides financial protection, through a cashless transaction process, to families living below poverty line for the treatment of serious ailments requiring hospitalization and surgery. The objective of the scheme is to improve the access to quality medical care for below poverty line population, through a network of health care providers.

Background

The Chief Minister Dr. Rajshekar Reddy turned to PK Agarwal, then Principle Secretary at Department of Health, Medicine and Family Welfare (DoHMFW), for assistance to develop a strategy for how to effectively improve the services of the poor. PK Agarwal was asked to spend three days listening to the problems of the poor coming to the government with requests related to health. One woman brought in her elderly mother who was ill and in a wheel chair. She wanted money to pay for medical care. A doctor examined the mother and concluded she did not have many years left and there was no support to be provided. The devastated daughter turned to the Chief Minister saying a few years with her mother is significant to her life. The Chief Minister turned to Principle Secretary and asked him to think about how this could be solved. The outcome was the Aarogyasri Community Health Insurance Scheme for the population Below Poverty Line (BPL) for which the Government has stepped in to cover the premium for the insurance.

The motivation for the focus of the Aarogyasri scheme is, according to PK Agarwal, the social protection, addressing the healthcare problems that cause indebtedness and often bring people in devastating distress. The Aarogyasri scheme provides financial protection to families holding a White Card[1] for treatment requiring hospitalization up to approximately USD 4,500 in a year. At the same time, the DoHMFW recognized how public hospitals do not have the capacity to handle all the cases and do not have the specialists required for many of the severe cases. DoHMFW therefore decided to reach out to the private hospitals.

1) The White Card was initially introduced to define the Below Poverty Line (BPL) population, while it has been estimated that approximately 80 percent of the population of Andhra Pradesh currently holds a White Card, and are therefore eligible to the Aarogyasri health insurance scheme. The definition of BPL population has been further questioned and within the State departments the opinions of the definition varies. Government officials have defined Below Poverty Line as the person coming to the government begging for help; the motivation is that e.g. farmers can be in severe financial distress despite holding assets which the farmer suicides illustrates. The current numbers of people holding White Cards has been criticized and said to reflect existence of corruption, and facilitating a misuse of the system.

There have been several attempts to introduce similar schemes in other states but Aarogyasri has proven unique in the ability to roll out the scheme. The main success factors were:

1. Not collecting a premium – which would have required tremendous administration costs, plus that many people would not have enrolled even if the amount would have been nominal.
2. Collaborative private sector – agreed to low reimbursement rates for the provided services and agreed to carry the cost of the compulsory health camps where thousands of people are screened every day in the rural areas.
3. The existing White Cards – which made it easier to attract health insurance companies; there was a system to build upon to identify the people to be insured.
4. The use of technology with about 200 networked hospitals connected, and transfer data, in real time for pre-authorization and monitoring.

Though, there has been criticism in India and internationally in terms of priorities of the scheme. The main criticism has targeted a lack of attention to the health problems faced by the majority of the poor such as fever and gastrointestinal disorders. The two main reasons for the chosen focus of Aarogyasri are (1) the purpose of addressing indebtedness due to healthcare costs and (2) the challenges with monitoring treatment of ailments without hospitalization.

The scheme initially covered 330 procedures but has now expanded to include an addition of 389 surgical and 144 medical diseases. The diseases specifically excluded from the list are:

- High end diseases such as hip and knee replacement, bone morrow, cardiac and liver transplantation, gamma-knife procedures in neuro surgery, assisted devices for cardiac failures etc;
- Diseases covered by National programs such as TB, HIV/AIDS, Leprosy, infectious diseases, Malaria, Gastroenteritis, Jaundice etc.

Overview

The lack of specialist doctors and lack of adequate equipment were among the main reasons for the government to engage the private sector.

Given the scenario with severe indebtedness among poor due to healthcare costs, financial assistance of USD 315 million was provided for 2004 - 2007 from Chief Minister's Relief Fund to financially assist about 55,360 cases in meeting hospitalization expenses for the poor. From this experience, it was felt that this form of assistance could be institutionalized for the benefit of the poor who cannot afford healthcare.

The Government of Andhra Pradesh has set up Aarogyasri Health Care Trust under the chairmanship of Honorable Chief Minister. The Trust, with support from the specialists in the field of insurance and together with medical professionals, has formulated a tailor-made insurance scheme, called the Rajiv Aarogyasri Community Health Insurance Scheme. The Star Health and Allied Insurance Co. Ltd, was selected, through a competitive bidding process, to implement this scheme. The entire scheme is being implemented through the contract of this private insurance firm and a memorandum of understanding was signed with the company in April 2008. At first the project was piloted in the three most backward districts of Andhra Pradesh but now covers the entire State. The insurance coverage under the scheme is in force for a period of one year from the date of commencement of the policy.

The scheme provides coverage for meeting expenses of hospitalization and surgical procedures of beneficiary members up to USD 4,000 per family per year, subjected to limits, in any of the network hospitals. The Government covers the insurance premium and the entire scheme is cashless for the patients.

Healthcare delivery model

An important aspect of the scheme is the health camps which are main source of mobilizing the beneficiaries under the scheme. Most of the network hospitals are conducting regular free health camps under the Rajiv Aarogyasri Community Health Insurance Scheme. These camps are held as per a schedule and place given by the Trust. As of now, about 200 network hospitals are conducting around 500 camps in a month in 13 districts. Patients are screened based on guidelines and the interaction with the health workers is providing additional opportunities for health advice.

Another contact point is the primary health centers and government hospitals in the District, where the representative of the insurance company has a help desk known as Aarogyasri Help Desk. The desk managed by an Aarogyasri Health Coordinator who is appointed and paid by the insurance company. The Aarogyasri Help Desk refers patients on the recommendation of the doctors to the hospitals in the network. The hospital is chosen by the Below Poverty Line family member's and not forced upon them.

At the network hospital, the insurance company has an Aarogyasri Assistance Counter and there is a Medical Doctor working full time with Aarogyasri, as well as Argoya Mithras who are assigned to facilitate for the patients. One of the aims of the Aarogyasri Assistance Counters at the network hospitals is to facilitate cashless transaction connected with discharge of patient. All the individuals whose photographs and details appear on a White Card are the eligible for these benefits.

Moreover, the network hospitals provide following additional benefits to the Below Poverty Line beneficiaries: (i) Free out-patient consultation, (ii) free tests and medical treatment for beneficiaries, who might not avail any surgery or therapy procedures, (iii) minimum 24-26 free Health Camps in villages in a year for screening of the Below Poverty Line patients suffering from identified ailments, and (iv) free transport to the patient identified for surgery or therapy.

Strengths of the model

As of May 2009, this scheme has covered over 250,000 operations, over 1.5 million patients have been screened and 168 million dollars have been claimed. In January 2010, 450,000 families had received surgeries or treatment. The strengths of the scheme are that it promotes cashless transaction and by doing so it minimizes the scope for corruption in these facilities, but also reduces anxiety and financial burden on the poor. Patients get admitted, operated and discharged without paying any money, while the Government has stepped in to pay the yearly premium for the patients.

Additionally, immediate pre and post operative expenditure is included in packages, so as to minimize the other financial expenses to the patient. Unlike private insurance scheme where most of the pre-existing diseases are not covered, with Aarogyasri, all the pre-existing conditions are covered from the day one.

Schemes similar to Aarogyasri have been criticized for severe delays in reimbursements and private hospitals with outstanding payments to suppliers have not been able to participate in the schemes due to cash flow problems while Aarogyasri has proven effective in timely reimbursements which have further built trust with the private providers.

The networked hospitals have been keys to the scale of the scheme and the contract arrangement for the administration of the scheme has been critical for the effectiveness of the implementation. The scheme has also promoted coordination with the health departments at various levels, district collectors, civil supplies department etc.

Challenges of the model

The scheme has many innovative features and other schemes from all over the world can learn from the model. Many experiments of the scheme need to be assessed while the management of the health insurance scheme has both limited resources and capacity to evaluate the effectiveness of the different features. Also, there is a large and continuously increasing amount of data that needs to be analyzed.

Further comments

The aim of this compilation of information is not to elaborate on health insurance schemes but the implications on the providers will be considered. At Care Hospitals the affect of Aarogyasri has differed between the hospitals depending on location. The coastal hospitals in tier-II cities have seen a significant increase in number of admissions and have easily absorbed the additional patients. Some of the hospitals in the capital Hyderabad were already working on full occupancy and the main hospital has increased the number of beds from 324 to 450 beds to serve the increased demand. The hospitals in the coastal region have always served a high ratio of low-income patients while the ratio of patients living below poverty line at the urban hospitals of Care Hospitals has significantly increased. It is evident that the Aarogyasri scheme has improved the access to quality medical care for people living below the poverty line. The scheme has also brought cost consciousness; the negotiated prices are significantly lower than most corporate hospitals' normal rates. Figure I display the price of bypass surgery packages and the reimbursement rate within the Aarogyasri scheme.

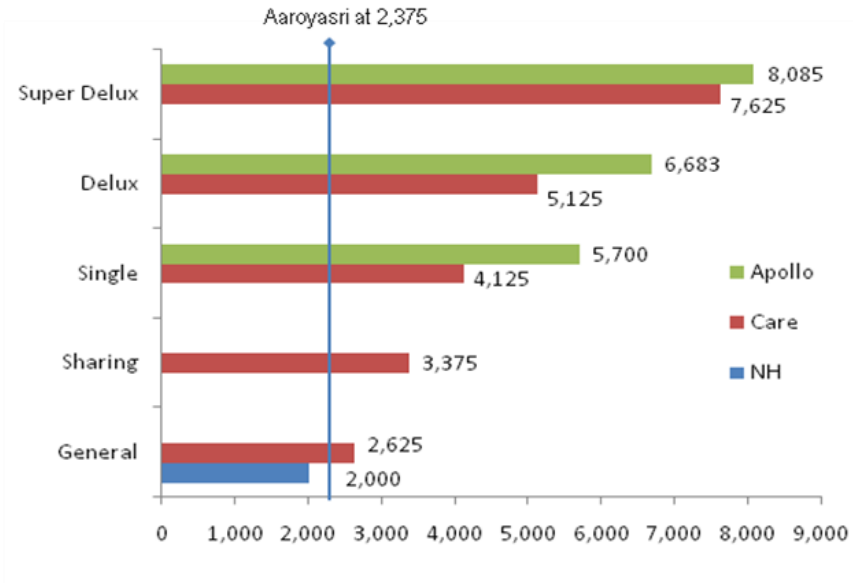

Figure I: Price of CABG in US$

Sources: Khanna, et al.; phone interviews with Apollo and Care Hospitals, 2008 (included in the *"Innovative Service Delivery Models in India - Challenges and Opportunities" report, written by ACCESS Health Initiative in 2008)*.

The graph clearly shows how profit margin per patient treated is squeezed. Several hospitals are undertaking activity based costing to have a better picture of the cost per procedure to communicate this to the government but also to identify potential areas for cost reductions; procurement, supply chain management and human resource planning is being evaluated. The providers can still make a small profit from most of the treatments but have to increase volumes to meet the overall revenue targets and several hospitals are adding the number of beds.

Website
www.aarogyasri.org

Apollo Hospitals

Apollo Hospitals is interesting due to the fact that this private group is one of the top-of-the-line hospital chains in India. It is one of the largest health care groups in the world, with innovative approaches to healthcare delivery, and at the front line of incorporating technical solutions into the array of service delivery components.

Organization

Apollo Hospitals started as a 150-bed hospital in Chennai, in 1983. In the early 80's, India was not the easiest place for private enterprise, private healthcare institutions were unknown and were not doing cutting edge work. Today, Apollo Hospitals is one of the country's premier healthcare providers and has played a role in helping India to become a center-of-excellence in global healthcare.

The Apollo Hospitals Group today includes over 8065 beds across 46 hospitals in India and overseas, neighborhood diagnostic clinics, an extensive chain of Apollo Pharmacies, medical BPO and health insurance services, as well as clinical research divisions that are working on the cutting edge of medical science.

Services

Apollo Hospitals Group has become an integrated healthcare organization with owned and managed hospitals, diagnostic clinics, dispensing pharmacies and consultancy services. In addition, the group's service offerings include healthcare at the patient's doorstep, clinical and diagnostic services, medical business process outsourcing, third party administration services and health insurance. To enhance performance and service to customers, the company also makes the services available to support other areas of healthcare; telemedicine services, education and training programs, research services and a host of not-for-profit projects.

As of efficiencies, the use of technology and equipment can be monitored and controlled in such ways that task shifting is made possible. Through training of mediators and paramedics, the dependency on doctors and specialists decrease. For example, in the Apollo Hospital telemedicine initiative the staff working at the remote center interacting with the patients does not even need to be a paramedic. This is a good example of how technology affects health care delivery in such a way that task shifting is possible and the utilization of available human resources is improved. Faced by the challenge of recruiting doctors for rural areas, telemedicine will be one of the future solutions to the problem as it enables task shifting. In addition, the sustainability of the health care provision is increased since local staff can be recruited in the villages.

Initiatives

A few of Apollo Hospital's initiatives will be further described in this section*; Apollo Reach Hospitals*, *contracted tertiary care hospitals, Apollo Networking Foundation,* and the *Health Highway.*

Apollo Reach Hospitals

This initiative was conceived by the Apollo Hospitals Group to bridge the existing rural-urban gap in accessing quality healthcare and to reach tertiary healthcare to semi-urban and rural areas. This is an endeavor to make advanced technology and experienced medical professionals available throughout the country. Apollo launched the new concept of Apollo Reach with the vision to make quality, cost-effective health care accessible to people across the country, especially to those in rural and semi-urban regions. In case of a serious medical condition that requires a specialist's diagnosis or second opinion, patients simply have to walk in to Apollo Reach and access the respective specialist through telemedicine.

Apollo Hospitals is an example of how tax holidays can incentivize creation of new infrastructure. The first hospital is a 150-bed hospital in Karim Nagar, a town in Andhra Pradesh in South India, and was expected to be break-even within the first year. This has been made possible by not purchasing brand new equipment but using functioning equipment previously used at Apollo's tertiary hospitals, as well as by utilizing existing infrastructure, whereas in this case, the building used to be a school. The access to specialists is provided via telemedicine and thereby decreasing the human resource cost at the tier-II hospital. The structure of this initiative is to tap in to the economies of scale enabled by the already existing broad Apollo network of tertiary care hospitals. The five year tax holiday has made this low cost model with early breakeven date much more attractive and has gained attention not only within Apollo Hospitals but also among other major health care providers in India.

Apollo is in the process of setting up hospitals in large towns like Karaikudi, Andaman and Nicobar Islands, Karimnagar and Chittoor, and plans to establish more such facilities across the country, are already underway.

Contracted Tertiary Care Hospital

Dr. Prathab C. Reddy, Chairman of Apollo Hospitals, explained in May 2008 how the private health care sector never got the attention of the government during the last 20 years. State governments, particularly Gujarat and Andhra Pradesh, have now undertaken health sector reforms, to address the inefficiencies in the health system. A major shift has been the government's openness for private involvement in the public infrastructure. There have been several examples of primary health centers contracted out to be managed by non-profit organizations. These have in turn shown varied success, but recently there has been a shift in attitude towards the for-profit providers as a player in this arena. There is an increasing interest in the government to find private partnership solutions for management of hospitals.

Government owned tertiary care hospitals are being contracted to non-state actors, such as Apollo Hospitals. For example, Raichur in Karnataka is an economically backward region and did not have any modern health facility with specialist care so the government decided to build the Rajiv Gandhi specialty hospital at a cost of US$15 million. The government got financial support from Organization of Petroleum Exporting Countries (OPEC) through a soft loan. The government tried to run the hospital but was unable recruit and retain specialist doctors so the hospital was not operational. Apollo Hospitals had been planning to set up a hospital in the area and it was decided to create a joint venture between the Government of Karnataka and the Apollo Hospitals Group. There was no competitive process but a tender advertisement was issued in the newspaper. The contract was entered for ten years and the governing council can approve another ten years.

The core of the partnership between Apollo and the Government of Karnataka is that below poverty line patients are treated free of cost. The government provided the infrastructure while Apollo upgraded equipment and provided competent medical personnel to operate the hospital. Apollo pays for the recurrent costs and is responsible for maintenance of the infrastructure.

A Governing Council has been established to review the performance of the hospital twice a year, make recommendations to improve the administration and management and also resolve any disputes that might arise. The ten-member council is chaired by the Karnataka Health Minister and includes the Raichur District Collector, the Apollo CEO, the Principal Secretary, the Health Secretary, the Finance Manager, the Hospital Operations Manager, Medical Directors and local members of the Legislative Assembly. The impression from a visit at Rajiv Gandhi Super specialty Hospital in Raichur is that occupancy is high and the majority of the patients are said to be either below poverty line or part of the low income farmers health insurance scheme Yeshaswini. The mortality has been said to be higher than other Apollo hospitals which is likely to be associated with low income patients with a general health status lower than the average Apollo patient.

Apollo Telemedicine Networking Foundation (ATNF)
ATNF was incorporated with the aim of developing the 'Apollo Telemedicine Network'. The Apollo Telemedicine Network allows the participant sites to collaborate with institutions in the country and abroad, and further provides their clientele access to better healthcare in areas not adequately served by the medical community.

The Apollo Telemedicine Network was one of the pioneers in the use of telemedicine with its initial project in Andhra Pradesh in 1999. It started out with approximately 30,000 population of Aragonda, which was provided with telemedicine services by Apollo Aragonda Hospital, whereas the closest clinical and diagnostic facilities were at least 20-25 kilometers away. The project got assistance from the Indian Space Research Organisation, and was connected to Apollo's tertiary care hospitals in Chennai and Hyderabad using ISDN and VSAT connection.

Overall, the Apollo network consists of Telemedicine Specialty Centers, where specialists give consultations, Telemedicine Consultation Centers, where patients seek their consultations and Mobile Telemedicine Consultation Centers, where mobile vans are used to reach remote communities. The ISDN connectivity is currently provided by the government owned telecom company Bharat Sanchar Nigam Ltd. but Apollo has been in discussions with other providers as well. The benefit of this type of static broadband is that it has very low operational costs. The Apollo Hospital in Chennai is the referral hospital for the network. Though telemedicine consultations are costlier than regular consultations, it is still cost-effective for the patient as travel costs etc are eliminated. The Apollo telemedicine initiative covers more than 20 different specialties.

To set up a Telemedicine Consultation Center, Apollo has several determining parameters since static location has to be strategic. The location has to be accessible, there has to be medical presence in the area with basic medical facility and basic equipment available, and there has to be private or public tie-ups in the area. The plan is to work in collaboration with other hospitals, Apollo Clinics in the urban areas as well as a network of primary health centers, both public and private, will expand the reach into rural areas The referral chain reaches from the primary health centers, to the community health center, to the district hospital and further to Apollo if need be.

The problem is that in the case of surgery, the poor population cannot go further in the service chain. 1.5 percent of the patients need surgical procedure and the suggestion from Apollo is that state governments should follow the course of a state government insurance policy, e.g. the Aarogyasri scheme in Andhra Pradesh, to empower the people to access further treatment and surgeries if needed. In referral cases within

Andhra Pradesh, Apollo covers the cost of transportation and food for the patient during the stay at the hospital.

As of what the future might hold for Apollo in terms of telemedicine is other activities in the Telemedicine Consultation Centers, such as remote health education, diagnostics, epidemiologic management, but also continuous medical education for the local private clinics Apollo is furthermore looking into Remote Intensive Care Unit monitoring and home-based care facilitated by high-end telemedicine solution.

In terms of replication, the plan is to expand the total network to 250 telemedicine nodes and also to incorporate kiosks into the network, which do not have to be staffed by medical practitioner As for international replication the expansion is in particular focused on the Pan-African Nations and the Middle East. Many countries do not have their own specialty hospitals and the general practitioners need support from specialist consultations. The provision of specialist consultations through telemedicine is important in order to mitigate international referrals if not needed and furthermore to identify critical cases at earlier stages. As for further plans of international replication, collaboration with Nigeria is about to be finalized whereas 18 Mobile Telemedicine Consultation Centers are about to be rolled out.

ATNF as already given 100 tele-consultations and 46 CME programs to 7 countries in Africa through the Government of India Pan African eNetwork. More than 30 presentations have been made in international conferences and about 75 papers published in journals. ATNF started the first formal course in tele-health technology with the Ana University as early as 2003 and organized an international conference on telemedicine in 2007 in Chennai. With 103 centers including 10 overseas, it is the largest and oldest multi specialty telemedicine network in South Asia having carried out about 68,000 tele-consultations so far.

Health Highway

The Health Highway is a fairly new project, with IBM as the technology provider, where Apollo is creating a linkage between hospitals - not just their own, but hospitals across India – as well as doctors so that patients' records can be made available. The project encompasses all aspects of IT, whether it involves managing a hospital, managing procurement, or finding resources in terms of human resources. The project provides scientific information, tele-radiology, telemedicine. The objective is to make everything a part of the Highway Initiative.

Website

www.apollohospitals.com
www.apolloreach.in

Health related information – India

To ensure the health of populations, no matter the country or region, an efficient healthcare delivery system is the key. It requires an ensured drug and medical supply chain, an enabling policy environment, political will and engagement, leadership, governance and managerial skills to maintain the whole wheel works. Governments around the world are struggling to ensure an efficient healthcare delivery system and to meet the needs of the population. In India, the provision of healthcare by the public sector is constrained by low public health expenditure and is further challenged by human resource constrains, deficient monitoring system and corruption, among other things.

The healthcare delivery in India is mainly provided by the private sector, which is the case in rural as well as urban areas. Over 80 percent of out-patient visits are handled by private healthcare providers. The inability to pay for treatment by large segments of the population has brought about innovation in low cost healthcare delivery and India has developed a unique pool of successful entrepreneurs in healthcare. There are numerous examples of innovative models developed to improve the access to affordable quality healthcare in India.

The identified challenges with these models are related to human resources for health, which are in turn addressed by technology, such as telemedicine and phone help-lines, as well as through incentive mechanisms such as pay-for-performance strategies, equity participation and continuous training. Further challenges are found in securing a financial model, ensure quality, attract funding for scale up and recruit personnel.

In terms of affordability, for the patient as well as the provider, this is addressed and created through low cost solutions for quality care. The solutions comprise innovation for bulk purchase of quality controlled generics, guidelines for sterilization and reuse of disposables, maximized use of capital equipment, task shifting to reduce human resource costs, strategic outsourcing and partnerships with e.g. the government for facilities. Affordability is further created through cross-subsidies. Many models provide free treatment to the poorest patients by charging more from patients with the ability to pay. Some models assess the ability to pay, while other models give the decision to the patient and provide added services to make higher price categories more attractive. Cross-subsidies are also seen between activities where incomes from other products and services subsidize the healthcare delivery.

Identified innovative models for healthcare delivery are created by for-profit as well as non-profit organizations. The type of funding accessible is dependent on the organizational structure and different funders have different expectations which influence the management and furthermore operations. The last couple of years have seen a rapid increase of private equity and venture capital available for entrepreneurs in healthcare, which has enabled scale up of new interesting models providing healthcare to low-income population. Access to funding for non-profit healthcare providers has improved with philanthropic capital. The Government of India is increasing the allocation to private healthcare delivery through public-private partnerships with for-profit as well as non-profit providers.

The Government of India is further exploring ways to improve the access and quality assurance of healthcare. Policies like tax exemptions to encourage private sector to build healthcare infrastructure in tier-II and tier-III cities have been introduced. There are also initiatives for demand creation among population below poverty line with health insurance schemes. These actions are significantly changing the

environment for the private healthcare providers and it is relevant to understand the impact of these reforms.

Why India in focus?

It is evident that there are several solutions for strengthened healthcare systems to be found in India. Many models need evidence-based evaluations and failures needs to be assessed, but many models have also been proven successful in delivering quality care at low cost helping millions of people. India is the home to many innovative healthcare delivery models and with a relatively high density of social entrepreneurs.

The country provides an enabling environment for health innovations, due to the large population of more than 1,15 billion people (in 2006), the prevalent burden of disease, the economic growth and improved access to capital. With the current epidemiological transition in the country, with the burden of disease increasingly putting weight on non-communicable diseases, innovation and new designs in healthcare delivery is necessary to meet the shifting needs. Non-communicable diseases contributed in 2006 to 48 percent of the mortality in India and the communicable diseases to 42 percent, yet most public health programs in India target communicable diseases. And notably, the epidemiological transition is increasingly prevalent among resource poor populations (IKMC, 2006).

Furthermore, India has a vast need of healthcare services with 250 million people below the poverty line and majority of the population, more than 70 percent, living in rural areas. The country's public spending on healthcare is among the lowest in the world, yet with the proportion of private spending on health as one of the highest (Government of India, 2008). As of household health expenditure, about five to six percent of the consumption expenditure goes to healthcare (Government of India, 2008). But an encouraging fact is that India is the home of extensive and increasing philanthropy that stems from a culture of altruism and now increasing economic wealth. This has resulted in an amplified flow of capital to private sector healthcare where funding and willingness to invest in pilots, technology etc. has created the enabling environment for this development and shift on the ground.

It is noted that India is establishing new global standards for cost, quality and delivery, through its breakthrough innovations. An ecosystem of innovations for world-class healthcare delivery, driven by private providers, is developing (Prahalad, 2006).

Health system approach

The Government of India has however acknowledged the inadequate situation of the healthcare in the country and highlight drawbacks of the public health system e.g. 1) the conceptualizing and planning of all programs is centralized instead of decentralized using locally relevant strategies, 2) disease control and prevention is fragmented and disease specific rather than comprehensive, 3) these vertical programs are technology-centric and work in isolation of each other, 4) inadequate resources and non-availability of essential consumables and non-consumables is an issue, 5) human resources at various levels of care face a gap between requirement and availability, 6) the system lacks processes of monitoring, evaluation and feedback, thus the quality assurance is insufficient**,** 7) there is a lack of linking with other key areas affecting health e.g. safe water, sanitation, hygiene and nutrition, 8) locally available human resources have not been mobilized and integrated enough in the system (Government of India, 2008).

To improve health systems, interventions need to be anchored in lessons learned at the country level and further pointed at both practitioners and policy makers. These lessons furthermore need to be incorporated in an understanding of the financial, political, regulatory, value driven and cultural context in which the health provision operates. (Reich, 2008) No generalized solution for health sector reform is believed to be

possible, yet it is realized that cross sectional partnerships are important for health systems strengthening and that different types of investors are needed (Schmidt, 2006).

Addressing the challenges

Issues regarding ***access*** to healthcare have been addressed through outreach activities and technical solutions such as telemedicine and phone consultations. As for concerns regarding ***quality*** of care, technology can also increase the quality through standardization of processes and facilitate monitoring. Providers have developed clinical practice guidelines and protocols for quality control. Further quality assurance is however needed, hence the need for tools and systems to establish and maintain monitoring mechanisms which can be introduced along with risk-pooling programs. As for ***affordability***, below poverty line population have increased access to healthcare through various financial solutions, e.g. allowing for cross-subsidizations to cover the costs for those who cannot pay. Health insurance schemes are other means to battle both affordability of care and to enable successful scalability of service delivery models. ***Sustainability*** is affected by various factors, such as the financial model, governance and leadership, as well as by training efforts, recruitment and incentive strategies. The scarcity of human resources is furthermore addressed through task shifting, various incentive strategies, e.g. monetary incentives, and through technical solutions, such as telemedicine. To ensure sustainability there is a need for both "soft support" and "hard support"; both human resources and technology are needed to complement the lack of human resources and to facilitate the ongoing practices.

Private sector engagement

The role of the private sector in healthcare in emerging markets is attracting attention globally. The first point of contact with the health system for most people in developing countries is through primary healthcare provided by the private sector, and it is estimated that more than 80 percent of the healthcare in India is provided by private providers. Many of these providers are informal workers operating without quality control, even though India has evolved as the home of many healthcare entrepreneurs providing low cost care with the highest international standards. Most of them have relied on support from family and friends for establishment and scale-up of services.

Thus far, policies for the primary healthcare approach have almost exclusively focused on the public sector, despite the fact that private providers most often are the first point of contact for people seeking healthcare in developing countries. Increased quality of care and extended coverage cannot be achieved by solely replicating existing public models for service delivery. Decision-makers need to seek other innovative ways to engage with communities, NGOs and the private sector in the quest of improving the health of the population's health system. (WHO, 2007) Though there is currently a growing interest in healthcare among large and small investors, policy makers are exploring Public Private Partnerships and philanthropists are looking for healthcare opportunities to support.

In terms of growth of the sector, the hospital sector is one of the most under stated sectors in India, according to KPMG's 2009 report. There is tremendous scope for growth, if you consider that the Indian national average for hospital beds is 0.7/1000 people, compared to 4/1000 internationally. This gives a glimpse of the under development of the sector (KPMG and CII, 2009).

Innovative health service delivery models and alternate supply chain models are both what are called for and what are being developed by private providers or in Public Private Partnerships to fill gaps in the healthcare system. Private models for healthcare delivery supplement the public system with innovations ranging from alternative business models and health financing, to innovative technological solutions. These

models have shown valuable response to the global health challenges, through means of e.g. scale and cost-effectiveness.

Public Private Partnerships (PPPs)

With the rapid growth of the economy and the changing demographics and socio-economic mix of the Indian population, the healthcare requirements have undergone a vast change in the country. The grow ground for Public Private Partnerships (PPPs) have been fostered by public policy initiatives, further stimulating the realization to increase the collaboration between the public and the private sector of the healthcare industry, as well as stimulating investments in the sector.

It has further been recognized that many progressive healthcare models spur from the State of Andhra Pradesh and that lessons can be learned from many of these models, for national and international expansion or replication. Overall, collaborations between the private sector and the government in the delivery of health services are of recent origin in the State. The collaborations have effectively started during the early nineties, whereas many of the collaborations are continuing and taking shape in various forms: buying and selling health services, contracting out clinical and non-clinical services, facilitating and promotion of partnerships and pure business partnerships (e.g. telemedicine projects).

In Andhra Pradesh alone, there are a number of notable healthcare related PPPs. A project for healthcare services in urban slums was a first innovative effort to contract private providers, non-profit organizations, to provide primary healthcare. The Government of Andhra Pradesh has thereafter undertaken major initiatives with the private sector for healthcare delivery. The regional organization Emergency Management and Research Institute (EMRI), a non-profit organization originally providing ambulance services in Hyderabad, was in 2006 asked by the government to scale the services to cover rural areas. EMRI was contracted to provide ambulance services to the entire State and the government has thereafter contracted the sister organization Health Management and Research Institute (HMRI) to provide primary healthcare services through mobile vans in rural areas and a toll-free health helpline providing standardized medical information, advice and counseling. HMRI is furthermore conducting research for the government, based on the large amount of health data the organization gathers through its services. HMRI also has several education initiatives including training of Rural Medical Practitioners to improve the quality of care and the link to the public sector.

EMRI and its sister organization HMRI have until recently been partnerships structured with government support covering 95 percent of the costs. The Rajiv Gandhi Aarogyasri Health Insurance scheme is another example of a Public Private Partnership that has drawn upon much attention, both nationally and internationally. More in-depth descriptions of these organizations and partnerships will be presented in the following sections.

It is noteworthy how these partnerships have enabled new approaches to healthcare delivery. Healthcare providers, researchers and policy makers around the world have shown interest in the innovations sprung from the Public Private Partnerships in Andhra Pradesh. The government has, however, been criticized for the management of the contracts and for lack of transparency, though noble intentions of the partnerships. The combination of the private sector's ability to spur innovation and the public sector's funding and broad reach, have laid a good foundation for large scale pilots. Hopefully such efforts will continue to arise and be maintained, while improving transparency, cost-effectiveness measurements and monitoring.

Executive Summary - Innovative Service Delivery Models in India

This is an extract of the Executive Summary of the "Innovative Service Delivery Models in India - Challenges and Opportunities" report, written by Sofi Bergkvist and Hanna Pernefeldt in 2008, with the objective to better understand the role of the private sector in health systems. The project was supported by the Haseltine Foundation for Medical Sciences and the Arts and Rockefeller Foundation.

Primary healthcare

Primary healthcare has an important role to play for early detection of diseases, which can mitigate the risk of catastrophic healthcare expenditures at later stages. The public primary healthcare provision is, however, often deficient and the ability to pay for services from private providers is low among many people in India. They tend to wait to seek care due to inability to spend out-of-pocket, loss of income associated with seeking care and transportation costs. The lack of trust in the healthcare system is another factor constraining the use of services.

- Successful models in rural primary care usually depend on trust in the community and many of the private providers mentioned in this report partner with self-help groups to build trust and raise awareness in the community.
- Geographical distances and living conditions in rural areas hinder recruitment of human resources, which is a key attribute for delivery of quality healthcare. In addition, geographical barriers are challenging supply chain management and the ability to monitor the quality of care.
- A possible solution to the challenges of well-functioning primary healthcare includes task shifting to reduce the dependence on doctors; upgrading skills of nurses and paramedics to shift responsibilities and delivery processes to available human resources. Creating incentives for staff such as revenue sharing and schooling for their children are other important efforts to attract and retain healthcare personnel.
- It is recognized that primary care can be delivered without the physical presence of a physician, whereas remote diagnostics and telemedicine solutions are ways to leverage the limited infrastructure and resources. The high penetration of cell phones has also been identified as an important tool to reach people in remote areas for primary care. It is estimated that the majority of visits to primary health centers can be managed by patients calling to be consulted over the phone with medical personnel.
- Some providers address the human resource challenge via local recruitment. The recruitment and training of rural medical practitioners has enabled models to quickly scale up service delivery and improve quality of care, yet monitoring remains a challenge. The organizations that have linked up with rural medical practitioners have a limited scope of services e.g. maternal health or family planning, while no model in the report has networked with rural medical practitioners for comprehensive primary care.
- Local recruitment for health service delivery in rural areas is yet more common of non-medical personnel; young people are selected and trained to work as volunteers or for small stipends and link people in villages with primary healthcare levels.
- Experiments where tertiary care hospitals provide primary healthcare are based on the realization of the importance of increased and improved primary healthcare. The eye care hospitals included in the report have developed self-sustainable networks of primary eye

care centers while more comprehensive primary healthcare models are still exploring means for financial sustainability.

- A Home Based Newborn Care model is an encouraging example of how the public sector can adopt innovations from private providers. The model, which has proven effective in reducing infant and maternal mortality, has clear objectives and procedures that have been successfully replicated.
- The challenge with financial viability of rural primary care in combination with the government's challenges with securing staff and quality of care has led the government to contract-out public primary health centers to non-government organizations.
- The success of the public-private partnership with contracted-out primary health centers is dependent on the degree of political commitment and coherence, transparency and the relationship and dialog between stakeholders. Hence there are variations in the progress and success of the partnerships in the different Indian states and in the different partnering organizations. The models included in the report have evolved over time and are now well appreciated while still highly dependent on key individuals in the private organization as well as within the government, which further indicates the challenges with replication and scale-up of these models.
- As for outreach strategies to improve the primary healthcare provision in underserved areas, mobile vans are being piloted at large scale. These models are not believed to be self-sustainable but serve the purpose of providing quality care in remote areas and long term funding for these models are worked out through e.g. public-private partnerships.

High-volume low cost hospitals

The high-volume low cost hospitals in India play an important role in providing quality care to low-income population. Standardization and processes comprise the core of these models and the well-defined processes enable efficiencies. Years of probe-and-learn have brought about low cost innovations for quality care.

- Most high-volume low cost hospitals have standardized protocols to make the best use of resources and enable high volumes. Protocols are for example developed for the use of radiology equipment where in-patients are scheduled for the nights and out-patients for the days to ensure maximum utilization. There are systems in place for world class sterilization of materials to be reused despite manufacturers' claim of single usage. These process innovations are adopted after scientifically validating that the recycling process is as effective and safe as the use of new disposables. All this plays an important role for the affordability of treatment.
- The cost of imported items has also encouraged hospitals to develop and commercialize low cost indigenous technologies. The products are developed and tested in the hospitals, but separate entities are set up for the manufacturing and distribution of the low cost supplies.
- The importance of standardization is likely an explanation for these hospitals to be single-specialty hospitals, even though both cardiac hospitals included in the report are increasingly providing multi-specialty services. High volumes are reached with vast outreach programs where people receive free screening and which secures a steady flow of patients to the hospitals. Volumes are also reached by providing care at significantly lower price than other specialty hospitals.
- Task-shifting strategies are common to optimize cost of human resources and also to reduce high attrition rates prevalent in the sector. Training programs have been created for

'Physician Assistant', 'Nurse Clinician', 'Nurse Assistant', 'Community Cardiologists' and 'Vision Guardians'.

- The for-profit hospitals in this report are rapidly expanding after an infusion of capital by new investors while Aravind Eye Care Systems is the only non-profit model in expansion mode. Other non-profit high-volume low cost hospitals could potentially scale up to benefit more people if access to funding was easier. These hospitals are self-sustainable and capital costs of the non-profit hospitals are often covered by philanthropic contributions. A drawback is that philanthropists generally are interested in supporting their area of origin and there are therefore many underserved areas that are difficult to expand to.
- These hospitals have developed processes for efficiency and low cost; some organizations have documented protocols of the innovative processes while other models have no documentation. These processes, clinical and non-clinical, are the core of the models and needs to be documented to facilitate scale-up of the current services but also to spread innovation in service delivery, from surgical procedures and guidelines for reuse and sterilization of materials to financial models and pricing structures. The Aravind Eye Care System has created a separate entity and a strategy for replication, the Aravind Managed Care Model, which provides an encouraging example of replication in collaboration with local partners. The other high-volume low cost hospitals can be supported to follow this model for replication. Those hospitals have the strengths of efficiently treating many poor people free of cost, reaching out to rural areas for screening and an ability to attract high performing professionals.

Low cost secondary healthcare

The majority of the hospital beds in India are small hospitals with fewer than 30 beds. Most of these are unorganized nursing homes and secondary hospitals run by individual doctors and face challenges with access to funding for adequate upgrading of equipment.

- There are, however, encouraging examples of networked hospitals that have been able to attract funding to scale up the number of hospitals with a focus on low cost healthcare with uniform quality. The innovations within these hospital chains of smaller sized hospitals are similar to those in the high-volume low cost hospitals. The network of hospitals enables economies of scale for procurement, training etc.

Enabling environment

Access to funding

Health financing must be viewed from a demand-side and supply-side perspective.

Demand-side funding

Out-of-pocket spending in India represents 80 percent of healthcare expenditures and many people delay or never seek treatment because of inability to pay for service (World Health Accounts, WHO, 2008).

- An increase in demand-side financing by the government and private risk-pooling programs are changing this environment in some areas by creating more secure revenue streams for providers. There are already indications of how this is encouraging providers to explore new models of healthcare delivery in underserved areas. Most of the government funded health insurance schemes cover surgeries but not primary healthcare. The impression is that the primary healthcare models are facing the greatest challenge with

financial viability due to the patient's lack of ability to pay and the difficulty to create effective cross-subsidy schemes for out-patient treatment. There are, however, few examples of micro health insurance programs covering out-patient visits, and these are said to have improved the health seeking behavior in the region benefiting the provider, though a lack of impact assessments remains.

Supply-side funding

Demand-side funding is, however, not enough. There is a need for improved access to seed funding for development of healthcare delivery models.

- The vast majority of the organizations included in the report faced difficulties in raising seed-funding and received the initial funding from families and friends. There are individuals with aspirations of becoming social entrepreneurs, but who have neither the knowledge of where to seek seed funding nor family or friends with accumulated wealth to seek funding from.
- Presence of funding is not the same as access to funding. Investing in healthcare is a challenge due to, among other things, weak financial management. This applies to for-profit as well as non-profit providers alike. The lack of financial skills in some organization impedes investments, but the lack of capacity is also on the institutional side. Many investors and donors have expressed an interest but lack of capacity to assess opportunities to support high impact healthcare endeavors. The interface between donors and non-state providers, the government and non-state providers and investors and providers need attention. Efforts to facilitate assessments and management of investments and donations in terms of monitoring and technical assistance could play an important role in strengthening the system, increasing the flow of funds to the healthcare sector and enable more models to evolve and grow.

Leadership for innovation

- The importance of good leadership stands out as one of the key enabling factors for successful healthcare delivery models. The individual doctors behind these models have not only been crucial for fund raising and building an organization but also to attract patients. The importance of trust in the individuals can impede scale-up in locations where the individuals are not known and the same goes for sustainability when the founding individuals leave the organization.
- The deficiencies in the public healthcare sector have motivated many of the healthcare entrepreneurs to improve the quality and access to care for poor people but an important factor is also a tradition of giving back to the society in India.
- There are clusters of entrepreneurship and the reason for these clusters can be explained by access to seed funding e.g. philanthropic capital, but inspiration is also believed to be a critical factor. Doctors have been inspired to establish healthcare delivery models after seeing other doctors succeed in social entrepreneurship.
- Leadership is important but community ownership is often a pre-requisite for building the necessary trust for healthcare delivery, especially in rural settings. The culture of self-help groups in India have shown to be an important foundation for rural development. Several successful models have had the self-help groups elect the representative for healthcare delivery that has been an efficient avenue for acceptance and for building community ownership of healthcare programs.

Role of the government

- The role of the government in creating an enabling environment stands out in different contexts. The government has through policies improved the investment climate for healthcare provision in some underserved areas through tax exemptions. Regulation is emphasized by healthcare providers in terms of quality assurance through accreditation but providers are also highlighting the need for incentives to undertake the resource demanding accreditation processes.
- Many providers endorse development of Public Private Partnerships for addressing inequities and improving quality of care for the poor, but the issues with compliance and the government's ability to manage contracts at national, state and local level are common concerns.
- Strengthening services for low-income populations has furthermore been incentivized by addressing the problem with lack of disposable income; the government's role in demand creation through health insurances is increasingly recognized. This demand-side financing is securing a steady revenue stream for providers and serves as an encouraging factor for entrepreneurs to explore healthcare delivery models in underserved areas. These schemes furthermore provide an opportunity for quality monitoring.

Financial models

- The difference in service delivery between non-profit and for-profit organizations do not necessarily differ; there are for-profit, but not profit maximizing, organizations providing services at discount for poor population and there are profitable non-profits reinvesting in research to further improve the delivery of quality care at low cost.
- The main difference between for-profit and non-profit organizations is the source of funding and with the funding come expectations on deliverables and involvement of the funders. Providers have shared how there has been intense interaction between the organization and the funders during the process of due diligence and structuring the transaction but limited involvement thereafter. Freedom for the management is important but organizations can be encouraged to reach targets, not only financial targets but also targets of quality and scale. Acumen Fund is an encouraging example of an investor with interest in outcomes and furthermore provides support to reach the targets if needed.

Public-Private Partnerships

The environment for public-private partnerships in India is changing. Large scale government contracts with non-profit and for-profit providers have evolved in 2007 and 2008.

- These arrangements with substantial government funding have given room for large scale exploration of innovative models while the efficiencies are still to be seen.
- The government has created working groups and task forces including private providers to advance the dialogue on public-private partnerships and the main objective to reach universal coverage and equity for primary healthcare.
- Some contracts for private management of primary health centers have been active for many years and are appreciated by the community as well as the government. This indicates the benefits of contracting-out but scale-up is a challenge; the success has been dependent on individuals, on the private provider's side as well as within the government. The experiences of structuring these contracts and success factors such as monitoring system and training programs are now shared for implementation of similar models in other locations.

- Providers have expressed the need for capacity building within the government for creating, managing and evaluating contracts. The capacity building is needed at all levels, district as well as national; providers have especially highlighted the importance of skill building of contract management at district level to realize the full potentials of the contracts.
- Compliance is one of the main concerns among private providers when considering Public Private Partnerships. There is a reluctance to enter contracts with the government due to fear of delays in the release of funds which is the experience of several Public Private Partnerships.
- Few contracts have defined output measures and pay-for-performance schemes.

Technology

- Technology has shown to affect barriers to healthcare (accessibility, availability, affordability and quality of care) in various ways and the role of technology for strengthening healthcare systems is increasingly recognized by providers and the government; solutions ranging from IT-applications, telemedicine and call centers are leveraging available resources. There are innovative examples where technology addresses the human resource crisis through supporting task-shifting and enabling increased service provision per healthcare worker and, hence reducing the gap of human resources. The technology solutions improve access to care such as access to specialists. Technology has also shown to improve supply chain management and monitoring capacity which e.g. reduced pilferage. Through providing diagnostic technologies to primary healthcare providers the identification of high-risk cases and early detection is facilitated.
- The costs, maintenance and connectivity are determining factors, making some technological solutions scalable and some not.

Advantages of telemedicine

- Access - Geographical barriers to care are reduced; aspects of secondary and tertiary care are made possible to reach rural areas.
- Availability - Human resource constraints are targeted through e.g. doctors' consultation with numerous remote villages per day, improvements in the overall healthcare delivery is possible.
- Affordability - The overall cost of care may be reduced through improved efficiency of services as well as saved travel expenses and reduced loss of income.
- Quality – Monitoring of healthcare services is facilitated by electronic reporting systems and electronic patient records improve the availability of relevant historic data of the patients.

Challenges in relation to telemedicine

- Connectivity is found to be a continuous constraining factor in telemedicine projects, both small and large scale.
- Sustainability and quality assurance may be difficult to ensure in multi-stakeholder initiatives which telemedicine solutions often require.
- Attitudes and challenges with acceptability among both doctors and patients may further hinder the usage of telemedicine services.
- Cost of equipment and connectivity can result in re-allocation of resources that might not result in improved service delivery. There is not much evidence on cost-effectiveness of

the telemedicine models included in this report. It is not uncommon with significant investment in technology followed by limited utilization.

Indigenous innovation

- There are solutions for the world to be found in India. Low cost products of high quality can be manufactured and distributed to lower the cost of treatment in many countries.
- India has advanced manufacturing of generics but there is much that can be done in the field of low cost medical devices and equipment.
- Some healthcare providers have vertically integrated manufacturing of key components to lower the costs of treatment. It is perceived beneficial to create an autonomous entity for manufacturing and the advantages are to be found in more flexibility in procurement, not jeopardizing the core activities of the healthcare provider. Furthermore, creating an autonomous manufacturing entity creates pressures to meet the competition.
- Increasing number of special economic zones for manufacturing gives incentives for investments and there is a growing interest in medical devices in India but manufacturers are sometimes struggling to meet standards which make investors cautious.
- There is initial reluctance among medical professionals to use indigenous technology. It is sometimes due to suspicion of lack of proper testing of the products. It is also a challenge to influence doctors' preferences for specific products when manufacturers are providing incentives such as a percentage of the cost of the devices; this induces the medical professionals to favor high-cost imported devices over indigenous devices.

Replication

- Many of the innovative healthcare delivery models have key attributes or tools that can serve for replication to strengthen health systems in other locations but the entrepreneurs behind these models are generally occupied with their own scale-up and do not have resources or incentives to communicate innovations for replication.
- Many entrepreneurs are willing to share solutions to leverage these for the benefit of healthcare delivery models in other locations.
- Some healthcare providers, such as Aravind Eye Care Systems, have created separate management teams (Aravind Managed Eye Care), with the specific focus on replication and scale-up of the services.
- In terms of enabling environment, there are of course certain local specific determining factors, such as recognition of the founding individual, yet there are also certain core characteristics and key attributes, e.g. protocols for interventions and technologies that have proven replicable.

There are no turn key solutions for replication but there are key success factors for any scale-up or replication to be possible. Access to funding, legal and regulatory environment and an individual to drive the implementation, and feel ownership, are among the crucial core factors for basically any model or component to be implemented in a new location.

Barriers to healthcare delivery in India

This is an extract from the "Innovative Service Delivery Models in India - Challenges and Opportunities" report, written by Sofi Bergkvist and Hanna Pernefeldt in 2008, with the objective to better understand the role of the private sector in health systems. The project was supported by the Haseltine Foundation for Medical Sciences and the Arts and Rockefeller Foundation.

Access and Availability

Obstacles hindering health for all are related to access, both in terms of geographical and financial restraining factors, which is furthermore closely related to the availability of health services. Limited infrastructure, where facilities are found understaffed or lacking equipment, medical supplies or human resources, is affecting the availability of the health services to the people. Furthermore, pre-existing inequalities, social and educational deprivations, may also be determining factors relating the accessibility to the services.

Human Resources

The scarcity of human resources within the field of medicine is a large problem in itself. The undersupply of qualified medical staff and the uneven distribution of medical staff between urban and rural communities are factors that add to the problem of availability of health services. In India, about 80 percent of the medical doctors practice in urban areas whereas 70 percent of the population lives in rural areas (Schmidt, 2006). The number of Auxiliary Nurse Midwifes per primary health center is the same throughout India, disregarding the fact that some states have twice the fertility levels of others (Patel, 2005). Furthermore, the human resources are known as the essential joining factor between financing, technologies, physical infrastructure and information.

Affordability

The vicious cycle of disease and poverty is a barrier to health that is important to understand to be able brake the pattern to improve the health of populations. (Schmidt, 2006) Due to high costs of health services many people fall into debt, which in turn affect their future financial status and future health. Poorer sections of rural Indian households spend close to twelve percent of their income on healthcare, compared to the US with six percent spent (Schmidt, 2006). A recent study by Banerjee & Duflo (2008), of a low income area found the main reason for households to have debt, and pay high interest rates with an average of 80 percent a year, is to meet healthcare expenses and it has furthermore been estimated that 60 percent of the Indian population takes loans to finance healthcare (Schmidt, 2006). These loans for healthcare expenditures can push families in a catastrophic poverty trap where future income cannot even cover the interest payments. Disease means in many cases loss of income and loss of income may mean deeper poverty and greater health risks for the family. Poverty might be what catalyzed the disease in the first place. Affordability of the healthcare services is crucial for its accessibility, but also the proximity is important for the same reasons. A large percentage of the costs for the care goes to paying high interest rates on loans for the healthcare, while travel and lost work time accounts for much of the remainder. (Rangaraj, 2005) With low affordability, people in cash low communities tend to delay treatment and only reach the health provider when the sickness has gotten severe, thus facing an onset of more complex diseases. This in turn sometimes increases the cost of treatment and might bring about even more financial burden and debt on the individual (Rogan, 2008). Furthermore, this health seeking behavior may even result in consultation at a stage where it is too late to prevent or cure the disease. It is stated that from a public health perspective, the out-of-pocket payments fail to promote utilization of healthcare services for

early detection and treatment; high out-of-pocket spending impedes preventive care. Out-of-pocket payments also does not provide financial protection against the costs of serious illness, and payment is required at the time that care is delivered, which is the time when, due to illness, the patient is least able to pay and the reason for people to issue the often catastrophic loans. (IFC, 2008) Risk pooling can be, and is piloted in many areas in India, used as a means to address these issues and to mitigate this risk.

The high out-of-pocket spending has a negative impact both on individuals, especially among low-income population, and on the health provider. It complicates the development of a higher-quality, formalized private sector. These payments are unpredictable for the provider, challenging the business planning and forecasting, plus increasing the risks and decreasing the engagement of investors. (IFC, 2008)

Quality

Furthermore, the quality assurance of the provided care can be an obstacle to the healthcare provision. Lack of incentives to ensure the quality throughout the delivery chain is an existing problem (Schmidt, 2006), as well as weak stewardship that undermines the quality and efficiency of the provision of care (Patel, 2005). The incentives to ensure quality of care is generally to keep the pool of patients, the trust and the reputation. But without competition these incentives are likely to decrease. The stewardship by the government is an important part for an efficient healthcare system, which should include accountability; the government can play an important role in creating transparency in clinical performance. The government has, and should take, responsibility in creating an enabling environment, safeguard the healthcare provided and a system of transparency in clinical performance. Accreditations of public and private providers, and the use of standards of care can improve quality but there must also be a mechanism of inspection of performance and enforcement of regulation. Hence standards and transparency benefit both the population and improve the performance of the providers. The accreditation of private hospitals is now initiated in India, whereas 30 hospitals will be completed by the end of 2008. (FICCI, 2008) The issues are costs, since an accreditation process takes time and requires broad participation of employees, how to incentives more providers to undertake an accreditation process and overall how to control the vast industry.

Andhra Pradesh Health Sector Reforms

This is a summary of the report "Andhra Pradesh Health Sector Reforms – A Narrative Case Study", which the ACCESS Health Initiative wrote in 2009. The full report can be found on the ACCESS Health Initiative website (www.accessh.org). More detailed information can also be found on the Results for Development website (www.resultsfordevelopment.org). The report can also be found on CD, through Leading Health Care or the ACCESS Health Initiative.

Andhra Pradesh Health Sector Reforms - A Narrative Case Study, 2009

The Government of Andhra Pradesh has the last couple of years taken several innovative approaches to improve the access to healthcare in the State. As an active response to the health situation, the Congress Party, with Dr. Rajshekar Reddy as the Chief Minister, came to power in 2004 with health as one of the three main priorities in its manifesto. With the focus on the health system, the State Government put a concerted effort in making quality healthcare more accessible to the people. This change in mindset and action, supporting health sector reforms, has resulted in contract arrangements where the government has harnessed the private sector for more effective healthcare delivery. Another motive of the reform has been financial protection of the poor given that healthcare costs have been the main reason for indebtedness; the outcome is one of the world's largest health insurance schemes. Another painting example which falls under the government's reform efforts is the Andhra Pradesh Health Sector Reform Programme (APHSRP), an initiative with managerial focus for improved efficiency in the work of the government. This report presents the main initiatives of the reforms and describes underlying motives, challenges and opportunities associated with the reform process.

The aim of this report is to present the health sector reforms and encourage the discussion on how governments together with partners can harness innovation and improve the access to healthcare.

Initiatives

The Rajiv Aarogyasri health insurance scheme for the poor, the Emergency Management and Research Institute (EMRI), and the Health Management and Research Institute (HMRI) which focus on primary and preventive healthcare and provides boundless medical advice, are all initiatives that will be presented in this report. The organization and the activities of the Andhra Pradesh Health Sector Reform Programme (APHSRP) will also be highlighted.

Enabling environment

The most important factor to the reform process has been the political support from the Chief Minister who took a strong interest in initiatives for high impact and encouraged innovative approaches in the health sector reform process. This resulted in significant budget allocations which was the grow ground for the new initiatives and to spur improved services in a short period of time for the many underserved people in the State. Support from the National Government has further been critical for some of the contract arrangements. It is also important to recognize the efforts to strengthened governance with focus on accountability, transparency and decentralization, as well as capacity building support by premier institutes and with funding from Department for International Development (DFID); all these factors supported the reform process. The overall approach has been multi-sectoral and aims to link with other ongoing interventions and to include non-governmental organizations and private providers to meet the set targets.

Challenges and weaknesses

The political commitment is critical and it is a challenge to ensure that this commitment remains. Other challenges are associated with inefficient use of financial resources, inadequate level of attention and response to equity and gender issues, fiduciary risk and accountability issues, as well as inadequate operational capacity to implement the reforms, and negative attitude among some stakeholders toward reforms. Some of the remaining weaknesses in the reform process are related to (a) Expiring donor support; the uncertainty of continued support affects the initiated reform process on multiple levels, and it is unclear if the government has capacity to institutionalize all functions of the reform, (b) Communication; internally a lack of complete understanding of the philosophy behind the health sector reforms and externally a lack of trust in the reform process among the public rooted in lack of transparency and accountability, (c) Health Information Systems; insufficient training of health information management staff and gaps in the data management and analysis, as well as lacking emphasis on knowledge transfer and communication of findings from the analysis of gathered data, (d) Health Financing; gaps in the financial management and unsatisfactory financial training, lack of evaluations and cost-effectiveness analysis, (e) Procurement; insufficient management, no well-defined system for decentralization, unclear audit trail, inadequate alignment with international best practices of documentation and delays in the creation of a procurement reform plan, (f) Human Resource Management; insufficient performance management which is related to lack of guidelines for incentive systems and promotions that are said not to be based on performance but seniority, weak operational management to create interventions based on findings from the improved access to data, and (g) Leadership and Governance; deficient key functions related to planning, monitoring, quality assurance and cost-effectiveness assessment, as well as lack of transparency, perceived by the public, in the management of contracts.

Opportunities

Along with the remaining gaps come opportunities for further action and constructive support to strengthen the reforms and the evolving innovations. The reform process has just started and the implementation phase will be realized only over a long period of time. To get the reform process institutionalized and fully adopted, oversight, continuous support and funding are key components to sustain. Important issues to address; (a) The expiration of donor support requires an assessment of what functions the government preferably should manage, for what activities there is a need for continued technical assistance and what functions might be better managed by an independent entity to support the government, (b) Define the responsible body for internal communication and strengthen the channels and systems for exchange, including feedback on reform initiatives from cross-sectoral departments. Alter the external communication through involvement of an independent party to improve the monitoring and evaluation, which could build trust in the reforms, (c) Strengthen the use of health information systems, define related functions and responsibilities, strengthen the validation of data provided from various initiatives, emphasize knowledge transfer of findings and implementation steps to act on findings, (d) Develop standards for financial management and provide training with focus on audits, budget execution, monitoring and reporting mechanisms, (e) Improve management and standardize procurement procedures by developing procurement manuals, bidding documents and streamline the contract award procedures, (f) Improve the performance management and (g) Improve capacity building for monitoring and management of contract arrangements, potentially assign an independent third party to take an active role in the creation and management of contracts. Provide financial and/or technical support to the Strategic Planning and Innovation Unit. Support independent monitoring and evaluations to assess cost-effectiveness, to strengthen the accountability and transparency.

Concluding comments

It is evident that innovative steps have been taken to shape the future health status of the population in Andhra Pradesh. The recent healthcare initiatives reflect positive changes in the mindset of both government officials and private healthcare providers, yet the reforms need sustained commitment to succeed and reach its targets. In conclusion, the health sector reform process needs time. It needs time to get all stakeholders wholeheartedly on board and to institutionalize the routines, attitudes and activities, as well as to gain the trust among people in the community.

External involvement in the process can be a critical factor for improved accountability and transparency, as well as for cross-learning within the Government of Andhra Pradesh but also internationally. Technical assistance could play an important role to support the enabling environment and the initiated innovative approaches, hence be essential in the transformation of the initiatives bringing them from pilots to well-anchored programs. Independent monitoring might be the determining factors to strengthen the awareness and trust in this health sector reform process. Though there are numerous impressive and innovative components and initiatives of this reform process, there are some important remaining gaps, whereas impact assessments and evaluations are essential to create a better picture of what works and what does not.

This report brings forward the health sector reforms in Andhra Pradesh to spur the discussion of health sector reforms as a phenomenon. Other governments can, and should, learn from the extensive and innovative approaches and change of mindset, while the government of Andhra Pradesh would benefit from improved access to information regarding related policy reforms and their affects in other countries.

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Indian School of Business (ISB)
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Suggested further reading

- **Innovative Pro-Poor Healthcare Financing and Delivery Models – Examples from Mixed Health Systems (2009).**
  (Dimovska, D., Sealy, S., Bergkvist, S. and Pernefeldt, H.)
  Available at: www.accessh.org and www.resultsfordevelopment.org

- **Innovative Service Delivery Models in India - Challenges and Opportunities (2008).**
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- **Andhra Pradesh Health Sector Reforms – A Narrative Case, 2009**
  (The ACCESS Health Initiative)
  Available at: www.accessh.org and www.resultsfordevelopment.org

- **The Emerging Role of PPP in Indian Healthcare Sector**
  (KPMG and CII: August 25, 2009)
  Available at: http://www.ibef.org/artdisplay.aspx?cat_id=84&art_id=23748

Useful links on the above topic

http://ibef.org/download/PublicPrivatePartnership.pdf

Case Stuides http://ibef.org/download/Appendix.pdf

Policy Paper http://ibef.org/download/PolicyPaper.pdf

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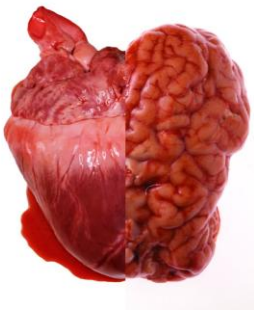


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Together with our partners, we conduct high-level dialogue on challenges and solutions for healthcare and life sciences, provide thought leadership, and disseminate research-based knowledge about how health systems can be