



cutting through complexity



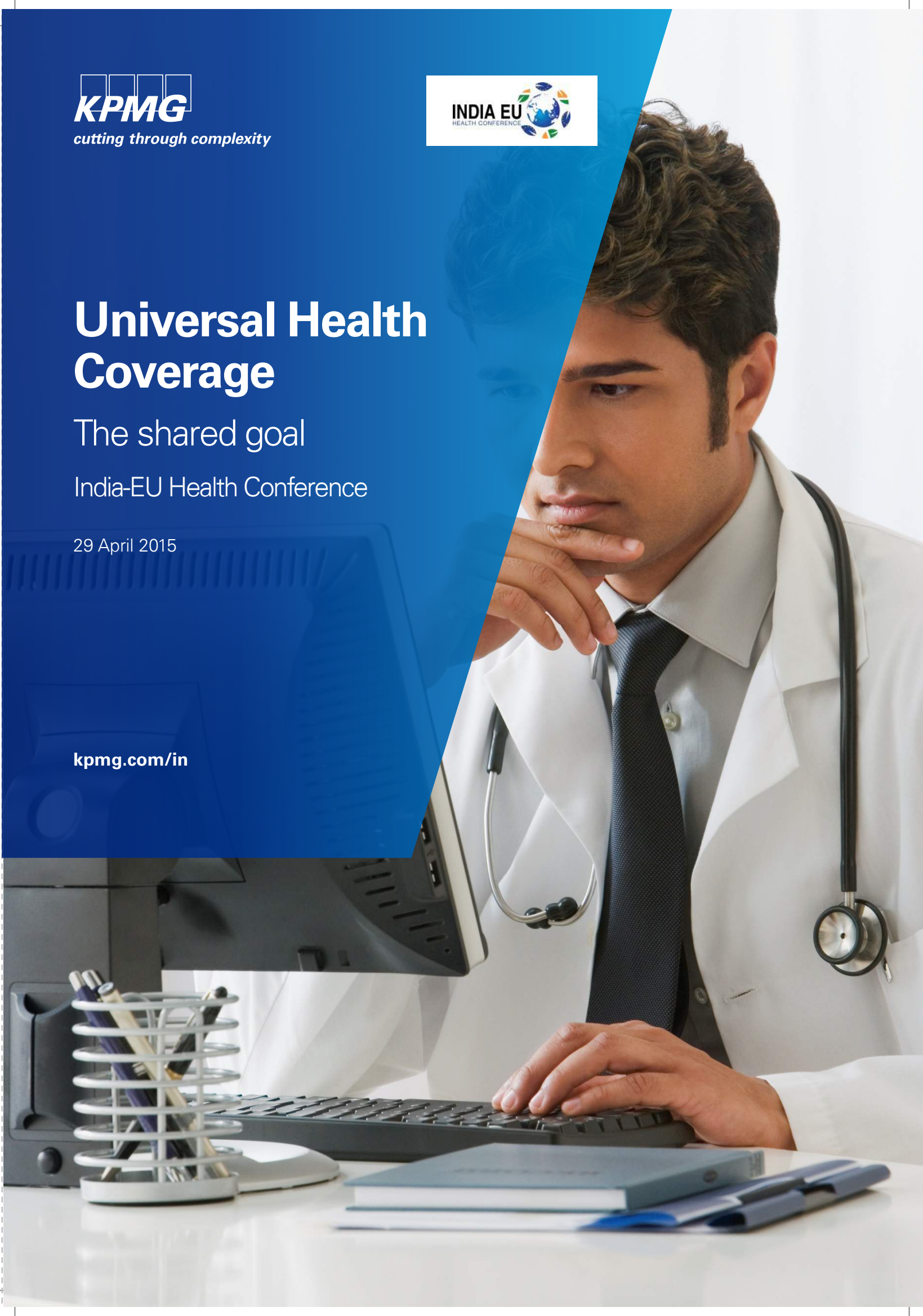
Universal Health Coverage

The shared goal

India-EU Health Conference

29 April 2015

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Partners and Supporters

Partners	About the partners
	The European Federation of Pharmaceutical Industries and Associations (EFPIA) is Brussels-based trade association founded in 1978. It represents the pharmaceutical industry operating in Europe. Currently, it has a 33 national associations and 40 leading pharmaceutical companies as its member firms.
	The European Health Forum Gastein (EHFG) was founded in 1998 as a European health policy conference with the aim of providing a podium for dialogue in the field of public health and health care. Today it is one of the key annual events, bringing together all the stakeholders to discuss various issues around healthcare.
	The Organisation of Pharmaceutical Producers of India (OPPI) was formed as a symbolic body of the manufacturers in the pharmaceutical sector. It supports India's healthcare objectives and engages with the Government and other stakeholders to find viable healthcare solutions.
	CII is a non-government, not-for-profit, industry-led and managed body, playing a active role in India's development process. It was founded in 1895 and today it is one of the leading business association with over 7400 members, both from private as well as public sectors. It has an indirect membership of over 100,000 enterprises from around 250 national and regional sectoral industry bodies.
	KPMG in India, a professional services firm, is the Indian member firm of KPMG International and was established in September 1993. Our professionals leverage the global network of firms, providing detailed knowledge of local laws, regulations, markets and competition. KPMG in India provide services to over 4,500 international and national clients, in India. KPMG has offices across India in Delhi, Chandigarh, Ahmedabad, Mumbai, Pune, Chennai, Bangalore, Kochi, Hyderabad and Kolkata. The Indian firm has access to more than 8,000 Indian and expatriate professionals, many of whom are internationally trained. We strive to provide rapid, performance-based, industry-focussed and technology-enabled services, which reflect a shared knowledge of global and local industries and our experience of the Indian business environment.



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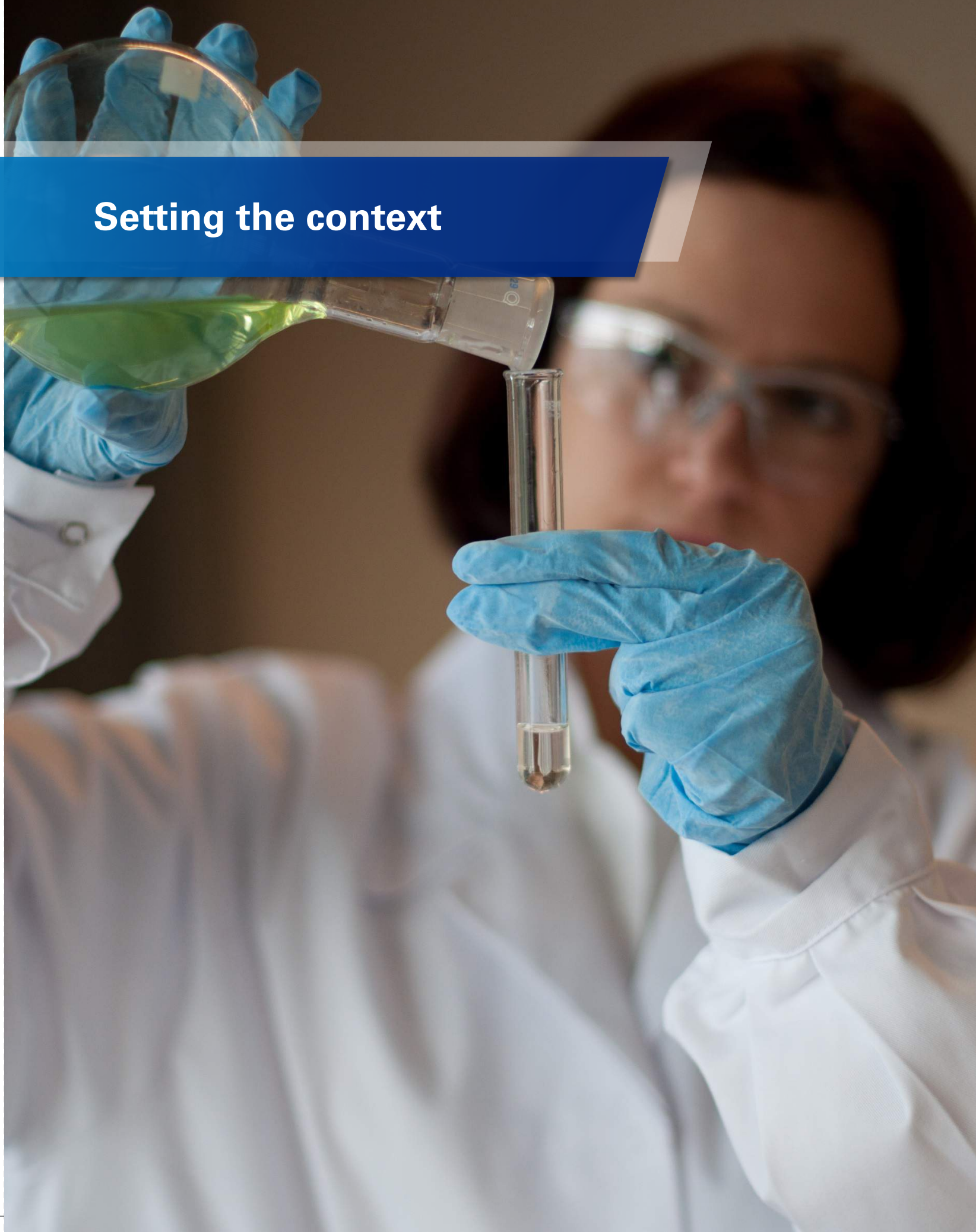
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Setting the context



As India gears itself for Universal Health Coverage, there is a need to learn leading practices from different nations in overcoming issues in healthcare access

The Indian healthcare industry is at crossroads today and needs important decision making around the four pillars of healthcare – availability, affordability, accessibility, and acceptability, to respond to the healthcare challenges. The gap in delivering quality and affordable health services to the bottom of the demographic pyramid is increasingly widening. Skewed accessibility to health facilities together with the issue of affordability amongst other factors, are among the many bottlenecks to achieving universal access for healthcare in India.

The need for universal health coverage has become imperative to the health needs of the population of India. In addition, nearly a quarter of the population falls under the low income group and approximately 70 per cent dwells in the rural areas¹, adding to the challenge of providing health coverage across the country.

India requires a robust healthcare infrastructure to meet the dual burden of communicable and non-communicable diseases. The current healthcare spending is around four per cent of Gross Domestic Product (GDP) as compared to the global average of around 10 per cent². The doctor to population ratio in India is 1:1,700 whereas the World Health Organisation (WHO) stipulates a minimum ratio of 1:1,000³. An additional 400,000 doctors will be required by 2020 to fulfil this healthcare goal³.

Affordable healthcare and patient safety have emerged as major concerns for both, developed and developing nations. Rising healthcare costs represent a serious challenge to several countries globally and policymakers are seeking ways to contain the growth in expenditure. Countries need to learn from each other to develop a healthcare system which can provide access to affordable healthcare to its population. Some countries such as Singapore, have successfully implemented programs to contain their rising healthcare costs, providing an opportunity for others to potentially learn from them.

The India EU Health conference is conducted at a time, when there is a growing demand for affordable quality healthcare services for all. The conference was conceptualised as a forum to initiate the process of sharing knowledge and key learnings between India and EU nations.

About the conference

With an objective to facilitate meaningful discussions on the healthcare sector, the European Federation of Pharmaceutical Industries and Associations, the Gastein Health Forum and the Organisation of Pharmaceutical Producers of India (OPPI) jointly organised a one day conference – ‘Building Health System for Universal Coverage’ on 29 April 2015 at New Delhi. The Confederation of Indian Industry (CII) also supported the conference, with KPMG in India being the knowledge partner.

Source: KPMG in India analysis, 2015;

1: “Rural population (% of total population)”, The World Bank, accessed May 2015

2: “Improving Health Outcomes and Health Care in India”, OECD Economics Department Working Papers, Page 5 and 16;

3: “India has just one doctor for every 1,700 people”, Indian Express, 22 September 2013

Setting the context

The conference was an important step in facilitating a dialogue between various stakeholders in India and EU to review current healthcare systems for further enhancement

The conference, based on the theme of 'Building Health System for Universal Coverage', was the first step in facilitating a dialogue between various stakeholders from India and EU to discuss best practices prevalent to overcome the healthcare challenges faced by these nations. The four dedicated plenary sessions in the conference saw various experts from different fields in the healthcare sector get together to identify the existing issues and brainstorm possible approaches to universal coverage.

The event received avid participation from Indian regulatory bodies, international healthcare organisations, healthcare professionals and the academia. The plenary sessions focussed on various topics, primarily around strengthening health systems, designing health systems, creating regulatory systems to support healthcare reforms and data as a driver for better healthcare outcomes, among others.

About the document

The conference highlighted the key concerns of the healthcare sector and provided possible recommendations to develop a health system that ensures 'universal coverage'.

The objective of this document is to:

- Capture the key deliberations at the conference. Additional research has been conducted by the knowledge partner to illustrate the points stated by the speakers at the conference.

Sources: KPMG in India analysis, 2015



Context and deliberations



Context to introductory session: Building Health Systems for Universal Coverage

The introductory session set the context for the conference by identifying key areas of intervention to build health systems for universal coverage

The conference was structured as four different sessions to discuss the challenges faced by healthcare systems and share knowledge and best practices from within the EU and India

**Session 1:
Strengthening
health systems**

- Imperative to increase investment in healthcare infrastructure to help ensure healthcare facilities are available to all.
- Need for monitoring and checking the quality and functionality of primary healthcare centres. Strengthening primary healthcare centres can improve healthcare access to the rural population in India.
- Discuss possible collaborative approaches to build healthcare capacity.

**Session 2:
Designing health
systems**

- Identify key building blocks of health systems, and steps to integrate and synergise these to create a healthy ecosystem.
- Imperative to learn from healthcare systems of different countries and give due consideration to cultural disparities while selecting the leading practices.
- Identify the changing socio-political impact on Indian healthcare due to a change in the country's leadership.

**Session 3: Creating
regulatory systems
to support
healthcare reform**

- Imperative to reconcile quality, safety and efficacy for faster patient access and role of regulatory cooperation in all these steps.
- Need to modify current regulations to implement universal health coverage.
- Vitality of strong quality control mechanism to measure quality and the outcomes of care.

**Session 4: Data
as a driver for
better outcomes**

- Emerging countries need to exploit new technologies to spring-board their health delivery. Role of e-health and m-health in revolutionising health delivery and treatment with reducing cost.
- Role of big data in the healthcare industry.
- Imperative to integrate big data with healthcare systems. This integration can use the data on a systemic level to design patient pathways and help analyse the healthcare situation in a region.

Source: KPMG in India analysis, 2015; Deliberations from India EU Health conference 2015

"The government has to lead the way to make healthcare accessible and it is going to be complex but not impossible. There will be stakeholders but the government needs to lead the way."

Ranjana Smetacek | Director General | OPPI

"The art and science of comparing health systems is quite complex wherein, the cultural disparities must be taken into account for drawing out more robust comparisons."

Prof. Helmut Brand | President | European Health Forum Gastein

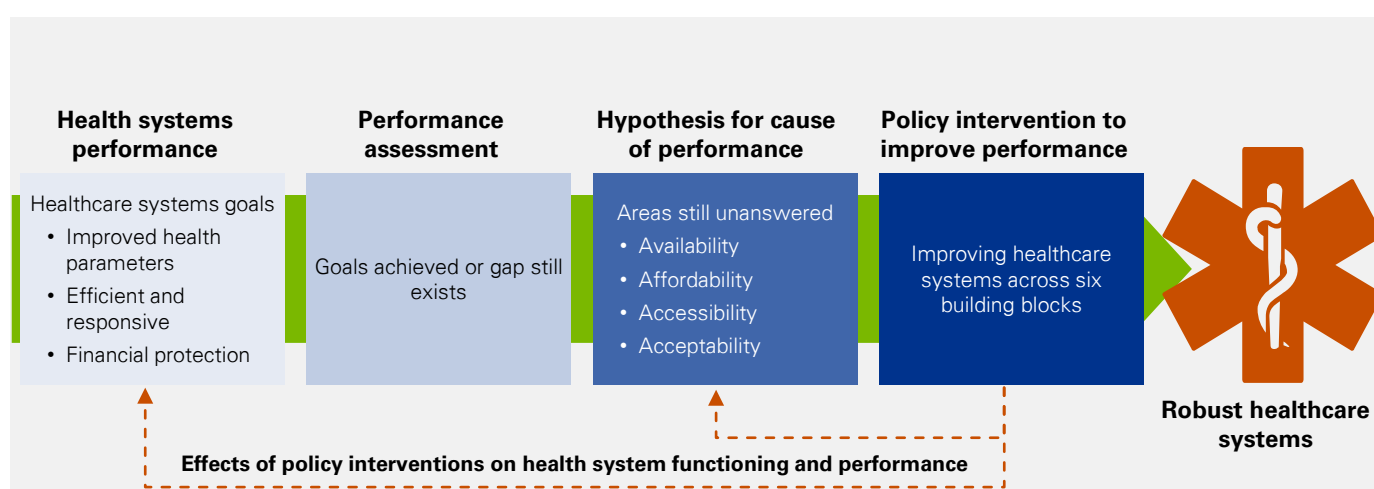
Session 1: Strengthening health systems- The context

India needs to analyse its health system focusing on availability, affordability, accessibility, and acceptability to provide a robust system to a large population

‘Strengthening a health system’ is the process of recognising and applying changes in the healthcare policy framework and practice in a country’s health system. The process also includes the initiatives and strategies that improve the functions of the health system and may lead to better health through improvements in quality, access, coverage and efficiency¹.

Strengthening of health systems is required to meet the goal of universal health access. Building capacity in six building blocks – healthcare delivery, human resources, information, medical product/ technology, financing, and governance will be key to establishing a robust health system².

Analysing health systems to make them robust



Source: Health Systems Analysis for Better Health System Strengthening, The World Bank page 7; KPMG in India analysis

The healthcare landscape in India is undergoing a paradigm shift. Changes in disease patterns, from infectious diseases to non-communicable diseases (NCDs), increase in healthcare spending, growing urbanisation and increasing awareness, are increasingly giving rise to diversified healthcare needs that still need to be met.

India needs to strengthen its healthcare system to improve basic healthcare indicators

Country	IMR	MMR	LE*
India	41	190	66
U.K.	4	8	82
Germany	3	7	81
Netherlands	3	6	81

*Note- IMR and MMR data is for 2013 and LE data is for 2012 (LE: Life Expectancy)
Source: Health indicators, The World Bank website, accessed April 2015

Presently, the gap between what patients expect and what the traditional healthcare system model offers is wide. In lieu of the Government of India’s agenda to attain ‘Universal Healthcare Access’, it is imperative to revamp the healthcare system across all the six building blocks to accommodate the healthcare requirements of the Indian population.

India can learn from the European healthcare system to strengthen its healthcare model so as to improve its basic healthcare indicators, create stronger primary healthcare infrastructure and reduce out of pocket expenditures, among others.

Source: KPMG in India analysis 2015

1: Health system strengthening, University Research Co., LLC website, accessed April 2015

2: Health Systems Strengthening, The Global Fund website, accessed April 2015

Case in point: The Netherlands

The Netherlands’ healthcare system, which ranks among the top three in Europe is built on the tenets of efficiency, choice and quality

Case in point: The Netherlands’ Healthcare system³

Background:

- The country faced a multitude of issues in its healthcare system prior to 2006, including a two-layer private health insurance system for the opulent, state coverage for the remaining population, long waiting periods, inefficient and complex bureaucracy, and relatively lower patient-focus
- There existed unproductive incentives for insurance players with little to negligible pressure on providers to achieve superior performance

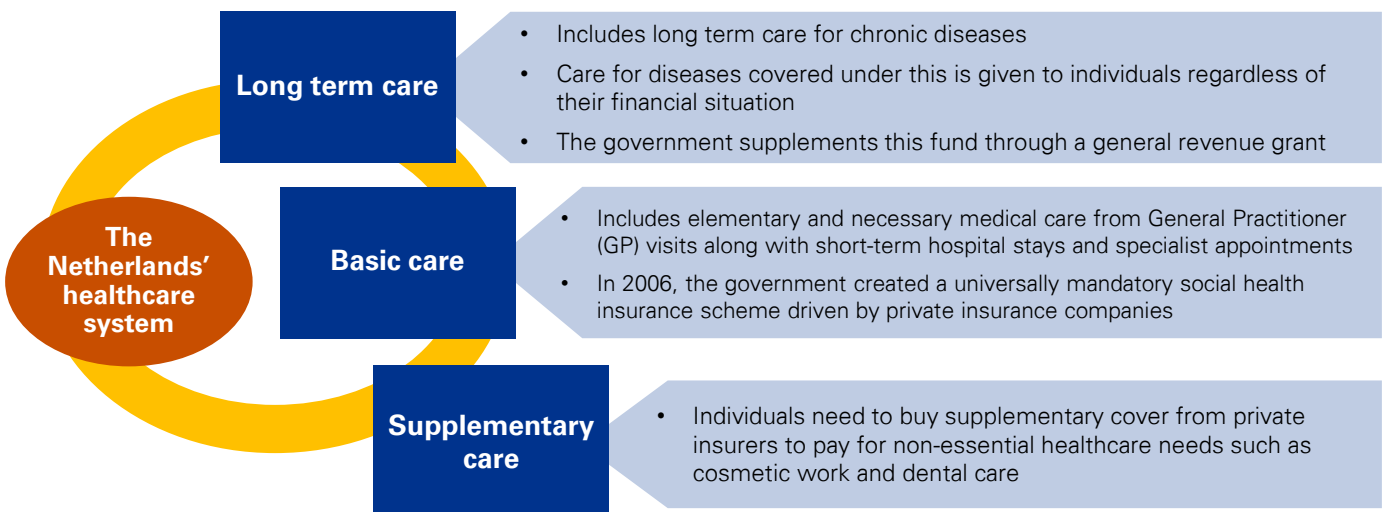
Action:

- In 2006, the country introduced a wide-ranging reform package to achieve universal medical care. These reform packages were primarily driven by the insurance market
- A new healthcare insurance system was introduced based on risk equalisation through a risk equalisation pool:
 - All Dutch citizens were mandated to buy the basic health insurance package or pay a penalty of up to 130 per cent of the premium
 - Insurers could not deny coverage to ‘high risk’ individuals
 - Individuals were free to choose from different health insurers operating in the country
- The government now plays the role of a watchdog in the entire system, checking quality and ensuring universal coverage. However, it no longer manages the majority of funds or controls prices of insurance schemes

Outcome:

- The Netherlands remains among the top three in the ‘Euro Health Consumer Index’ in 2014. The rankings are assigned based on several factors such as accessibility and wait time for treatment, the outcomes of care, the range of services offered, among others
- The country was successful in achieving a healthcare system built on the principles of resilience, choice, efficiency and quality

The Netherlands’ healthcare system is divided into three components³



Source: KPMG in India analysis 2015
3: Healthcare Systems: The Netherlands”, Civitas, January 2013

Strengthening health systems: The deliberations from the conclave

A multi-pronged focus on improving infrastructure and enhancing insurance coverage could be the key to universal health coverage in India

Challenges in Indian healthcare	Deliberations from the conference
Availability	
<p>Shortage of doctors and healthcare centres</p> <ul style="list-style-type: none"> Shortage of doctors and primary healthcare infrastructure is a major challenge in India <ul style="list-style-type: none"> There is presence of only one doctor for 1,700 people in India⁴ whereas the WHO guidelines stipulate a minimum ratio of 1:1,000 Approximately 72 per cent of the Indian population lives in the rural areas whereas around 80 per cent of doctors, 75 per cent of dispensaries and 60 per cent of hospitals are present in the urban areas⁴ Nearly 381 registered medical education institutions are present in India as of 2014, with a total of ~50,000 seats⁴ Concentration of medical colleges in five states (Andhra Pradesh, Karnataka, Kerala, Maharashtra, and Tamil Nadu) has led to geographical disparity Increasing brain drain of doctors from the government to the private sector due to better incentives in the latter. For instance, Karnataka has witnessed movement of specialist doctors to the private sector despite the existence of financial bonds⁵ 	<p>Increase investment in healthcare infrastructure</p> <ul style="list-style-type: none"> The Government of India and other stakeholders need to invest to bridge the current healthcare infrastructure gap Increase investments for setting up colleges for doctors, nurses and other medical staff <ul style="list-style-type: none"> Establish new medical colleges based on demographic demand to eliminate geographical disparity⁶ Implement innovative and cost efficient models such as public private partnerships (PPP) to bridge the current infrastructural gap <ul style="list-style-type: none"> Establish setups such as, a 50 seat medical college attached to a 200 bed district hospital based on PPP model⁶ <p>Incentivise government sector jobs for doctors</p> <ul style="list-style-type: none"> The Government needs to incentivise doctors working in the public sector. For instance, the state government of Odisha has recently adopted a monetary incentive scheme for doctors, which is expected to entail compensation hike of INR40,000 to INR80,000 to doctors working in rural areas⁷ <p>Promote alternate system of medicine</p> <ul style="list-style-type: none"> Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homoeopathy (AYUSH) can be used as a complimentary system to allopathy <ul style="list-style-type: none"> In a few European countries, allopathic doctors are allowed to practice traditional forms such as homeopathy and acupuncture Training AYUSH practitioners on primary care and national health programmes may help reduce disease burden <ul style="list-style-type: none"> Approximately 0.79 million registered AYUSH practitioners⁸ in India can be leveraged to overcome the country's healthcare problems Integrate AYUSH infrastructure with other health services

Source: KPMG in India analysis, 2015 and deliberations from India EU Health conference 2015

4: "Healthcare in India: current state and key imperatives", KPMG, February 2015

5: "Govt losing specialist doctors to private sector", Times of India, 28 July 2013

6: "Healthcare in India: current state and key imperatives", KPMG, February 2015

7: "Money, Career Growth Both Vital for Rural Docs", Indian Express, 1 May 2015

8: "India has 9.36 lakh doctors of modern medicine", India Medical Times, 13 March 2015

Strengthening health systems: The deliberations from the conclave

Further improvements in insurance coverage is likely to enhance affordability in the country

Challenges in Indian healthcare

Deliberations from the conference

Affordability

High cost of healthcare delivery

- Increasing cost of treatment at tertiary care facilities has led to greater financial burden on the lower income group and middle class populations
 - Out of pocket (OOP) contributes close to 86 per cent of the private expenditure and 60 per cent of the overall healthcare expenditure⁹
 - There is low penetration of health insurance as only 17 per cent of the total population¹⁰ is covered by the government sponsored individual cover and non-government group cover insurance programs
 - Only 5 per cent of the healthcare expenditure¹¹ was financed by private insurers in 2013

Private spending on health and its contributors

Year	Private expenditure on health (billion NCU)	Out of pocket expenditure (%)	Non-profit institutions serving households (%)	Private insurance (%)
2008	1,630	87%	4%	1%
2009	1,845	87%	5%	1%
2010	2,067	86%	5%	1%
2011	2,446	86%	5%	1%
2012	2,713	86%	5%	1%

Source: "Global Health Expenditure Database", WHO, accessed 14 February 2015; KPMG in India analysis

- Limited availability of low cost medicines in the public hospitals
 - The median availability of a sample of key generic medicines in the public sector facilities was 36 per cent compared to 76 per cent in the private sector facilities¹²

Improve insurance coverage

- The Government of India needs to initiate policy level changes to improve healthcare insurance penetration
 - Develop a national health insurance policy to decrease OOP expenditure by establishing a health fund
 - Restructure existing insurance policies to holistically cover both in-patient and out-patient procedures for patients in the lower income groups
- Replacing small insurance schemes with a single integrated large insurance scheme could be much more effective

Ensure availability of low cost medicines in public hospitals

- The government needs to ensure availability of low cost essential medicines in public hospitals by strengthening the supply chain and drug procurement process

Source: KPMG in India analysis, 2015 and deliberations from India EU Health conference 2015
 9: "Healthcare in India: current state and key imperatives", KPMG, February 2015
 10: "Only 17% have health insurance cover", The Hindu, 22 December 2014
 11: "Global Health Expenditure Database" WHO, accessed May 2015
 12: "Medicine prices, availability, and affordability in 36 developing and middle-income countries: a secondary Analysis" The lancet, Page16

Strengthening health systems: The deliberations from the conclave

Leveraging technology can drive transparency and improve accessibility

Challenges in Indian healthcare	Deliberations from the conference																				
Accessibility																					
<p>Access to healthcare services in India is a key challenge</p> <ul style="list-style-type: none">• People living in the rural areas have to travel more than five km to access a healthcare centre as availability of healthcare centres is skewed towards the urban areas¹³• Providing access to affordable healthcare services to low-income groups is a challenge in India	<p>Technology can improve accessibility</p> <ul style="list-style-type: none">• Mobile phones can be used to improve healthcare services in remote regions through m-health technology platforms. India can leverage its huge base of mobile phone users:<ul style="list-style-type: none">– Nearly 137 million mobile internet users as of June 2014 and is expected to reach 213 million¹⁴ by June 2015– Mobile internet users in rural India are expected to reach 53 million¹⁴ by June 2015																				
	<div><p>Growth of mobile internet users (million)</p><table><thead><tr><th>Period</th><th>Rural (million)</th><th>Urban (million)</th><th>Total (million)</th></tr></thead><tbody><tr><td>Jun-12</td><td>4</td><td>44</td><td>48</td></tr><tr><td>Jun-13</td><td>21</td><td>70</td><td>91</td></tr><tr><td>Jun-14</td><td>36</td><td>101</td><td>137</td></tr><tr><td>Jun -15E</td><td>53</td><td>160</td><td>213</td></tr></tbody></table><p>■ Rural ■ Urban</p></div> <p>Source: "India to have 213 million mobile Internet users by June: Iamai-IMRB report", Live Mint. 13 Jan 2015</p> <ul style="list-style-type: none">• Increase usage of telemedicine services to improve primary care services in rural areas<ul style="list-style-type: none">– Need to develop and promote telemedicine usage via mobile devices	Period	Rural (million)	Urban (million)	Total (million)	Jun-12	4	44	48	Jun-13	21	70	91	Jun-14	36	101	137	Jun -15E	53	160	213
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Source: KPMG in India analysis, 2015 and deliberations from India EU Health conference 2015
 13: "Understanding universal access in healthcare in India", OPPI, June 2013
 14: "India to have 213 million mobile Internet users by June: Iamai-IMRB report", Live Mint. 13 Jan 2015

Strengthening health systems: The deliberations from the conclave

Further improvements in insurance coverage is likely to enhance affordability in the country

Challenges in Indian healthcare	Deliberations from the conference
Acceptability	
<p>Low awareness and monitoring of healthcare services</p> <ul style="list-style-type: none">Health audits are not a routine phenomenon in the Indian hospitals due to low awareness and relatively lower focus on quality¹⁵Low technology adoption in the Indian healthcare system has led to low transparency issues in terms of identifying providers and their services, resulting in reduced trust of providers by patients	<p>Regular monitoring of healthcare services</p> <ul style="list-style-type: none">Regular monitoring of the healthcare system is required in order to maintain quality<ul style="list-style-type: none">Establish a regulatory body to audit health services in India, as has been recognised in the draft National Health Policy 2015 <p>Spread awareness regarding the need of health audit among hospital administrators</p> <p>Technology to improve transparency</p> <ul style="list-style-type: none">Technology-intensive approaches for governance can improve transparency in public healthcareHospitals need to leverage technology and improve transparency by publishing statistics regarding diseases’ registries and mortality ratesPolicies are required to make the Indian healthcare system more transparent and patient centric <p>Legislation for quality standardisation</p> <ul style="list-style-type: none">It is imperative for the Government of India to formulate and implement policies around quality standardisation in the healthcare system. For instance, amend the Clinical Establishment Act, 2010 to increase its acceptability among private players

“ We need to build a system that people can trust, regardless of who is running the system. ”

Helmut Brand | President | European Health Forum Gastein

“ In the new generation, mobile phone is the largest form of reach and can be used as a tool to tackle health issues. ”

Jagruti Bhatia | Senior Advisor - Healthcare | KPMG in India

“ The two dimensions of healthcare – acceptability and availability should go hand in hand to improve healthcare services. ”

Dr. Phyllida Travis | Director - Health Systems Department | WHO/South-East Asia Regional Office

“ Currently, India faces shortage of doctors and the requirement is high. We need more medical colleges to fulfil this gap. ”

Dr. Ashish Kumar Tiwari | CEO | Zynova Hospitals

Source: KPMG in India analysis, 2015 and deliberations from India EU Health conference 2015

15: High level expert group report on universal health coverage for India, Planning commission of India, accessed May 2015

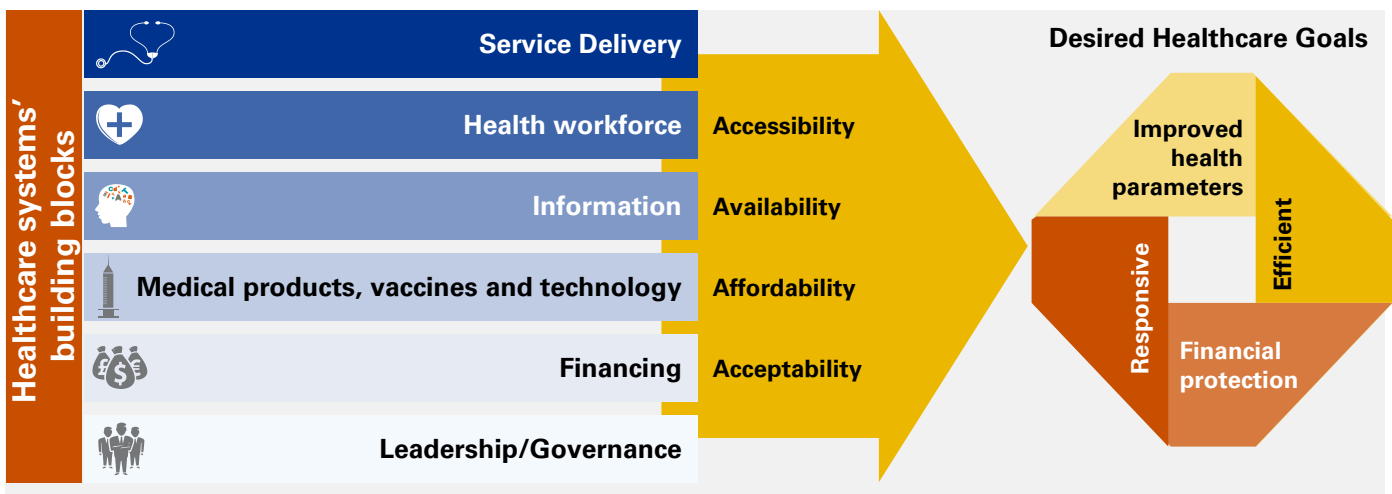
Session 2: Designing health systems: The context

Organisations, people and actions directed towards promoting, restoring or maintaining health altogether constitute an effective and efficient health system

A health system encompasses a range of organisations and people working in tandem with each other to improve and promote health by delivering quality services. A sound and operational health system responds in a balanced way to the needs and the expectations of the people by improving the health status of communities, families and individuals. Moreover, a health system needs to work towards defending the population against health threats and protecting its people against financial consequences of ill health. It needs to provide fair access to patient centered care and allow patients to participate in decisions affecting their health.

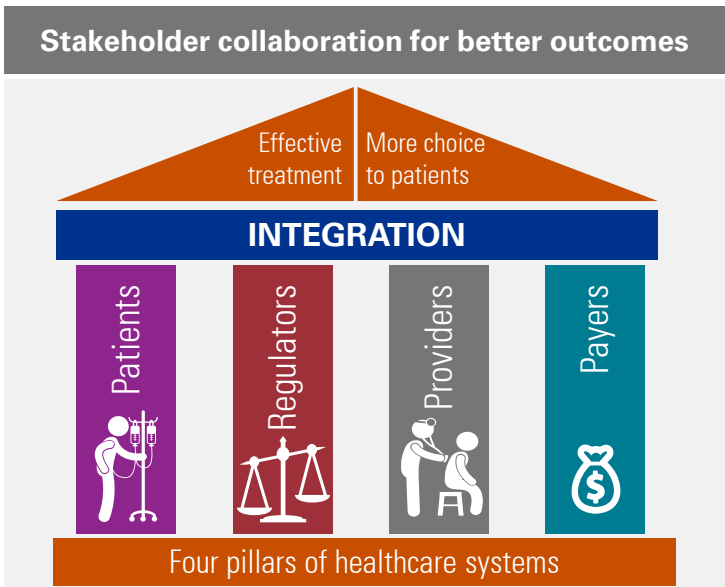
Integration of the six building blocks of healthcare can aid in designing a health system that can achieve the desired outcomes.

Building An Ideal Healthcare System



Growing patient awareness and availability of options has led to rising expectations and demands for higher quality healthcare services by patients. Globally, countries have started making changes in the healthcare system, keeping patients at the core of the healthcare architect.

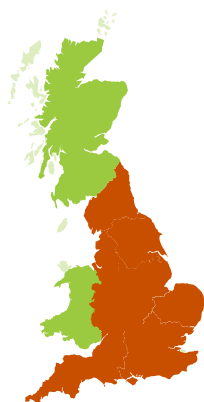
- **Integration:** Integrating patients, professionals, providers and those paying for and regulating care can bring together more choices for patients and possibly lead to effective treatment
- **Patient choice:** A nation's healthcare system should be centred around the patient's preferences, values and needs
- **Government role:** Policies and plans can play an important role in the integration of healthcare systems and maintaining high quality outcomes
- **Strengthening primary healthcare:** Strengthening primary healthcare centres with quality infrastructure, qualified medical officials and access to drugs can improve the healthcare outcomes



Source: KPMG in India analysis 2015

Case in point: England

England has proposed to adopt a new transparent health system based on the values of access and equity



England – building a healthy nation¹⁶

During the discussion on the World Economic Forum platform in January 2013, stakeholders identified several strategies for England that could help the country in building a **healthcare system based on the values of access and equity**. The central theme of the new healthcare system as envisioned was community care with home acting as primary locus of care, driven by innovative technology for remote diagnosis, cure and monitoring. Hospitals would act as highly specialised centres of excellence.

The proposed system aimed to provide its patients with in-depth information regarding the provider network and the treatment options that will help them take an informed decision. Beyond curative therapy, the system aimed to nurture wellness and preventive care among its people, making them responsible for it. Investments and decisions were to be based on value and data generated. The system aims for higher transparency on results and value. This visibility aimed to generate a competitive and innovative delivery sector.



Service Delivery¹⁶

- Fostering an innovative service delivery atmosphere by
 - Writing “early winners” legislation, remunerating innovative delivery models that focus on short-term results along with sustainable impact
 - Allowing healthy competition, entry and exit of providers focusing on low-risk treatments
 - Designing unconventional finance schemes for innovative treatment models such as employer incentives and fostering a milieu for new industries focused on health (e.g. healthy fast food)
- Continuing to provide cohesive care across other geographical regions and healthcare silos
- Restricting the provider and commissioning board CapEx limit on unproductive treatments



Health workforce¹⁶

- Investing in health education at school and community level; e.g. with local football clubs
- Linking welfare inducements to a healthy lifestyle
- Engaging with a range of stakeholders to develop a robust public program for healthy living
- Greater investment for enhancing well-being and greater compliance with medical treatments
- Linking predictive models with consumption data, such as supermarket cards for a more current and accurate outlook on the risk of patients



Financing¹⁶

- Establishing a state-funded infrastructure, with incentives for the new healthcare providers
- Changing budgets from five years to long-term CapEx for providers of chronically ill patients, shifting the emphasis of support system to long-term healthy living



Leadership/Governance¹⁶

- Expanding the directive of the National Institute for Health and Care Excellence (NICE) outside of drugs and technology to include the whole healthcare ecosystem
- Establishing new standards for transparency and value-based policy-making via the use of innovative technology to create an environment of data symmetry and information between all the healthcare stakeholders

Source:16: “Sustainable Health Systems Visions, Strategies, Critical Uncertainties and Scenarios”, World Economic Forum, Pg 10-11, accessed May 2015, KPMG in India Analysis

Designing health systems: The deliberations from the conclave

Universal health coverage along with availability of information can help enhance service delivery and increased patient participation, making collaboration easier for the providers

Challenges in Indian healthcare

Deliberations from the conference

Service delivery

Rising accessibility challenge

- India is working towards providing universal access to healthcare to its populace, but it faces certain challenges:
 - Primary healthcare in India is not well integrated with the higher levels, and is further riddled with problem of sub-optimal infrastructure¹⁷
 - Secondary healthcare infrastructure and quality has mostly been unsuccessful in matching the demand of growing population
 - Tertiary healthcare's rising costs tend to widen the gap of accessibility to the low income group: The economic burden of treatment for In patient department (IPD) services for low income group is more significant as they end up spending 217 per cent of the monthly household expenditure on a single episode of illness while accessing a private setup¹⁸
 - Despite the advent of major hospital chains in the country in the last decade, total bed capacity remains deficient. Hospital bed to population ratio in India is 0.5 per 1,000 population, lowest among all BRICS countries¹⁹. There is an additional requirement of 0.5 million beds to reach the target of 500 beds per one million people¹⁹

Comparison of infrastructure and human resource



Source: "Health equipment", OECD website, accessed on 3rd February 2015

- Burgeoning rural urban disparity is likely hampering the current efforts
- The sub-optimal and reactive government support has further added to the issue of accessibility to quality healthcare services

Implement a system with universal coverage

- Ensure alignment of the vision and needs of healthcare stakeholders with the political system for timely and effective focus on vital issues
- Develop centres of excellence across the country to avoid regional monopolies in the Indian healthcare system
 - For instance, Hungary has planned to establish regional health centres in all its areas, with the main centre in Budapest, together with three emergency centres²⁰
- Ensure professional management with spending on the right things to tackle persistent issues in not only public, but also private healthcare systems, ensuring quality care

Leverage health technology assessment strategy for effective healthcare policies and resource utilisation

- Develop a multidisciplinary process to use health technology for formulation of safe and effective health policies that are patient focused and enhance the usage of healthcare resources

Ensure universal system with universal coverage

- Focus on incentivising new technologies and innovation to enhance accessibility and affordability of healthcare services

Demographic profile driven healthcare framework

- Work with the demographic profile of the country while constructing the infrastructure and the policies of healthcare delivery systems

Source: KPMG in India analysis, 2015 and deliberations from India EU Health conference 2015

17: "Healthcare in India: current state and key imperatives", KPMG, February 2015

18: "Understanding universal access in healthcare in India", OPPI, June 2013

19: "Healthcare woes: India has 1 govt hospital bed for 879 people", Indian express, 24 August 2013

20: "Hungary – Preparing for the healthcare future", Hope Agora, 2014

Designing health systems: The deliberations from the conclave
Increasing accessibility of health-related information and decreasing dependency on imports of medical devices are further likely to help achieve the dream of universal health

Challenges in Indian healthcare	Deliberations from the conference
Information	
Inadequate access to information <ul style="list-style-type: none"> The problem of asymmetrical information where the care giver has more information than the care-seeker, renders the healthcare system frail <ul style="list-style-type: none"> With only 68 per cent literacy rates in rural India²¹, there is a limitation for a person to think and care about his own health The population of India faces a lack of clarity/knowledge around the availability of healthcare benefits, policies to support them, immunisation needs and exemptions, the necessity of adoption of preventing healthcare techniques, the availability of the government support in the form of financing, programs and policies, etc. 	Ensure pro-active participation of the population in their healthcare needs <ul style="list-style-type: none"> Patients need to be more proactive in seeking information on their care process from their care providers. Higher level of patient engagement can enable them to take informed decisions It is imperative to focus on the importance of preventive healthcare Increased access to healthcare information leads to informed decision making <ul style="list-style-type: none"> There is a need to increase awareness around the rights and benefits of the patients <ul style="list-style-type: none"> For instance, National Rural Employment Guarantee Act (NREGA) was backed by robust awareness campaigns to keep the potential beneficiaries and stakeholders involved at every stage Use media as an important tool to spread awareness around healthcare topics <ul style="list-style-type: none"> For instance, the awareness created in the country around HIV and tobacco incidence and prevention via print and digital media should be replicated for other diseases
Medical products, vaccines and technology	
Expensive capital technology <ul style="list-style-type: none"> The sector accounts for a high cost of capital technology driven by the import of medical devices. Currently, the medical device and equipment's imports fulfil more than 70 per cent of the demand of the medical devices in the country²² 	Indigenous manufacturing of medical equipment <ul style="list-style-type: none"> Medical equipment constitutes around 30-40 per cent of the overall hospital establishment cost and local manufacturing can help in reducing this cost The Make in India program could reduce the cost of medical devices by promoting indigenous manufacturing <ul style="list-style-type: none"> Establish medical device parks and medical device testing labs Draft separate legislation/ regulations for medical devices

Source: KPMG in India analysis, 2015 and deliberations from India EU Health conference 2015
 21: Census of India 2011
 22: "Healthcare sector seeks increase in import duty on medical devices", Live Mint, 23 February 2015;

Designing health systems: The deliberations from the conclave

Appropriate forms of financing form the backbone of a dynamic health system, where medicines also play a life-saving role

Challenges in Indian healthcare

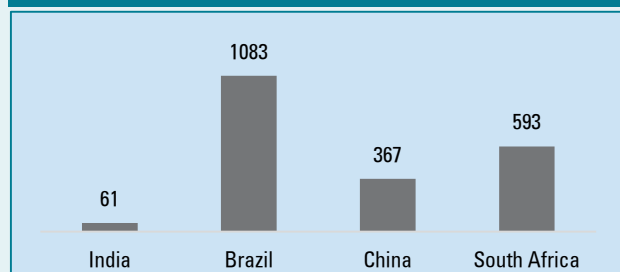
Deliberations from the conference

Financing

Low healthcare spending

- Sub-optimal levels of public spending in India across markets – public health expenditure accounts for only one per cent of the GDP
- Low levels of health expenditure per capita spend in India (USD61 in 2013), even in comparison to other emerging markets (Brazil – USD1,083, China – USD367, South Africa – USD593)²³

Comparison of infrastructure and human resource



Source: "Health expenditure per capita (current US\$)", The World Bank, accessed May 2015;

- OOP expenditure accounts for around 60 per cent of the total healthcare spending²⁴

Use of drug price control to enhance accessibility

- Drug price control measures are perceived to be a method of improving access to healthcare
 - According to an OPPI study, the price index of a Drug Price Control Order (DPCO) drug in 2011 increased by more than 39 per cent in comparison to a non-DPCO drug, reflecting that price regulation is not an effective measure to ensure accessibility of affordable medicine²⁵

Adopt an innovative healthcare financing strategy

- Use other forms of financing such as leveraging a health cess to ensure greater advantage to all the stakeholders.
 - Medicaid in the U.S., and Fondo Nacional de Salud (FONASA) in Chile were social health insurance schemes devised in accordance with the model of focusing actions and were financed predominately by the State, although they have been organised through social security schemes²⁶
- Increase GDP expenditure on healthcare
 - The Government of India has already proposed increasing this to 2.5 per cent of GDP in the draft National Health Policy 2015.

- Avoid financing healthcare system by taxing inputs used in healthcare as it impedes the price system

Overcome the myth that reducing prices increases access

- Prices are a narrow focus and don't cover the multi-factorial view of a robust healthcare system
- Embrace new policies for price regulation of both healthcare delivery and input to reduce inefficiencies in the system

“ India has an opportunity here in the healthcare technology to leapfrog in preventive healthcare because EU has been unsuccessful in getting anywhere with this. ”

Prof Bengt Jonson | Stockholm School of Economics

“ Availability of high quality medicines, equitable access to care, high quality appropriate care and affordability are like four interdependent balloons that are constantly competing with each other. ”

Ms. Anita Katharina Wagner | Associate Professor
|Harvard Medical School and the Harvard Pilgrim Health Care Institute

Source: KPMG in India analysis, 2015 and deliberations from India EU Health conference 2015

23: "Health expenditure per capita (current US\$)", The World Bank, accessed May 2015

24: "Healthcare in India: current state and key imperatives", KPMG, February 2015

25: "Understanding healthcare access in India", pg. 26; OPPI study, June 2013

26: "Essential Medicines and Health Products Information Portal", A World Health Organization resource, accessed May 2015

Designing health systems: The deliberations from the conclave

Effective oversight, designing of competent policy framework, pertinent regulations and a push from the top are required to pursuit national health goals

Challenges in Indian healthcare	Deliberations from the conference
Leadership/Governance	
Lack of focus on healthcare <ul style="list-style-type: none">Healthcare in India is primarily a state government responsibility, while the central government is largely responsible for policy makingIt is still not considered as a top agenda among the stakeholders, as was reflected in the 2015 Union budget:<ul style="list-style-type: none">The Union Budget 2015 failed to give the sector its due attention as it did not contain any specific programmes or policies to achieve the “Health for all” visionGranting ‘infrastructure status’ to the healthcare sector, which has been long awaited was also missingAbsence of a clear roadmap and focus on primary health delivery	Making healthcare a national priority <ul style="list-style-type: none">The government needs to take a leading role among all the stakeholders to give the healthcare sector its due importance Resolve the issue of transparency in the leadership <ul style="list-style-type: none">Stress on the need for strong government or payer mechanism to drive accountability

“ We have begun the process of managing healthcare by seeing the amount of money we will be spending (capping total expenditure on healthcare), leading to inefficiency. ”

Mr. Fredrik Erickson | Director | ECIPE

“ We cannot make informed decisions without having information on what we do, who pays for it, who gets it, etc. There is always some data available to make information. ”

Ms. Anita Katharina Wagner | Associate Professor |Harvard Medical School and the Harvard Pilgrim Health Care Institute

Source: KPMG in India analysis, 2015 and deliberations from India EU Health conference 2015

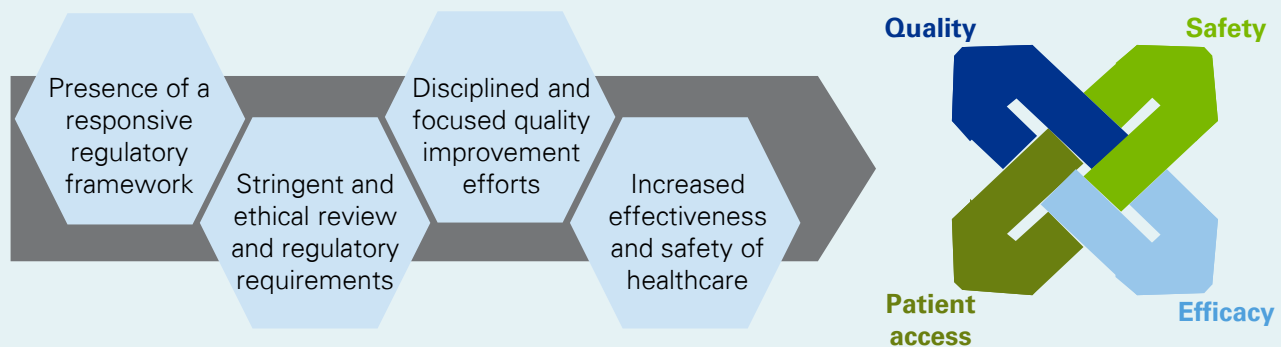
Session 3: Creating regulatory systems to support healthcare reform: The context

A responsive regulatory framework is imperative to ensure safety, quality of care and measure outcomes for enhanced patient experience

While several industries globally have successfully acquainted themselves with rigorous controls and reporting requirements, the healthcare industry is still seen as developing its governance of quality care. It is yet to discover an effective way of providing oversight and support, along with establishing an effective governing base. In the midst of growing compliance issues, it is vital to measure and monitor quality in an effective and efficient manner.

To leapfrog this development, an external review mechanism or a regulatory framework can act as a binding force for any successful healthcare delivery system. It covers a gamut of loosely-knit factors of quality, safety, and efficacy to ensure faster patient access, which forms the foundation of the healthcare industry. The regulatory reforms of a country not only help ensure greater patient safety and accessibility, but can also pave the way for enhancing the universal health coverage in a country.

Ideal regulatory framework: helping ensuring a robust healthcare delivery model

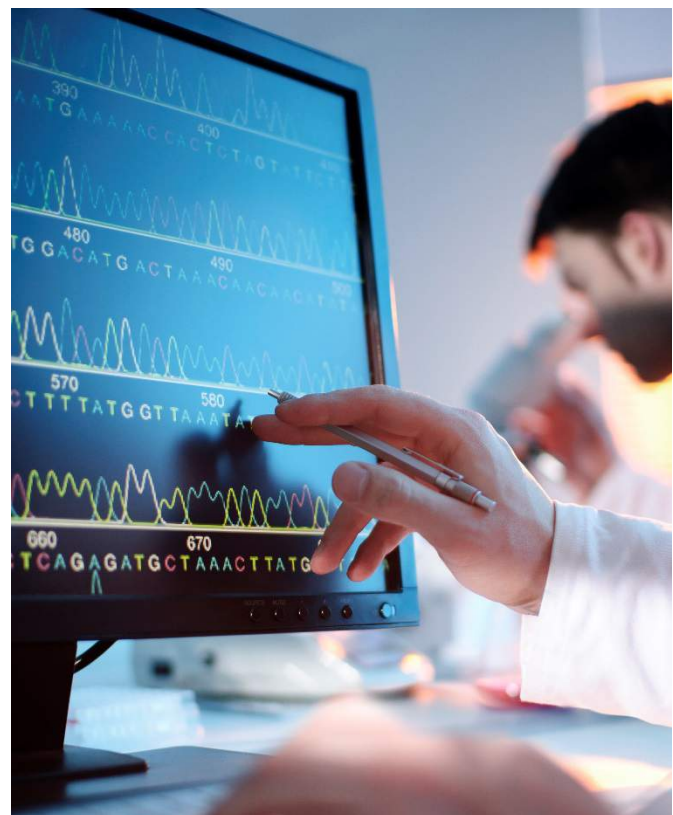


Source: KPMG in India analysis 2015

The use of external regulatory levers such as the government and other regulatory bodies to enhance performance within healthcare organisations, and reach all the segments of the economy effectively could prove to be more beneficial.

Main forms of external review mechanism:

- **Accreditation** of healthcare providers guarantees that an organisation meets the defined minimum standards and induces a development process where best practice is promoted
- **League tables** compare rankings on performance indicators for professionals and/or hospitals



Case in point: U.K.
The U.K. regulatory system has ensured a quality healthcare system for its patients by adopting policies focusing on safety and efficiency of the patient care



Case in point: The U.K. regulatory system²⁷

Overview

- The U.K. healthcare system is by far one of the largest central government run, tax funded and publically provided healthcare system globally.

Regulatory reforms

- The NHS, since its inception has gone through various regulatory reforms to evolve and meet the patient needs. Inefficiencies in the system called for the set up of the Care Quality Commission (CQC) in 2009 to oversee the entire healthcare and social care system including public, private, and voluntary. The Commission for Quality and Innovation (CQUIN) was introduced in 2009 along with the mandate that all healthcare providers produce quality accounts annually.

Outcome

- Greater focus being laid on documenting safety, effectiveness and patient experience. The doctors in the region are required to renew their license every five years, ensuring compliance with Good Medical Practices. A responsive approach to regulating U.K.'s healthcare system strives to ascertain real quality up-gradation and a competent healthcare system for the patients using supervision and oversight by the regulators.

Source: 27: "Regulation of the Healthcare Sector and its Professionals", Able Solicitors & Notary Public website, accessed April 2015



Creating regulatory systems to support healthcare reform : The deliberations from the conclave

Strengthening current policies and regulations is imperative to achieve universal health coverage along with quality outcomes in the healthcare services

Challenges in Indian healthcare	Deliberations from the conference
Healthcare system	
<p>The current regulations do not conform to the healthcare system needs</p> <ul style="list-style-type: none"> Absence of a unified regulatory framework encompassing the sector 	<p>Implement congruent legislative reforms in the healthcare sector</p> <ul style="list-style-type: none"> Stronger implementation of reformed laws and regulations is required Initiate a regulatory dialogue with different strategic partners globally in order to develop a unified regulatory framework Recognise professional qualifications by developing legislations such as the directive of professional qualifications in EU Develop a unified regulatory framework similar to China <div data-bbox="863 1006 1505 1373"> <p>China</p> <p>State Council of the People's Republic of China</p> <p>↓</p> <p>China Food and Drug Administration (CFDA)</p> <p>↓</p> <p>General Office, Dept. of Planning and Finance, Dept. of Legal Affairs, Dept. of Food Safety Supervision, Dept. of Drug and Cosmetics Registration, Dept. of Drug and Cosmetics Supervision, Bureau of Investigation and Enforcement, Dept. of Science, Technology and Standards, Dept. of Human Resources, Dept. of Medical Device Registration & Supervision, etc.</p> </div> <p><small>Source: "Organisational chart", China food and drug administration website, accessed June 2015</small></p>
Quality Control	
<p>Weak regulatory mechanism to oversee quality of health services</p> <ul style="list-style-type: none"> Regulatory measures are weak to regularly check the quality of healthcare services in the public and private hospitals Quality standardisations are partially implemented in the healthcare sector <ul style="list-style-type: none"> Low commitment and awareness in both the public and private sector in adopting quality standardisation practices 	<p>Ensure robust mechanism for quality control in health services</p> <ul style="list-style-type: none"> The government needs to focus on employing a regulatory framework for improving quality, efficiency and accountability of healthcare services Focus on outcomes of the quality of care <ul style="list-style-type: none"> A good practice would be to share critical operational and clinical data on a periodic basis from registered medical facilities Administrative and managerial reforms are required at the central and the state level health departments to streamline healthcare services It is imperative to spread awareness around health audits to the hospital administrators

Source: KPMG in India analysis, 2015 and deliberations from India EU Health conference 2015

Creating regulatory systems to support healthcare reform: The deliberations from the conclave

The policies around drugs and medical devices need to be addressed on priority to achieve universal healthcare access

Challenges in Indian healthcare	Deliberations from the conference
Drugs and medical devices	
<p>No separate legislation for regulating medical devices</p> <ul style="list-style-type: none">Separate regulations around medical devices are required as currently they fall under the drugs and cosmetics act <p>Multiplicity in policy making in the pharmaceutical sector</p> <ul style="list-style-type: none">Involvement of about 3-4 ministries in decision making is leading to delays in getting approvals in the life sciences sector<ul style="list-style-type: none">The Department of Pharmaceuticals focuses on the pharmaceutical sector and falls under the Ministry of Chemical and Fertilisers whereas the Central Drug Research Institute, the implementation wing, is under the Ministry of Health and Family Welfare	<p>Separate regulations for medical devices</p> <ul style="list-style-type: none">The government needs to amend the current Drug and Cosmetics Act in order to introduce separate provisions for medical devices <p>The Government of India is initiating several steps towards recognising the medical device sector such as amending the existing Drug and Cosmetic Act to include medical devices, setting up medical device testing laboratories and medical device parks</p> <p>A unified regulatory body for pharmaceutical sector</p> <ul style="list-style-type: none">As a long term approach - a single unified ministry with policy making and implementation power can reduce multiplicity in policy making <p>The Government of India is taking some positive steps around the legislative, pricing and marketing reforms in the pharmaceutical sector. However, comparable efforts are required to streamline the healthcare sector at the central and the state level</p>

Multiplicities in policy making in India

Ministry of Science and Technology

Ministry of Chemicals and Fertilisers

Ministry of Health and Family Welfare

Department of Biotechnology (DBT)

Department of Pharmaceuticals (DoP)

Central Drugs Standard Control Organisation (CDSCO)

■ Largely involved in implementation ■ Mostly policy making

Source: KPMG in India analysis, 2015

Massive overhaul process is taking place around the regulatory area in India. Legislative amendments in current regulations, strengthening capacity of regulators, pricing reforms along with reforms in the marketing area are being undertaken.

Sudhansh Pant | Joint Secretary | Department of Pharmaceuticals | The Government of India

India is becoming one of the major players in healthcare. It needs to adopt a unified approach and start at the very operational level, like implementation of standardisation in their procedures.

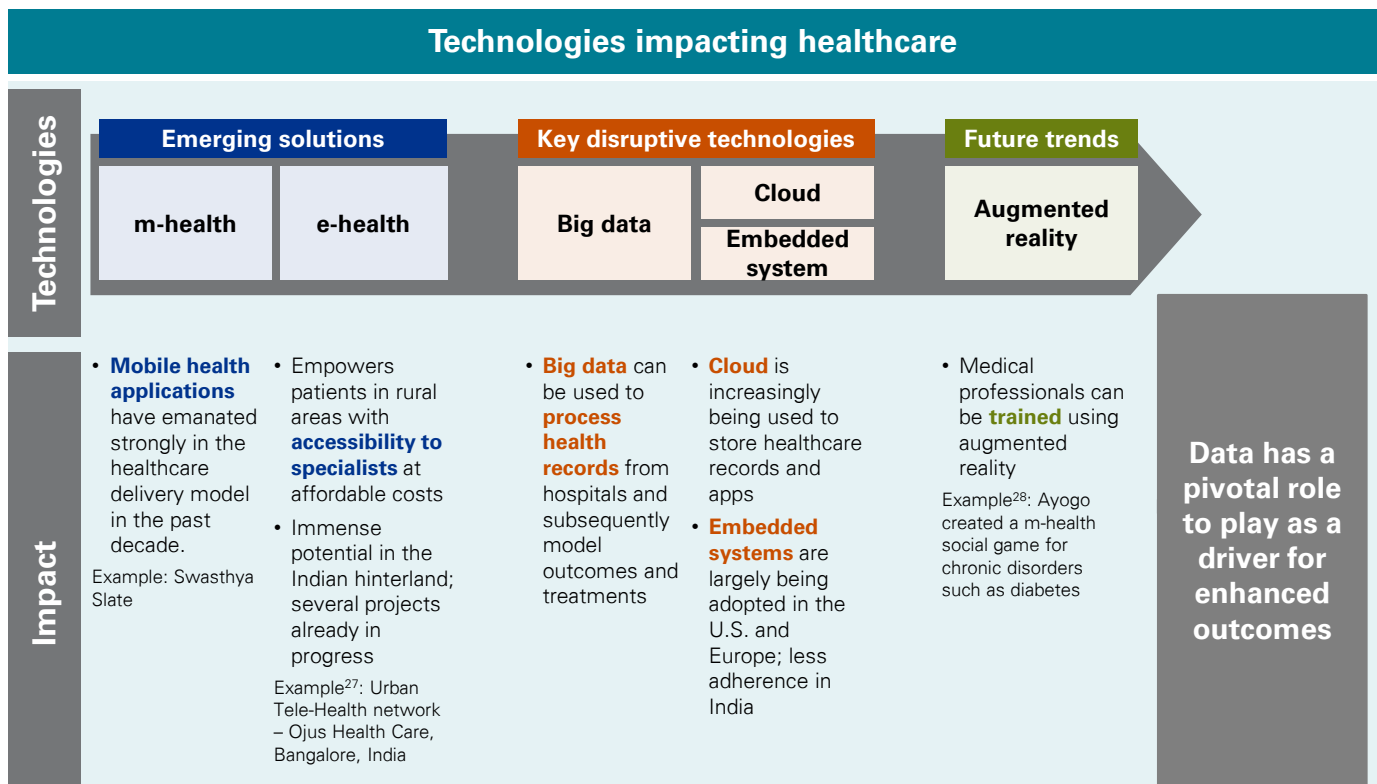
Prof. Guido Rasi | Principal Advisor in Charge of Strategy | European Medicines Agency

Source: KPMG in India analysis, 2015 and deliberations from India EU Health conference 2015

Session 4: Data as a driver for better outcomes: The context

There is an urgent need to modify and enrich the existing healthcare models by leveraging big data generated across the Indian healthcare value chain

Innovation, in the form of both product and process innovation, has the potential to transform the healthcare landscape in India. Presently, information technology is a driving force for innovation in the healthcare industry. To accelerate universal healthcare coverage, it is imperative to address the challenge of bridging existing data gaps and exploiting new technologies.



Source: KPMG in India analysis, 2015
 27: "Telehealth in India", International Telecommunication Union, 2011
 28: "Behaviour Change Platform", Ayogo website, accessed June 2015

M-health

- M-health has the potential of substituting a part of the future physical infrastructure (including clinics, hospitals, etc.) with remote diagnosis, monitoring and care in the country
- It is being touted as the future of rural healthcare, empowering the rural population with greater accessibility to healthcare services by reaching the remotest locations at affordable prices
- Healthcare providers can leverage India’s vast wireless subscriber base network of 952.34 million users (as of January 2015)³¹

E-health

- E-health, broadly covering the use of information and communication technology in health, offers a plethora of possibilities of communicating important health messages to the entire populace
- Its various forms including tele-medicine, care at home, and e-diagnostics, among others and has the potential to not only improve the quality of healthcare, but also increase coverage of remote areas
- The Ministry of Health and Family Welfare plans to start an “e-healthcare service” to fortify healthcare awareness in the rural parts of India

Source: KPMG in India analysis, 2015
 29: "Highlights of Telecom Subscription Data as on 31st January, 2015", TRAI website, accessed April 2015

Data as a driver for better outcomes: The context

Application of big data analytics in analysing population data and keeping a check on counterfeit drugs can help India achieve its “Swastha Bharat” status



Population data

- The country is going through a paradigm shift in its demographics and disease profiles, leading to discrepancies in health measurement
- A web-based Health Management Information System (HMIS), developed during the 11th FYP, captured data restricted to disease patterns in the public domain. This data is seldom used for program planning or monitoring³⁰
- Efforts are being made under the 12th FYP to enhance systems such as HMIS³¹



E-health

- Patients in 124 countries³² were affected by counterfeit drugs in 2011. These substandard medicines are a serious public health problem.
- According to the WHO estimates, around 20 per cent of drugs sold in India are fake³³.
- Drug authentication using mobile technology is being used to reach all sections of society possessing a basic mobile handset and helping ensure accessibility to high quality medicines.
- Moreover, the future medicine intake behaviour of the patients can also be predicted by tracking and analysing the past behaviour. This analysis can help in designing preventive drug abuse programs and promoting rational use of medicines
- It can also improve health outcomes by improving compliance.

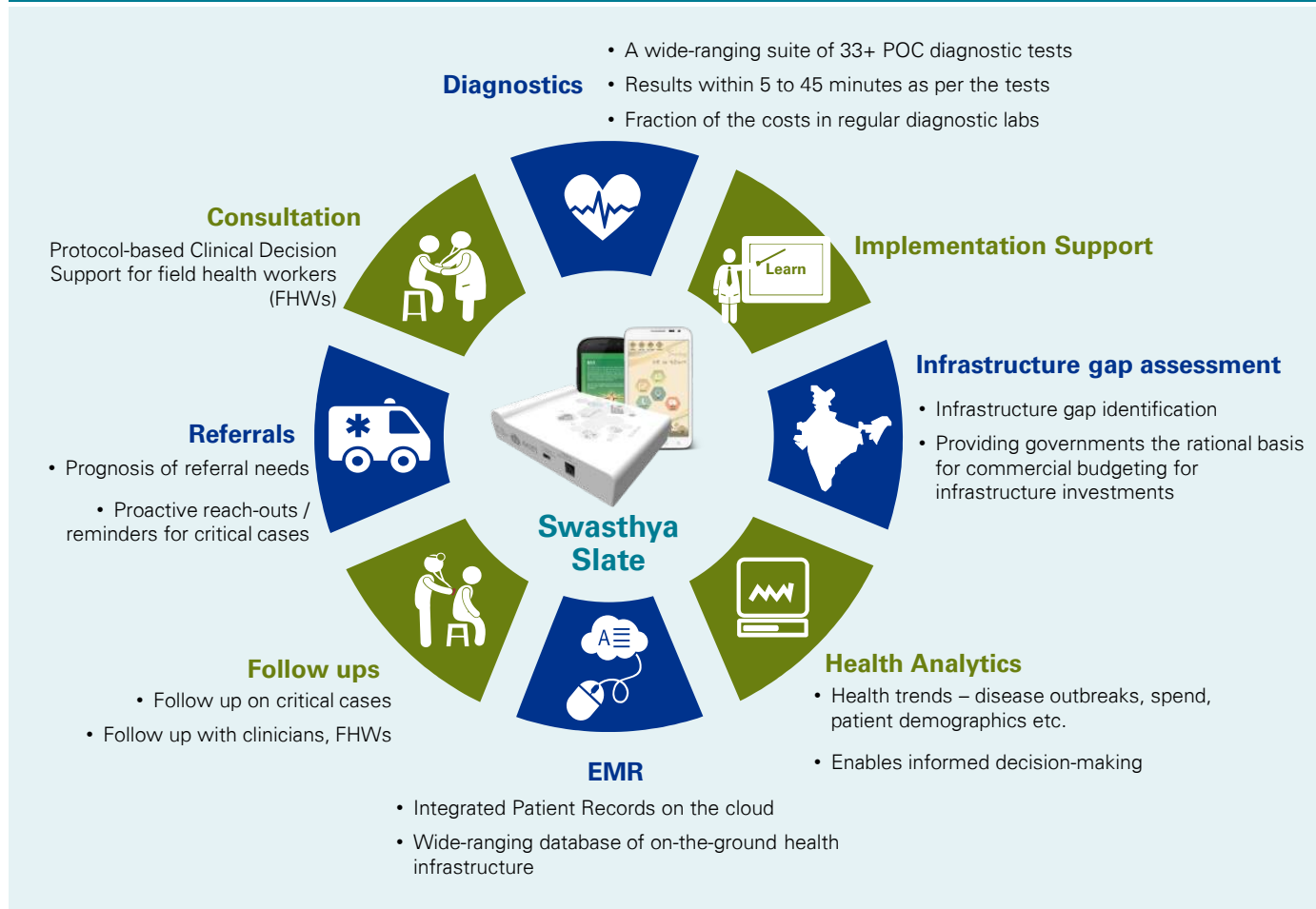
Source: KPMG in India analysis, 2015
30: “Twelfth Five Year Plan (2012-2017), Volume-III”
31: “The Twelfth Five-Year Plan for Health Sector Development”, WPRO website, accessed April 2015
32: “Source code: PharmaSecure goes mobile in battle against fake drugs”. The Gurdian website, accessed April 2015;
33: “PharmaSecure Uses Mobile Device And ID Codes To Take On Counterfeit Drug Problem”, Forbes website, 16th February 2012, accessed April 2015



Case in point: India

Indigenously developed technological platform – Swasthya Slate, can help deliver affordable quality care in remote areas of India

Case in point - India



Source: KPMG in India analysis, 2015

- The Public Health Technology Trust developed “Swasthya Slate”, which is an integrated, innovative, tablet-based portable diagnostic device capable of performing 33+ point of care diagnostic tests, provides clinical decision support and healthcare infrastructure gap assessment analysis
- It also includes specialised applications for health screenings, follow-up services including consultations and referrals and back-end health analytics for critical decision-making
- This equipment is expected to help India in creating population data at the rural level, which has so far remained a blind spot
- The population data can be further used for health analytics and infrastructure gap assessment, helping create a robust and efficient health system

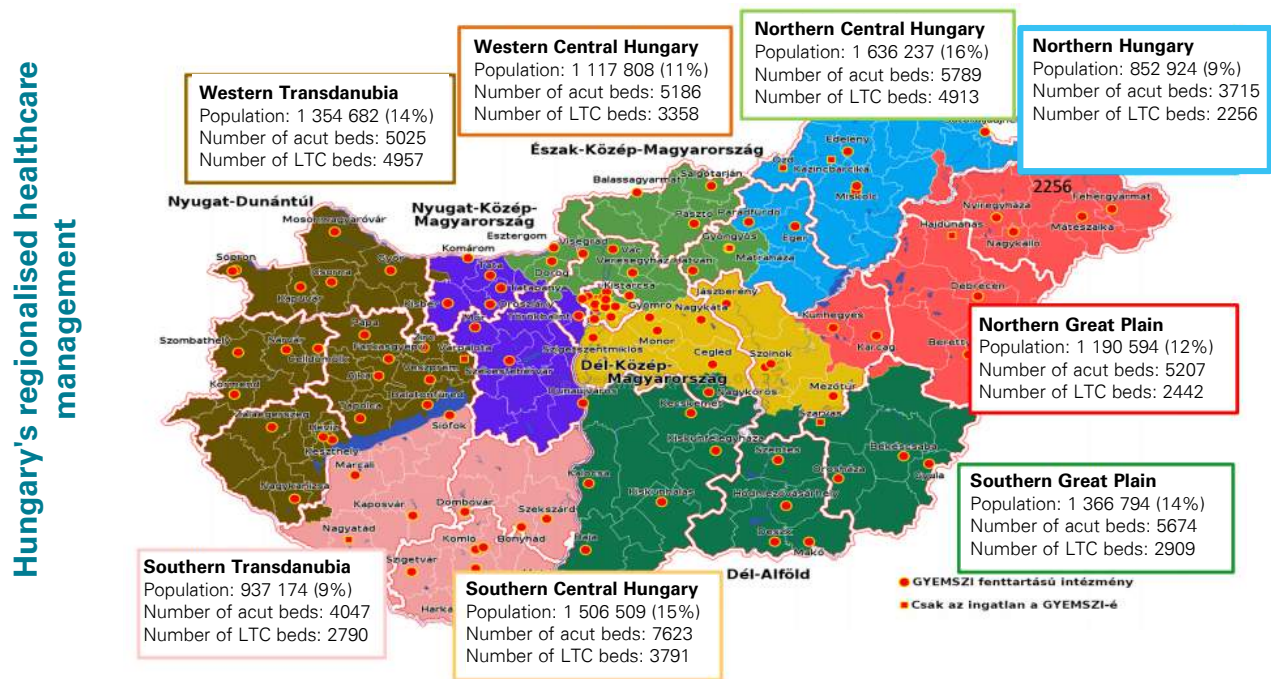
Source: KPMG in India analysis, 2015; Swasthya Slate website, accessed May 2015

Case in point: Hungary

Hungary used big data to analyse patient movement across counties to identify care regions and re-designed its healthcare system to provide better services

Case in point: Leveraging big data in Hungary³⁴

- Background:** The country faced a crisis in public healthcare, sustainability of health systems, human resources and the global economy
- Action:** Hungary adopted a data based approach to find solutions to its underlying problems. It tracked patient's geographical movements within the country to create healthcare regions. These regions were drawn up using the measure of patient pathways to analyse where the patients were getting referred to
- Outcome:** This data analysis enabled them to identify focal points of specialty hospitals for a given therapy area, for instance, cancer. It reflected that in one case patients were moving away from one cancer hospital to another due to the unavailability of radiotherapy in the former



Source: "Hungary – Preparing for the healthcare future", Hope Agora, 2014

Hungary re-designed its healthcare system to overcome challenges³⁴

In late 2011 and early 2012, Hungary's healthcare system was structured into eight geographical areas, with 1-1.5 million citizens each. In all these zones, **regional health centres were planned to be established**, while the main centre was to be located in Budapest together with three emergency centres.

Objectives Of The New Health System³⁴

- 1 Increasing allocations for healthcare and prevention programmes
- 2 Improving and rationalising the hospital system
- 3 Increasing allowances for General Practitioners, arming them with new equipment and health IT systems
- 4 Promoting one-day-surgery services to reduce the in-patient load
- 5 Establishing an advanced, zonal oncological network
- 6 Promoting preventive health awareness by campaigning for physical and sports activities on regular intervals

Sources: KPMG in India analysis, 2015;

34: "Hungary – Preparing for the healthcare future", Hope Agora, 2014

Leveraging big data can foster collaborations among healthcare stakeholders and assist in devising real-time solutions to existing issues

Challenges in Indian healthcare	Deliberations from the conference
Lower levels of acceptance and usage of big data <ul style="list-style-type: none">Healthcare policies and decision making in India suffers from low availability of population health dataDespite the requirement for perpetual innovation, the Indian healthcare industry has still not awakened to the advantages of big data	Integrate big data into the healthcare system <ul style="list-style-type: none">Designing regional specific system: Promote the use of big data on a systemic level to design patient pathways and help analyse the healthcare situation in a regionRationalise spending: Adopt a big-data approach to plan optimal usage of healthcare resources to achieve greater cost management Design policy: Utilise the big data opportunity to induce transparency in the system and drive demandUse surrogate markers such as hospital admission data, to substitute for population dataAdopt population data based models to price the healthcare services and products
Low technology penetration in healthcare system <ul style="list-style-type: none">There is limited use of technology in both preventive and curative healthcare practices	Nourish the healthcare system with innovative technology <ul style="list-style-type: none">Focus on the cautious development of e-health and m-health ecosystem to help ensure greater connectivity and reach a larger section of the societyIntroduce new ideas like gamification to augment patient participation in their health
Debate on ownership of data <ul style="list-style-type: none">With no clear policy on data privacy, analysing and storing large patient data or using a global technology can increase risk of data misuse	Give data privacy critical importance <ul style="list-style-type: none">While according due importance to data privacy and ownership, stringent regulations governing it are imperativeRethink the need for allowing data movement across regions and countries while ensuring they are not subject to any breach of privacy and integrity

“ Big data along with network analysis is more than just data valuation – it uncovers the invisible. ”

Miklos Szocska | Ministry of State for Health,
Ministry of HR for Hungary

“ Citizens create, own, and control their own data. ”

Prof. Dr. Angela Brand | Founding Director of
the Institute for Public Health Genomics |
Maastricht University

“ The wealth of data sitting in the market today, waiting to be unlocked, is phenomenal. ”

Nathan Sigworth | Co-founder and Director | PharmaSecure

Source: KPMG in India analysis, 2015 and deliberations from India EU Health conference 2015



Appendix



Session title and panellists

Session	Panellists
Introductory session: Building Health Systems for Universal Coverage	Ms. Ranjana Smetacek, Director General, OPPI
	Prof. Helmut Brand - Head of the Department of International Health at Maastricht University and President, European Health Forum Gastein
	Mr. Richard Bergstrom, Director General, EFPIA
Session 1: Strengthening health systems	Ms. Jagruti Bhatia, Senior Advisor- Healthcare, KPMG in India
	Dr. Phyllida Travis, Director, Health Systems Department, WHO/South-East Asia Regional Office
	Dr. Ashish Kumar Tiwari, CEO, Zynova Hospitals
	Prof. Helmut Brand, Head of the Department of International Health at Maastricht University and President, European Health Forum Gastein
Session 2: Designing health systems	Dr. Fredrik Erixon, Director, European Centre for International Political Economy (ECIPE)
	Dr. Anita Katharina Wagner, Associate Professor, Department of population medicine, Harvard medical school and the Harvard pilgrim healthcare institute, Boston
	Professor Bengt Jonnson, Professor Emeritus of Health Economics at the Stockholm school of economics (SSE), Sweden
	Mr. Amit Backliwal, Vice President, Technology and Services, IMS Health
Session 3: Creating regulatory systems to support healthcare reform	Mr. Sudhansh Pant, Joint Secretary, Ministry of Chemicals and Fertilisers, Department of Pharmaceuticals, The Government of India
	Dr. Andrzej Rys, Health Systems and Products Director, Health and Food Safety DG, European Commission
	Prof. Guido Rasi, Principal Advisor in Charge of Strategy, European Medicines Agency
Session 4: Data as a driver for better outcomes	Dr. Miklos Szocska, Minister of State for Health, Ministry of HR of Hungary
	Mr. Varun Sood, CIO and Head of Strategic Initiatives, Fortis Healthcare
	Mr. Nathan Sigworth, Co-founder and Director, PharmaSecure
	Prof. Angela Brand, Full Professor, Founding Director of the Institute for Public Health Genomics (IPHG) at Maastricht University

Source: India EU Health conference 2015

Abbreviations

AYUSH	Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homoeopathy
BRICS	Brazil, Russia, India, China and South Africa
CapEx	Capital Expenditure
CDSCO	Central Drugs Standard Control Organisation
CEO	Chief Executive Officer
CFDA	China Food and Drug Administration
CII	Confederation of Indian Industries
CIO	Chief Information Officer
CQC	Care Quality Commission
CQUIN	Commissioning for Quality and Innovation
DBT	Department of Biotechnology
DG	Director General
DoP	Department of Pharmaceutical
DPCO	Drugs Price Control Order
ECIPE	European Centre for International Political Economy
EMR	Electronic Medical Record
EU	European Union
EHR	Electronic Health Record
FHW	Field Health Worker
FONASA	Fondo Nacional de Salud
FYP	Five Year Plan
GDP	Gross Domestic Product
GMP	Good Manufacturing Practices
GP	General Practitioner

HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HR	Human Resource
IMR	Infant Mortality Rate
IPD	In-patient Department
IPHG	Institute for Public Health Genomics
IT	Information technology
LE	Life Expectancy
LTC	Long Term Care
MMR	Maternal Mortality Rate
NAREGA	National Rural Employment Guarantee Act
NCD	Non-communicable disease
NHS	National Health Service
NICE	National Institute for Health and Care Excellence
OOP	Out of pocket
OPPI	Organisation of Pharmaceutical Producers of India
POC	Point of Care
PPP	Public Private Partnership
Prof.	Professor
SSC	Stockholm school of economics
U.K.	United Kingdom
U.S.	United States
USD	United States Dollar
WHO	World Health Organisation

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