

What can the UK learn from healthcare innovation in India?

Reflections from an International Partnership for Innovative Healthcare Delivery (IPIHD) study tour to India

This thought paper is the result of a week-long study tour to India, facilitated by IPIHD for senior leaders of healthcare systems and industry to learn from what is working in healthcare delivery. The tour provided an inside view of two specialist healthcare systems and two networks of care in Bangalore and Hyderabad. It was designed to explore new models that challenge the assumptions that can be taken for granted. Participants saw first-hand how innovation can drive quality and efficiency simultaneously.

The Health Foundation and representatives of the UK health system were among the tour participants and this thought paper presents their reflections on the lessons from the tour – and what they might mean for healthcare in the UK.

At the Health Foundation, we are seeking to enhance our understanding of healthcare quality improvement internationally. Alongside the tour, we have also commissioned some work to understand what improvement agencies around the world are doing to tackle healthcare challenges.

We hope that this thought paper will stimulate ideas, reflection and discussion.

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Foreword

Health systems around the world struggle to balance affordability, quality and access in healthcare delivery. In high-income countries, the response to these challenges often calls for more research and discussion, the establishment of committees and task forces to explore the issues in greater depth. But in low- and middle-income countries, where challenges in healthcare provision are exacerbated by factors such as poverty, lack of infrastructure and a shortage of trained providers, the need for solutions is often felt more urgently, driving entrepreneurs to challenge assumptions on the ground and find new, immediate ways of delivering healthcare that connect vulnerable populations with the care they need.

Reverse innovation, in which an innovation first adopted in a low-income country spreads to a higher-wealth country, is a growing trend across all industries, including healthcare. The logic is simple. Solutions will emerge first where the need for them is greatest. A model that cuts costs and increases quality of cardiac surgery in India, for example, can surely be adapted to do the same elsewhere.

The International Partnership for Innovative Healthcare Delivery (IPIHD), founded by the World Economic Forum, McKinsey & Company, and Duke University, works directly with healthcare innovators and senior leaders from industry and government around the world to forge partnerships that drive the successful scale and replication of these innovations.

IPIHD facilitated a study tour in India for senior leaders of healthcare systems and industry to learn from what is working in healthcare delivery in India, a country where only 5% of the population is covered by health insurance and two-thirds of all healthcare spending comes directly from patients' pockets. India faces significant shortages of healthcare workers and infrastructure, resulting in a lack of comprehensive treatment options. Many communities, particularly among the 70% of Indians in rural areas, have

no local access to care at all. And those that can access care must often choose between affordable public care with poor quality outcomes or incurring potentially crushing debt to pay for expensive private care.

In spite, or perhaps because, of this context, India is ripe with examples of innovations in healthcare delivery, models that leverage all existing resources to connect patients with low-cost high-quality care. There is no room for waste, no margin for misaligned incentives - only a driving need to provide better healthcare, for less.

The week-long study tour provided an inside view of four innovations in healthcare delivery and was designed to explore new models that challenge the assumptions that many of us take for granted. Participants saw first-hand how innovation can drive quality and efficiency simultaneously, two dimensions that, in the US and UK, we often think of as opposing values. This is something we saw again and again during the week: balancing the need for excellence in both quality and cost.

We were particularly interested in programmes and care delivery models that could improve care in the US and UK and to better understand how these models could be translated across boundaries. The next challenge comes in adopting, and adapting, the models to new contexts. Of course, providers and patients face different constraints and resources in the UK. But if we are serious about implementing solutions to our own healthcare challenges, we must focus on what we **can** learn from what is working in other places, rather than on what we cannot, and also on trying new solutions, rather than just discussing possibilities.

I commend the Health Foundation for its leadership in bringing the lessons from studying transformative health innovations around the world to the UK, and for its commitment to continuing to improve the quality of healthcare in the UK.

Krishna Udayakumar,
Executive Director, IPIHD

Introduction

To meet its ambition of continual improvement, the NHS has historically looked either within itself or at healthcare systems in other high-income countries. However, the unparalleled challenge now set for the NHS – to make efficiency savings of £30bn by 2021, and to do it whilst meeting the ever-changing needs of the population – will require an ever-wider search for solutions.

An October 2013 report from the health sector regulator, Monitor, stated that current approaches to efficiency will only get us two-thirds of the way towards the target and that there is a need to look to countries such as India for more radical ideas for savings.¹

Monitor's report was published in the same week that the International Partnership for Innovative Healthcare Delivery (IPIHD) led a study tour to India, visiting two specialist healthcare systems and two networks of care in Bangalore and Hyderabad.

IPIHD invited staff from the Health Foundation to take part in the tour. We were also asked to suggest participants from the UK health service so that the lessons gained from the tour could be applied to an NHS context. We were keen to get a broad spread of experience and expertise, and so invited health service leaders with nursing, medical, commissioning and senior management roles.

So what might the UK learn from what is happening in countries such as India?

India has often been cited for its innovative cost saving ideas for delivering healthcare. The Aravind Eye Care System, for instance, delivers low cost, high quality cataract surgery across five hospitals. By streamlining the delivery process in a way that can be replicated, doctors at Aravind can perform an average of 2,600 operations per year, compared with around 400 operations in other Indian hospitals.²

Of course, when looking for ideas to apply to the NHS, we must bear in mind the context. India's lower labour costs dramatically reduces the price and less regulation allows for greater flexibility in how the workforce is used. Current levels of access to healthcare in India also means, relative to the developed world, something is better than nothing. But none of this precludes us from seeking inspiration for how to solve the problems we face in the UK.

So whilst the context is different, the goal remains the same – the highest quality care provided to the largest number of people in the most efficient way.

The following sections provide an overview of the sites visited by the tour and then draw together the UK participants' reflections on what they saw – and what they would take back with them to the NHS.

¹ www.monitor.gov.uk/closingthegap

² www.innovationunit.org/blog/201106/innovation-healthcare-aravind-eye-care-system

Overview of the health centres visited by the tour

Narayana Health

www.narayanahealth.org

Vision

‘Japanese companies reinvented the process of making cars. That’s what we’re doing in healthcare. What healthcare needs is process innovation, not product innovation.’

Devi Shetty, Founder and Chairman

Context

70% of the urban Indian population is at the risk of being diagnosed with cardiovascular disease. It causes more than 25% of deaths, killing almost 2 million people a year.

Overview

- 18 hospitals
- Serves 1,000,000 people per year.

What do they do?

Narayana Health provides high quality, affordable cardiac care to the whole population. No one is turned away for lack of funds. This is made possible through a cross subsidy model, where income from those who can afford to pay subsidises the care of those who cannot. Each year subsidised inpatient care is provided to more than 50% of patients.

How do they do it?

Narayana Health is an example of how a noble social purpose can be met through a continuous focus on cost reduction, process standardisation and innovation. Through a series of innovations, Narayana Health has managed to substantially reduce the average cost of open heart surgery to \$2,000 – compared to between \$20,000 and \$100,000 in the United States. These innovations include an ‘assembly line’ concept, a pay-per-use model for medical equipment and low cost prefabricated buildings. The labour costs in India are also much lower, accounting for some of the difference.

Vaatsalya

www.vaatsalya.com

Vision

‘We have 1,500 people and it is our job to encourage innovation. The team is now focused on innovation and people are coming up with things that affect their work and saying, ‘We could do it this way.’

Aswin Naik, Co-Founder

Context

70% of the population in India lives in rural areas, yet 80% of the healthcare facilities are in urban areas.

Overview

- 17 hospitals
- Serves 400,000 outpatients and 14,000 inpatients per year.

What do they do?

Vaatsalya provides affordable and accessible primary and secondary healthcare services to under-served peri-urban and rural communities. It is the first hospital network to target smaller towns rather than the big cities, meeting the needs of rural India that has been chronically under-served in the past.

How do they do it?

Vaatsalya has created a viable model for small-town hospitals by operating lean processes, standardised operations and product specialisation to eliminate waste and reduce costs. They have an unashamedly ‘no frills’ approach, which means they are able to offer services at one-fifth of the price of comparable Indian Government services. Doctors have been offered consultant posts sooner than they would expect in urban hospitals, helping to address the 50% doctor vacancy rates typical in rural India

LifeSpring
www.lifespring.in

Vision

‘Understanding the centrality of a woman’s health to her household’s wellbeing and also supporting the household to care for their children is the essence of LifeSpring’s work.’

Anant Kumar, Founder

Context

Over 100,000 women die each year in India from pregnancy-related causes and an equal number suffer moderate to severe morbidities.

Overview

- 12 hospitals
- Examines 40,000 women and delivers 25,000 babies a year.

What do they do?

LifeSpring provides maternity care for between a third and a fifth of the cost of private hospitals. They have improved the care and capacity in the community health system as a whole and reduced the burden on overcrowded public facilities. They have also raised the quality and reduced the cost of neighbouring providers.

How do they do it?

LifeSpring’s model is based on specialisation and standardisation, and developing standard protocols for delivery. It is a ‘no frills’ environment for patients, deliberately lacking the comforts of most private clinics – but there’s an option for patients to upgrade their room for a fee.

LV Prasad Eye Institute
www.lvpei.org

Vision

‘Several factors motivated me to change the way eye care is provided in India: A lack of attention to quality in the previous system and a lack of equity in care, combined with the magnitude of the need... we saw the opportunity for a new model of care that could address the huge and unmet need.’

Dr Gullapalli N. Rao, Founder and Chair

Context

8 million blind people and 20% of the global visually impaired live in India.

Overview

- 95 Primary, 11 Secondary, 3 Tertiary care centres
- Serves 1,500,000 people per year.
- Through its outreach programme, 50,000 children are screened for eye disease a year.

What do they do?

LV Prasad have developed an innovative Pyramid Model of Eye Care (see Figure 1) to best meet the needs of the population and address issues of access and geography. It provides world-class eye care and 50% of its care is provided free.

How do they do it?

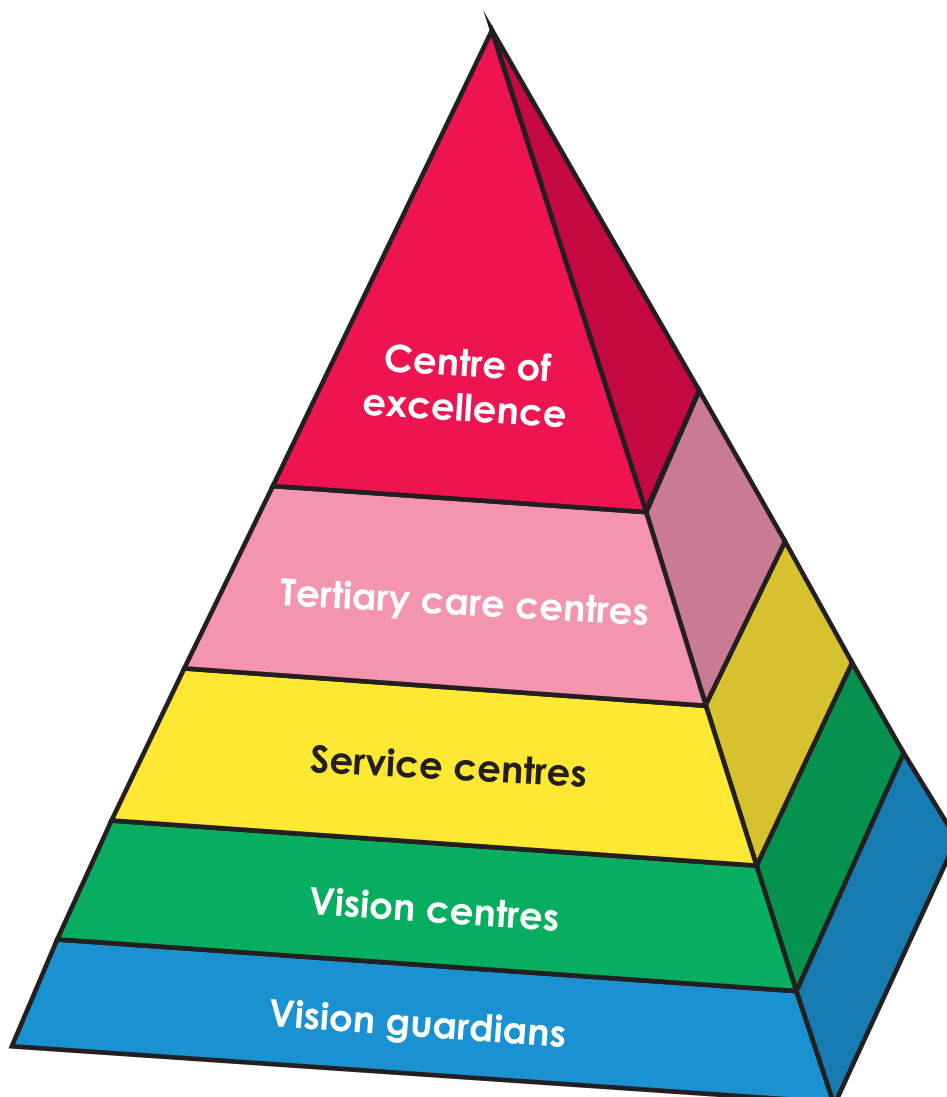
Those who can afford to pay extra have the option of extra room amenities, shorter waiting times or even a different type of lens. This funds the care provided to the poor, but the quality of the surgery remains the same. The additional throughput of subsidised patients gives the ophthalmologists the experience to turn them into experts, therefore driving the paying side of the business.

Figure 1: The LV Prasad Eye Institute pyramid of care

The pyramid model rests on the foundation of community involvement, with increasingly fewer, more specialised centres providing care for the more complex eye health problems the further up the model you go.

The pyramid comprises:

- **Centre of Excellence** – deals with highly specialised cases, subspecialty training hub, research and advocacy, eye banking and stem cell research. Population served: 50 million.
- **Tertiary care centres** – provide comprehensive eye services and training. Population served: 5 million.
- **Secondary centres** – can handle most complex eye issues and basic surgeries. They can diagnose all disease and perform cataract surgery. Population served: 500,000
- **Vision centres** – typically small facilities in rural areas, serving basic primary eye care needs. Technicians are community members who have been trained for a year. Population served: 50,000
- **Vision guardians and community eye care workers** – trained local residents conduct door to door visits raising awareness of eye conditions, offering preventative tips and referring those with problems to secondary centres. Population served: 5,000



Healthcare innovation in India: reflections from a UK perspective

The UK participants on the study tour were:

- Ajit Abraham – Consultant Hepato-pancreatic-biliary Surgeon and Associate Medical Director (Improvement, Innovation, Safety), Bart's Health NHS Trust
- Jo Bibby – Director of Strategy, the Health Foundation
- Hilary Chapman – Chief Nurse, Sheffield Teaching Hospitals NHS Foundation Trust
- Jim Easton – Managing Director, Care UK
- John Illingworth – Policy Manager, the Health Foundation
- Ros Roughton – National Director of Commissioning Development, NHS England.

In this section we bring together their thoughts on what they saw, what they would take back to work with them, and what ideas they felt could be applied in the NHS.

Closing the information gap

Each health centre had a strong understanding of the role that clinical indicators play in performance monitoring and improvement, with the information genuinely owned by the clinicians. This wasn't just for the purpose of reviewing performance retrospectively, but actually to know what is happening in real-time in order to do something useful with the information. According to Hilary Chapman:

'The provision of data to clinicians was the closest to real-time I have ever seen... but even more impressive was the rapidity with which actions were taken. Their view was that to look at the data after the event is like doing a post-mortem...'

Narayana Health in particular had positioned information technology as a 'binding value' for the organisation, rather than a discrete corporate function. Their entire

system operates on a consolidated 'cloud' environment which allows for real-time monitoring of transactions and stock-taking.

The concept of real-time feedback was also apparent in how customer feedback was sought and valued. Ros Roughton was taken by seeing service guarantees on the wall in every floor of LifeSpring's Maternity Hospital, asking patients and families to 'TEXT ZERO to SMS 789...' if their care did not meet the guarantee. Given that the NHS in England has its own Constitution, Ros asked 'why don't we have the same thing in all of our hospitals?'

The development of Academic Health Science Centres and Networks in England are designed to bridge the gap between clinical research and practice. At LV Prasad, we saw clinicians and scientists work together in the same building, doing their ward rounds together and meeting together at 7am four days a week. The research undertaken by the scientists is defined by the observations they make of the problems patients face – 'bedside to bench and back to bedside'.

Standardisation and innovation

The role of process standardisation came up repeatedly across all of the sites as one of the key mechanisms by which clinical services could be provided at costs far lower than equivalent private providers in India. Instead of surgeons seeing this kind of 'standard work' as restrictive, Ajit Abraham argued that there was nothing 'standard' about what they were doing:

'...they embraced [standardisation] as the only way for surfacing and understanding variation in order to improve care for specific conditions.'

LV Prasad saw process compliance and standardisation as a means for best practice to be formalised and any changes to be made systematically. Deviations in performance are identified and analysed for their root cause across six dimensions of quality.

Narayana Health developed their protocols in collaboration with staff, with compliance

regularly monitored. But these protocols weren't seen as a straightjacket, and staff were free to make improvements if they could demonstrate there was value over the standard approach.

Standardisation can often be seen as a barrier to innovation, but Jim Easton saw plenty of examples of home-grown innovations on the tour and questioned why we don't see the same sustained level of product innovation in the UK:

'This is a country making its own stents, medical equipment and drugs at hugely reduced cost compared to us – and data suggesting equivalent outcomes. Is our system of regulation in these areas eroding our ability to provide care?'

Jim was also taken by the business model innovation he saw. None of the providers visited were geographically limited, and they had all designed a scalable, asset-light business model with efficient centralised support that enables care to be delivered locally. He argued:

'Being big was actually seen as key to being local and is relevant as we think about new models of primary, secondary and integrated care.'

Challenging traditional roles

Localism was a strong theme that came out of the tour, and in Ros Roughton's words, 'it takes the community to reach the community'. Two of the providers recruited, trained and deployed local people to work within their community. LV Prasad called these 'vision guardians', who go door-to-door asking if people have eye problems, identifying who might benefit from screening. Ros went on to say:

'...in a country where 12 million people are blind, 80% of causes for the condition are preventable, LV Prasad is gradually creating blindness-free villages. It was a powerful reminder of the untapped resource that sits in ourselves and our families and communities...'

Traditional roles for patients, families and health professionals alike were consistently challenged – something that often meets opposition in the UK. Auxiliary nurse midwives, with the same level of training and expertise as general nurse midwives, were utilised and empowered at LifeSpring. Junior doctors were attracted to Vaatsalya regional hospitals by the prospect of having greater responsibility for patients.

These challenges to professional orthodoxy have created cost savings as well as improved staff satisfaction and retention rates. However, this has been achieved by finding a competitive advantage in a highly fragmented healthcare market much different to the UK system.

At Narayana Health, families were seen as having a crucial role in the recovery of patients following surgery. They operate a 'Care Companion Programme' to harness family members' potential and position them as an integral part of the patient's recovery. A free structured training programme, tailored for those with low literacy levels, provides family members with simple medical skills such as monitoring vital signs, encouraging medicines adherence and supporting physical rehabilitation.

The programme improves the quality and hours of care, leverages an untapped workforce, reduces costs and is universally transferable. 5,000 people a month are being trained on the programme. Given the desire to place patients and families at the centre of their care in the NHS, such training seems like it could be a practical way to help achieve it.

Similarly, a patient education programme is run by LifeSpring to change the behaviours of pregnant women. It addresses the benefits of regular antenatal checks, drug adherence, nutrition and breast feeding. As a result, the average number of check-ups has increased from 2.5 in 2008 to 7.0 in 2013.

Achieving value

'Tiered' amenities were offered within the same organisation as a means of cross-subsidisation. In other words, those who

could afford to pay more subsidised the care of those who couldn't. Although we would be uncomfortable with the idea of different levels of amenities within the NHS based on the ability to pay, the organisations we visited viewed it as a legitimate way of enabling access to care for more of the population. Hilary Chapman commented:

'Differential payment enabled patients to choose different levels of infrastructure, whilst the quality and uniformity of the clinical service is maintained. Like flying: you can turn left or right when you board but the pilot and levels of safety are the same.'

The UK group were struck by the way in which achieving value sat hand-in-hand, not opposite to, a sense of social purpose. Ros Roughton commented that, time and again, they heard the relentless ways in which organisations sought to reduce costs. For instance, at the LV Prasad one of their engineers described the replacement of an expensive electrode (\$100 a unit) with Zari thread, used in making saris (\$1 a unit).

Finally, Jim Easton drew a direct parallel on this with the UK, and the efficiency challenge set for the NHS over the next decade:

'As the person in my previous role responsible for QIPP, I was struck by the way these organisations, with a mission of creating healthcare for a huge and diverse population, had no problem with cost-effectiveness as a moral mission – it enabled more care. I'm not sure we ever achieved this understanding as we grappled with the economic challenge.'

Underlying principles

Jo Bibby reflected that there were some key principles evident in the centres the tour visited that she felt had potential to offer real benefits to the UK's health system.

1. Make efficiency a noble purpose

Efficiency remains the one domain of quality that we seem to fail to connect with in the NHS, but in India the relentless reduction in waste was pivotal to their mission of improving equity, access and safety. The 'cost cutting' agenda in the NHS leaves us feeling uneasy, but in India the case was simple: reduced unit costs means more people can receive the care they need.

2. Harness all the available assets

The healthcare systems we visited amply illustrated that necessity is the mother of invention. Technology was embraced, ranging from the utilisation of cloud computing to iPads replacing paper-based notes. The workforce was upskilled, with staff trained not just on the clinical skills but also on quality improvement and business management. And the community was mobilised, with families trained in basic medical skills to support the rehabilitation of family members following surgery, and vision guardians detecting disease in their communities.

3. Embed continuous quality improvement

Quality improvement approaches were integral to the management systems we saw. Standardisation was universally seen to be a critical factor in ensuring affordability. Any risk of this having an adverse effect on outcomes was mitigated through rigorous (and often real-time) use of data to track process and outcome measures. Protocols weren't straightjackets and there were systematic approaches to study and learn from any deviation from the standard process.

4. Listen to your service users

With the friends and family test only up and running for a few months in England, it was humbling to see the extent of user feedback in the Indian health systems we visited, whether through follow-up phone calls, text messaging or visits from community teams post-discharge. Of course, in a market-based system an element of this was driven by the need to keep ahead of competitors, but the motive doesn't detract from the impact on maintaining and improving standards.

The Health Foundation is an independent charity working to improve the quality of healthcare in the UK.

We are here to support people working in healthcare practice and policy to make lasting improvements to health services.

We carry out research and in-depth policy analysis, run improvement programmes to put ideas into practice in the NHS, support and develop leaders and share evidence to encourage wider change.

We want the UK to have a healthcare system of the highest possible quality – safe, effective, person-centred, timely, efficient and equitable.

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