The Economist

Health care in India

Lessons from a frugal innovator

The rich world's bloated health-care systems can learn from India's entrepreneurs

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ENTER the main cardiac operating-room at Bangalore's Wockhardt hospital on a typical morning, and you will find a patient on the operating table with a screen hanging between his head and chest. On a recent visit the table was occupied by a middle-aged Indian man whose serene look suggested that he was ready for the operation to come. Asked how he was, he smiled and answered in Kannada that he felt fine. Only when you stand on a stool to look over the screen do you realise that his chest cavity has already been cut open.

As the patient was chatting away, Vivek Jawali and his team had nearly completed his complex heart bypass. Because such "beating heart" surgery causes little pain and does not require general anaesthesia or blood thinners, patients are back on their feet much faster than usual. This approach, pioneered by Wockhardt, an Indian hospital chain, has proved so safe and successful that medical tourists come to Bangalore from all over the world.

This is just one of many innovations in health care that have been devised in India. Its entrepreneurs are channelling the country's rich technological and medical talent towards frugal approaches that have much to teach the rich world's bloated health-care systems. Dr Jawali is feted today as a pioneer, but he remembers how Western colleagues ridiculed him for years for advocating his inventive "awake surgery". He thinks that snub reflects an innate cultural advantage enjoyed by India.

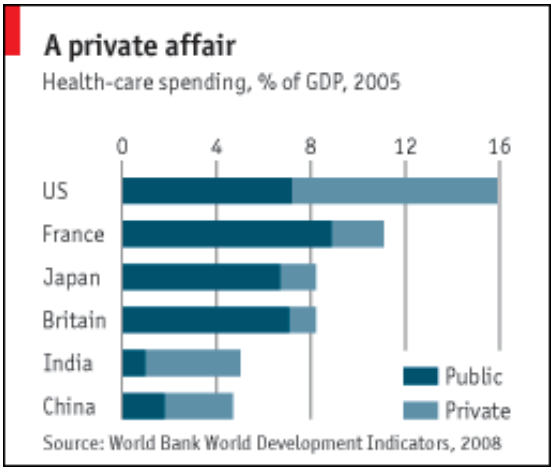
Unlike the hidebound health systems of the rich world, he says, "in our country's patient-centric health system you must innovate." This does not mean adopting every fancy new piece of equipment. Over the years he has rejected surgical robots and "keyhole surgery" kit because the costs did not justify the benefits. Instead, he has looked for tools and techniques

that spare resources and improve outcomes.

Shivinder Singh, head of Fortis, a rival hospital chain based in New Delhi, says that most of the new, expensive imaging machines are only a little better than older models. Meanwhile, vast markets for poorer patients go unserved. “We got out of this arms race a few years ago,” he says. Fortis now promises only that its scanners are “world class”, not the newest.

Mr Singh is not alone in thinking that many firms in the rich world are looking at innovation the wrong way. Paul Yock, head of the bio-design laboratory at Stanford University, which develops medical devices, argues that medical-technology giants have “looked at need, but been blind to cost.” Amid growing concern about runaway health spending, he thinks the industry can find inspiration in India.

Poverty, geography and poor infrastructure mean that India faces perhaps the world's heaviest disease burden, ranging from infectious diseases, the traditional scourge of the poor, to diseases of affluence such as diabetes and hypertension. The public sector has been overwhelmed, which is not surprising considering how little India's government spends on health as a share of national income (see chart). Accordingly, nearly four-fifths of all health services are supplied by private firms and charities—a higher share than in any other big country.



In the past that was more a reflection of the state's failure than the dynamism of entrepreneurs, but this is changing fast. Technopak Healthcare, a consulting firm, expects spending on health care in India to grow from $40 billion in 2008 to $323 billion in 2023. In part, that is the result of the growing affluence of India's emerging middle classes. Another cause is the nascent boom in health insurance, now offered both by private firms and, in some cases, by the state. In addition, the government has recently liberalised the industry, easing restrictions on lending and foreign investment in health care, encouraging public-private partnerships and offering tax breaks for health investments in smaller cities and rural areas.

Cheaper and smarter

This has attracted a wave of investment from some of India's biggest corporate groups, including Ranbaxy (the generic-drugs pioneer behind Fortis) and Reliance (one of India's biggest conglomerates). The happy collision of need and greed has produced a cauldron of innovation, as Indian entrepreneurs have devised new business models. Some just set out to do things cheaply, but others are more radical, and have helped India leapfrog the rich world.

For years India's private-health providers, such as Apollo Hospitals, focused on the affluent upper classes, but they are now racing down the pyramid. Vishal Bali, Wockhardt's boss, plans to take advantage of tax breaks to build hospitals in small and medium-sized cities (which, in India, means those with up to 3m inhabitants). Prathap Reddy, Apollo's founder, plans to do the same. He thinks he can cut costs in half for patients: a quarter saved through lower overheads, and another quarter by eliminating travel to bigger cities.

Columbia Asia, a privately held American firm with over a dozen hospitals across Asia, is also making a big push into India. Rick Evans, its boss, says his investors left America to escape over-regulation and the political power of the medical lobby. His model involves building no-frills hospitals using standardised designs, connected like spokes to a hub that can handle more complex ailments. His firm offers modestly priced services to those earning $10,000-20,000 a year within wealthy cities, thereby going after customers overlooked by fancier chains. Its small hospital on the fringes of Bangalore lacks a marble foyer and expensive imaging machines—but it does have fully integrated health information-technology (HIT) systems, including electronic health records (EHRs).

New competitors are also emerging. A recent report from Monitor, a consultancy, points to LifeSpring Hospitals, a chain of small maternity hospitals around Hyderabad. This for-profit outfit offers normal deliveries attended by private doctors for just $40 in its general ward, and Caesarean sections for about $140—as little as one-fifth of the price at the big private hospitals. It has cut costs with a basic approach: it has no canteens and outsources laboratory tests and pharmacy services.

It also achieves economies of scale by attracting large numbers of patients using marketing. Monitor estimates that its operating theatres accommodate 22-27 procedures a week, compared with four to six in other private clinics. LifeSpring's doctors perform four times as many operations a month as their counterparts do elsewhere—and, crucially, get better results as a result of high volumes and specialisation. Cheap and cheerful really can mean better.

But there is more to India's approach than cutting costs. Its health-care providers also make better use of HIT. According to a recent study in the *Journal of the American Medical Association*, fewer than 20% of doctors' surgeries in America use HIT. In contrast, according to Technopak, nearly 60% of Indian hospitals do so. And instead of grafting technology onto existing, inefficient processes, as often happens in America, Indian providers build their model around it. Apollo's integrated approach to HIT has enabled the chain to increase efficiency while cutting medical errors and labour. EHRs and drug records zip between hospitals, clinics and pharmacies, and its systems also handle patient registration and billing. Apollo is already selling its expertise to American hospitals.

Eye on the prize

A casual visitor to Madurai, a vibrant medieval-temple town in southern India, would not think it was a hotbed of innovation. And yet that is exactly what you will find at Aravind, the world's biggest eye-hospital chain, based in the town. There are perhaps 12m blind people in India, with most cases arising from treatable or preventable causes such as cataracts. Rather than rely on government handouts or charity, Aravind's founders use a tiered pricing structure that charges wealthier patients more (for example, for fancy meals or air-conditioned rooms), letting the firm cross-subsidise free care for the poorest.

Aravind also benefits from its scale. Its staff screen over 2.7m patients a year via clinics in remote areas, referring 285,000 of them for surgery at its hospitals. International experts vouch that the care is good, not least because Aravind's doctors perform so many more operations than they would in the West that they become expert. Furthermore, the staff are rotated to deal with both paying and non-paying patients so there is no difference in quality. Monitor's new report argues that Aravind's model does not just depend on pricing, scale, technology or process, but on a clever combination of all of them.

C.K. Prahalad and other management gurus trumpet examples like Aravind, but do the rich countries accept that they could learn from India? Unsurprisingly, some reject the notion that America's model is broken. William Tauzin, head of America's pharmaceutical lobby, warns that regulatory efforts to cut costs could stifle life-saving innovation. Sandra Peterson of Bayer, a German drugs and devices giant, stoutly defends the industry's record. She argues that overall cost increases mask how medical devices, “like cars or personal computers, give better value for the money over time.” Diabetes monitors and pacemakers have improved dramatically in the past 20 years and have fallen in price—but costs have gone up because they are now being used by more patients.

But those examples are exceptions. Many studies show that America's spending on health care is soaring, yet its medical outcomes remain mediocre. Mark McClellen of the Brookings Institution, an American think-tank, says that a big problem is the overuse of technology. Whether or not a scan is needed, the system usually pays if a doctor orders it—and the scan might help defend the doctor against a malpractice claim. “The root cause is not greed, but tremendous technological progress imposed upon a fractured health system,” says Thomas Lee of Partners Community HealthCare, a health provider in Boston.

Dr McClellen, a former head of America's Food and Drug Administration, points out that other innovative industries often sell new products at a loss, and recoup their investments later. In genuinely competitive industries, innovators are rarely rewarded with the “cost plus” reimbursements demanded by medical-device makers for their gold-plated gizmos.

That is why Stanford's Dr Yock wants to turn innovation upside down. He has extended his bio-design programme to India, in part to instil an understanding of the benefits of frugality in his students. He believes that India's combination of poverty and outstanding medical and

engineering talents will produce a world-class medical-devices industry. Tim Brown, the head of Ideo, a design consultancy, agrees. In the past, he notes, health bosses thought all devices had to be Rolls-Royces or Ferraris. But cost matters, too. Pointing to another recent example of India's frugal engineering, he says: “In health care, as in life, there is need for both Ferraris and Tata Nanos.”

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