Unlocking productivity through healthcare delivery innovations
Lessons from entrepreneurs around the world
The innovation challenge – and opportunity

How can societies improve access to medical care and simultaneously reduce costs and improve quality? This conundrum is preoccupying healthcare leaders everywhere. The current annual cost of healthcare globally is estimated to be $7 trillion, and healthcare systems are consuming an increasing share of income in developed and developing nations alike. Indeed, increases in healthcare expenditure in OECD countries have, on average, exceeded GDP growth by two percentage points annually over the past 60 years.

The challenge is how to boost the productivity of healthcare systems. Getting more for less will require innovation in the way healthcare is delivered, in broader health systems, and in clinical care and interventions. In partnership with the World Economic Forum, McKinsey has conducted research that has focused on the first of these, identifying more than 30 cases where innovation in delivery has led to step change improvements in productivity (Exhibit 1).

In Mexico, a company established ten years ago is now providing telephone-based advice and triage to more than 5 million people. For a fixed fee of $5 a month on their phone bills, two-thirds of callers have their healthcare need resolved over the phone. This is a significant win for both patients and an overwhelmed healthcare system more broadly, in a country where insurance coverage is limited and a regular physician visit costs $30.

1 We would like to thank the members of the World Economic Forum on the Steering Committee (Aetna, AstraZeneca, Cisco Systems, Duke University Health System, Merck, Pfizer) and the numerous healthcare innovators in the field for the time, perspectives and insights that they generously contributed.
Ten time zones away in India, Life Spring has established nine maternity hospitals in three years. These hospitals offer high-quality, no-frills maternity care at one-fifth of the cost of comparable private-sector competitors. Life Spring hospitals display a price list for all to see – for normal deliveries, they charge $40 rather than the typical $200. This has dramatically improved access. Women who would previously have given birth at home with no medical assistance can now bring their children into the world in a hospital setting.

In the United States, the Care Management Organisation at Montefiore Medical Center has used remote monitoring to reduce hospital admissions for elderly patients by more than 30 percent. Patients are managed actively and accurately at a distance, eliminating the need for them to travel to care facilities. This produces a significant cost saving and enables patients to lead more independent and fulfilling lives.

These are just a few of the examples of innovation in the delivery of healthcare that is taking place all over the world (Exhibit 2). The most compelling cases of innovation are found in emerging markets. There are two reasons for this. First, necessity breeds innovation. In the absence of adequate healthcare, care providers and entrepreneurs are compelled to improvise and innovate. Second, the weakness of the existing infrastructure and institutions means there are fewer constraints placed upon entrepreneurs (this is one upside of a lack of meaningful oversight that has many drawbacks too). In short, precisely because of what they don’t have and the constraints that they don’t face, healthcare entrepreneurs in the developing world are able to bypass outdated 20th century Western models of care delivery and forge new solutions fit for the century ahead.

### Step-change improvements in productivity are possible

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Impact</th>
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<tbody>
<tr>
<td><strong>Access</strong></td>
<td>Call resolution, (incoming calls)</td>
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<tr>
<td></td>
<td>By referral</td>
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<td></td>
<td>Two-thirds are resolved over the phone</td>
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<td></td>
<td>Over phone</td>
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<tr>
<td><strong>Cost</strong></td>
<td>Price for normal delivery, ($)</td>
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<tr>
<td></td>
<td>Life Spring perform three times as many surgeries as private clinics each week</td>
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<tr>
<td></td>
<td>Drives down costs, raises quality, and dramatically extends access</td>
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<tr>
<td><strong>Quality</strong></td>
<td>Reduction in elderly hospital visits (patient episodes)</td>
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<tr>
<td></td>
<td>Remote monitoring and management</td>
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<tr>
<td></td>
<td>During first year of program, dramatic reduction in hospital visits was observed</td>
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**Source:** Company Websites; Interviews; Litan R. Vital signs via broadband. Better Health Care Together 2008; McKinsey
The secrets of success

The models of innovative delivery that we have identified are not successful by chance or good fortune. Each reinvents the logic of delivery and thereby fundamentally changes the underlying economics. We observed six things that innovators do to be successful:

1. **Get close to the patient and follow their established behaviour patterns.** This enables delivery innovation that lower distribution costs while improving adherence to clinical protocols. The Care Management Company is successful because its technology is located in patients’ homes and works with the grain of their behaviour. Vision Spring, an organisation that brings affordable eye care to the poor, succeeds because its “vision entrepreneurs” are members of the communities that they serve.

2. **Reinvent the delivery model by using proven technologies disruptively.** Technology can extend access, increase standardisation, and drive labour productivity. The innovative models we identified use proven technologies in new ways, repurposing rather than reinventing. We have seen the power of the mobile phone and call centres – Medicall in Mexico, or Pesinet using SMS technology – to improve the accuracy of malnutrition diagnosis in Africa.

3. **Confront professional assumptions and ‘right-skill’ the workforce.** Successful innovations tightly link skills to the task at hand, challenging existing practices and confronting professional assumptions about who is allowed to do what. By doing so, entrepreneurs reduce labour costs and at the same time overcome constraints such as shortages of available medical talent. Health Store in Africa, for example, trains community health workers to diagnose and treat the top five diseases that account for more than half of preventable deaths. Life Spring’s midwife-led model enables a single doctor to oversee significantly more cases.

4. **Standardise operating procedures wherever possible.** The operating procedures of many effective innovations are highly standardised, allowing the elimination of waste, the improvement of labour and asset utilisation, and the raising of clinical quality. Aravind Eye Care in India standardises the entire end-to-end patient pathway from gathering patients at eye camps, to surgical procedures, recovery, and discharge. The CEO of Life Spring visited leading manufacturers in India to learn their techniques for standardising production processes and applied them to maternity care.

5. **Borrow someone else’s assets.** Smart innovators enhance their business models by utilising existing networks of people or fixed infrastructure, enabling them to reduce capital investment and operating costs – and then passing those savings on to consumers. Examples include “piggybacking” on the existing mobile phone infrastructure (Medicall) and taking advantage of established supply chains by operating out of public hospitals (India’s Health Management Research Institute).

6. **Open new revenue streams across sectors.** Some healthcare delivery models collaborate with other sectors such as retail. This enables them to share costs, capture additional revenues, and, where a social component is strong, to cross-subsidise. PDA in Thailand promotes family planning through its network of restaurants. Pakistan’s Greenstar operates an entire network of retail outlets for family planning.

Successful healthcare entrepreneurs pull as many of these levers as they can – although some innovations more naturally leverage some elements more than others. Awareness of the six success factors that we have identified can enhance existing delivery models, inspire new innovations, and test the validity of early ideas.
Where innovation happens

As we examined innovations along the healthcare delivery value chain and in categories of care that run from the beginning to the end of life, we observed four clusters of innovation – franchising; product specialisation; technology-enabled networks; and integrated care – that we believe healthcare systems should consider adopting (Exhibit 3):

<table>
<thead>
<tr>
<th>Categories of care</th>
<th>Franchising</th>
<th>Production specialisation</th>
<th>Technology-enabled networks</th>
<th>Integrated Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staying healthy</td>
<td>PDA, Thailand</td>
<td>LifeSpring, India</td>
<td>Medicall, Mexico</td>
<td>Valencia, Spain</td>
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<tr>
<td>Long-term conditions</td>
<td>K-Met, Kenya</td>
<td>NH Heart, India</td>
<td>NHS Swine Flu Helpline, United Kingdom</td>
<td>VHA, United States</td>
</tr>
<tr>
<td>Mental health</td>
<td>PSI, Various</td>
<td>Aravind, India</td>
<td>Care Management Company, United States</td>
<td>Kaiser Permanente</td>
</tr>
<tr>
<td>Maternity &amp; newborn</td>
<td>HealthStore, Kenya</td>
<td></td>
<td>RapidoSMS, Malawi</td>
<td>United States</td>
</tr>
<tr>
<td>Care for children</td>
<td>Pesinet, Mali</td>
<td>EMR, India</td>
<td>EMR, India</td>
<td>United States</td>
</tr>
<tr>
<td>Acute care</td>
<td>Greenstar, Pakistan</td>
<td></td>
<td></td>
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<tr>
<td>Planned care</td>
<td>VisionSpring, Vaticano</td>
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Franchising (which takes its name from the retail sector) focuses on delivering highly-standardised, one-way flows of information, products, or services. The franchising model seeks to harness the talents of local entrepreneurs to operate at a local level and be part of the rhythm of daily life. The model lowers distribution costs and improves adherence to clinical protocols. Furthermore, the franchise model is simple to implement, even with a relatively unsophisticated workforce; targeted training can overcome any labour constraints. For example, Vision Spring, which aims to bring quality, affordable eye care to communities in 13 countries, offers its entrepreneurs a “business-in-a-bag” – all the products and equipment required to accurately diagnose and correct presbyopia with affordable eye glasses. Greenstar has established itself as a trusted brand, enabling its many thousands of franchisees to offer high-quality family planning.

Production specialisation, well-established in many other industries, introduces “lean” thinking to healthcare. The aim is to standardise operating processes, eliminate waste, and dramatically reduce the cost for complex care from cardiac surgery to cataracts to normal births. Healthcare innovators who follow this strategy have successfully confronted professional assumptions and produced workforces with the right skills.

Technology-enabled networks such as mobile phones and call centres have been adapted for healthcare delivery (e.g., Medicall). These asset-light models exploit existing infrastructure, centralise medical talent to raise utilisation, and follow existing patterns of patient behaviour. By opening up a two-way dialogue with patients using such networks, some companies are beginning to deliver care at a distance, reducing cost and raising quality, and to fundamentally “change the game” in healthcare delivery.
Finally, with the great challenge of chronic disease, delivery innovations appear to have the most impact when they operate within a system of integrated care where information and incentives are aligned so that all providers collaborate in the best interests of patients. The integrated model evidently delivers a dramatic reduction in costs (e.g., 25 percent differential in per capita costs in Valencia) whilst raising patient satisfaction and clinical quality.

**Implications for health systems**

Our research suggests that healthcare leaders should:

1. Encourage franchise models for primary and community care to improve access and quality, where creating jobs and improving healthcare can go hand-in-hand
2. Promote production specialisation in secondary and tertiary care to reduce cost, improve access and raise quality – the one-size-fits-all general hospital model should be consigned to the 20th century
3. Harness technology-enabled networks to fundamentally change the game in triage, chronic disease management and delivery of care at a distance
4. Enable easy interaction between providers so that the system reaps the benefits of integrated care

Our case examples show that delivery innovations are possible; but change is hard to implement. So, how can healthcare innovations be replicated in other countries?

**Replicating innovations**

In order to replicate successful examples of innovation around the world, we believe that companies should look carefully at two elements:

- The extent to which underlying processes such as clinical protocols can be standardised to facilitate knowledge transfer
- The acceptance of the business models in the receiving geographies/ societies including the regulatory environment which determines who can do what, payment mechanisms which determine who get paid for what, and the legacy care infrastructure which determines what gets done where

Our analysis also shows that the scope of the innovations has a major bearing on the ability to replicate them elsewhere in two different ways. First, we found an inverse relationship between ease of replication and its scope – logical given that the level of complexity tends to increase with how broadly the innovation applies.

Second, as the scope increases so does the sensitivity to variations in local circumstances. Healthcare regulations differ widely across countries and most regulatory systems suffer from some lags – i.e., outdated notions of who can do what, how and where, that aim to protect patients but often end up protecting professional self-interest too. The bigger the change innovations seek to introduce, the more constituencies they tend to threaten and the more likely they are to be caught up in red tape. Innovations that are broad in scope can do much that is positive but also have the potential to cause greater harm – and rightly invite increased regulatory scrutiny.
More complex innovations display a greater number of dependencies and linkages with both payment mechanisms and legacy care infrastructure. In some cases, public provision can crowd out private innovation. For instance, in the United Kingdom, the fact that NHS (National Health Service) Direct already provides a publicly-funded call centre makes it less likely that a similar private sector innovation can succeed.

Overall, innovations in healthcare delivery require external support to survive and prosper. To reap the benefits on offer, policymakers and other health system leaders will have to make changes to enable innovation and allow innovators to flourish.

**The value innovation creates**

Having established that innovation in healthcare delivery is possible, we examined the implications for individual systems if they were to adapt such innovation broadly, what value this could create, and what impact this could have on share of a country’s wealth spent on healthcare.

To illustrate the potential for creating value, we looked in detail at an OECD country, using existing data on health system spending together with data from our case studies, to model the future. We applied four key inputs:

- **First contact in primary care.** Based on the ability of Medicall in Mexico to resolve two-thirds of calls over the phone, we applied a 30 percent reduction in primary care visits.

- **Acute interventions.** Drawing on LifeSpring (85 percent reduction in costs), Aravind (70 percent reduction) and NH Heart Hospital (40 percent reduction), we opted to model a conservative 20 percent cost saving.

- **Integrated care.** Based on the Valencia region’s success in reducing per capita costs by 25 percent compared with peers in Spain, we applied a cautious 10 percent cost improvement.

- **Chronic diseases.** Drawing on the 38 to 55 percent saving achieved by The Care Management Organisation in New York by keeping patients under remote monitoring, we applied a conservative 15 percent cost improvement.

Taking these four aspects together, we calculate that successful implementation could lead to a 16 percent reduction in healthcare spending in the country case we examined – equivalent to $400 per life covered every year. This could be used to contain growing cost pressures, improve access or quality, or be returned to overall government balance sheets.

As healthcare leaders ponder today’s quality, access, and cost challenges, they should draw comfort that at least some of the solutions already exist. The real challenge, therefore, is not to invent but to implement. Given the pressure on healthcare systems everywhere, it is an urgent task. And if we know what needs to be done, then we had better get on with doing it.
If you want to learn more, please contact Nicolaus Henke (nicolaus_henke@mckinsey.com), Tilman Ehrbeck (tilman_ehrbeck@mckinsey.com), or Tom Kibasi (thomas_kibasi@mckinsey.com).