Revolutionising healthcare delivery
A roadmap for digital change

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The promise of digital innovation is a seductive one: a step change improvement in care quality at significantly lower cost. Yet healthcare systems are failing to realise even a fraction of the potential. To accelerate the digital revolution, system leaders must change their focus, learn from other industries and recognise that all stakeholders have a role to play.
Existing healthcare delivery models seem increasingly unaffordable, with health spending rising faster than GDP in most developed countries and aging populations driving up demand. Developing countries cannot afford to maintain, let alone replicate, such legacy health systems. A detailed McKinsey analysis of health spending in three economies\(^1\) shows that total spend could be cut by 7 to 11 percent—a conservative estimate—by applying known digital technologies.

Exhibit 1

About half of the potential for reducing total health spending resides in acute care, where inefficiencies include:

- Low utilisation (typically 50 to 60 percent) of expensive fixed assets such as theatres\(^2\)
- Duplication of medical tests (one study suggests that 13 to 22 percent of tests are redundant)\(^3\)
- A large proportion (some 25 percent) of clinical staff time spent on collecting, recording or checking data, only 65 percent of which is relevant to patient care\(^4\)

Unfortunately, the efficiency figures tell only half the story. Most healthcare systems are facing worsening talent shortages in high-growth specialties and skilled nursing roles. In addition, the variations in the quality, activity and access to healthcare that different populations experience are unacceptable. Activity of healthcare services varies enormously; the UK, for example, has a nearly fourfold variation\(^5\) in the rate of primary hip replacement procedures by regional payer organisation. Quality outcomes also differ greatly, with the best systems and institutions achieving significantly better results than those of their peers. And despite significant time spent on collecting data manually, systems access and use only a tiny fraction of the available information.

Advances in engineering, large-scale data analysis and machine learning have the potential to completely transform diagnosis and care. Based on our work with clients, we have identified three critical tasks to accelerate the development and adoption of digital innovation. First of all, if the best outcome requires a radical and complete reimagining of how systems deliver care, then capturing value is not about installing a technology but changing how organisations and individuals work. Secondly, the new and compelling value proposition must be clearly articulated and success measured based on the value created rather than simply a successful rollout. Thirdly, stakeholders must look to other industries that are more advanced regarding the digital continuum as well as to other hospital systems that have undertaken digital transformations, and learn from their triumphs as well as their mistakes.

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\(^3\)“Medical Errors, Lack of Coordination and Poor Physician-Patient Communication Are Pervasive in Health Systems of Five Nations (Australia, Canada, New Zealand, UK and US)”, The Commonwealth Fund, 2003.
Think revolution, not evolution

The word “radical” may even understate the promise that digital technologies hold for providing better health outcomes through enhanced information sharing, data analysis and transparency, and improved access to specialist skills and remote care. Further, digital solutions can automate manual tasks to free up scarce clinician time and promote the greater involvement and empowerment of patients and their caregivers.

Although a conservative estimate puts the impact of transformative, end-to-end digitisation at 6 to 10 percent, a McKinsey analysis shows that it could generate cost savings of up to 30 percent for health systems. To achieve this result, leaders will need to not only accept but also support—in deed and in spirit—a step change in how health systems are run. They will need to fundamentally reimagine care delivery, integrate multiple providers along patient-centred care pathways, and engage patients fully in their own health management. The challenge is to look beyond individual provider processes and workflows to rethink where healthcare is delivered and by whom.

Tell a compelling value story

Revolution in healthcare can only be achieved with the support of the staff who will deliver it. However, skilled professionals often view new role-changing technologies with suspicion. For example, despite the clear benefits to passengers, London Underground staff initially fiercely resisted the introduction of ticket-free travel, where passengers could pay instantly by mobile phone or debit card at platform barriers. Staff were less concerned about job losses or salaries (since both were protected) than really anxious about the change in roles from passive ticket selling to active customer assistance and what this would mean for them.

Health system change leaders will need to articulate a compelling value story for staff and patients from day one—a task that will require them to gain a thorough understanding of a technology’s true value and purpose. At one hospital, we found the software provider had framed its technology story around efficiency by such measures as fewer and faster staff-patient touchpoints. Yet while hospital managers valued these outcomes, their real concerns were staff and skill shortages, recruitment difficulties and unhappy staff. The technology had great potential to solve these problems, but the vendors did not communicate this value.

The patient engagement platform Qure4u, which facilitates data sharing, offers an example of one technology that has been successfully implemented in Europe, South America and the United States. It gives patients a visual tool that allows them to collaborate with their general practitioner (GP) to set goals, develop treatment plans and monitor outcomes. By offering a high level of technical support, the platform supports patients as they book appointments, refill prescriptions and communicate with their doctors—all online. The value story for patients is convenience as well as greater understanding and empowerment. For doctors, Qure4u’s value story derives from enabling them to help patients quickly and efficiently by providing a real-time view of a patient’s data from all providers and sources.
Learn from others
Healthcare’s uptake of digitisation has lagged behind that of other industries such as manufacturing and retail. Health system leaders can learn from the successes and failures of these trailblazers. The simple example of supermarkets introducing new self-checkout technology highlights three useful lessons:

1. **Create incentives to encourage use.** As supermarkets reduced the number of manned checkout lanes, self-checkout’s additional terminals and shorter queues offered a more attractive option to time-pressed customers. These benefits led shoppers who valued speed to try the new store feature.

2. **Give people confidence.** Each self-checkout area had a friendly staff member nearby to help customers navigate and build confidence with an unfamiliar system.

3. **Iterate and adapt.** Supermarkets were quick to change aspects of the technology that did not work well initially, such as bagging systems. They didn’t expect everything to work perfectly out of the gate and so were prepared to iterate.

Managing internal expectations, particularly around the rollout phase, is incredibly important. Mike Davies, a banking and finance CIO with 30 years of experience, observes that when transformational technology is introduced, two things are guaranteed. First of all, it will always cost more than anticipated. Secondly, a change in process will inevitably mean that operational tasks initially take longer as staff make their way up the learning curve. Davies emphasises that system managers need to understand these constraints and work hard to manage expectations. Unrealistic initial expectations that go unfulfilled will only create dissatisfaction, jeopardising change management efforts. High-risk IT implementations are commonplace in banking and finance; reducing the risk from lofty expectations to encourage adoption is every bit as important as decreasing operational risk by having contingency and parallel run plans in place.

Strong project governance is also crucial. Gareth Sherlock, chief information officer for the Cleveland Clinic in Abu Dhabi, comments, “To be a hospital of the future, to actually execute on your healthcare vision and mission, you cannot just depend on good technology and people. You also need one governance model and one project methodology; don’t allow every vendor to use their own methodology. That way you have transparency, consistency, and control”. 
Everyone has a role to play
The promise of digital technology stems from the power of interconnection: better links between different physicians and specialties, stronger connections between consumers and clinicians, more efficient information sharing on common platforms, and more effective collaboration with technology providers to identify needs and shape solutions. Everyone plays a part in accelerating the transition to a new, digital world.

- **Technology vendors.** Vendors need to do two things well. They must invest effort in making technology easy to use for clinicians and patients by creating simple, intuitive interfaces. They must also clearly articulate the value model—that is, how will the technology generate savings or new revenue, or else improve quality?

- **Policy makers.** As technology changes delivery models, policies must follow. Therefore, policy makers must address issues around data exchange and privacy, interoperability, technology quality standards and the regulation of professional roles.

- **Payers.** Whether payment comes from private insurers or from public funds, reimbursement mechanisms need to support technology adoption rather than discourage it. Payers also need to set service standards and explicitly encourage data sharing in their contracting arrangements.

- **Providers.** Too often, technologies are deployed that at best replicate and often duplicate current work rather than enabling higher-quality, lower-cost care. Therefore, to achieve real and lasting impact, providers must first transform their clinical workflows and pathways before they procure new technology solutions. This task is no small feat. It requires that providers:
  - Map key consumer journeys and workflows and size and prioritise the impact of digital interventions
  - Think not in terms of successful technology deployments but rather of the outcome they hope to achieve, measuring success by the performance change compared to business objectives
  - Recognise the degree of change required and work proactively not just in advance of deployment but also post-deployment, a critical time to support the change and realise the value
  - Elevate the role of IT, making sure that all members of executive teams take ownership of the digital transformation and that there are sufficient skills within the organisation to match clinical and technological requirements.

- **Consumers.** Consumers will continue to demand more control over shaping their own care and then embrace the opportunities they are given. Whether this means using more remote options, such as e-mail and Skype, or offering more support to self-manage chronic conditions, providers can meet these needs by selecting the appropriate technology.
A number of significant changes need to happen, however, to make this value proposition a reality. The technology needs to be user-friendly so that midwives can enter and access information quickly and conveniently. Current paperless systems are more cumbersome and less easy to use than paper and telephone, so midwives have been reluctant to switch. Regulatory changes will be needed to facilitate and protect digital records held in the cloud and accessed on an approved application versus the current requirement that every mother receive a set of printed, handheld notes. The reimbursement model will need to change as well, since hospitals are currently paid to carry out tests that women can do themselves, and remote consultations are not always covered. Most importantly, the way that midwives work and interact with their patients must change. They will need to feel confident that they have the skills required to work in a different way, that their patients value these innovations and that patient safety is not compromised in any way.

To achieve the full benefits of digitisation, healthcare systems cannot just adopt technology—they must use it to transform the way healthcare is delivered. Managers must clarify and articulate a powerful value story and work with all stakeholders to bring about the digital revolution.