

Where, when and how will we experience the digital disruption in healthcare?

While patient-centricity is top of mind, the healthcare system is still organized around providers

Healthcare is the only industry where the consumer doesn't always know what they are getting because there is no transparency on performance; the consumer nor the provider knows how much the care for each person costs; only the payers do, but they are far from where the care is delivered. Care is organized in tiers, around medical disciplines and largely delivered in brick-and-mortar practices, clinics, and hospitals, with multiple patient hand-offs and limited feedback. Let's be honest: there is no such thing as a care continuum, as the orchestration and longitudinal patient view to enable this is missing. While the quality of care has dramatically improved since our current health system was designed mid last century, cost increases have continued to outpace GDP growth. In the Netherlands, healthcare spend has doubled compared to education in the last 20 year. There is an acute shortage of personnel that will only exacerbate in the coming years. Clearly, just making some tweaks to the system will not stem the tide; we have to redesign the system.

Healthcare has been one of the slowest industries to adopt digital technologies and to apply new business models. There are many reasons: we're stuck in fee-for-service reimbursement with no incentives to innovate around patient outcomes, the provider landscape remains highly fragmented, vested interests, rigid regulation, strong focus on patient safety (rightfully so) driving risk-aversion, there is a resistance to change, over-emphasis on evidence-based outcomes and limited IT capabilities.

However, there is a clear and present opportunity and the pandemic has triggered a major push in the right direction. It is now time to adjust the system to the digital world and the opportunities it brings for value-based care and truly address the quadruple aim. We will have to redesign the system to create better health outcomes for all, improve the access to and experience of care, while at the same time addressing the needs of overburdened care workers. And of course, we must make the system way more efficient, by actively addressing the spiraling costs and the roughly 20% of waste due to unnecessary or untimely diagnostics and treatments, broken care paths, complex administration, lack of virtualization of critical resources and limited investment in prevention.



Enabling the
Quadruple
Aim



Better
health outcomes



Improved
Patient access
& experience



Improved
staff experience



Lower
cost of care

The pandemic and spiraling costs drive us into the arms of technology and new care models

Let's start with asking ourselves the following questions: What if we can fully support a person in achieving the best possible health outcomes on their health journey? What if healthcare providers could use connected devices, streaming data and applying AI to monitor patients 24/7 with blended digital and physical care, orchestrated among ecosystem players? What if we could combine personal medical data with socio-economic and behavioral data to predict health risk and potential deterioration? What if family, friends and the broader community participate in care teams with the right care, at the right time in the right place? What if we could facilitate global access to the highest quality clinical services, based on value-based outcome data, through digital channels? What if reimbursement is supporting these changes and shifting from fee-for-service, towards value-based care? *The combined benefits to individuals, their families and to society at large would be enormous.*

The COVID-pandemic fueled demand for virtual care, including digital triage and remote monitoring from a health service center. Some hospitals achieved 50% replacement of hospital visits by virtual care. Sharing of resources and data have triggered a fundamental change in the way healthcare is being delivered. In 2020, the Dutch Healthcare Authority (NZa) approved virtual care for reimbursement. The road has opened towards consumer-centric care, enabled by blended digital and physical services that expand from sickness-only to preventive care and well-being, enabling a movement through a person's entire health journey based on outcome data.



A digital infrastructure will underpin a human-centric health ecosystem

A population health management approach starts with the health needs of different population segments, recognizing the risks, urgency, complexity, and constraints that are associated not only with physical and mental disease, but also the socio-economic determinants and behavioral aspects that impact outcomes and cost-to-serve. Clearly, the needs of a senior suffering from multiple chronic diseases, including mental deterioration, on 7 different medications, is different from a 30-year-old woman with type I diabetes.



A system organized around people's health needs will deliver care in a personalized way to drive the best outcomes. Low complexity care will increasingly be automated and consumer self-directed on digital channels, mid complex will be provider-assisted, while complex care remains fully provider-directed. [The hospital of the future](#) is not a physical location with waiting rooms, beds and labs. It will instead be a network with nodes and connections. Technology, in other words, will be the starting place of our new spaces and will allow us to approach health and care in new ways. Around 70-80% of the care currently delivered in hospitals can move to lower cost and more convenient settings: community health hubs, the home and online. It will be orchestrated, blended care focused on better outcomes. This will also require overhauling the metrics system. Currently there are around 2,000 [quality measures](#), of which only 7% address outcomes and 2% are patient-reported, which seems upside down if it is the outcome that counts.

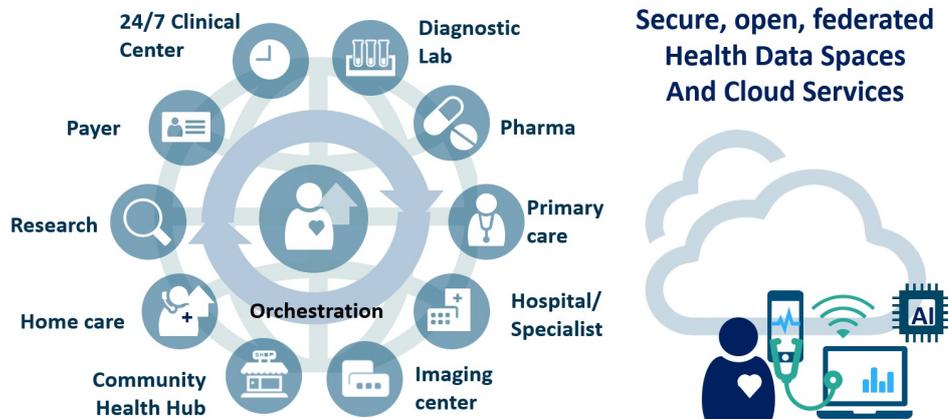
A risk-based, blended virtual-physical approach offers three *levers for optimization*:

1. The cost of low and mid complex care will go down over time because of higher efficiency through automation (administration, referrals, triage, reimbursement) and data insights.
2. Secondly, the availability of a larger care capacity pool, inherent in virtualization, will enable timely and more efficient resource allocation.
3. The third big lever is the preventive, longitudinal approach for chronic disease, aimed at timely interventions, eliminating unnecessary tests and procedures, and reducing downstream care cost. Chronic disease today represents around 85% of healthcare spend. All of this will create a substantially better patient experience because of personalized, 24/7 availability of the right expertise at the right time.

This outcome-focused and consumer-centric care model can only work if the underlying IT and data landscape is fit-for-purpose and can be deployed at a very large scale, including "last-mile touchpoints" to consumers, wherever they are. This landscape is data-driven and designed for orchestration towards better outcomes in a concerted health delivery ecosystem. Its aim is to make a step change in public health by applying population health management and deploying the major building blocks for consumer-centric, value-based care and the related healthcare performance transparency and benchmarking.

Besides the necessary leadership and vision for a new, sustainable care model, this requires substantial funding and capabilities in the areas of integration, data management and AI. We also need a new patient-centric pathway design.

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It surprises me that people don't blink an eye when a proposal is submitted for a new billion-euro hospital to complete in 7 years, while a small fraction of this amount applied to health data infrastructure could get us going on the road to value-based care. We have analyzed the subsidies for healthcare data-related projects and counted well over a hundred projects that received grants or subsidies of multiple million Euros each. This will lead only to duplication and further fragmentation. If we band together and base these projects on a common, open infrastructure we not only reduce the risks and improve outcomes, *we open the world up for better care and new AI-enabled innovation*. We will have to deeply engage patients, clinical staff, and payers on this journey. Without their support the gap between research and practice will remain a wide one. The last and critical point is that we need to commit to value-based care and redesign the incentives in the reimbursement system.

This will not be an easy journey. It requires vision, leadership, guts, and dogged execution to get us there. *I am counting on all of you to jointly build a 21st century digital healthcare system that dramatically improves health for all!*