



Achieving Healthcare Happiness – The Finland Model

A thought leadership paper on how to 'Transform care delivery'
co-authored with Dr. Päivi Sillanaukee

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Preface

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Executive Summary

The people of Finland consistently rank among the happiest on earth. According to the World Happiness Report, Finland was the happiest country in the world in 2020 – for the third year in a row.¹⁻³ The Report points to numerous reasons for this including reliable welfare benefits, low corruption, a well-functioning democracy, and dependable state institutions.

The Finnish healthcare system is a key component of this dependable public infrastructure, contributing to a broad and deep sense of what we call “Healthcare Happiness”.

Achieving “Healthcare Happiness” requires a number of things: positive health outcomes; motivated and productive caregivers; a high level of confidence amongst patients; and success at keeping demand, and corresponding costs, at a manageable level particularly in a publicly-funded system.

The approach that Finland has taken to healthcare delivery is a noteworthy example of meeting challenges through change, of actively transforming care delivery in order to sustain and improve it.

Finland has a long-standing commitment to delivering quality healthcare to its citizens; in fact, it is a constitutional obligation. Yet, Finland has also had to respond to challenges in recent years, some relating to geography and population density, others relating to factors being felt throughout the world such as demographics and human resources.

The government of Finland has employed five strategies to transform the country’s healthcare system. These changes can serve as a model for other health systems, whether public or private.

These five strategies are:

- **Establishing clear lines of responsibility:** optimizing clinical operations and ensuring the right care is delivered at the right time in the right place,
- **Integrating care:** so patients have access to care they need under one roof,
- **Specializing care services:** improving workforce productivity and leveraging the skills of health specialists to deliver the best care and obtain a competitive edge in the marketplace,
- **Digitalizing healthcare:** embracing technology and building a data-driven healthcare system,
- **Measuring healthcare performance:** to understand what needs improving, and to reward providers for positive patient outcomes.

These strategies are widely understood to be effective responses to specific problems in healthcare. Employed together, in the manner that Finland is employing them, they go a long way to securing quality healthcare services for the present and ensuring continuous improvement for the future.

What Finland does right

“In only a few decades, Finnish healthcare has developed from a somewhat rudimentary healthcare system into one that is internationally acclaimed. Every permanent resident in the sparsely populated country has access to an extensive set of services, yet total per capita healthcare costs remain lower than in most comparable countries. Despite recent concerns about equity issues, Finns are generally very satisfied with their healthcare services.”

The Finnish Healthcare System:
A Value-Based Perspective – Juha Teperi,
Michael E. Porter, Lauri Vuorenkoski and
Jennifer F. Baron⁴

If there is one thing that the world knows about Finland, it is that the people who live there love doing so. For three years in a row, the World Happiness Report has declared the Nordic country to be the happiest in the world.¹⁻³ One reason is undoubtedly the quality of public institutions including Finland’s healthcare system, which is ranked among the top six in the world.⁵ Finns have a life expectancy of 81.8 years, which is higher than the EU average of 81.0 year,⁶ and an infant mortality rate that is the lowest in the world.⁷

Finns are happy with their lives, and they are happy with their healthcare. 78% of Finnish people are satisfied with the medical treatment they receive, giving the country the highest rating in patient satisfaction in the European Union (EU).⁸ However, for the government of Finland, delivering excellent healthcare is about more than just keeping people happy. It is about more than delivering a public service widely viewed to be essential. It is about fulfilling a constitutional obligation. The constitution of Finland guarantees every citizen the right to “health and medical services” and further imposes an obligation on public authorities to “promote the health of the population”. All in all, a remarkably strong constitutional guarantee.

This paper investigates the Finnish healthcare example, analyzing how the country has been able to achieve this state of relative ‘healthcare happiness’, and examining what other healthcare providers – either public systems or private organizations – can learn from Finland’s success at transforming care delivery.

“Public authorities shall guarantee for everyone adequate social, health, and medical services and promote the health of the population”

The Constitution of Finland (731/99), 19§

Better equipped than the EU average
(per 100,000 population, 2016)⁶



100% of public primary healthcare centers and public hospitals **use electronic health records**¹⁷

100% of medicine **prescriptions** are done **electronically**¹⁷

Growing up healthy

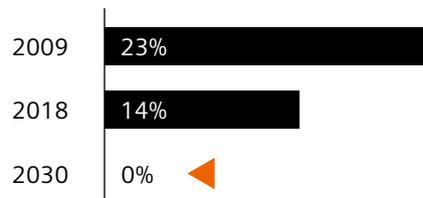
15 **obligatory visits** to a child health clinic (for children below school age)

free preventive **dental care** for children up to 18 years of age



Staying healthy in the happiest country in the world

Finland's goal: **smoke-free** country **in 2030** (% of daily Smokers)⁶



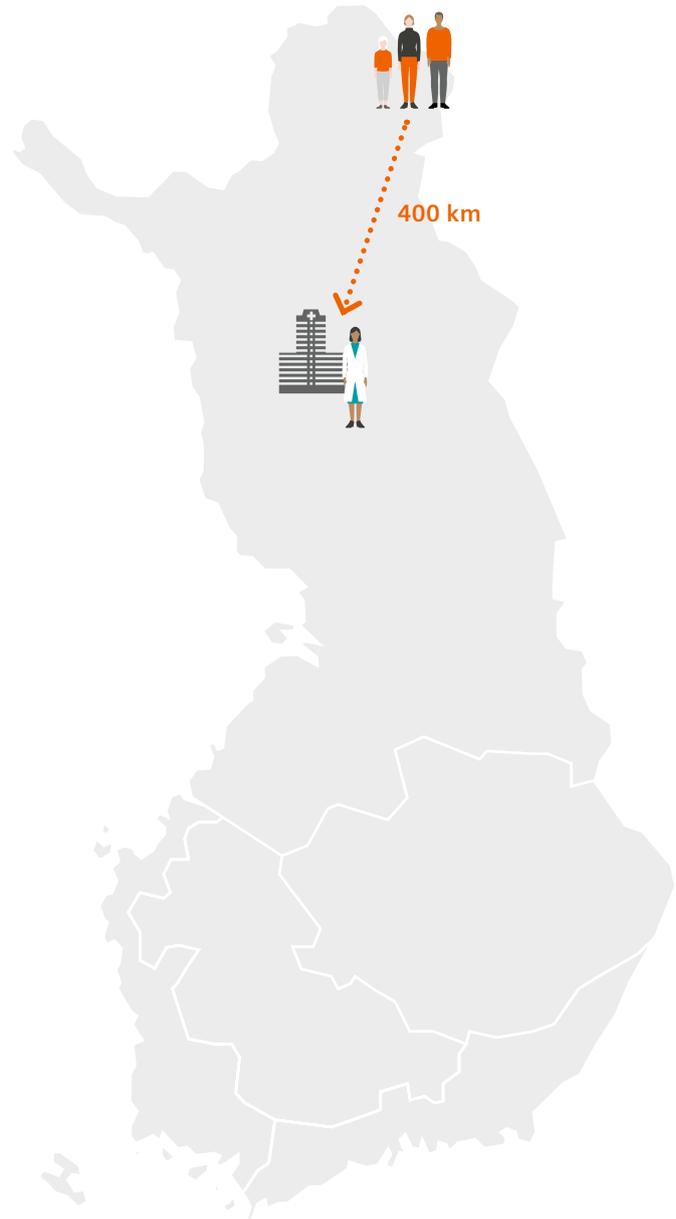
The challenge

Because Finland's healthcare system is publicly funded, the government has a great deal of control over both healthcare policy and how healthcare challenges are met. Over the past few years, Finland has moved to address several existing and emerging challenges, the most significant of which revolve around geography, structure, human resources and demographics.

Geography: Big country, few people, many languages

Delivering healthcare services equitably is always a challenge, particularly when taking into account Finland's population and geography. Finland has a population density of 18 inhabitants per square kilometer,⁹ one of the lowest in Europe. For a country close in size to Germany, Finland has a population of only 5.5 million (compared to Germany's 83 million). Making good on a constitutional promise to deliver quality health and social services to everyone is a hard one to keep in a country where some people have to travel more than 400 km to find a hospital. The promise becomes even harder to keep in a country where there are two main official languages and several official minority languages.

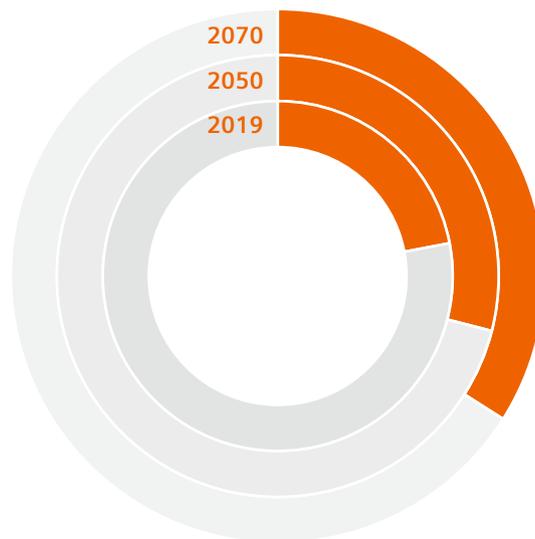
Residents in the North of Finland face long travel times to the next hospital



“What we know about healthcare is that nothing ever really stands still. Technology changes, tools change, new diseases emerge, demographics wreak havoc with expectations.”

Proportion of population over 65 years¹⁴

- > 65 years
- < 65 years



Responsibility: Variations in quality, variations in demand

As noted above, Finland is a large country with a small and widely dispersed population. In order to meet these challenges, the Finnish government realized that responsibility for at least some the healthcare system needed to rest with the municipalities where patients live. To that end, much of the responsibility for delivering healthcare in Finland falls to the country's 310 municipalities. Delegating significant healthcare responsibilities to municipalities ensures that local needs are understood and responded to. Yet meeting those local needs is easier for some municipalities than for others. In Finland, there is a great deal of variation between municipalities in terms of geographic location and demographics. Healthcare demands in some areas are greater and more expensive than in others, which makes the task of coordinating and ensuring equal healthcare more complex.

Human Resources: Not enough doctors

The defining relationship in healthcare is between the patient and his or her doctor. This has been the case since time immemorial, and to this day it is almost impossible to properly deliver care if there are not enough doctors to do the delivering. This has become a problem with which Finland has had to contend.

While the country's ratio of physicians to population is above to the EU average (3.8 in Finland, 3.7 in EU), Finland lags behind some Nordic countries such as Denmark, Iceland, and Sweden.¹⁰ In 2018, 6% of clinic physician vacancies in Finland were unfilled.¹¹ In the eastern part of the country, this number reached almost 20%.¹¹ This has led to long wait times and, on occasion, patients being unable to see a doctor at all.

Indeed, in 2018, nearly 5% of Finns reported difficulty in accessing treatment or medical examination as a result of long wait times – that is almost eight times the EU average of 0.6%, placing Finland 27th out of 28 EU countries.¹²

Demographics: People getting older, care getting more expensive

Like many jurisdictions, Finland is coping with a classic demographic quandary. Life expectancy in the country is growing – it was 81.8 in 2019, and is expected to be 85.9 in 2050.¹³ At the same time, the proportion of elderly people is growing rapidly. In 2019, 22% of the population was 65 years or older.¹⁴ That figure is expected to be 29% in 2050.¹⁴ Because seniors are increasingly dependent on healthcare as they age, these trends pose a significant challenge for the publicly-funded Finnish healthcare system.

The solution

“Healthcare systems are enormously complex. But the goal in healthcare is really simple – excellent patient care. If you can maintain a laser focus on that goal, the changes you need to make really do become quite clear.”

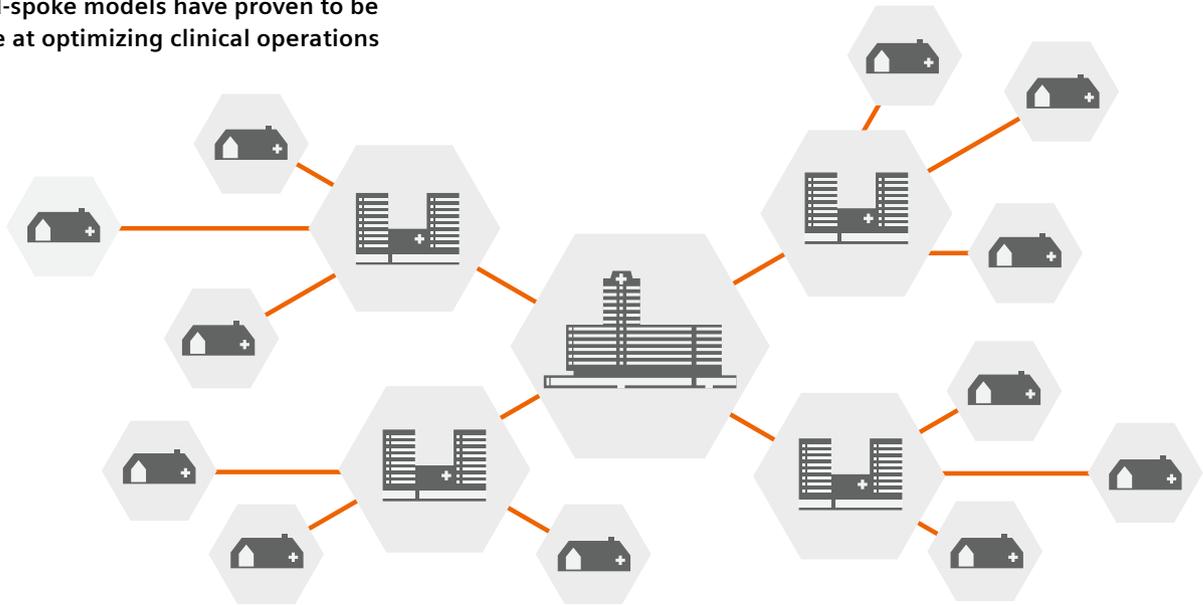
Something that has set Finland somewhat apart in its approach to healthcare has been its refusal to rest on its laurels. Success has not bred complacency. Quite the opposite. Over the past few years, the country has taken significant steps to build on an already solid foundation of healthcare achievement to address a number of challenges that were emerging. In the process of doing so, it can be safely said that Finland has transformed care delivery.

That transformation has taken place in five distinct ways. Establishing clear lines of responsibility, integrating services, encouraging specialization of care, fully embracing digitalization, and measuring performance. All have been successful, and as a result, all are expected to continue.

1 Establishing clear lines of responsibility

The point to clear lines of responsibility for the delivery for primary, secondary, and tertiary care is to ensure that wherever patients might be, they will always know who is responsible for the specific type of care they need, and the system itself will always be ready to provide it. And so, in Finland, the 310 municipalities are responsible for funding and managing primary care. They are also responsible for ensuring that anyone living within their boundaries can receive any necessary secondary, or more specialized care. That care is provided by the country's 20 hospital districts. Every municipality belongs to one of the hospital districts, and they are all responsible for the

Hub-and-spoke models have proven to be effective at optimizing clinical operations



management and funding of those districts. Tertiary care is delivered by Finland's five university hospitals.

In effect, the Finnish system is a variation on the hub-and-spoke model in which anchor establishments, in this case university hospitals, act as hubs offering a wide and complex array of services, with secondary establishments, in this case hospital districts and primary care providers in the municipalities, acting as spokes offering more limited services.

Hub-and-spoke models have proven to be effective at optimizing clinical operations. It is an operating model that increases and improves coordination between primary, secondary, and tertiary care. By contributing to a more efficient allocation of resources, municipalities with fewer resources are not left behind and are better able to provide for the needs of their residents.

2 Integrating care

One of the most significant recent healthcare developments in Finland has been the introduction of the so-called Future Health and Social Services Centres Programme, which is expected to be completely implemented by 2022. The program envisions a future in which all primary care-level health and social services that patients need will be available to them under one roof.

Available services will include primary healthcare, oral healthcare, local social work and home care services,

primary level mental health and substance abuse services, outpatient rehabilitation services, prevention of chronic illnesses as well as maternity and child health clinics and other preventive services. These future health and social services centers will introduce electronic assessment of the need for a healthcare consultation, digital and mobile remote services, online booking systems, specialist consultations to support the work of GPs, and longer hours that include weekends and evenings.

It is widely understood that integrating care increases quality as well as access to care. Wait times decrease. In addition, the 'one-stop shop' model enables the deployment of multidisciplinary teams of health and social services professionals, as well as a shift in focus from specialized care to primary care and prevention.

3 Specializing care services

Finland has a long history of encouraging specialized healthcare services. There have been several specialization initiatives over the course of the past few decades, and in 2017 the country moved to support specialized services even further with regulations mandating minimum volumes for certain types of healthcare services. The effect of the regulations has been to encourage the development of centers that focus on just a few services. This helps these centers to meet their annual volume requirements. Patients benefit from the knowledge that they are receiving care in a highly

specialized facility. And this specialization and expertise becomes self-perpetuating, as clinics attract the best medical practitioners in their respective fields.

For these types of services, implementation of specialized approaches is at the core of optimizing their clinical operations. It allows them to benefit from economies of scale, while attracting an increasing number of patients.

The first example is COXA Hospital for Joint Replacement, the only hospital in Finland to specialize exclusively in endoprosthetic surgery and joint replacement surgery. COXA was founded in 2002, and was thus making the case for specialization long before the recent regulations opened the door further.

COXA is a blueprint for healthcare specialization. The center operates on a single site in the city of Tampere, with a focus on standardization that results in superior outcomes while enabling high volumes. The system runs like clockwork and clearly improves workforce productivity: a 30 minutes doctor/ patient interaction prior to surgery, a 45-minute surgery, 52 hours of inpatient rehabilitation, follow-up after 3 months. COXA has 14 fully qualified orthopedic surgeons, each performing 200 to 250 joint replacements per year. Surgeries are performed six days per week. There is only a 15-minute changeover time between patients, and there is always a patient ready for surgery if a planned surgery gets canceled.

The results? A solid argument for specialization. COXA performs 5,300 joint replacements per year, well above the regulatory requirement of 600. The revision rate for COXA joint replacements is half the Finnish average: 2.7% for knee replacements and 0.9% for hip replacement. According to a recent OECD report, COXA is also leading internationally.¹⁵ The hospital achieves top scores in terms of effectiveness of joint replacement surgery, measured by patient-reported outcomes.¹⁵ Financially, the hospital sees a growth rate of 15–20% per year.

The COXA example provides a clear demonstration of how specialization can help optimize clinical operations. But COXA is located in a city, and Tampere is the second-largest urban area in Finland. The question that needed to be answered was whether minimum volumes and specialization could be made to work in sparsely populated Northern Finland, particularly in time-critical situations. The answer, as it turns out, is yes.

Northern Finland accounts for almost 50% of the country's geographical area, but just 13% of its citizens. Long distances between where people live and where they can receive care are challenging, doubly so in time-sensitive cases such as childbirth. The whole of Northern Finland is the special responsibility area of the Oulu University Hospital. The distance from a village like Utsjoki, in Finland's most northerly region, to that hospital is 650 kms, an eight hour drive.

What Oulu Hospital has done is make it as easy as possible for an expectant mother in a place as far away as Utsjoki to give birth at Oulu. Pregnant mothers are

encouraged to travel days if not weeks before their planned birth date. They are housed in facilities called patient hotels, where they are supported and cared for as they prepare for the arrival of their babies.

The law requires a minimum volume of 1,000 childbirths per year for a childbirth performing hospital. In 2019, Oulu University Hospital performed 3,309.

4 Digitalizing healthcare

If Finland has an ace up its sleeve when it comes to transforming its healthcare system, it may be digitalization. There is no model of future healthcare that does not forecast a steadily increasing amount of digitalization, so countries whose citizens have embraced electronic technology enjoy a real advantage in adapting that technology for healthcare. As it happens, Finland ranks first according to the *The Digital Economy and Society Index 2020*, which measures the overall digital performance of all EU countries.¹⁶ Thus, digitalization is able to support the goal of providing adequate health and social services to the people of Finland, because the people of Finland support digitalization.

Digital assets

With “The National eHealth and eSocial Strategy 2020”, Finland has begun shaping the future of digital health. The strategy is built around two digital assets developed to help Finland forge a more effective digital healthcare future for both patients and providers. The two assets are

Kanta: Patient Data Repository and Prescription service¹⁷

Patient Data Repository

 More than **1 billion** records on service events and treatments

Prescription Centre

 **187 million** electronic prescriptions

 More than **6 million** personas has patient data in Patient Data Repository

“Today, we are better at gathering data than we are at using it. There is so much potential not yet being tapped in healthcare data, but that is beginning to change. And we want to lead that change here in Finland.”

the National Archive of Health Information called Kanta, and the eHealth service called Health Village.

Since 2013, Kanta has been Finland’s national archive of electronic health information. Kanta provides citizens with their health data, wherever and whenever they need it. It also provides that data to private and public welfare and healthcare sector actors who are authorized to view it. Patients can use Kanta to browse their prescriptions and order repeat prescriptions online. They can also state their organ donation wishes, and issue certificates to authorities. Professionals can access needed data nationwide, store patient records and enter prescriptions. Simply put, Kanta has improved the experience of patients in interacting with the healthcare system, and has allowed providers to optimize clinical operations and increase workforce productivity. All public primary healthcare centers, public hospitals and community pharmacies in Finland have subscribed and use these services.^{17, 18} As of 2018, almost half of Finnish adults participated in Kanta.¹⁸

The second asset is Health Village, a mobile electronic health platform that brings healthcare directly to health professionals, patients, and the general public. For professionals, Health Village offers everything from expert-level information on rare diseases, access to teleconferences, trainings, telemedicine, a virtual knowledge center with guidelines and treatment instructions, as well as guidance and training on how to develop eHealth services. For patients, Health Village is designed to become a part of the patient’s treatment plan. There are self-care programs, digital

care paths to guide patients in preparing for an operation, dealing with chronic diseases, and finding coaching and web therapy. There were more than 6.2 million visitors to Healthvillage.fi in 2018.

Data utilization

In healthcare as in much else, the more you know, the more you are able to do. Data is knowledge. In Finland, the goal is not only to generate significant amounts of data, which eHealth services and electronic health records will do, but to find ways of analyzing and using it to its maximum potential. That is the key to data-driven healthcare.

At HUS Helsinki University Hospital, Finland is piloting the utilization of the data. HUS is building a ‘data lake’ to aggregate data coming from sources such as patient information systems, quality registers, billings, picture archiving and communication systems, genome data, mobile applications and administrative data. Since 2014, HUS has used this data to develop algorithms which can be used for everything from predicting septic infection to image analysis to head trauma mortality prediction. For example, the algorithm to predict a septic infection of preterm infants 24 hours before onset reaches a sensitivity of 82% and a specificity of 96%.

Patient trust

Trust continues to be an essential cornerstone of the relationship between healthcare providers and patients. Trust plays an especially important role when it comes to the security of patient data, particularly in a digital

environment. The generation and utilization of data can only work if the owners of the data – the people – are willing to use digital assets and share their data, confident that it will be used properly and securely. When developing the legislative framework that governs digital healthcare data, Finland has been rigorous about including public consultations and public discussions as part of the process. This openness and transparency has helped to nurture a strong sense of trust from the beginning. Strong patient trust also contributes to the ongoing growth and increasing effectiveness of digital innovations. Trust contributes to increased use of digital assets, which results in more data being gathered and generated, which in turn boosts the speed of further innovations and contributes to better patient outcomes. Comprehensive and reliable health and social data can contribute to better knowledge management, more effective research, and stronger innovation. The current COVID-19 pandemic offered an opportunity to see how strongly the Finnish people trust their digital healthcare assets. Within only two weeks, the Finnish COVID-19 mobile contact tracing app was downloaded by 40% of the population. In Germany, where the government was very satisfied with the download numbers, the share was “only” 17.5% after two weeks.¹⁹

5 Measuring healthcare performance

The growing trend in healthcare is for providers, including hospitals and physicians to be paid based on patient health outcomes. This differs from the conventional fee-for-service or capitated approach, in which

providers are paid based on the number of services they deliver, or patients that they see. The goal is to reward providers for helping patients improve their health, reduce the effects and incidence of chronic disease, and live healthier lives in an evidence-based way.

There is a saying in healthcare that “if you can’t measure it, you can’t improve it.” Those words inform the work of the Finnish Institute for Health and Welfare (THL), which carries out an assessment of social and healthcare systems in Finland annually. The THL has been tasked with monitoring and measuring healthcare performance on a population health basis, in order to lay the groundwork for outcomes-based health funding. Every year, THL provides an expert assessment for each of Finland’s counties, in 11 defined service areas. These are measured against five performance indicators (availability, costs of services, customer orientation, equality, quality).

Regardless of whether THL’s work results in changes to the funding model, it has resulted, and continues to result, in greater performance transparency and better resource allocation/planning. It allows the system to assess the various hospital districts’ abilities to organize services so that population needs are met in an equitable manner. It also supports funding that is reliably based on costs, production efficiency and cost-effectiveness. Moreover, the data generated is used for prediction and forecasting and comparison between counties can be made to identify best practices and close performance gaps.

Conclusion

Finland's success in transforming care delivery is reflected in the commitment of its government, the engagement and buy-in of its service providers, and the participation and trust of its citizens. This rare synergy stems from the fact that the changes being wrought reward those who embrace them. Simply put, there is something for everyone. And the world is taking notice.

In a real sense, we consider the Finland healthcare model to be a roadmap to future healthcare success. The five approaches are solid, proven, effective responses to different challenges, and taken together form an excellent strategy for transforming healthcare systems to overcome future obstacles and meet present demands. We believe other governments and health systems will embrace these strategies in the years ahead.

For patients, there is surely comfort in knowing that some of the most vexing problems in healthcare are being solved. How and where to receive the care one needs. How to access care from remote locations. How to take more control over one's own healthcare and the outcomes of the healthcare measures. What Finland has demonstrated is that not only are the answers to these questions available, they can in fact be influenced by the patients asking the questions.

Health systems will look at the manner in which setting clear lines of responsibility can result in the right care being delivered at the right time in the right place. Providers will look at how integration and specialization can improve their ability to leverage their skills and deliver care in the best possible ways. Finally, digitalization and measuring outcomes will underpin all future healthcare, and the systems and providers who embrace them will gain a step up in the marketplace.

Change has been a constant in healthcare for a very long time. In Finland, the pattern has been to change proactively, to bring about healthcare transformation in response to challenges, instead of responding to challenges that stem from changes nobody planned for. The results, and the overall happiness of the population, suggest the pattern is a good one.

Regardless of whether the health system under discussion is a public or private one, there will always be pressure to deliver better care at lower costs. For public systems, that pressure will come from taxpayers and from competing resource demands within government. For private systems, that pressure will come from competition between providers. In the years to come, we believe that both types of systems will work to emulate the Finnish model, and their patients will enjoy the best possible 21st century care.



Establishing clear lines of responsibility



Integrating care



Specializing care services



Digitalizing healthcare



Measuring healthcare performance



Empower patients



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Suggested follow-up on

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- Insights Series, Issue 13:
Sight to the world: How Aravind improves access to care for millions
- Insights Series, Issue 7:
Do one thing and do it better than anyone else
- Insights Series, Issue 4:
Achieve twice as much but only work half as hard
- Harvard Business Review:
Transforming care delivery to increase value



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If you have further questions or would like to reach out to us, please do not hesitate to contact our expert directly:

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Dr. Sillanaukee serves as Ambassador for Health and Wellbeing at the Ministry for Foreign Affairs of Finland and represents Finland in the WHO Executive Board. With more than 20 years of experience in the highest civil servant administrative positions both from government and public sector, she is sharing Finnish know how and experiences on legislative framework, as well as enabling regulation on secondary use of social and health data for innovation policies, R&D&I and implementation of new technology, digital and AI solutions as well as personalized medicine. Dr. Sillanaukee served as Director General and Permanent Secretary of the Ministry of Social Affairs and Health of Finland. She was the Deputy Mayor and Director of Social and Health Services of Tampere, Finland and held clinical and managerial positions in the Pirkanmaa Hospital District. She has worked on policies to promote public health, social protection and gender equality in the European Union and served as first and third Vice Chair at the WHO Executive Board. Dr. Sillanaukee holds a MD, PhD, and eMBA from University of Tampere, and an honorary doctor from University of Helsinki Faculty of Medicine.



Dr. Ralf Meinhardt
Senior Global Marketing Manager at Siemens Healthineers

Ralf Meinhardt engages in thought leadership activities for Transforming Care Delivery. Prior to his role at Siemens Healthineers he spent several years in the pharmaceutical industry, consulting and scientific research. Ralf holds a Doctor of Economics and Social Sciences degree from the University of Erlangen-Nuremberg. In addition, he holds a Master of Science degree in Management and Bachelor of Arts degree in Business Administration. He studied at the University of Erlangen-Nuremberg and Indian Institute of Management, Bangalore (IIMB). His scientific background is in the field of corporate strategy where he has authored several publications.



Dr. Sinikka Salo
Chief Medical Officer at the Regional State Administrative Agencies, Finland

Dr. Salo is working on the transformation of healthcare in Finland. She was leading the implementation of national reform of social welfare and healthcare in Finland from 2016 to 2020 with the Ministry of Social Affairs and Health, focusing on service integration, digitalization, developing electronic services and information systems. Her current position as Chief Medical Officer at the Regional State Administrative Agencies provides her with the opportunity to work in close collaboration with local authorities. The agencies' mission is to promote regional equality by carrying out executive, steering and supervisory tasks laid down in the law. To this end, they aim to strengthen the implementation of basic rights and legal protection, access to basic public services, environmental protection, environmental sustainability, public safety and the provision to a safe and healthy living and working environment in the regions. Dr. Salo holds a Ph.D. and a DDS, with a focus on telemedicine, eHealth, and forensic odontology.



Dr. Herbert Staehr
Vice President
Global Head of Transforming Care Delivery at Siemens Healthineers

Herbert Staehr is passionate about healthcare and, as global head of Transforming Care Delivery, drives activities to equip healthcare providers to deliver higher-value care. Prior to this position, he led Portfolio Development and Marketing within the Enterprise Services and Solutions business of Siemens Healthineers. Before joining Siemens Healthineers, Herbert Staehr worked with a major private hospital group in Germany in senior leadership roles including serving as managing director of an acute care and a post-acute care hospital. Earlier, he led the group's Corporate Development department. He was employed for several years in the Healthcare Consulting practice of McKinsey & Company on various European and international assignments. Herbert Staehr holds a PhD in Healthcare Economics from the University of Hohenheim, Germany. He obtained a dual degree (Bachelor of Arts and Diplom-Betriebswirt) in International Business and Finance from the European School of Business, Germany, and Dublin City University, Republic of Ireland.

At Siemens Healthineers, our purpose is to enable healthcare providers to increase value by empowering them on their journey towards expanding precision medicine, transforming care delivery, and improving patient experience, all enabled by digitalizing healthcare. An estimated five million patients worldwide benefit every day from our innovative technologies and services in the areas of diagnostic and therapeutic imaging, laboratory diagnostics and molecular medicine as well as digital health and enterprise services.

We are a leading medical technology company with over 120 years of experience and 18,500 patents globally. With about 50,000 dedicated colleagues in over 70 countries, we will continue to innovate and shape the future of healthcare.

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