

A man and a woman are walking a German Shepherd dog on a leash in a park. The woman is on the left, wearing a light blue leather jacket over a floral top and jeans. The man is on the right, wearing a maroon quilted jacket over a grey shirt and jeans. They are both smiling and looking at each other. The background is a blurred green forest.

PHILIPS

Population health

Juan's story

The role of digital solutions
in preventing chronic disease
progression



Juan's lifestyle was putting him **at risk for diabetes** as well as exacerbating his knee pain.

In our continuing story of the Roberts family — who serve as a fictional representation of a family grappling with health issues similar to those faced by thousands of families across the U.S. — we explore the potential for an ecosystem of connected solutions to help Albert's son, Juan, and his providers improve health, reduce utilization and save money for all stakeholders.

Juan is a 48-year-old man who lives alone. Until recently, he had not experienced any major health issues other than nagging pain in his right knee. His physician, Dr. Smith, used Philips population insights and care solutions to identify that Juan was overdue for his annual exam and to contact him to schedule an appointment.

The exam revealed that Juan, who hadn't noticed quite how much weight he had put on in the last few years, now had an unhealthy body-mass index (BMI) and that his hemoglobin A1c level (blood sugar) was elevated at 6.2%.

After talking through potential risk factors, Dr. Smith explained that Juan's sedentary lifestyle and tendency to eat a lot of fast food was putting him at risk for diabetes as well as exacerbating his knee pain.

Dr. Smith referred Juan to an orthopedist using the Fibroblast patient referral management system that's part of the Philips digital platform. Fibroblast allowed her to find a nearby, in-network orthopedist with high-quality scores who had an opening in the next week. Juan was pleased that he didn't have to pay for an out-of-network visit and liked the fact that the entire process was facilitated through remote patient monitoring tools — including texting him reminders about his appointment and coordinating care between his providers.

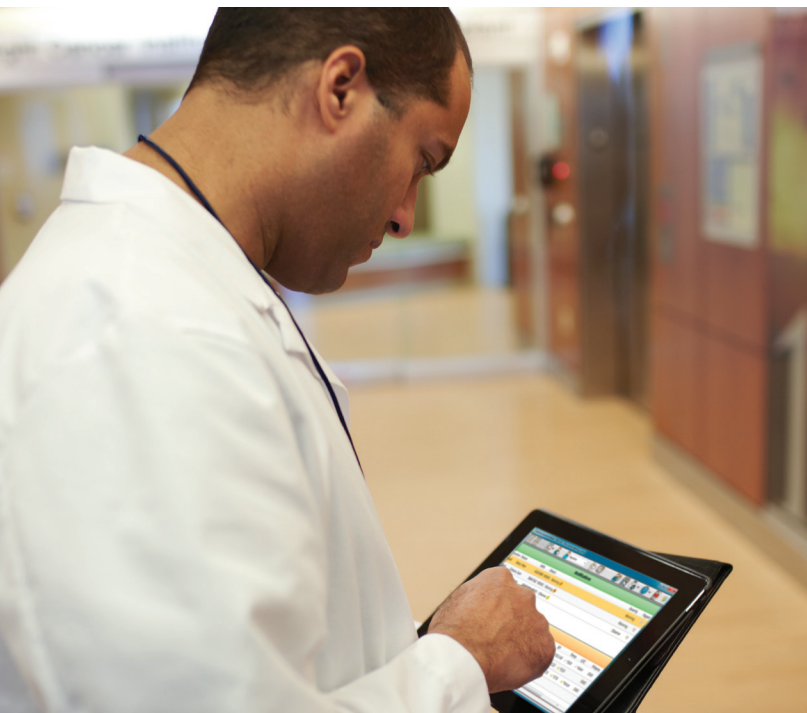
Additionally, after seeing the positive health changes in his father's and sister's lives, Juan agreed to start on the Philips automated pathway for lifestyle coaching and patient-reported outcomes measurement to help his care team monitor positive behavior changes, including automated tracking of his exercise habits.

For the next three months, Juan participated in the Philips remote patient monitoring program, which allows caregivers to track and assess patients' vital signs. Juan worked with a coaching team to develop a plan and get the tools he needed for health improvement. This included a scale that, using a Bluetooth connection, transmitted his weight to a hub that connects with his doctor. Juan also used a digital application to respond to surveys, assessments and questionnaires from his doctor, allowing his care team to proactively monitor him and communicate with him directly to help mitigate acute health episodes. The digital application also provided Juan with personalized patient education materials aimed at helping him manage his weight and his overall condition.

The digital tools and extra coaching motivated Juan to improve his health. With monitoring of changes in his behavior, including automated tracking of his exercise and personalized coaching, Juan was able to start and stick with an exercise program and choose healthier foods.

At his follow-up visit six months later, Juan was happy to report that he had more energy as well as less knee pain. He told Dr. Smith that without the convenience of the digital application-based program, he may have had difficulty sticking with the changes of his new exercise and nutrition plans over the past few months. Dr. Smith told Juan that his hemoglobin A1c level had dropped, and that if he maintained his new, healthier lifestyle, he could potentially avoid becoming diabetic.

Juan and Dr. Smith are fictional persons for illustrative purposes only to serve as an example of potential results and outcomes.



We explore the potential for an **ecosystem of connected solutions** to improve health, reduce utilization, save money.



Health system benefits

The Northern health system has experienced significant improvements in its quality metrics and its financial health since adding the Philips connected ecosystem of solutions to coordinate care for people like Juan and his family.

This year, based on Medicare benchmarks,^{1,2} Northern has reduced its rate of avoidable readmissions to avoid a Medicare penalty, saving \$3 million compared to last year.

Thanks in part to these digital tools, Northern hospital has increased its HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) scores this year, including meeting measures focused on improving care transitions/coordination.³ As a result, Northern has received better public star ratings, and increased its reimbursement potential from CMS (Centers for Medicare & Medicaid Services).⁴

Its HCAHPS scores are one of several factors enabling Northern to be viewed as a provider of choice in its community; as a result, it's in negotiations with the major health insurer in its city about participating in a narrow network. Such networks are growing; studies found that about a third of Medicare Advantage participants were enrolled in narrow network plans in 2015, and nearly three quarters of Affordable Care Act

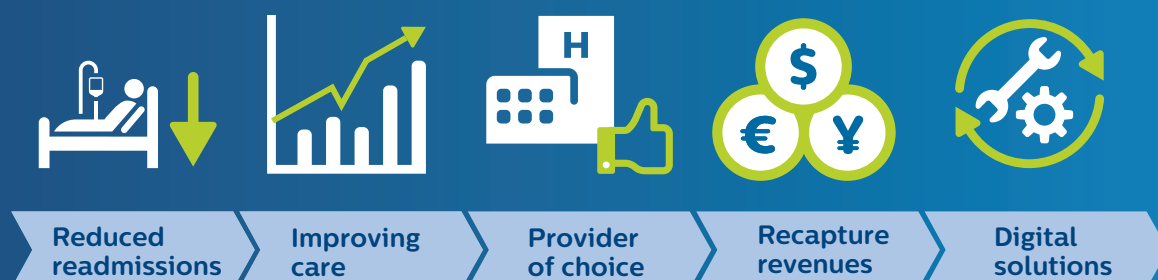
enrollees were in narrow networks of some kind in 2018. These networks have been found to significantly reduce health insurance premiums.⁵

The system's growing experience with managing risk and costs is also allowing it to feel more prepared for CMS's push for ACOs to take on two-sided risk, and enabling it to enter into direct contracting negotiations with the largest employer in town.^{6,7}

The growth in patient volume in its affiliated and owned medical practices is bringing new revenue to Northern's outpatient and inpatient services. The health system recently analyzed its network referral patterns and discovered that it was losing \$4 million each year due to out-of-network referrals. It was able to identify the top 10 physicians who were referring patients to other health system providers and services and begin putting a plan in place to address this leakage and help recapture \$1.5 million in new revenues next year.^{8,9}

As health systems consider choices and opportunities for new investments while preserving what works in their current ecosystem, they should consider that the most powerful digital solutions work together in coordinated, open-architecture ecosystems where new capabilities can be added in a 'plug and play' approach. Digital solutions are also most powerful when technology partners work strategically with healthcare organizations to identify wider needs and work collaboratively to implement the most effective solutions.

Northern health system is a fictional organization for illustrative purposes only to serve as an example of potential results and outcomes.





1. www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/Hospital_VBPurchasing_Fact_Sheet_ICN907664.pdf
2. www.cms.gov/medicare/medicare-fee-for-service-payment/acuteinpatientpps/readmissions-reduction-program.html
3. www.healthcarefinancenews.com/news/hospitals-get-18-billion-2017-bonuses-value-based-purchasing-cms-says
4. www.medicare.gov/HospitalCompare/Data/payment-adjustments.html
5. www.healthcaredive.com/news/could-narrow-networks-be-the-next-big-cost-cutter/512298/
6. www.revcycleintelligence.com/features/exploring-two-sided-financial-risk-in-alternative-payment-models
7. www.forbes.com/sites/brucejapsen/2017/02/02/unitedhealth-aetna-anthem-near-50-value-based-care-spending/#543ff69d1d4e
8. www.athenahealth.com/insight/arizona-care-network-in-network-referrals#
9. www.healthcarefinancenews.com/news/fixing-healthcare-revenue-leaks