

Summary

CUSTOMER

Northwell Health

CHALLENGE

Pull together all the data from multiple sources to improve care coordination and outcomes, identify cohorts for population health and clinical trials, and manage risk.

OUTCOME

Better, more informed care through a unified health record, and faster, more innovative uses of the data.

Northwell Health + InterSystems

Northwell Health Leverages a Billion Data Points for Innovations in Care and Care Coordination

Northwell Health, based on Long Island, New York, is one of the largest private health systems in the United States. Its growth has been simplified by leadership's decision to avoid the disruptions of "ripping and replacing" the different EMRs used by acquired organizations. Instead, Northwell uses InterSystems HealthShare® to aggregate, integrate, store, and use information from the disparate EMRs and other clinical systems across its 23 hospitals, 655 outpatient facilities and more than 18,500 affiliated physicians.

Using HealthShare's unified health record, Northwell now has at its disposal a healthcare database holding over 1 billion data points. This includes eight million patients and hundreds of millions of diagnoses, observations, results, and other information. Northwell has deployed HealthShare and used this data to improve care delivery, care coordination, outcomes, and business performance.

"The key thing about HealthShare for us is in building a unified health record, and the ability to integrate that information into the clinician's workflow. It enables us to deliver the right information at the right time into whichever EMR the clinician uses."

Jim Heiman, Director of Clinical Information Systems, Health Information Exchange, and Enterprise Architect for Interoperability, Northwell Health



“OUR ABILITY TO SHARE DATA BETWEEN THE ACUTE AND AMBULATORY CARE SETTINGS IS PIVOTAL TO SUPPORT TRANSITIONS OF CARE AND CARE COORDINATION ACROSS DISPARATE SYSTEMS.”

*Jim Heiman,
Northwell Health*

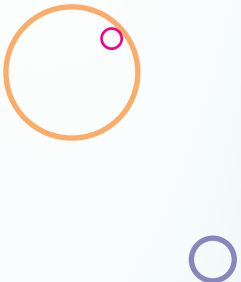
Piloting the Path to Innovation

Northwell was introduced to HealthShare through a pilot project with Healthix, the nation’s largest public health information exchange, which also uses HealthShare. The project tested the premise that shared health information can improve care coordination and outcomes for women with high-risk pregnancies. For Northwell this was a test of HealthShare, as well, as it required the sharing of obstetrics information across a community of more than 100 providers using three distinct outpatient EMR instances, two different inpatient EMRs, and two prenatal imaging centers with their own ultrasound reporting systems.

The pilot succeeded on several fronts. Critical information followed the patient wherever she encountered the healthcare system. For example, when a high-risk expectant mother was admitted to an emergency room, the system automatically notified her obstetrician and primary care doctor while providing the emergency room physicians with instant access to her aggregated medical history. If lab results indicated a problem for mother or baby, the admitting physician received an alert in the form of an indicator on the Labor and Delivery EMR.

Expanding Care Coordination and Raising Efficiency

With the success of the pilot project, Northwell adopted HealthShare to take advantage of its unified health record and connected applications. For its first major project, Northwell used HealthShare as the foundation for a rule-based care coordination application called Care Tool. Care Tool identifies high-risk patients, assesses needs, shares care plans across providers and locations, supports efficient workflows, and provides quality metrics for continuous improvement. In its initial assessment, Northwell found that the use of Care Tool resulted in:

- Six percent fewer readmissions for cardiac valve replacement patients
 - Eighteen to 28% more patients discharged to home instead of a skilled nursing facility
 - Lowered risk of infections
 - Up to 56% greater use of in-network home care, enabling better quality control
 - Greater patient satisfaction
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“Especially where we are at risk for patients covered by incentive contracts, HealthShare is key in providing identity management across our hospitals and ambulatory settings. From there, triggered by events such as admissions or discharges or the recording of certain documentation in clinical systems, HealthShare sends notifications to relevant clinicians and seamlessly integrates the information into the care manager’s workflow.”

Jim Heiman, Northwell Health

A Bimodal Approach to Innovation Protects EMRs

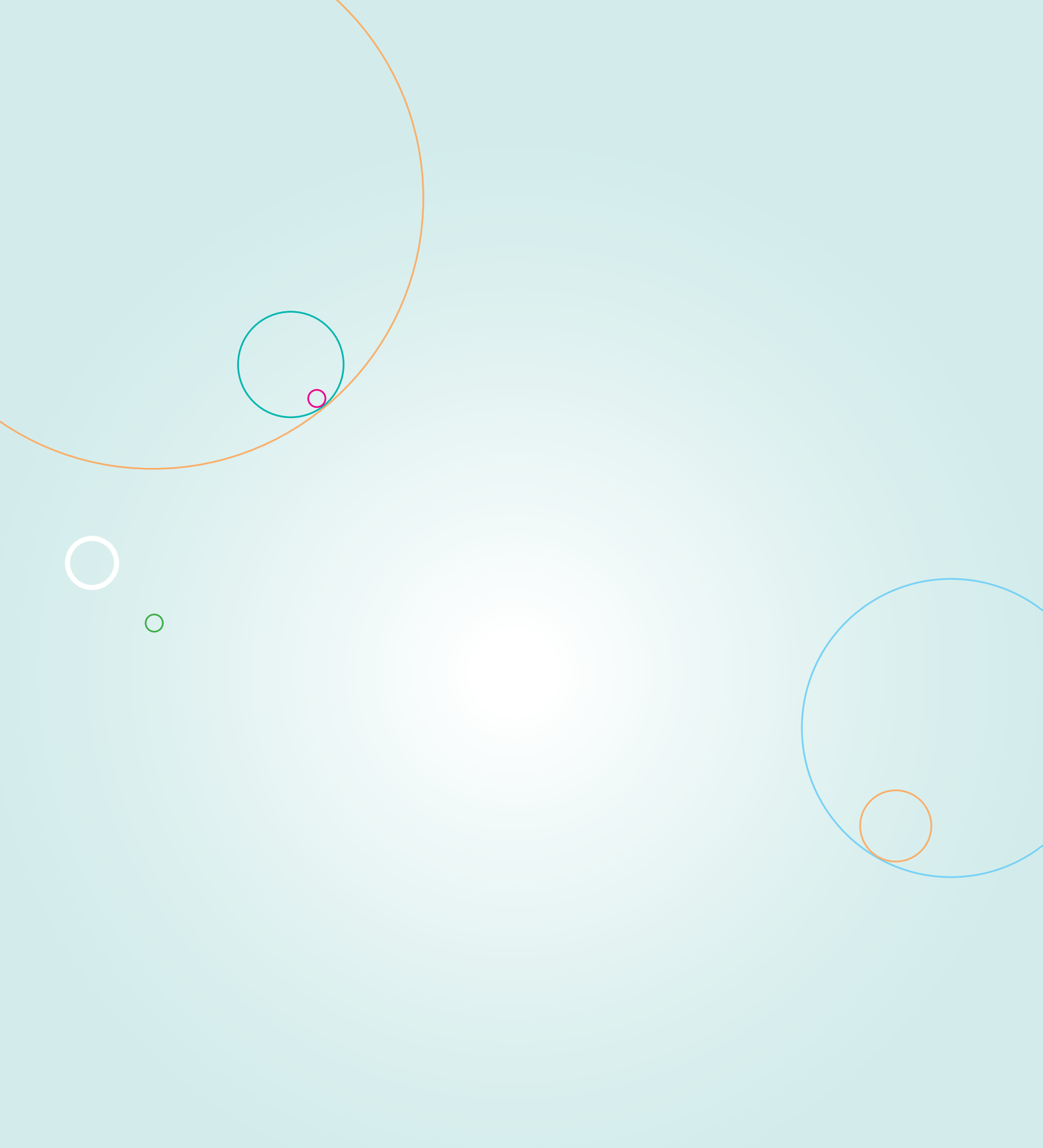
With its now-proven capabilities for aggregating data and improving care coordination, Northwell saw the opportunity with HealthShare to take a “bimodal” approach to innovation. This approach ensures that Northwell’s mission-critical EMR systems remain up, stable, and secure, while their data is captured by HealthShare in real-time for use in other, value-added systems. The organization established the Center for Health Information Technology and Innovation with HealthShare at its core, and began creating new systems to:

- Target gaps in clinical workflows not typically covered by EMRs
- Simplify management of risk in at-risk contracts
- Automate establishment of patient cohorts for population health management and cohort analytics

The Center for Health Information Technology and Innovation has developed workflow optimization capabilities by pushing the boundaries on patient identity management, cohort stratification, event notifications, clinical dashboards, and smart light-weight applications. At the same time, Northwell has built out a technology backbone where external solution vendors can integrate with these innovations through application programming interfaces (APIs) to test and optimize their complementary products.

**“WE CONSIDER
HEALTHSHARE AND
ITS ENTIRE SUITE OF
SOLUTIONS TO BE
THE BACKBONE TO
OUR INNOVATION
SPACE.”**

*Jim Heiman,
Northwell Health*



The power behind what matters.

