



Summary

CUSTOMER

Northwell Health

CHALLENGE

Connect more than 100 providers, and multiple inpatient and outpatient EHRs, to improve care coordination for women in high-risk pregnancies.

OUTCOME

Gaps in care eliminated with all clinicians having the information needed to reduce risk and achieve the best results for mother and child.

Northwell Health + InterSystems

Northwell Health Uses HealthShare to Make Care for High-Risk Patients Less Risky

Not long ago, Northwell Health engaged with Healthix, a regional health information exchange built on the InterSystems HealthShare® platform, in a proof of concept project exploring care coordination for high-risk obstetrics patients. The success of this project led to the decision to bring HealthShare in-house as the strategic interoperability platform for the entire Northwell Health network of 16 hospitals, more than 6,000 beds, nearly 400 outpatient physician practices, 3 owned skilled nursing facilities, and 19 affiliated nursing facilities.

Vish Anantraman, MD, MS, Chief Information Architect at Northwell Health, notes that, “Automation of patient tracking and coordination of care across delivery environments is a prerequisite to high-quality, efficient management of individuals and populations. For us, interoperability across different EHRs throughout our system is a strategic goal and process automation is a key enabler of improved and coordinated care.”



Breaking the Barriers to Better Care Coordination in Obstetrics

A woman in a high-risk pregnancy (having gestational diabetes, for example) may see multiple clinicians, from primary care providers to adult and pediatric specialists, across multiple facilities using different electronic health record (EHR) systems. Interoperability among these systems often is limited due to differences in terminology and variations in the discrete data elements each collects.

When the expectant mother arrives at the hospital to deliver, the admitting physician may not be aware of all the treatment she has received for her medical conditions. After delivery, information about her labor and delivery is important for appropriate outpatient follow-up care for the mother and baby. Care coordination for these patients can be a time-intensive, manual process.

To improve obstetric information sharing and care coordination, Northwell Health needed to connect more than 100 providers using three distinct outpatient EHR instances, two different inpatient EHRs, and two prenatal imaging centers with their own ultrasound reporting systems. An initial challenge was that the standard outbound integration capabilities of outpatient EHRs do not include all of the specialized data elements typically used for obstetrics, and industry standards for interoperability (including IHE, HL7, and CCD) do not address all of the specific requirements for obstetric use cases.

At the outset, Northwell Health established goals for integrating these systems and achieving interoperability, including:

- Use IHE, CCD, HL7 and other standards as much as possible.
- Exchange discrete data elements between systems to enable clinical decision support, analytics, and alerting.
- Transmit physician narratives for smooth transitions of care.
- Standardize content and terminology mappings (“semantic interoperability”) across EHRs.
- “Push” data automatically to destination EHRs so that information is available to clinicians when and where needed within existing workflows.
- Address the key obstetric workflows including initial pregnancy visit, emergency visit to a non Northwell Health hospital that’s connected to Healthix, 12-week visit to the obstetrician with ultrasound order and result, referral to a high-risk specialist, labor and delivery hospital visit, and postnatal outpatient visit.

Northwell Health achieved these goals using HealthShare to accurately transmit and share, among outpatient EHRs and its inpatient labor and delivery system, over 150 discrete data elements required for standardized care of obstetric patients. HealthShare also enabled Northwell Health to share physician narratives in unstructured text for smooth transitions of care.

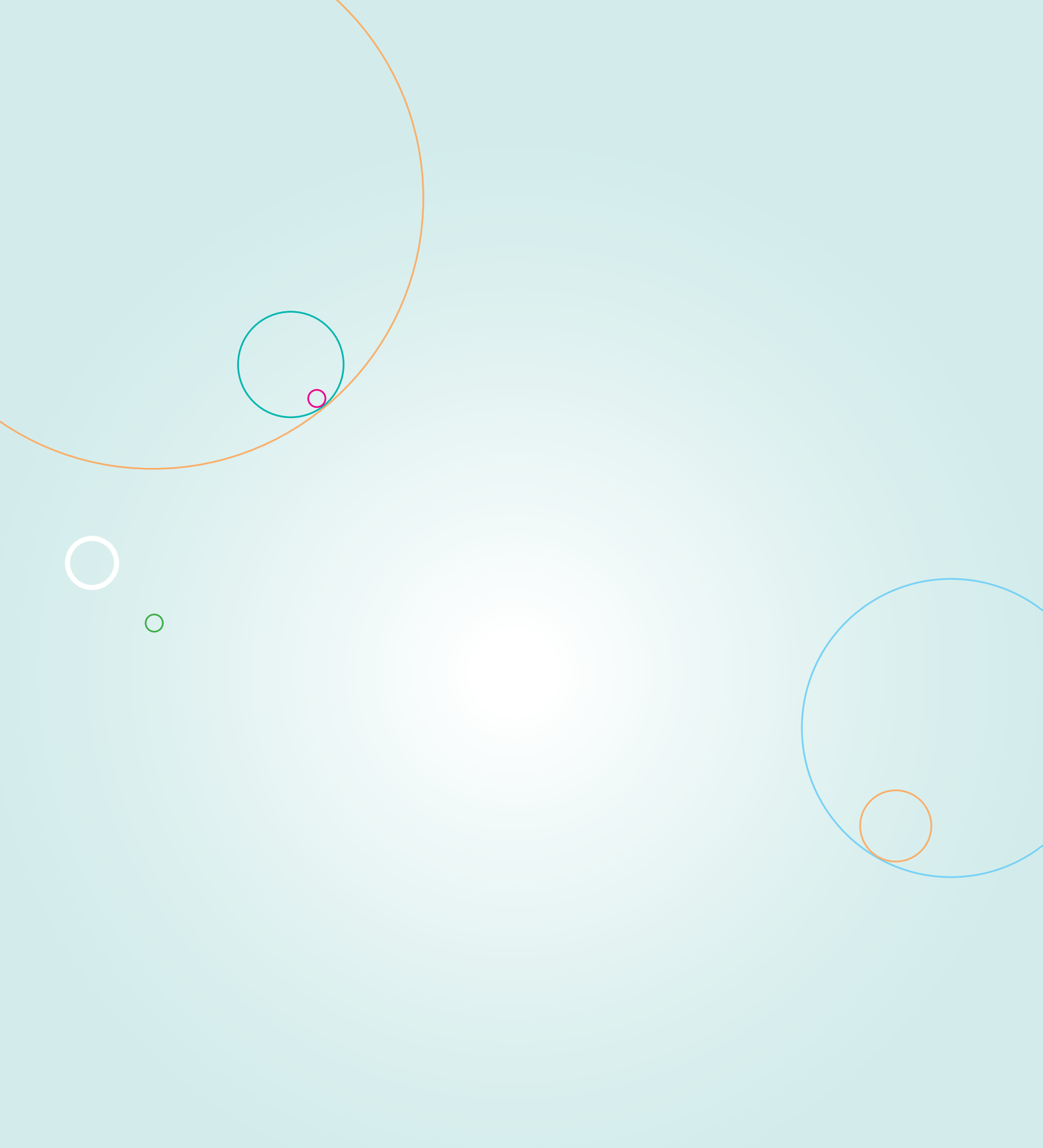
HealthShare Makes it Easier to Manage High-Risk Populations

Now, the entire care community shares complete and up-to-date information on each patient, increasing safety and patient satisfaction. When a high-risk expectant mother is admitted to an emergency room, the system automatically notifies her obstetrician and primary care doctor, while providing the emergency room physicians with instant access to her aggregated medical history. If lab results indicate a problem for mother or baby, the admitting physician will receive an alert in the form of an indicator on the Labor and Delivery EHR.

“We now have the tools to automatically detect and notify providers of gaps in care or clinical changes even when the patient is not present,” says Michael Oppenheim, MD, Northwell Health Chief Medical Information Officer. “Our providers should be able to proactively intervene and dramatically improve the health and well being of the people that we serve.”

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*Michael Oppenheim, MD,
Northwell Health Chief
Medical Information
Officer*



The power behind what matters.

