

Patient Linking

IMPROVING THE ACCURACY OF RESEARCH DATA THROUGH PATIENT LINKING

Business Challenge

Healthcare in the United States is fragmented. Patients interact with multiple healthcare providers throughout the course of their care. They may see a primary care physician about a new ailment, undergo diagnostic testing at a third-party facility, be treated by a referred specialist in another system, receive additional care from a home health agency or refill prescribed medications at a local retail pharmacy. Patient data generated from each of these healthcare providers remains fragmented, so no single provider has a complete picture of the patient's care history.

This data fragmentation creates challenges for clinical and outcomes research. Researchers increasingly recognize that their own EMR data alone likely doesn't provide a complete longitudinal view of patients because it may be missing crucial clinical events for patients. Despite these shortcomings, EMR data is emerging as the significant new source of "real-world data."

TriNetX, the global health research network, is leading the way by making EMR data available to researchers across the globe.

EMR + Claims Data: A Perfect Combination

Claims data tends to be a better source for longitudinal care data and many investigators are turning to it to conduct their research. Claims data is now considered to be the original "real-world data."

Because payers see all billable patient activity, regardless of which provider delivers the care, the claims data they generate doesn't suffer from gaps that result when patients visit different health systems. Yet claims data suffers from its own drawbacks including lack of clinical depth of EMR data, and lack of lab results, vital signs, and detailed disease-specific data. Because claims take an extended period of time to prepare, submit, and adjudicate, claims data is never as fresh as EMR data.

Combining EMR and claims data minimizes their individual limitations and creates a rich, longitudinal patient data set. EMR and claims data are complementary, filling critical gaps in patient histories. In order to fully realize the benefits of combining the two, EMR and claims data must be linked at a patient level.

+ EMR Data

- ✗ Covers only the institution that uses the EMR, not the care continuum
- ✗ No adherence data (e.g., prescription fills)
- ✓ More comprehensive diagnoses, problems, non-prescriptions drugs, social history
- ✓ Includes lab results & vital signs
- ✓ Timely: recorded within hours or days
- ✓ Includes any patient receiving care

📄 Claims Data

- ✓ Spans unaffiliated providers across the continuum of care
- ✓ Prescription fills, not just admin & orders
- ✗ Only billable diagnoses, procedures & medications
- ✗ No lab results or vitals
- ✗ Lags clinical events by 1-3 months
- ✗ Includes only insured patients

TriNetX is poised to significantly enhance the landscape of real-world data by providing a practical way to connect de-identified EMR and claims data. Our patient linking solution enables TriNetX healthcare organizations to enrich their data set by adding claims data at no additional cost. TriNetX has licensed a comprehensive claims dataset that covers 99 percent of US health plans and linked it to the existing TriNetX members database.

How It Works

TriNetX provides the software that enables you to securely generate de-identified, encrypted, linkable keys for each of your patient records. TriNetX has generated the same keys for patients in claims datasets and uses them to link data across both claims and EMR datasets, without uncovering the identity of any patients.

Benefits of the TriNetX Linking Service

Our Patient Linking capability enables us to combine the selected patient claims records with their EMR data in your system using the TriNetX appliance. You can then run your queries, generate patient cohorts and perform analytics on the enriched data. The linked data—which can also be downloaded from the TriNetX Network—provides a valuable asset in furthering your understanding of your patient population, conducting feasibility research, developing outcomes analysis with more valuable uses still to come.

Another significant benefit of the TriNetX claims dataset is providing enriched patient mortality information. This data is gathered from Social Security Administration and published obituary records. Linking this data significantly improves mortality-related queries and outcomes analyses.

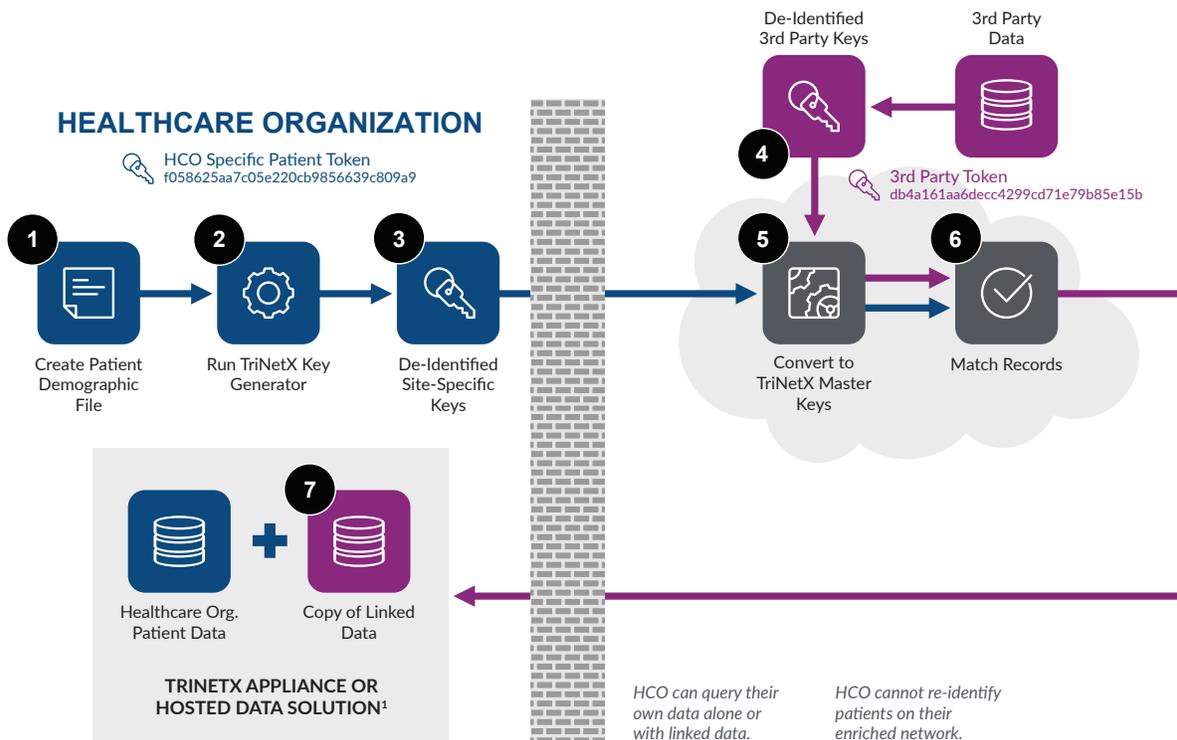
Even though healthcare is fragmented, your research data doesn't have to be. Through TriNetX patient linking, you can have rich, longitudinal data to power your clinical and outcomes research.

How to Get Started

All existing TriNetX members can add this functionality by contacting your TriNetX representative. We'll then provide the patient tokenization guidelines allowing you to generate the privacy preserving tokens which you will transfer to your TriNetX appliance or cloud hosted instance. TriNetX will then match and load the claims related data, which will increase the patient counts returned in your user queries. We are pleased to offer this service pre, during, or post TriNetX implementation at your institution.

About TriNetX, Inc.

TriNetX is the global health research network that revolutionizes clinical research and enables discoveries through the generation of real-world evidence. TriNetX combines real time access to longitudinal clinical data with state-of-the-art analytics to answer complex research questions at the speed of thought.



¹For Hosted Data Solution, entire data set resides in a Virtual Private Cloud in AWS.