Case Study

Tackling the Opioid Epidemic Through Community Engagement and Data Linkage



More health care data exists today than ever before — data from insurance claims on diagnoses and procedures and cost, public health registries, prescription fills and more. This data can be a powerful tool for understanding drivers of health and identifying opportunities for improving the health of individuals and communities. But each data source tells only part of an individual or group's total health story. Interoperability — the ability for different data sources to easily connect and exchange information — is key to getting a more complete health story.

Too often, however, data systems are not designed to connect with other systems. Even if technology enables data systems to connect, strict privacy laws that govern health care data as well as interpersonal and programmatic willingness to share data further complicate interoperability. Data owners are often hesitant to share with others unless there are established, trusting relationships in place and binding agreements acceptable to all parties involved.

These fragmented data sources make it difficult for clinicians and other health professionals to develop policies, clinical guidelines and care decisions that do the most good for the most people because they don't have access to the total health story of individuals or populations. For that, we need integrated data structures, enabling interoperability, that facilitate data aggregation across time and data sources.

Data fragmentation is especially apparent as we tackle the opioid crisis:

- Public health departments hold information about opioid-related deaths.
- Insurers hold information about patients' diagnoses and treatments when care is paid for by health insurance.
- State hospital discharge registries hold information about hospital and emergency department use (whether or not the visit was paid by health insurance).
- Prescription drug monitoring programs hold data on all opioid and other scheduled prescriptions dispensed from outpatient pharmacies.

Comagine Health is collaborating with Brigham and Women's Hospital, Oregon Health Authority Injury and Violence Prevention Program, McLean Hospital and Brandeis University on a National Institutes of Health (NIH) funded R01 research grant, "Using a Novel Comprehensive Linked Dataset to Determine Early Predictors of Opioid Overdose." The purpose of this grant is to determine the odds of opioid overdose based on interactions between patient-level risk factors and household and community prescription levels. As a neutral convener and nonprofit organization, we are in a unique position to engage partners in this work.

We began by identifying the project's mission, which helped us build trust among the various data owners. We then developed data use agreements (DUAs) that met all parties' needs. We now meet with the data owners frequently, provide them with opportunities for ongoing involvement in advisory committees, acknowledge them in presentations and written reports, and share results and/or authorship in work that grows out of the aggregated data.

Once we established effective working relationships among the project's data owners, we went on to develop a comprehensive opioid registry (CORR). The foundation of the CORR is the Oregon Data Collaborative (ODC), Oregon's voluntary all payer claims database. The ODC itself is the result of our effective partner engagement and data aggregation. Over the last ten years we have built and maintained strong partnerships across health care, resulting in voluntary claims data submission to the ODC that now includes more than 80% of Oregonians.

With aggregated claims data in the ODC from Medicaid, Medicare and commercial payers, we linked in patient records across public health data sources, then removed all identifiers. This linkage created an anonymous yet comprehensive opioid risk registry with complete identification of patient comorbidities, health care utilization and opioid overdose events.

This combination of effective partner engagement and innovative technical solutions works: We have created a robust comprehensive opioid risk registry by linking multiple disparate data sources, assembling a total health story for opioid risk.

This project's success is having important impacts on health care now and fueling crucial work toward future advancements. With aggregated claims data, providers and clinic administrators are better able to manage their patient panels — a critical component of success in alternative payment methodologies. Building the comprehensive opioid risk registry on top of aggregated claims data is even more powerful, enabling health services research at a deeper and more informed level than previously possible.

About Comagine Health

Comagine Health is a national, nonprofit, health care consulting firm. We work collaboratively with patients, providers, payers and other stakeholders to reimagine, redesign and implement sustainable improvements in the health care system.

As a trusted, neutral party, we work in our communities to address key, complex health and health care delivery problems. In all our engagements and initiatives, we draw upon our expertise in quality improvement, care management, health information technology, analytics and research.

We invite our partners and communities to work with us to improve health and redesign the health care delivery system.

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