

SPOTLIGHT ON

The Importance of Clinical and Claims Data

In the rapidly evolving health care economy, getting comprehensive data has become essential for providers as they move to manage more patient risk. Clinical and claims data must be considered as health care organizations work to improve health care delivery and patient outcomes.

“Combining clinical and claims data lets providers manage a patient’s health and understand what they are doing,” said John Cuddeback, MD, PhD, Chief Medical Informatics Officer for the American Medical Group Association (AMGA). “It allows the provider to move from being reactive to being proactive.”

Proactive management is the key to providers successfully managing risk, a function that had formerly been carried out by payers. “Providers have two natural advantages: direct relationships with patients and the detailed clinical data in the EHR [electronic health record],” according to Carl Johnson, MD, EdM, MSc, Senior Physician Director at Optum Analytics. “But if they want to succeed at financial management, as well as clinical management, they can’t afford to ignore the claims data that payers have used, nor the analytic methods the payer community has developed. By themselves, neither clinical nor claims data provide a complete picture. It’s the combination that’s so powerful.”

Claims data — the financial data found on health insurance claims — provides an overview of care delivered to the patient — e.g., that a lab test or an imaging procedure such as a cardiac echo was done — as well as charge or payment data and the accompanying financial



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costs. Claims data provides no information on the results of the lab or procedure. Health care delivery is not just about services; services for which there are no claims can slip through the cracks. Take an office visit, for example. While an office visit is listed in the claims data, it does not show the many important events that take place during the visit, e.g., patient education, health coaching and care coordination.

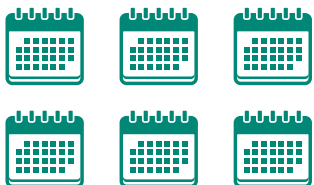
On the other hand, clinical data — findings and care documented by health care team members (providers, pharmacists, care coordinators, social workers, etc.) — offers a robust, intimate portrait of exactly what happens with a patient and how health care is really being practiced. Clinical data is the only documented way to tell if the patient is getting better.

Timeliness of data

CLINICAL DATA 1–30 days



CLAIMS DATA 3–6 months



“You can get a lot of observations from clinical information. Most of all it lets you know if you are getting the desired clinical care,” Dr. Cuddeback said.

Consider a typical diabetic patient. Aggregated claims data would describe the patient as diabetic and indicate that the patient is prescribed insulin to control blood glucose. The data would reveal the total treatment fees (outbound claims would show charges, aggregated claims would show payments) and the prescription price. Clinical data gets much more specific. Care team member documentation shows that the diabetic patient:

- Has an A1C between 7 and 8 (through lab results)
- Injects 50 units of insulin per day (thanks to pharmacy data)
- Has a hypertension co-morbidity of 140 over 110 (via history and physical and vital signs)
- Has other contributing health factors (by way of socio-demographic data)
- Has not seen a clinician for more than a year (through utilization and access data)

These important clinical snippets cannot be gleaned from claims data.

Another difference between clinical and claims data is timeliness. Getting data from claims can take from three to six months; information that has aged that much is unlikely to impact care. Clinical data, on the other hand, can be retrieved in as little as one day, and it rarely takes more than 30 days for it to become available.



CLAIMS DATA

the financial data found on health insurance claims



CLINICAL DATA

findings and care documented by health care team members



COMPREHENSIVE DATA

The Importance of Clinical and Claims Data

“There are two views with claims data,” Dr. Johnson said. “The outward-bound view contains all the costs billed to the insurance company or Medicare. But these bills are nowhere near reality. The round-trip view, also called the post-adjudicated view, is getting closer to reality and gives a clearer picture of the patient.”

“Adjudicated claims can help organizations predict what it will cost to care for the patient the next year,” Dr. Cuddeback said.

Clinical data is much more actionable than claims data. For most clinicians, information that is two months old or more renders it not actionable.

“Providers can access clinical information in as little as one to two days. On the other hand, using claims data from two months ago is not likely to impact care,” Dr. Johnson said. This lag in terms of how quickly claims data is available prevents the physician from accurately treating the patient in a timely and efficient manner.

Professionally trained care team members can quickly see what care has been provided and what has resulted. This, in turn, allows care teams to help patients prioritize interventions, wellness activities and prevention.

Clinical data is rich in information, but there remains a caveat: the population health benefits of clinical data come only through electronic records. EHRs are critical for managing population health because, according to Dr. Cuddeback, the EHR is much more than mere documentation. Viewed on the patient level, the EHR becomes

a vibrant tool that can change the approach to clinical workflow, create evidence-based decision-making and support team-based care.

At the population level, clinical records impact both care and learning. Care can be improved when patients are identified who may be at risk for poor outcomes. Learning can be expanded using aggregate data to refine and grow the evidence base and to increase clinical understanding of what interventions are most effective for certain population subsets. In this way, EHRs allow modern medicine to become a learning system for patients, providers and health care organizations. The iterative and ongoing use, application, and refinement of claims and clinical data fuel the cycle of improvement.

Clinical data can often fill gaps in claims data. More than 20 percent of patients who meet the diagnostic criteria for diabetes or are being treated to control blood glucose have neither a diagnosis code for diabetes on a claim nor diabetes listed on their problem list in the EHR. These patients are likely to be missing the benefits of oversight or intervention programs for patients with diabetes, since these programs are typically driven either from claims data or EHR problem lists.

TRUE HEALTH CARE
BIG DATA
ANALYTICS ARE WITHIN OUR REACH

COMBINING
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But considering all the benefits of clinical data, it has its drawbacks. Clinical data is not always easily accessible — up to 80 percent of electronic medical record (EMR) data is stored as free text rather than as structured forms.¹ Some of the most valuable clinical information is locked up in unstructured physician’s notes.

But according to Dr. Cuddeback, clinical data must be captured in a structured form for it to be of use. Data is “structured” when it is: 1) stored in a discrete field, or data element, for each clinical concept, and 2) represented by a standard set of codes — called a controlled vocabulary — for expressing the content of each field. Even with these two elements, clinical data may not present the full picture. For example, a provider only has to apply the multi-diagnosis code for a patient presenting with multiple problems without noting each specific ailment.

In contrast, claims data is highly structured and, therefore, can be effortlessly rendered into a standard, easy-to-read presentation. This might be why, traditionally, analytics have relied on claims data to fuel health care predictive models. The value of the predictive model is in targeting patients where they will yield the greatest benefits, in terms of averting utilization and maintaining or improving health. The impact of traditional prediction is narrowed by the fact that it’s based on incomplete data. However, the limitations of prediction with just claims data are soon to be alleviated.

“By deploying health care big data management and analytic technologies that combine claims data with more structured clinical data, technologies are emerging to better structure data in health information systems,” Dr. Johnson said. True health care big data analytics are within our reach.

Both clinical and claims data are necessary to create actionable information. Clinical data provides a detailed picture of the patient’s condition; two forms of claims data show all covered services received from all providers: 1) outbound claims from the provider, reflecting the services the patient received from that organization, and 2) full adjudicated claims. Clinical data and outbound claims are internal data and should be available within a few days after the services are provided. Providers, especially those working in risk-based contracts, should also receive full adjudicated claims data for the patients for whom they bear risk. Adjudicated claims provide a more complete picture of a patient’s care and the cost of that care, e.g., if he or she is receiving cancer treatment from an outside oncology provider. Claims processing takes time, and adjudicated claims data typically runs three to six months behind, sometimes longer.

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—John Cuddeback, MD, PhD, Chief Medical Informatics Officer for the American Medical Group Association

overview — combining claims data with EMR, lab, pharmacy and other relevant data — gives the provider organization an opportunity to identify areas where services are being overused, find which providers are the most productive, realize ways to improve coding and billing, and discover which procedures and medications work for patients and which don't work as well.

This combination of data types produces a detailed picture for each patient and for the total population the health care provider is serving. But before it can be used for analysis, all the data must be cleaned, normalized and validated.

Then clinical and financial analytics, including predictive analytics, can give the provider organization actionable insights. The new wave of health care big data analytics encompasses the full cycle of care, with all predicted and unpredicted events along the care delivery process to be accounted for. A better understanding of value can be realized with accurately analyzed cost and outcomes data.²

Sources

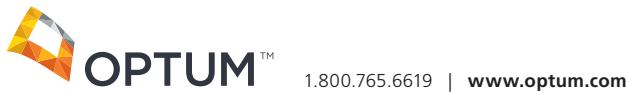
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