

CASE STUDY



A global health insurance company improves the precision of hospital ratings for its annual Centers of Excellence designations

They switched from using All-Payer Claims Databases (APCDs) to payer-complete, advanced analytics software

Overview:

CLIENT
A global health insurance company

PRODUCT
Clarify Networks

DATA PERIOD
2017-2018

CHALLENGE

A large, global health insurance company has a Centers of Excellence (COE) program that annually evaluates its network hospitals on patient outcomes and cost efficiency. It publishes ratings, which give COE designations to hospitals with scores that meet or exceed calculated benchmarks. The ratings are made available in a public report and on a searchable website. The precision and accuracy of the ratings are important because they are used by members to make decisions about which facilities to select for care, and they may be used as a component of the plan's pay-for-performance hospital payment methodology.

In years prior to 2020, the COE program used State-based all-payer claims databases (APCDs) to calculate its ratings. The APCDs included medical claims, pharmacy claims, dental claims, and eligibility and provider files collected from private and public payers; however, there were critical limitations to using this data for annual ratings. First, the data was not current. In fact, the data from some states lagged annual report production by more than three years. Second, the APCDs varied significantly in coverage by state and often lacked outpatient claims. Third, the data cleaning process conducted by the plan's vendor was Excel-based and manual. Ingesting new data each year was arduous, especially because there were no standard IDs for hospitals. Lastly, their vendor used a simple cohort-based approach to benchmark hospitals which resulted in unfair comparisons between hospitals with vastly different patient populations. With these limitations, the report did not include the most precise scores, and was often scrutinized by physicians, hospitals, members, and employers.

SOLUTION

To build their 2020 hospital COE report, the plan decided to leave APCDs and Excel-based analyses in the past. They wanted an end-to-end healthcare analytics solution that could instantly and precisely calculate a wide range of metrics with the flexibility to evaluate new ones later, making it easy refresh the ratings in future years.

They selected Clarify Networks, an analytics software that evaluates health system-, hospital- and physician-level performance using machine learning generated expected values for a wide range of quality and cost-efficiency metrics. The software assesses performance and outcomes on-demand, with continuously refreshed data that can be cut and analyzed in seemingly endless ways.

Clarify Networks draws upon the Clarify Platform, which brings together one of the largest, longitudinal, patient-level datasets in the industry, aggregating traditionally siloed claims, electronic health records (EHRs), prescription, and social and behavioral data from over 300 million lives. Importantly, patient confounders are accounted for, delivering case-mix adjusted ratings that are far more precise than simple cohort-based approaches.

CMS Qualified Entity Status

Clarify is one of only a handful of for-profit companies with CMS Qualified Entity status, giving it access to 100 percent of Medicare fee-for-service data sets. This data is complimented by vast amounts of commercial claims data and feeds directly into the Clarify Platform and all its machine learning models.

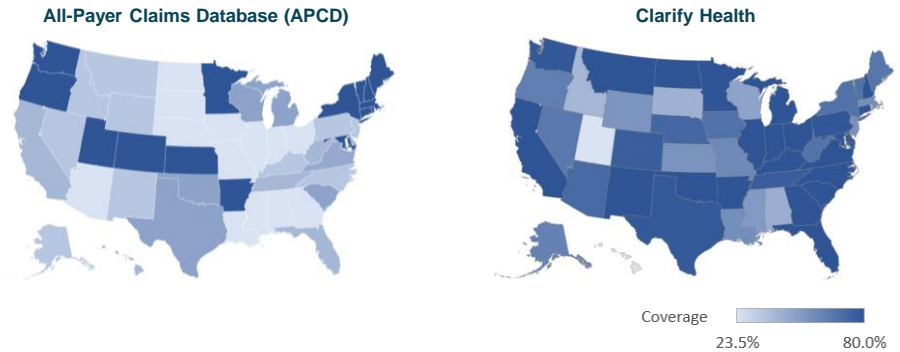
Machine-learning-derived ratings

- Significantly more precise measurement of hospital performance
- Fairer comparison of hospitals serving widely different patient populations
- All volume was captured, and future data refreshes will be easy, leveraging the standard hospital IDs that were created to enable every NPI to be mapped to a unique facility

RESULTS

As part of the vendor selection process, the health plan compared data coverage from the Clarify Platform to the APCD. They found that Clarify had significantly greater non-Medicare fee-for-service coverage across the US, as shown.

Non-Medicare fee-for-service national data coverage for APCD and Clarify Health



To generate the COE ratings, the health plan assessed hospitals on four inpatient surgical procedures (Chart 1) and 14 inpatient medical conditions (Chart 2) across metrics such as mortality rates, readmissions, patient safety, patient experience, and patient infection rate.

Chart 1. Four surgical procedures assessed individually

- Bariatric surgery
- Colon surgery
- Gallbladder removal
- Hysterectomy

Chart 2. 14 Medical and surgical conditions assessed by category

Heart surgery	Cancer conditions	Cardiac	Pulmonology
<ul style="list-style-type: none"> • Coronary artery bypass graft (CABG) • Heart valve replacement 	<ul style="list-style-type: none"> • Mastectomy • Prostatectomy (radical) 	<ul style="list-style-type: none"> • Cardiac catheterization • Angioplasty, with or without stent 	<ul style="list-style-type: none"> • Chronic obstructive pulmonary disorder (COPD) • Pneumonia
Back surgery	Joint replacement	Delivery	
<ul style="list-style-type: none"> • Disc surgery • Spinal fusion 	<ul style="list-style-type: none"> • Hip • Knee 	<ul style="list-style-type: none"> • Cesarean section • Vaginal delivery 	

About Clarify Health

Clarify Health empowers customers to deliver better care and therapies through more actionable insights.

With an integrated enterprise analytics platform, Clarify helps customers select the best providers, map and predict how individuals' journeys through their health care, and understand the use and impact of therapy on patients.

The 2020 COE ratings will be published in the third quarter of 2020. With machine-learning derived metrics, the 2020 COE designations were based on significantly more precise ratings of hospital performance; and it more fairly compared hospitals serving widely different patient populations. Additionally, the software's data schema mapped all NPIs to unique facilities which ensured that all volume was captured. The health plan expects that their 2020 report will be better received by customers and more defensible to question of fairness, compared with prior years.

Producing the ratings in future years will be much easier and faster now. Whereas it previously took them months to manually aggregate, clean, and analyze the APCD data, now they have an on-demand software that instantly refreshes metrics. Ultimately, the health plan hopes that their Clarify-produced ratings will strengthen the value of a COE designation, lead to better patient outcomes, and increased member retention and satisfaction.