Standardizing data through terminology

CASE STUDY

COMPANY PROFILE

Sharp HealthCare is a not-for-profit regional healthcare system serving patients in the San Diego region. With four acute care hospitals, three specialty hospitals, three affiliated medical groups, and a health plan, Sharp aims to make "The Sharp Experience" the gold standard for patient care for the community at large.

THE CHALLENGE

As the capabilities of electronic health records (EHRs) grow, so too does the ability to analyze an endless amount of clinical data. Whether the information comes from clinicians documenting at the point of care, laboratory or clinical test results, or patients themselves via wearable technologies, all of this data is only useful if it is actionable.

Like many healthcare organizations, Sharp captures data in hundreds of different systems, and their analysts often work with data that is siloed or integrated in a custom data warehouse. For almost two decades, they have used bespoke approaches to standardize patient information, but doing so requires an "extreme and sometimes unreasonable amount of effort," according to Chris Tomac, Director of Clinical Analytics and Data Strategy at Sharp. And although his team consists of seasoned data professionals, easily translating clinical concepts and questions into queries and data outputs that deliver actionable information has proven difficult and time consuming.

THE SOLUTION

It became apparent that at Sharp, manually standardizing clinical and administrative data was an unmanageable task. While data used for billing and standardized clinical reporting is often well maintained and mapped to industry code sets, the majority of healthcare data is not mapped, regardless of whether it is structured, semi-structured, or unstructured.

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Discussions with IMO made it clear that their terminology-based approach to normalization – based on decades of experience helping clinicians document at the point of care – would be an ideal solution. "It's hard to overstate the value of IMO Precision Normalize," said Jon McManus, VP & Chief Data and Software Development Officer at Sharp. "And it's exciting to see how this solution is providing us with the power of automated normalization so we can really unlock new value from our data to quickly provide insights across the organization."

Indeed, with IMO, Tomac's team can query a greater volume of patient information all at once. This is due to the ability of IMO Precision Normalize to align clinical data to a single concept and fill in missing links to standard coding systems like ICD-10-CM, SNOMED CT®, LOINC®, and RxNorm®. This, in turn, paves the way for Sharp to flexibly link to the up-to-date standardized codes that best meet their needs for each use case.

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"We know in an ideal world, data from our various systems will align to the same standard terminologies," Tomac explained. "The reality is that data is captured in different systems, uses different vocabularies and dictionaries, and are not always standardized." However, using IMO's streamlined, robust, and granular terminology allows providers to request data more efficiently and helps Tomac's team to compile and present their findings faster – giving stakeholders accelerated access to the relevant information essential to informing and improving care decisions.

LOOKING FORWARD

IMO Precision Normalize now automates the normalization of clinical terms in the Sharp analytics environment, helping to accelerate the delivery of analytics that support the high-quality care patients have come to expect. Moving forward, the data and analytics team plans to take advantage of the normalization engine's capabilities to help:

- Increase the team's capacity to accurately and precisely perform both prospective and retrospective analyses of pertinent patient data at scale
- Streamline any client's transition from one EHR system to another using IMO's terminology mappings to clinical concepts, instead of system IDs
- Quickly conform to industry standard data models, such as OMOP, without having to manually encode vocabulary relationships.

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To learn how IMO's unique approach to terminology and patient data standardization can help your organization, visit **imohealth.com/imo-precision-normalize** or call **847-272-1242**.

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