Realyze Intelligence
HEALTHCARE SOLUTIONS

Identifying Precision Patient Cohorts

Realyze Intelligence enables health care organizations to understand their patient populations more precisely so they can manage both overtreatment and undertreatment of their patients. Realyze helps organizations know their patients better to optimize their resources, manage financial risk and improve care. Applying our sophisticated clinical models alongside the latest artificial intelligence technology, Realyze unlocks information from across the entire patient record including narrative text to prioritizes specific patient populations that are typically hard to identify. Health systems and health plans have found that EMRs and data warehouses can only report on broad categories of patient populations because the structured data such as claims, labs and problem/medication lists can be limited or inaccurately updated. This is where Realyze can help.

Because patients are complex and their health is driven by innumerable factors, health systems and health plans depend on clinical notes to capture most clinical details about the patient. However, to access this data and understand the true progression of the patient's health, these notes must be read and interpreted by a trained clinician. This intricate patient story is effectively trapped resulting in billions of dollars wasted in abstraction costs. Not to mention the waste in both over and undertreatment of these patients because of their true condition not being able to be queried and reported on.

The Realyze Intelligence Solution

The Realyze Intelligence solution "reads" the detailed clinical notes from patients' EMR, allowing the software to understand them at a deeper more precise level, also known as deep phenotyping. This solution identifies precise patient populations that are used to align to the most beneficial treatments. It can identify patients for referrals to a specialist, in need of proactive treatment to reduce adverts events, ideal for expensive treatments/medications, and patients eligible for clinical trials. This solution not only prioritizes patients but gives the clinician the evidence needed to understand the clinical reasoning, thus reducing the need for manually inspecting the entire patient record. This *Augmented Intelligence* streamlines the decision making for a clinician and significantly reduces time for an abstractor.

Realyze has built this general-purpose platform that creates a comprehensive detailed patient story. This infrastructure enables reuse of its core clinical understanding, rapidly addressing many clinical scenarios and delivering results quickly. This has been deployed at large health systems, oncology centers, integrated into software vendor solution and manual abstraction services. Realyze has built a solution that can handle healthcare's ever-changing complexity.

Solution Example

The Realyze Intelligence platform can explain and prioritize patients based on complex clinical conditions. One example of this is for a Chronic Kidney Disease (CKD) population. There is a significant difficulty in identifying the details and progression of CKD patients using just structured data such as claims, lab results and problem lists from the EMR or population health tools. The gradual progression of the disease and delayed reporting of patients' details results in huge costs for patients that are not treated in a timely way. This is concerning both because the size of the US CKD patient population and the impact of delaying treatment may progress to advanced CKD or end-stage renal disease (ESRD) requiring costly events and/or dialysis care.

Realyze was able to take a 100K believed CKD population and break it down into prioritized lists for ideal treatment. This included 10,000 patients that were highest risk of a crash dialysis or hospitalization that could result in heavy costs on the health system. Additionally, Realyze was able to find 6,000 patients documented for being on dialysis that were not in the structured data and 8,000 as being ESRD that went undetected using the existing technologies. By identifying these populations, the health system was able to reduce costs for both over and undertreatment of these populations as well as the ability to improve predictive models for future CKD events.

Additional examples of precision cohorts include:

- Patients with higher risk of **COVID-19** complications based on comorbidities and **Social Determinants of health (SDOH)**
- Patients with higher risk of **readmission** based on evidence identified at discharge.
- Patients with **incidental findings** in need of follow up as documented in specialty notes.
- **Precision medicine** to align patients to medication treatment that will respond to their genomic sequencing.
- **Breast cancer** data needed for registries and patient matching new clinical trials.
- **And many more…**

Visit our website to learn more and get in touch with us: **realyzeintelligence.com**

About Realyze Intelligence

Realyze Intelligence was co-founded by Aaron Brauser MBA and Gilan El Saadawi MD based on 40+ combined years in developing and delivering software for healthcare. Most recently, Aaron was responsible for the commercialization of products at M*Modal (now a 3M HIS company). As Chief Medical Information Officer at M*Modal, Gilan was responsible for the development of all the Natural Language Understanding (NLU) solutions. Realyze Intelligence is a UPMC Enterprise portfolio company.