

Improving Population Health: Data-Driven Approach to Identifying and Engaging Patients with High Risk of Mortality from COVID-19



THE CHALLENGE

MemorialCare has a vast amount of patient-level healthcare data for its ACO and HMO populations that can be easily accessed, as the majority of MemorialCare utilizes the EMR system. The challenge was understanding how MemorialCare can organize this data in a meaningful way as quickly as possible to address the COVID-19 outbreak. The partnership between MemorialCare and Health Catalyst provided an opportunity for collaboration to address this challenge.

THE PROJECT

Leveraging the Health Catalyst® Data Operating System (DOS™) platform and the ACO Risk Stratification Dashboard, MemorialCare developed and implemented an algorithm to identify and risk-stratify members at the highest risk of mortality from COVID-19. Members are stratified into two categories:

Extremely high-risk: Patients with complex health problems that place them at even higher risk of severe illness from coronavirus based on recommendations from the WHO and CDC. These health problems include, but are not limited to, patients with organ transplant, active cancer with chemotherapy, leukemia, lymphoma, and cystic fibrosis.


High-risk: This category is further stratified into three distinct sub-categories.


- All patients over the age of 70 years, regardless of any medical condition.
- Patients under the age of 70 years who have an underlying health condition. These conditions include, but are not limited to, asthma, COPD, heart failure, chronic kidney disease, and diabetes.
- Pregnant women.


Care managers can visualize at-risk members and the specific factors contributing to the increased risk in the ACO Risk Stratification Dashboard, enabling them to quickly prioritize member lists for outreach.

THE RESULT

MemorialCare is using DOS to identify its members at the highest risk for mortality from COVID-19, successfully performing patient outreach, and providing member-specific interventions to improve population health and decrease mortality.

 **Developed and deployed the algorithm for COVID-19 risk for mortality within four days.** The algorithm was applied and visualized on MemorialCare's entire ACO population.

 **Within one week, the algorithm was expanded** to include MemorialCare's entire HMO population.

 **66 percent** of individuals in the extremely high-risk category of MemorialCare's **ACO population** were **engaged by care management.**

PRODUCTS

- Health Catalyst® Data Operating System (DOS™)