



POPULATION SEGMENTATION – PAYER

CASE STUDY

“ We used the standard outputs of the ACG System to develop logic to group patients into these new risk categories. ”

– Sarah Kachur, Pharm.D., MBA, BCACP  
Senior Director of  
Population Health Analytics  
Johns Hopkins HealthCare



Johns Hopkins HealthCare (JHHC) develops and manages medical care contracts with organizations, government programs, and health care providers for close to 400,000 plan members. JHHC serves four lines of business: a self-insured plan (EHP), a Medicaid plan (Priority Partners), a Medicare Advantage plan (Advantage MD) and a military health plan (USFHP) and advocates on behalf of client-employers, patient-members and physician-providers to create optimal results for patients and healthy financial outcomes for providers and employers.



## OVERVIEW

JHHC created a framework based on an adapted version of the National Academy of Medicine taxonomy, combined with ACG System output, to provide a more extensive set of risk categories in an effort to expand their care management programs to high-risk Medicare patients.



## CHALLENGES

As the prevalence of long-term conditions increases, the need for a better understanding of how to manage a multi-morbid population is becoming increasingly important. Specifically, how to better deliver care to high-need, high-cost patients through evidence-based practices while also relieving the cost burden on physician practices.



## METHODS

JHHC's adapted taxonomy focuses on a patient's continuum of needs over the course of their life. It segments the high-cost, high-need patient population enrolled in the Medicare Advantage Program into mutually exclusive hierarchical categories based on their needs. The new taxonomy draws from ACG System output data, including:

- EDC markers to identify medical and behavioral health conditions
- Utilization markers for inpatient and emergency department visits
- Predictive likelihood of hospitalization over the next 12 months
- Local ACG concurrent risk score to validate against historic risk and utilization



## RESULTS

The expansion of case management programs allowed JHHC to:

- Refer approximately 3,400 patients, which represented 30% of the Medicare Advantage population, to case management programs
- Refer all patients categorized as Frail Elderly, Non-elderly Disabled and Major Complex Chronic to case management programs
- Create specific programs tailored to a group's targeted needs
- Monitor the financial and clinical outcomes of the program on a quarterly basis



## RECOMMENDATIONS

JHHC plans to run the new taxonomy model quarterly and monitor clinical and financial outcomes from the program. Alongside this, referrals to the program will continue (via provider referral and patient self-referral) which can help to identify high-risk patients before their claims data is available to process through the taxonomy. Social data will also start to be captured by case managers through administering patient questionnaires that will be validated and fed into the taxonomy model in due course.