Multi-Division High-Utilizer Case Management Pilot

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Project Description

To help develop targeted interventions I wanted to identify social and health disparities among avoidable utilizers of the emergency department based on the New York University algorithm, and avoidable inpatient admission based on Prevention Quality Indicators #90. I believed I could do this by partnering with the informatics team.

Problem Statement:

Five percent of Medicaid patients account for almost half of the program's spending.

Discovery:

1. I started an Ambulatory ICU Pilot and interviewed 30 people. The model was not sustainable because of staffing issues and other competing waiver demands, so we pivoted to social needs case management model.

2. I was surprised by how difficult it was to measure outcomes specifically related to social needs, insurance claims, and avoidable hospital utilization.

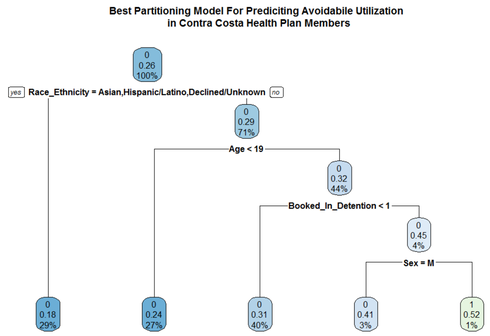
3. Based on my interviews and research I refined my project to identify unique social and health disparities among our patients with the highest avoidable hospital utilization.

Goal: To partner with informatics to analyze Contra Costa Health Plan's 120,465 county residents as of June 2018, and run models to identify the predictors of avoidable hospital utilization over the next 13 months. Predictors to be considered are insurance status, race/ethnicity, age, history of detention, marital status, sex, living alone/social isolation, history of homelessness, and English speaking.

Outcome-oriented Objective: Advise stake holders of where high-utilizer case management efforts should be focused for spread, and open enrollment to another 50 patients by January 2020.

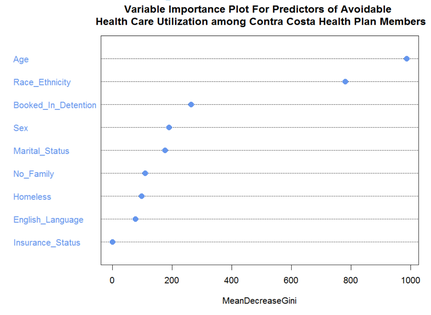
Results

Partition Model



This model partitions the total population into groups with the largest differential in the concentration of avoidable utilizers. We observe that among Contra Costa Health Plan (the county sponsored Medi-Cal Managed Care plan) members, 18% of the Asian and Hispanic/Latino members have avoidable utilization. In contrast, among African-American, White, and Pacific Islander women older than 19 years old with a history of detention in the past 3 years, 52% have avoidable utilization.

Variable Importance



This model identifies the strongest predictors of avoidable utilization. Age had the strongest relationship with utilization, followed by race/ethnicity, history of detention, sex and marital status.

Lessons Learned

- I was overly ambitious at the beginning to think that I could move forward with implementation and data collection, without fully understanding the problem.
- Using matrix management to lead a multi-division team from Public Health, Housing, Alcohol and Other Drugs, Health Plan, and Primary Care has inherent barriers like addressing personnel issues.
- If implemented at another organization, assure that the multi-disciplinary team reports to one leadership structure, and that expectations and outcome goals are clear.
- Working on this project helped me to understand the importance of understanding the problem, and pivoting as needed with other demands.

Next Steps:

- Further research is needed to evaluate what makes African-American, White, and Pacific Islander women with a history of detention are at such high risk for avoidable utilization.
- Consider coordinating efforts with recently launched Medicaid waiver initiative, Whole Person Care, to address target populations.

Mission Model Canvas

Key Partners

Health Services Director,
Public Health Director,
Behavioral Health Director,
Alcohol and Other Drugs Director,
Housing Services Director,
Health Plan CEO, and
Hospital/Clinics/Detention CEO

Key Activities

Analyze Contra Costa County's 120,465 CCHP member county residents as of June 2018. Partner with informatics to identify predictors of avoidable utilization over the next 13 months.

Key Resources

Access to informatics team to build, test, and run partition and variable importance models.

Value Propositions

Customize a bundle of targeted services that address social needs gaps, such as race, age and history of detention. Success will be measured by analyzing avoidable hospital utilization 1 year prior to enrollment, and compare to avoidable utilization 1 year post enrollment.

Buy-in & Support

We will need support of the key partners to provide data, staffing, work space, jail access, and funding for spreading the pilot.

Deployment

We will use direct channels to conduct health disparity analysis, spread the program to another site, and then outreach to identified customers in the hospital and community.

Beneficiaries

Our niche customers have been the highest utilizers of the hospital system that are defined as a 4 emergency department visits and or 2 hospitalizations in a 6 month period prior to enrollment. We should consider shifting the niche population base on data.

Mission Budget/Cost

10 staff a $1,000,000 per year
Other expenses at $30,000 per year
3 vehicles at $60,000 every 5 years

Mission Achievement/Impact Factors

By identifying the social and health disparities among those most at risk for avoidable hospital utilization, we can aggressively target specific communities and reduce unnecessary utilization for our customers. Ultimately, we will reduce overall costs of health care expenditures while improving patients' quality of life.