MIDWEST HEALTH INITIATIVE

COVID-19 ANALYSIS PROJECT PROPOSAL

The Midwest Health Initiative Is Seeking Partners to Fund and Provide Input into an Analysis of the Impact of COVID-19 Pandemic among Commercially-Insured Individuals in the St. Louis Area.

As our communities confront COVID-19, collaboration and data are key to understanding the pandemic's impact and what opportunities there are to lessen its emotional, physical, and financial harm.

The Midwest Health Initiative (MHI) manages a set of health claims data from commercially insured individuals in Missouri and its sounding areas. MHI intends its COVID-19 analysis to complement the work of other health care analytics organizations and inform Missouri's capacity to respond to public health crises.

MHI's diverse team of stakeholders includes those who pay for and those who deliver health care. MHI's team of expert data and health analysts provide insights into the MHI's data set.

Differences among Populations per Coverage Status

MHI's data offers insights into the differences in the incidence and care provided to:

- Those with commercial insurance;
- Those covered through Medicaid or another program; and
- Those without insurance.

MHI will provide insights into the financial impact of COVID-19 on the region's health systems, including the loss of revenue among health care providers serving commercially insured populations.

Project Summary

MHI will examine:

- The rates of COVID-19 testing and diagnosis; and
- Inpatient and outpatient treatment patterns, the cost of treatment, and the resources used for treating both COVID-19 and non-COVID-19 conditions before, during, and after the pandemic.

MHI Data Set

MHI's data contains medical and pharmacy claims and information on eligibility for over 2.2 million people residing in Missouri and its bordering metropolitan areas. Roughly 850,000 of those individuals reside in the St. Louis Metropolitan Statistical Area. Claims data through April 2020 is currently available.

Geographic Scope

This analysis proposes to cover those residing in the St. Louis Metropolitan Statistical Area. MHI's data asset is statewide and the analysis could be expanded to cover the State of Missouri and bordering communities.

Description of Analysis

The COVID-19 analysis will allow diverse community partners to better understand the COVID-19 pandemic and take informed actions to mitigate its impact. If funded, work will begin immediately to refresh MHI data to represent services provided through October 2020. MHI will also solicit input from clinical, public health, actuarial experts and other experts to review and refine the data queries and research approach.

Corresponding ICD-10 diagnosis and treatment codes will be programmed into queries. MHI will pull data for analysis and findings produced for the baseline periods and early 2020. The project's multisector advisory council will review findings and make recommendations for refining queries and reassessing findings. Once early findings are accepted, the MHI team will develop them into an initial report to be shared widely. Data will be refreshed in the fall, with a subsequent analysis, review of findings, and report distribution. Ongoing analysis could be performed as needed.

Questions to Be Explored:

A. **Incidence –** The number of people in the St. Louis Metropolitan Statistical Area that received testing and/or treatment for COVID-19, by age, gender, co-morbidities, risk score, and modality of test (viral, antibody, rapid).

B. **Treatment Patterns for COVID-19 –** Treatment modalities (outpatient, medication, inpatient, ICU, mechanical ventilation, other), the duration of treatment episode, and identifiable outcomes (discharge home, to morgue, outpatient therapy without hospitalization).

C. **Disparities –** Data from MHI analysis of the incidence, treatment, and outcomes of COVID-19 for commercially insured people would be useful to assess the presence of disparities when compared to other analysis of those enrolled in Medicaid, Medicare or the uninsured. As Census data permits, MHI would analyze the incidence of COVID-19 by demographics.

D. **Cost and Resource Use –** The average cost and resource use for a COVID-19 treatment episode and comparison to the average cost and resource use in influenza treatment for the years 2017-2020.

E. **Trends in Related Conditions –** Analysis of the following per population on a monthly, quarterly or annual basis for 2017, 2018, 2019 and 2020 to date and throughout 2020 in order to understand:

1. **Incidence and Patient Severity as Compared to Annual Flu** – Using claims with diagnosis of COVID-19, assess how the incidence and severity of patients diagnosed compares to the incidence and severity scores of patients diagnosed with influenza in prior years.

2. **COVID-19 Arrival in St. Louis MSA –** Using monthly incidence rates for influenza, pneumonia, upper respiratory disorders, with and without a COVID-19 diagnosis:

   a. Compare rates to the same month during earlier years (2017 – 2020).

   b. Attempt to identify when increases in conditions related to COVID-19 began to appear in the St. Louis MSA. Provide a frequency distribution, which may be compared in time to stay- at-home orders.

3. **Serious Acute Conditions –** Trend emergency department and urgent care visits to assess reductions in acute care and track the incidence of heart attacks, strokes, or other serious acute medical conditions by month for the years 2017 – 2020. Using these findings, assess whether there was a COVID-related decline in the incidence of these acute conditions and the potential impact of treatment delayed.

4. **Primary Care**

   a. Trend the number of visits during 2017 – 2020.

   b. Compare the number of primary care visits before and after the COVID-19 pandemic.

   c. Attempt to determine whether the acuity of chronic conditions and compliance with care maintenance has changed during this time due to deferred care, including the effects of changes in the availability of specialty care for co-management and referral of conditions.

5. **Specialty care –** Trend the number of visits to specialists related to COVID-19 (respiratory, heart, etc.) and non-COVID-19 related care. Examine the effects of deferred care on condition management and referral of conditions.

6. **Telemedicine Adoption**

   a. Trend increases in the use of telemedicine on a quarterly basis for the years 2017 – 2020 by primary care and specialist providers.

   b. Assess the degree of increased use during 2020 and the likelihood of its continuation in the post-pandemic world.

7. **Elective services impacted by COVID-19**

   a. Review medical utilization and common elective surgery trends in prior years and during 2020.

   b. Assess the degree of decline in elective services, projected reductions in spending, the return to care, and other trends over time.

8. **Facility Infrastructure –** To assess any pandemic-related changes, review the number of health care facilities that billed for services to commercially insured patients in the region, both rural and urban, during the periods before, during, and after the pandemic.

9. **Enrollment Trends –** Monitor declines in the number of individuals in the data set as an indicator of the number of people losing insurance coverage.