**SHIELD Illinois Presentation**

To achieve the goal of assessing the impact of SHILED testing centers on mitigating severe COVID-19 outcomes in disadvantaged neighborhoods, a structured approach is required. This process involves data collection, analysis, and interpretation withing a framework designed to show the relationship between testing center accessibility and health outcomes.

1. Data Collection

SHIELD testing centers

EHR data related to COVID-19, including ICU admission, use of mechanical ventilation, and deaths from Loyola University and University of Chicago hospitals between 2020 and 2022

All data related to socioeconomic status, including ADI, for each zip code as well as demographic data, emphasizing racial and ethnic composition

1. Data Preparation and Integration

Map SHIELD testing centers against demographic and socioeconomic status indicators by zip codes to identify disadvantaged neighborhoods.

Merge EHR data with socioeconomic status, demographic, and SHIELD testing data

1. Analytical Methods

Using regression models to assess the relationship between the presence of SHIELD testing centers and severe COVID-19 outcomes, controlling the confounding variables such as socioeconomic status, demographic factors, and pre-existing health conditions

Using panel data analysis to examine changes over time withing zip codes, comparing health outcomes before and after the introduction of SHIELD testing centers, and across different levels of socioeconomic status and demographic factors

1. Identifying Disadvantaged Neighborhoods
2. Evaluating SHIELD Testing Centers’ Impact

Compare COVID-19 severe outcomes in disadvantaged neighborhoods with and without SHIELD testing centers, analyzing the data before and after the centers were introduced

Examining how the test volumes at SHIELD centers correlate with changes in severe COVID-19 outcomes

1. Recommendations for Future Testing Sites

Based on the analysis, identify areas with high needs but no current SHIELD testing centers

Use the findings to recommend locations for future testing centers to maximize the impact on mitigating severe COVID-19 outcomes