## Step 1: Estimate Parental Hesitancy

**Inputs**: COVID-19 Trends and Impact Survey data

**Method**: Mixed effects logistic regression

Outputs: Predicted probabilities of hesitancy by county and sociodemographic characteristics of parents/guardians



## Step 2: Post-Stratification

Inputs: Predicted probabilities of hesitancy (step 1); American Community Survey (2015-2019)

Method: Post-stratification

Outputs: County-level estimates of parental hesitancy for 5-11 and 12-17



## Step 3: Regress coverage on hesitancy for 12 to 17 years

Inputs: County-level hesitancy estimates for 12-17 (step 2) and CDC coverage data for 12-17

Method: Logistic regression

between parental hesitancy

and 9-month vaccination

**Outputs**: Relationship

coverage



## Step 4: Predict coverage for 5 to 11 years

Inputs: Relationship between hesitancy and coverage for 12-17 (step 3) and hesitancy estimates for 5-11

**Method**: Prediction from logistic regression

**Outputs**: Predicted 9-month coverage for ages 5 to 11 years