

covidcase080120.csv

Johns Hopkins
University Center for
Systems Science and
Engineering database
August 2020
COUNTIES
Incidence, quartiles

disability_raw.csv

2018 American
Community Survey
(ACS)

Calculate County
Percentages

"County percentages
for each disability
sub- group were
calculated by dividing
the number of PwDs
in each subgroup by
the total civilian **non-
institutionalized
population** relevant
to the variable
category." (2)

join

summary stats

pearson's R

"statistical
associations between
COVID-19 incidence
rate and each
disability variable"

Table 1

so many errors before GEE that we
won't use, no. Inoger expectation
that we could get the same results

Define Clusters

State Correlation

method???

SatScan (spatial epi
for us, planned
deviation)

used Poisson model
to determine relative
risk (RR)

- because satscan is
not open source,
methods, logistics

repeated 5 times: race, ethnicity, poverty status, age, and biological sex

Group By

into 6 RR intervals:
<1.0, 1.00e1.99,
2.00e2.99, 3.00e3.99,
4.00e4.99, and 5.0 or
more

GEE Cluster
Results

The use of both
states (n ¼ 49) and
RR groups (n ¼ 6)
for the GEE cluster
definition resulted in a
total of 102 clusters,
with the number of
counties per cluster
ranging from 1 to 245.

Calculate intra-cluster
de- pendency
correlation matrix.

"normal, gamma, and
inverse Gaussian
distributions with log-
arithmic and identity
link functions were
explored. The gamma
distribution with
logarithmic link
function was chosen
for all GEEs since this
model specification
provided the lowest
QIC value"

correlation
matrix

Multicollinearity
Analysis

Variance inflation
factor, tolerance, and
condition index
criteria

"All independent
variables were
standardized before
inclusion in the GEE
and their statistical
significance was
estimated using two-
tailed p-values from
the Wald chi-square
test."