

## COVID-19:

1. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0249980>

Researchers in this paper analyzed patients under 17 years old for COVID-19 symptoms from March 20 to June 22, 2020, at Providence Community Health Centers and estimated the sensitivity, specificity, and AUC of individual symptoms and three symptom combinations.

They first conducted chi-square tests between demographic and clinical characteristics of COVID-19-infected and uninfected participants. Variables that differed between the two groups at a significance level of  $p < 0.2$  were in a multivariable model. Then, they checked for interactions between known COVID-19 exposure and all other covariates.

For each age group, researchers calculated the sensitivity, specificity, and AUC of COVID-19 exposure history and each symptom for identifying the infection. After that, they evaluated the diagnostic values of three symptom combinations: the RIDOH probable case definition, a variety generated by a backward elimination approach, and a combination generated by classification and regression tree (CART) analysis. Lastly, they evaluated the test characteristics of the three symptom combinations with and without considering COVID-19 exposure.

Of 555 participants, 217 were COVID-19-infected. Fever was more common among 0–4-year-olds; older children more frequently reported fatigue. In children  $\geq 5$  years old, anosmia or ageusia had 94–98% specificity. At all ages, exposure history most accurately predicted infection. Concerning individual symptoms, cough most accurately predicted disease in  $<5$  year-olds and 12–17 year-olds, while headache was most accurate in 5–11 year-olds.

2. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0261272>

In this paper, researchers want to identify predictors of mortality associated with COVID-19. All cohorts were divided into two groups: survivors and deceased patients. Categorical variables were compared using the chi-square test; continuous variables were compared using a t-test. Univariate and multivariate logistic regression examined the association between demographics, clinical, laboratory, treatment-related variables, and risk of in-hospital death. Age, respiratory rate, and CRP were useful predictors of mortality.

## Diabetes:

1. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0269594>

This paper investigated whether masticatory disorders are relevant to diabetic microvascular complications. Multivariable linear regression models were constructed to examine factors related to masticatory efficiency. According to the bivariable analysis, masticatory efficiency was significantly correlated with the duration of diabetes, number of remaining teeth, number of moving teeth, and condition of diabetic neuropathy.

Moreover, the number of remaining teeth and diabetic neuropathy remained significantly correlated with masticatory efficiency in the multivariable analysis.

2. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0043275>

Researchers in this paper investigated the usefulness of several anthropometric measurements, such as waist-to-height ratio, to predict the presence of type-2 diabetes, hyperglycemia, hypertension, atherogenic dyslipidemia, or metabolic syndrome. Logistic regression models were fitted to evaluate the odds ratio of presenting each cardiovascular risk factor according to various anthropometric measures. AUC was used to compare the predictive ability of each measurement. In conclusion, most anthropometric parameters were significantly and positively associated with cardiovascular risk factors.

#### **Abortion:**

1. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0064775#s2>
2. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0231672#sec006>

#### **Gun Legislation:**

1. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0111893>
2. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0077552>

#### **Vaping:**

1. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0260290> (Sentiment Analysis, LDA)
2. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0262407> (Gradient Boosting)

#### **Opioids:**

1. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0167479>
2. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0244285#sec002>

Topics:

- Covid-19 - keep top modeling, add simulation
- Diabetes - keep top
- Abortion
- Gun legislation
- Nursing homes
- Foodborne diseases
- Vaping
- Opioids

Journals:

- PLOS ONE
- JAMA Network Open
- Journal of Applied Statistics
- American Journal of Epi