

Abstract

Introduction - The emergence of the novel SARS-CoV-2 coronavirus in 2020 has led to rapid changes in national public health policy leading to the implementation of many new epidemiologic strategies towards the mitigation of Covid-19 disease spread. Contact-tracing and case investigation are among two of the most common tools utilized by infectious disease specialists to gather information on a state and county level. The utilization of behavior-based prediction models to determine the risks of disease on a local and community level can provide epidemiologists with more tools to improve disease management strategies.

Methods - Using an 8-item questionnaire through Qualtrics software based on behaviors identified by the CDC related to Community-Related Exposures to Covid-19, local Southern Illinois residents were anonymously surveyed regarding the frequency or occurrence of each individual item during the Covid-19 pandemic. The survey aimed to determine the behaviors and trends associated with changes in activity among Southern Illinois residents as a result of the Covid-19 pandemic.

Results - 77 total survey responses were collected, with the most common response being 77.92% of participants indicating they spent <\$99/month additionally due to Covid-19 restrictions. Masks being worn every time an individual left their home was reported by 71.43% of respondents. Most respondents reported travelling on trips related to either business, leisure, or family members, however 54.6% of participants reported 0 visits to restaurants, bars, and other public venues.

Discussion - The survey results identified key trends in behaviors of Southern Illinois Residents geared towards adherence of CDC Covid-19 Guidelines for Community-Related Exposures. An association of individual behaviors towards the development or exposure of Covid-19 was unable to be determined due to limitations with incorporating cross-comparative Covid-19 testing results.

Conclusion - Major behavioral changes made by members of the Southern Illinois community may not reflect significant cost changes. There were strong trends towards adherence to CDC guidelines made by observation of survey data. Future studies should include Covid-19 testing services to improve the predictive value of behavioral activity models.