Southern Illinois Behavior Trends During The Covid-19 Pandemic

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BACKGROUND

• SARS-CoV-2 virus has a well-documented, high rate of disease spread with massive global ramifications on public health and safety
• Historical disease mitigation procedures lack suitable efficacy and require additional state and local government involvement
• Contact tracing at a local level is limited and provides non-specific insight to actual Covid-19 disease risk
• Behavioral-based epidemiologic investigations allow public health officials to make individualized decisions to minimize risk of disease and optimization of health resources

OBJECTIVE

• To determine the behaviors most frequently conducted by individuals testing positive for Covid-19 in Southern Illinois area
• To identify the trends in behaviors and activities of Southern Illinois residents due to Covid-19 changes

METHODS

Study Design
• Observational, cross-sectional, chart survey of 77 participants

Inclusion Criteria
• Adults aged 18+
• Access to social media (Facebook)
• From “Southern Illinois area” (self-reported)

Survey Design
8-item questionnaire:
• Based on items in CDC Recommendations for Community-Related Exposures to Covid-19
• Collection of consent, multiple choice answers, no demographic information

Study Measures: Dependent Variables
Occurrence of behavior/activity
• Rate of occurrence of all 10 questionnaire-activities by survey response selection percentage

Study Measures: Independent Variables
• Age, gender, race of participants

Data Analysis
• Sample was described using means/ranges, modes and frequencies/percentages
• All data collection was completed using Qualtrics software and calculations were made using formulas within Excel

RESULTS

Q1: On average, how often were you traveling to grocery stores, supermarkets, and convenient stores?

Q2: How often were you visiting pharmacies, doctor’s offices, urgent-care centers, or other health-care facilities?

Q3: How often were you visiting restaurants, bars, or other public dining venues during the Covid-19 pandemic?

Q4: What percent of times traveled outside your home did you wear a face mask or other protective equipment?

Q5: How many encounters with suspected or known individuals with Covid-19 have you had?

Q6: How many total trips (vacations, business trips, visits to family/friends) did you take during the Covid-19 pandemic?

Q7: How much additional spending on cleaning supplies, protective equipment, or other costs related to Covid-19 did you incur?

Q8: How often did you use: trains, buses, airplanes, or Uber/Lyft during the Covid-19 pandemic?

CONCLUSION

• Multiple behaviors strongly associated with intent to closely follow public health guidance
• Mask wearing, social gathering avoidance, and absence of public transportation use were among the most common trends
• Marked individual awareness of Covid-19 encounters/exposure history may be indicative of greater
• Cost implications of Covid-19 may have been lower than perceived public opinion

FUTURE DIRECTIONS

• Completion of this study with the original design incorporating comparative, anonymous Covid-19 test results would yield an improved predictive-behavior model utilizing weighted-scoring of each questionnaire item
• Comparisons of data regarding the occurrence of behaviors in the questionnaire before the Covid-19 pandemic would improve the study’s ability to determine trends in behaviors
• Behavioral tracking data may become a more beneficial tool to epidemiologists in combination with contact-tracing and case investigation in order to provide individualized risk management strategies in local communities