

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

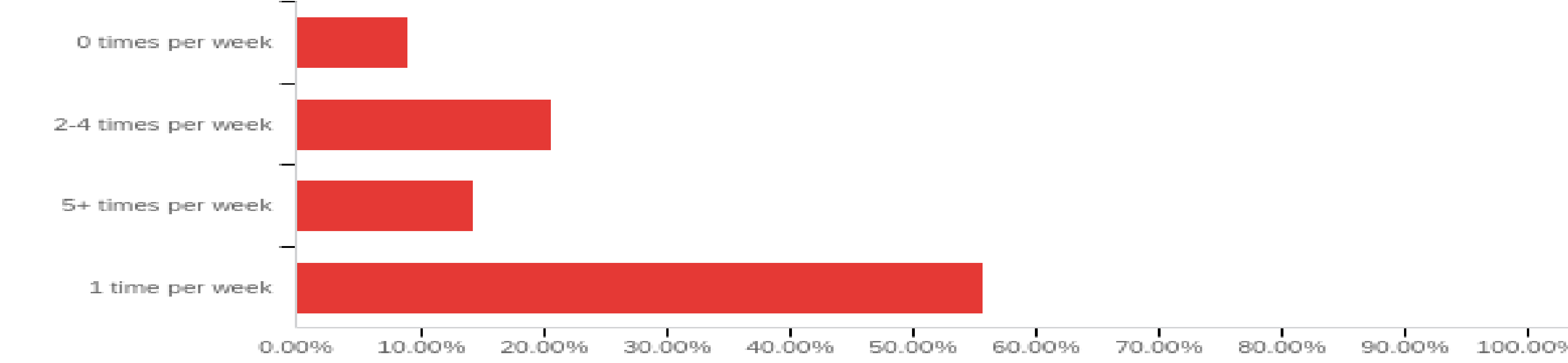
Data Analysis

- 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

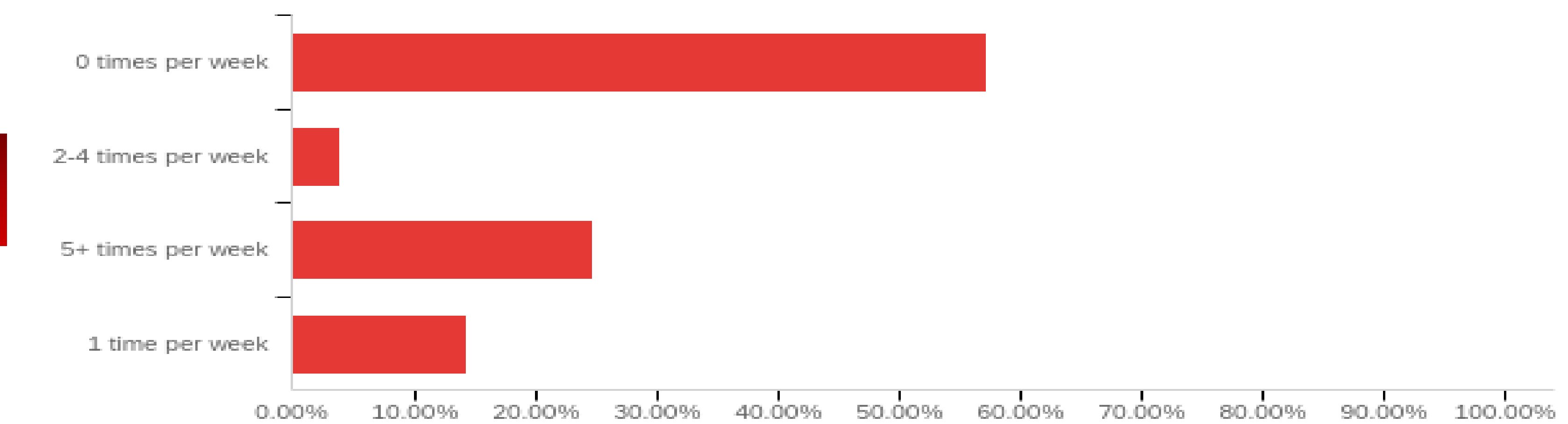
RESULTS

Figure 1: 8-Item Questionnaire Response Percentages

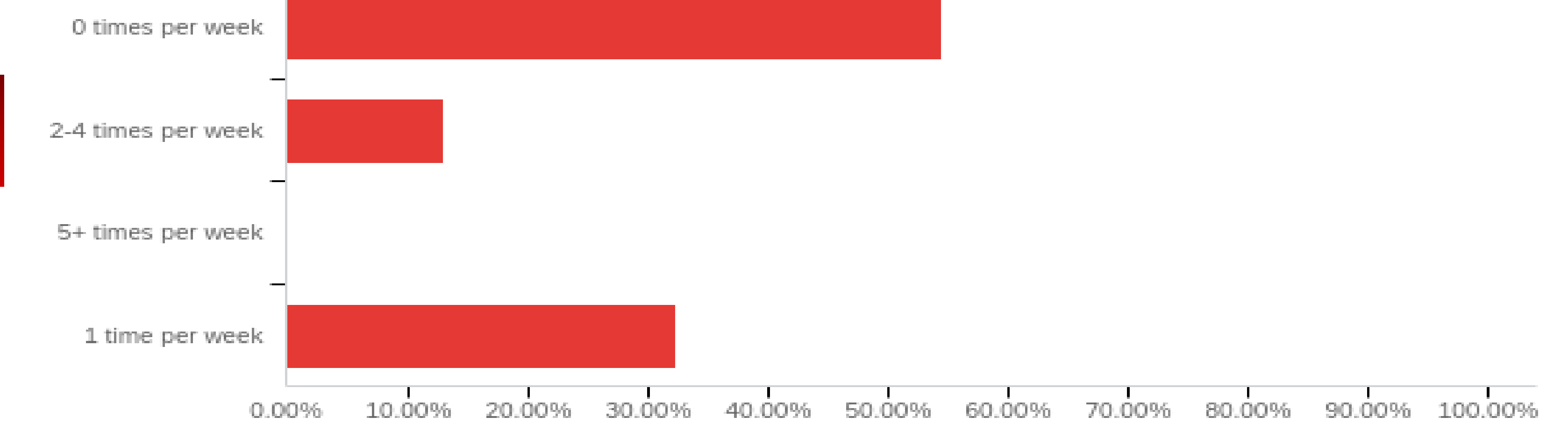
Q1: On average, how often were you traveling to grocery stores, supermarkets, and convenient stores?



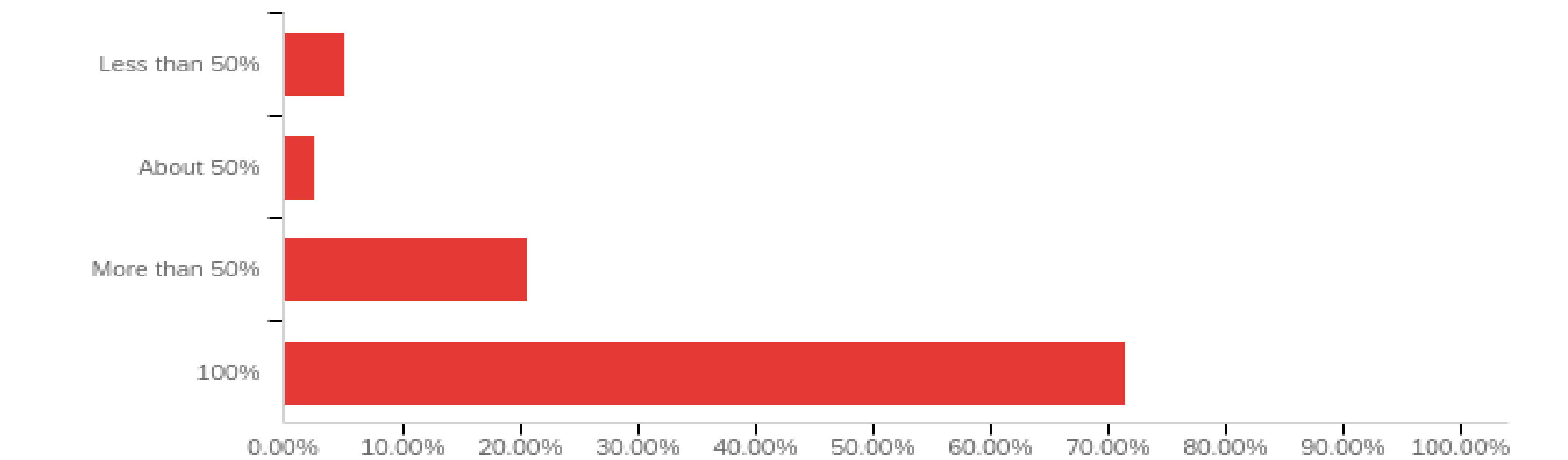
Q2: How often were you visiting pharmacies, doctor's offices, urgent-care centers, or other health-care facilities?



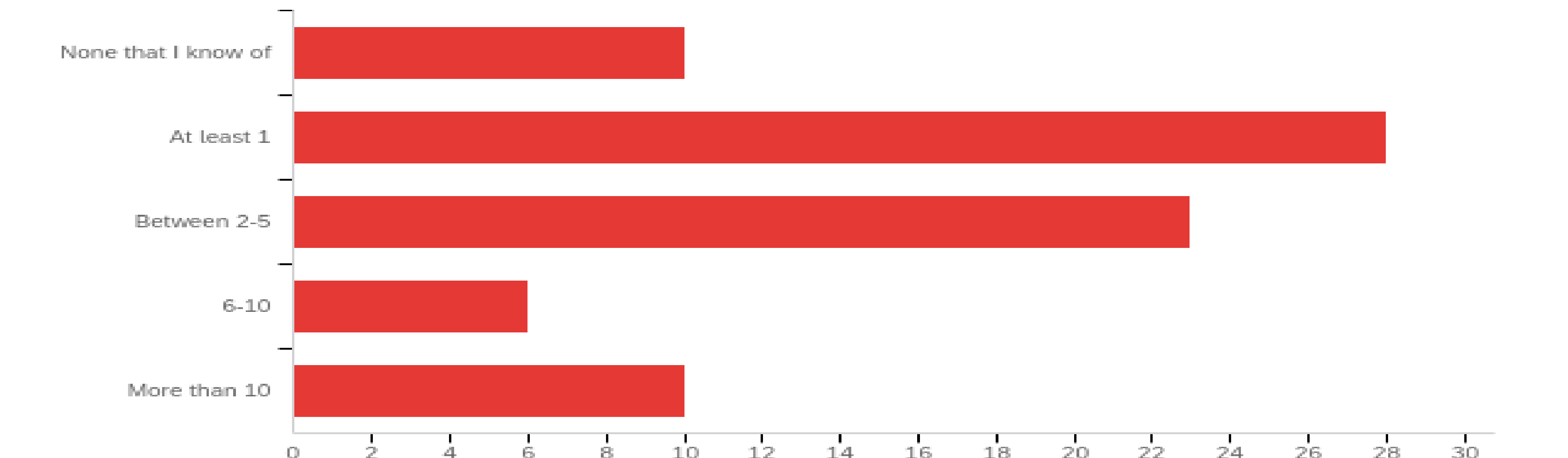
Q3: How often were you visiting restaurants, bars, or other public dining venues during the Covid-19 pandemic?



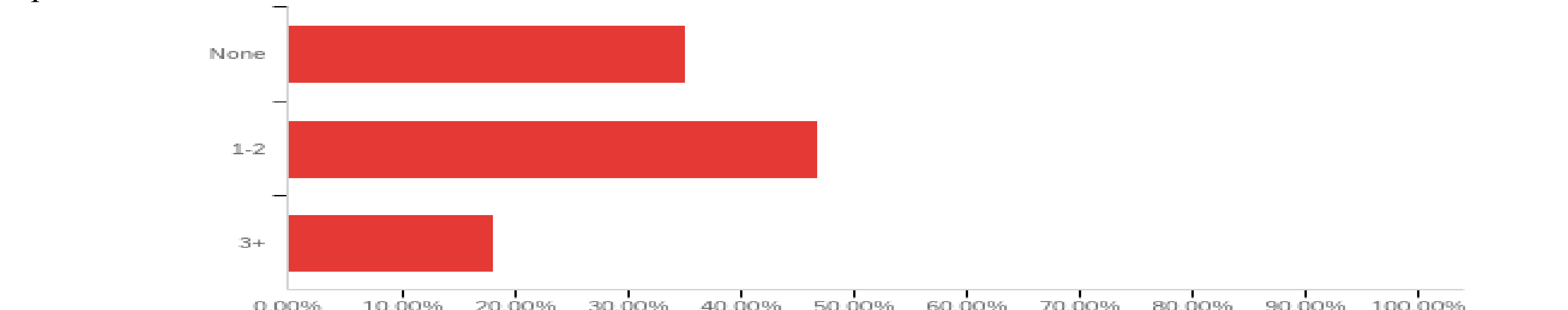
Q4: What percent of times traveled outside your home did you wear a face mask or other protective equipment?



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

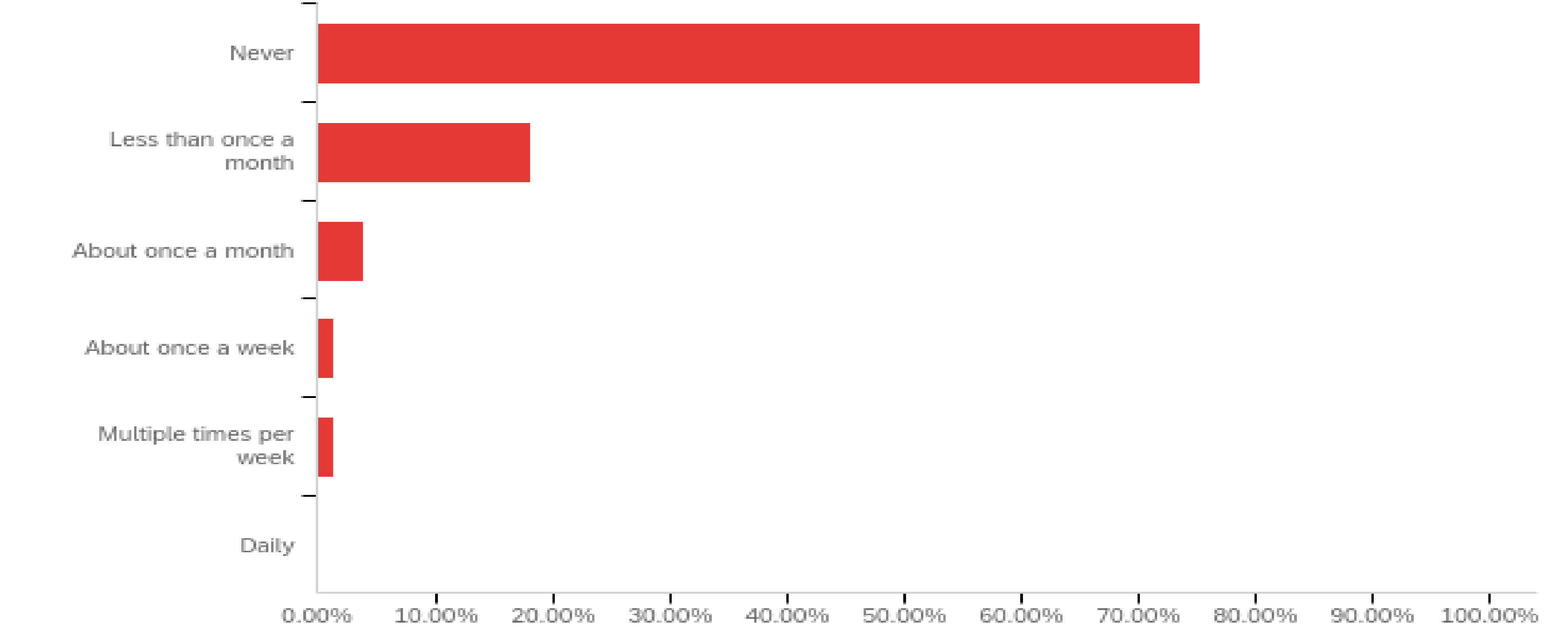


Q6: How many total trips (vacations, business trips, visits to family/friends) did you take during the Covid-19 pandemic?

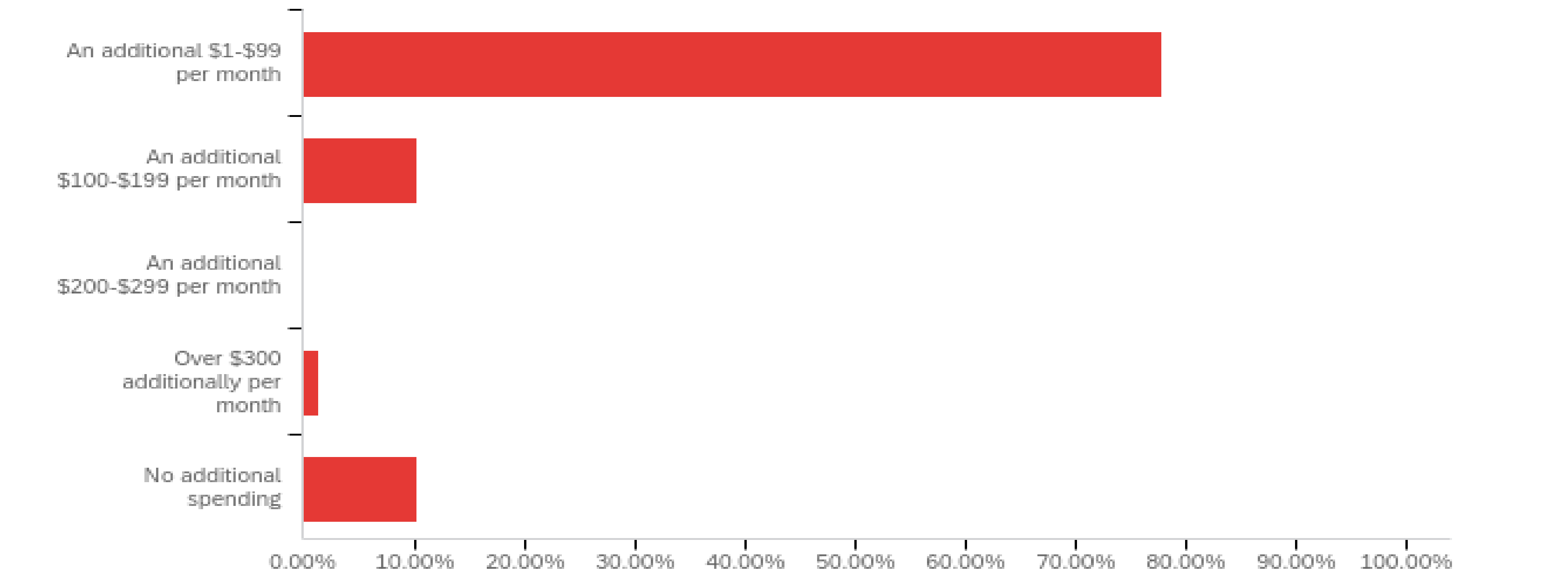


RESULTS

Q7: How often did you use: trains, buses, airplanes, or Uber/Lyft during the Covid-19 pandemic



Q8: How much additional spending on cleaning supplies, protective equipment, or other costs related to Covid-19 did you incur?



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