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Threats of compound wildfire smoke and extreme heat in California

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Threats of compound wildfire smoke and extreme heat in California

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Abstract

Wildfires and extreme heat events are inherently linked; shared climatic drivers are simultaneously worsening both hazardous events in California. Populations likely experience exposure to a combination of these hazards, i.e., compound hazards; yet there is little known about this public health threat. Studies indicate wildfire smoke and extreme heat, independently, elevate risks for morbidity and mortality. In addition, epidemiologic evidence gives reason to suspect compound wildfire smoke and extreme heat could exacerbate health outcomes and present a greater threat to public health.

This dissertation aims to examine multiple facets of compound wildfire smoke and extreme heat in California. Chapter one assesses the distribution of compound wildfire smoke and extreme heat exposures in California from 2011-2020. The exposure assessment uses a clinically meaningful definition of exposure to estimate populations with disproportionate vulnerabilities. Chapter two then estimates the joint effects of exposure to wildfire smoke and extreme heat within a short-term exposure lag window. Chapters two and three both utilize a statewide payer's database to examine all-natural cause, cardiovascular, cerebrovascular, renal, and respiratory morbidity impacts. In Chapter three, exposures are examined at different time periods to evaluate temporally compounding wildfire smoke and extreme heat in two ways; that is, effect modification of extreme heat-related morbidity by wildfire smoke exposure weeks to months prior, and vice versa.

Methods include descriptive mapping and exposure assessment to identify disproportionately exposed populations. Joint effects and effect modification are estimated using time-stratified case crossover design with conditional logistic regression models.

Each chapter investigates different periods of exposure and characterizes findings by individual or community level factors, such as race and ethnicity, income, education, and rural and urban classifications. These studies utilize secondary datasets from trusted agencies in environmental health monitoring and exposure assessment, including public health surveillance.

Altogether, the findings from this dissertation work provide evidence on the public health impacts of compound wildfire smoke and extreme heat. Exposures to compound wildfire smoke and extreme heat are increasing and their health impacts are synergistic, even for exposures across different periods of time. Individuals across California have been impacted by compound wildfire smoke and extreme heat in recent years; however, exposures were consistently highest within the Central Valley. In addition, health impacts were disproportionate, often by race and ethnic groups. This work improves characterization of vulnerable populations to help target joint mitigation of compound hazard risks.

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1. Introduction

California is burdened by combinations of worsening climate hazards (Bedsworth et al., 2018). Unprecedented frequencies and intensities of hazards present critical threats to public health. This includes harmful smoke emissions from wildfires and rising temperature extremes. Projected increases of wildfires and extreme heat may increasingly expose populations to multiple hazards. Subsequently, this would present unique risks to the diverse populations in California.

Wildfire and extreme heat disturbances in California are characterized in many ways. In recent years, wildfire regimes have become catastrophic. Seven out of California's ten largest wildfires on record occurred in the past 5 years (State of California Department of Forestry and Fire Protection, 2023). Repeated record-breaking years are burning more acres (Figure 1.1; Williams et al., 2019). In 2020 alone, over 4 million acres burned, and the number of annual incidents continues to rise. Concurrently, high ambient temperature extremes, characterized as extreme heat events, are increasing in frequency and duration (Mastrandrea et al., 2011; Watts et al., 2018). Extreme heat health risks are unique to regional climates due to acclimatization (Vaidyanathan et al., 2019); thus, classified at smaller regional scales. However, there is no singular definition for an "extreme heat" event, which has been characterized ranging from duration-specific events to threshold-derived temperatures (McElroy et al., 2020, Wobus et al., 2018, Xu et al., 2016). Changes in temperature are often associated with cascading hazards. For instance, in early 2023, California was bombarded by atmospheric rivers which lead to increased flood risks. This event was partially driven by warming temperatures (Najibi and Steinschneider, 2023). Additionally, a study on climate conditions preceding the extreme California wildfires of

2018 shows extreme heat contributed to fire ignitions during that period (Jacobson et al., 2022).

Wildfires and extreme heat are inherently linked; yet the relationship is complex and dynamic. This further complicates the understanding between threats of wildfire smoke and extreme heat exposures. High ambient temperatures provoke drought conditions and dry out fuels conducive to wildfires (Vitolo et al., 2019). A study from Libonati et al. (2022) shows the combination of drought and heatwave increases the severity of wildfires. However, a recent study regarding the 2019-2020 Australian wildfires describes the potential for large wildfires to reduce global temperatures by altering climate systems, such as La Niña (Fasullo et al., 2023). The relationship is not straightforward, and fluctuations of wildfire and extreme heat events contribute to disruptions in the climate system, such as water cycles, influencing changes in drought and precipitation. Furthermore, there is evidence that heat can trap air pollutants, thus, increasing ambient air pollution during episodes of extreme heat (Peterson et al., 2014). One study also found reductions in tree canopy post-wildfire resulted in a significant 3.7°C increase in local temperature within the short-term (Wolf et al., 2021).

Amidst the complexities of this relationship, there is growing concern regarding compound wildfire smoke and extreme heat events. Compound climate events can be characterized by their different mechanisms and impacts. For instance, Zscheischler created a typology of compound events based on the combination of modulator, drivers, and hazards resulting in an impact (Zscheischler et al., 2020). The types include preconditioned, where a pre-existing condition compounds with the driver of a hazard; a

multivariate event, where multiple drivers or hazards compound; temporally compounding, where within a fixed region there is a cluster of hazards over time; and spatial compounding, where multiple regions are affected by the same or different hazards within the same timeframe.

Each compound type could lead to more severe impacts, which may be assessed as the frequency or intensity of a hazard, environmental damages, societal losses, or human health. Multiple studies have examined the impacts of combinations of climate drivers and hazards on wildfire frequency and severity (Libonati et al., 2022; Ramos et al., 2023; Richardson et al., 2022; Walden et al., 2023). Evidence shows compound drought and extreme heat cause more severe wildfire compared to the impacts of either drought or extreme heat alone (Libonati et al., 2022; Richardson et al., 2022). Additionally, growing attention is focused on the public health implications of compound hazards (Leppold et al., 2022; Simpson et al., 2023). Impacts of compound climate events are exacerbated by existing vulnerabilities, often relating to lack of adaptive resources (Simpson et al., 2023). However, there are many gaps in this research, including the public health impacts of compound wildfire smoke and extreme heat.

Epidemiologic evidence of wildfire smoke and extreme heat, independently, show critical health risks for morbidity and mortality. Wildfire smoke contains multiple harmful air pollutants, and many studies show that wildfire-related fine particulate matter ($PM_{2.5}$) is associated with adverse respiratory and cardiovascular conditions, including asthma, chronic obstructive pulmonary disease (COPD), and cardiac arrest (Cascio, 2018; Chen et al., 2021; Jones et al., 2020; Reid et al., 2016a). Schmeltz et al. (2016) found exacerbations

of respiratory and cardiovascular morbidities with co-occurring heat-related illness, which ranges in severity from dehydration to heat stroke with multiple organ failure. Additionally, many extreme heat studies show high ambient temperatures often result in acute effects, such as renal failure and fluid and electrolyte disorders (Bi et al., 2011; Bobb et al., 2014; Guirguis et al., 2014; Schmeltz et al., 2016).

The physiologic pathways driving these adverse health effects are similar for wildfire smoke and extreme heat as well. Inhaled wildfire smoke particulates produce systemic inflammation, which disrupts cardiovascular and respiratory functions (Jones et al., 2020). Extreme heat exposure strains similar physiological responses by stressing the thermoregulatory system and impairing circulatory functions (Gordon, 2003; Khan, 2019). Additionally, physiologic adaptations to heat increases respiration, which can subsequently increase inhalation of harmful air pollutants (Gordon, 2003). Therefore, interaction between wildfire smoke and extreme heat effects is biologically plausible. Additionally, although there is limited evidence on interactions of wildfire smoke and extreme heat on health (Patel et al., 2019; Rahman et al., 2022), there is extensive evidence showing ambient air pollution and extreme heat can have synergistic health impacts (Analitis et al., 2018; Anenberg et al., 2020; Patel et al., 2019; Schwarz et al., 2021).

Furthermore, the characterizations of compound hazards lack an assessment of multiple impacts on a system or individual. Co-occurring hazards may jointly impact health; however, it is possible that temporally compounding hazards may lead to multiple impacts, which may impair an individual's or system's capacity to adapt and mitigate risks (Figure 1.2). This dissertation aims to examine both facets, co-occurring hazards and

temporally compounding hazards, for compound wildfire smoke and extreme heat in California. Chapter one assesses the distribution of compound wildfire smoke and extreme heat exposures in California from 2011-2020. The exposure assessment uses a clinically meaningful definition of exposure to estimate populations with disproportionate vulnerabilities. Chapter two then estimates the joint effects of exposure to wildfire smoke and extreme heat within a short-term exposure lag window. Chapters two and three both utilize a statewide payer's database to examine all-natural cause, cardiovascular, cerebrovascular, renal, and respiratory morbidity impacts. In Chapter three, exposures are examined at different time periods to evaluate temporally compounding wildfire smoke and extreme heat in two ways; that is, effect modification of extreme heat-related morbidity by wildfire smoke exposure weeks to months prior, and vice versa. Altogether, the findings from this dissertation work provide initial evidence on the public health impacts of compound wildfire smoke and extreme heat. Additionally, this work improves characterization of vulnerable populations to help target joint mitigation of compound hazard risks.

Figure 1.1 California wildfire activity from 2011-2020 showing the number of fires each year (left axis), and the total acres burned each year (right axis). Data obtained from CAL FIRE (State of California Department of Forestry and Fire Protection, 2023).

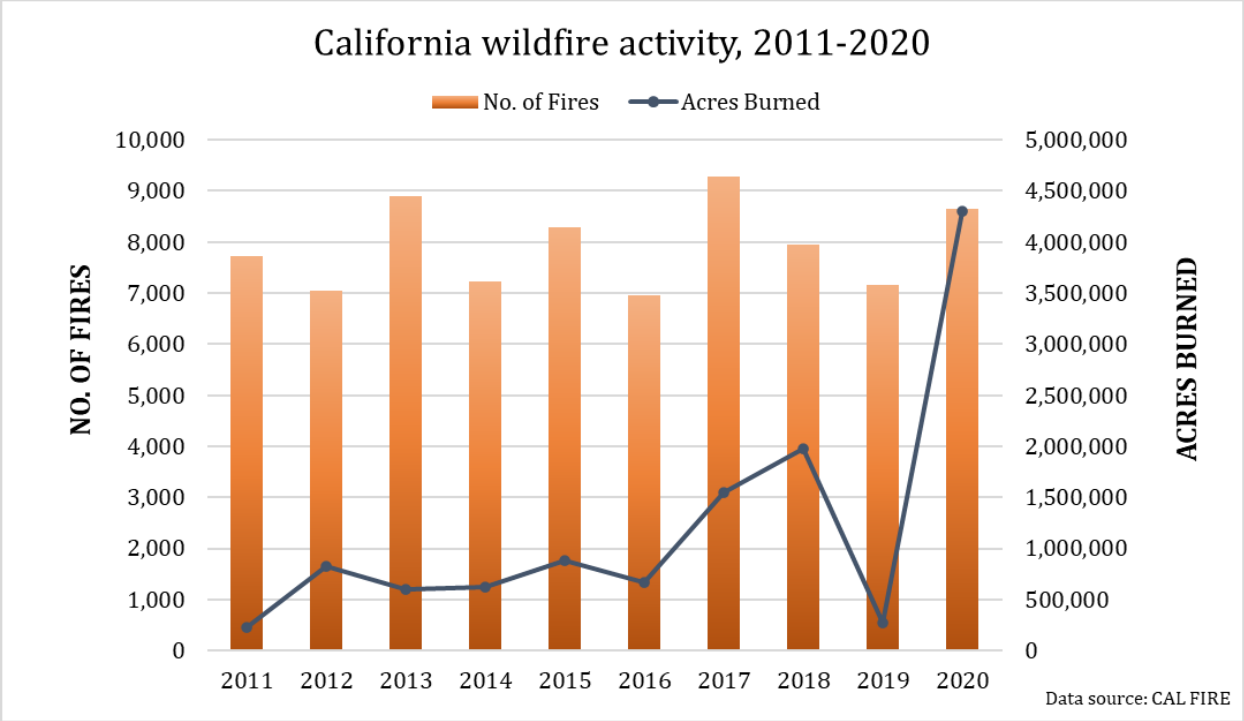
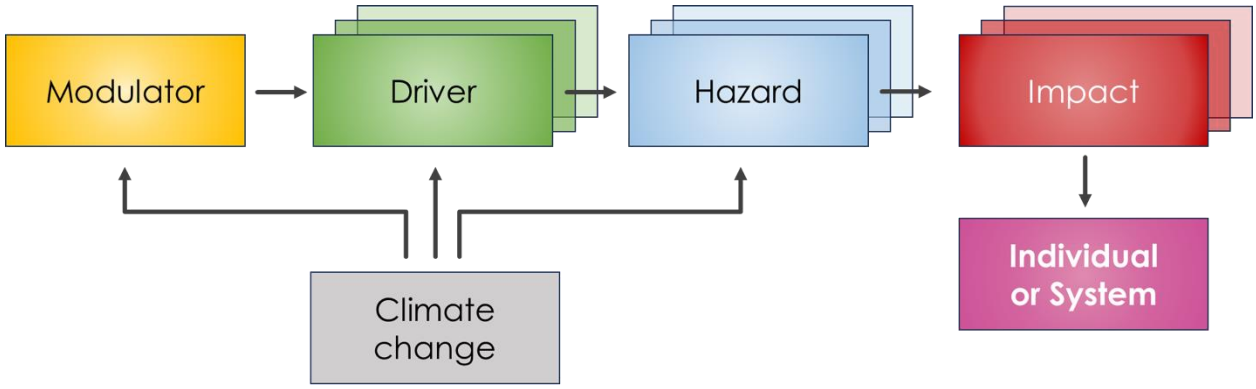


Figure 1.2 Elements of compound hazards, adapted from Zscheischler et al. (2020), to consider multiple impacts compounding on an individual or system.



2. Chapter One: Increasing exposures to compound wildfire smoke and extreme heat hazards in California, 2011-2020

Abstract

Background: Climate change is simultaneously worsening wildfire and extreme heat events in California. Therefore, exposure to a combination of hazards, i.e., compound hazard (CH), is more likely.

Objective: This study examines the exposure distribution of compound wildfire smoke and extreme heat in California, 2011-2020, and characterizes disproportionate population vulnerabilities.

Methods: We obtained fine resolution temperature data (4-km) from GridMET and wildfire-influenced fine particulate matter ($PM_{2.5}$) estimates (3-km) from a combined metric of geostatistical modeled total $PM_{2.5}$ and satellite-detected wildfire smoke plumes. Estimates were aggregated to the ZIP-Code Tabulation Area (ZCTA) level using weights for the population distribution within each grid cell. Extreme heat exposure was defined as a day above a month- and ZCTA-specific 95^{th} percentile. Wildfire smoke exposure was defined by presence of wildfire-influenced $PM_{2.5}$. Exposure days to CH and single hazards were defined using a 2-day exposure lag window for wildfire smoke and extreme heat. Daily exposure counts were summed across the year and over the ten-year study period for descriptive mapping. Ten-year exposures were characterized by ZCTA level characteristics and differences were tested using ANOVA.

Results: Exposures to compound wildfire smoke and extreme heat varied temporally and geographically over the ten years. CH exposures were driven by wildfire smoke activity,

and, which varied geographically across the years. We observed an increase in the number of days that ZCTAs were exposed to CH and the number of ZCTAs exposed each year in California. On average, ZCTAs experienced 3-4 CH days across the ten years, with the highest ZCTA average (9.85 CH days) occurring in 2020. ZCTAs with consistently higher annual CH days had significantly higher minority populations, lower median income, and higher urban composition.

Conclusions: Our results show increasing exposures to compound wildfire smoke and extreme heat, which are disparate across community level factors. These risks should be considered when evaluating climate change impacts and assessing mitigation strategies for climate vulnerable populations.

Background

A critical threat of climate change is the shift in seasonality, frequency, and intensity of multiple hazards. California is grappling with increasing wildfires and instances of extreme temperatures (Borchers Arriagada et al., 2020; Rossiello and Szema, 2019). The state has experienced a five-fold increase in annual burned area from 1972 to 2018 due to wildfires (Westerling et al., 2006). California is also projected to have a ten-fold increase in extreme heat events by 2050 (Mastrandrea et al., 2011). These events are inherently linked by the influence of climate change, land management decisions, and utility regulations; thus, intensifying trends may be increasing the likelihood of exposure to multiple hazards. There is growing public health concern regarding the combination of multiple hazards, i.e., compound events.

Common approaches to exposure assessment focus on single hazards. However, this overlooks the contribution of compound events, which are defined as "a combination of multiple drivers and/or hazards that contributes to societal or environmental risk" (Zscheischler et al., 2018). Compound hazards may result in more severe impacts than single hazards. For instance, one study in Brazil showed compound droughts and heatwaves amplified wildfire episodes compared to when droughts or heatwaves occur in isolation (Libonati et al., 2022). Another study suggests climate change is the primary driver of compound wildfire, drought, and fire weather (high temperature, low humidity, and strong winds), by altering the seasonality of fires and weather conditions such as high temperature (Richardson et al., 2022). Compound events can be classified, and subsequently analyzed, based on how hazards are anticipated to interact or co-occur (Zscheischler et al., 2020). The frequency with which wildfire smoke and extreme heat hazards in California have spatially and temporally compounded, i.e., co-occurring in the same region, at the same time, has not been investigated. Emerging research on compound events introduces a new dimension to understanding the complexities of extreme impacts of environmental hazards and has become an important consideration for assessing population exposure risks.

Hazards such as wildfire and extreme heat both have significant impacts on human, ecological, and climate system; however, the relationship between these two events is not straightforward. There are many contributing factors to both wildfire and extreme heat. Some evidence suggests high ambient temperatures provokes drought conditions, drying out fuels conducive to wildfires (Vitolo et al., 2019). A recent study also describes the potential for large wildfires to reduce temperatures by altering climate systems, such as La

Niña, thus, possibly cascading changes for drought and precipitation across the globe (Fasullo et al., 2023). In other circumstances, researchers found reduced tree canopy post-fire resulted in significantly higher temperatures, a 3.7°C increase, within the short-term (Wolf et al., 2021).

Interactions between wildfire smoke and extreme heat may also alter subsequent health consequences. Studies have shown synergistic impacts of ambient air pollution and heat. A review of literature studying health effects of air pollution, temperature, and pollen exposure showed sufficient evidence for synergistic all-cause mortality, cardiovascular, and respiratory effects of air pollution and heat (particularly for ozone and particulate matter) (Anenberg et al., 2020). While wildfire smoke differs from ambient air pollution, epidemiologic evidence suggests wildfire smoke and heat may act through similar mechanistic pathways, suggesting that an interaction between exposures is biologically plausible (Gordon, 2003). For instance, inhaled wildfire smoke particulates produce systemic inflammation, disrupting cardiovascular and respiratory functions (Jones et al., 2020). Exposure to extreme heat strains similar physiological responses by stressing the thermoregulatory system, impairing circulatory functions (Gordon, 2003; Khan, 2019). Wildfire smoke, often measured by fine particulate matter ($PM_{2.5}$), and high ambient temperatures, are both associated with adverse health impacts, such as respiratory, cardiovascular, and renal conditions (Bi et al., 2011; Bobb et al., 2014; Cascio, 2018; Guirguis et al., 2014; Jones et al., 2020; Reid et al., 2016a; Schmeltz et al., 2016).

Health impacts, as well as exposures to wildfire and extreme heat, are shown to be disproportionate across population subgroups, such as those defined by age, race and

ethnicity, and income, independently (Anderson et al., 2018; Becha, 2020; Davies et al., 2018; White-Newsome et al., 2009). Studies on the joint effects of ambient air pollution and extreme heat also indicate compound hazards may disproportionately impact population subgroups, such as communities with lower median income or higher unemployment (Anenberg et al., 2020; Austin et al., 2021; Masri et al., 2022; Qin et al., 2017). These subgroups, characterized as populations at greater risk, experience inequitable conditions driven by social disadvantages and historical community contexts. Additionally, prior research has highlighted the need to examine how socio-economic risk factors relate to exposure to compound climate events in order to improve risk management and adaptation responses (Simpson et al., 2023). Relationships of single hazards and risk likely persists, if not amplifies, with the impacts of compound events.

In this paper, we assess exposure to compound hazards, specifically wildfire smoke and extreme heat, co-occurring in the same region, at the same time. Exposure constitutes physical proximity to a hazard, which may be influenced by the duration, intensity, and distribution of the event (Simpson et al., 2023). We consider a delineation between the distribution of hazard versus exposure to hazard, where the latter is informed by the distribution of hazard and population. We examine exposure to compound hazards in a clinically meaningful way by characterizing compound hazard events within an exposure lag window. Exposure lags account for the time from exposure to health impacts, in which a subsequent exposure to another hazard may compound the same physiologic processes. Both wildfire smoke and extreme heat are known to result in health impacts up to 2 days following exposure (i.e., a two-day lag) (Gronlund et al., 2014; Reid et al., 2016a; Wang et al., 2021); therefore, we consider this circumstance for compound wildfire smoke and

extreme heat exposures. In this study, we aim to (1) determine whether exposures of wildfire smoke and extreme heat in California, 2010-2020, occurred simultaneously across populated regions; and (2) characterize communities experiencing disproportionate exposures to compound hazards.

Methods

Environmental data

Information on wildfire smoke and air quality was obtained by combining two existing data sources. The first characterizes overall daily air quality using geostatistical modeled estimates of daily $PM_{2.5}$ from the NASA Health and Air Quality Applied Sciences Team (HAQAST) at a 3-km spatial resolution gridded over the entire state of California (Diao et al., 2019a, 2019b, 2018; Freedman et al., 2021, 2019, 2017). This modeled $PM_{2.5}$ NASA/HAQAST product is based on the geostatistical surfacing algorithm of Al-Hamdan et al. (2019, 2014, 2009) and combines ground monitored data with satellite information on aerosol optical depth to estimate daily, 24-hr averages, across the state of California (Diao et al., 2019a, 2019b, 2018; Freedman et al., 2021, 2019, 2017). The second, wildfire-specific, information source is NOAA's Hazard Mapping System (HMS) SMOKE Product, which includes spatial vectors of smoke plumes drawn from satellite imagery and connected to remotely sensed fires on the surface (Schroeder et al., 2008). Daily gridded $PM_{2.5}$ estimates are combined with HMS smoke plumes to generate WF-Influenced $PM_{2.5}$ estimates (methods described in Vargo 2020). Expected smoke-free estimates of $PM_{2.5}$ were modeled for each grid cell and day of year. If a smoke plume overlapped a grid cell and the NASA-estimated $PM_{2.5}$ exceeded the expected smoke-free value, then the amount of

$PM_{2.5}$ assumed to be WF-Influenced was calculated by subtracting the expected smoke-free value from the NASA-estimate.

We obtained 4-km gridded daily maximum temperature (T_{max}) from the gridMET dataset (Abatzoglou, 2013). GridMET combines data from the Parameter-elevation Regressions on Independent Slopes Model (PRISM), which is a climate analysis system utilizing point data from a wide range of monitoring networks while considering dynamic climate scenarios to produce fine-scale spatial estimates of short- and long-term climate trends. PRISM provides appropriate temporal and spatial resolution for this study by interpolating data from the NASA North American Land Data Assimilation System (NLDAS) Phase 2 (Daly et al., 1997).

Population and demographic data

The Gridded Population of the World V4 (Doxsey-Whitfield et al., 2015), a 1-km gridded population dataset, was used to calculate ZCTA-level, population-weighted exposure estimates (further elaborated in Section *Exposure Assessment*). ZCTA is the spatial counterpart to ZIP Code from the U.S. Census Bureau. ZCTA boundaries change with each decennial census and can be linked to Census data and California's statewide hospitalization and admissions data. The ZCTA geography can be used to examine disproportionate exposures by meaningful indicators of health inequities (Graham et al., 2015; Gronlund et al., 2015; Ilango et al., 2020). For the analysis of exposure disparities, we obtained ZCTA-level indicators of median income, educational attainment, and race and ethnicity from the U.S. Census Bureau American Community Survey (ACS) 5-year estimates for 2015-2019. We also obtained rural and urban classifications at the ZCTA level from the

2010 Decennial Census. Demographic and exposure data were examined using 2010 ZCTA boundaries.

Exposure assessment

Exposure estimates were defined by population-weighted hazard estimates at the ZCTA-level. Gridded daily T_{max} and WF-Influenced $PM_{2.5}$ estimates were resampled to 1-km resolution to align with the population data. ZCTA shapefile boundaries were used to extract the grid cell values for temperature, WF-Influenced $PM_{2.5}$ and population within each of the ZCTAs using the terra package in R. Then, gridded population-weighted hazard estimates were calculated by multiplying a grid cell's WF-Influenced $PM_{2.5}$ and temperature estimates (Haz_{Grid}) by the proportion of grid cell population to ZCTA population (Pop), i.e., the sum of grid cell population within the ZCTA. Gridded population-weighted estimates Eq. 1 ($PW\ Exp_{Grid}$) were then summed by ZCTA to obtain ZCTA-level population-weighted exposure estimates Eq. 2 ($PW\ Exp_{ZCTA}$) for wildfire smoke and extreme heat.

Eq. 1 $$PW\ Exp_{Grid} = \frac{Pop_{Grid}}{Pop_{ZCTA}} x\ Haz_{Grid}$$

Eq. 2 $$PW\ Exp_{ZCTA} = \sum_{ZCTA}^{n} PW\ Exp_{Grid}$$

We applied dichotomous indicators of exposure for wildfire smoke and extreme heat to examine annual compound hazard (CH) exposures. ZCTA-level, population-weighted WF-Influenced $PM_{2.5}$ estimates were identified as present or absent. Extreme heat was defined as daily population-weighted T_{max} above the month- and ZCTA-specific 95th percentile across the ten years, 2011-2020. We tested month- and ZCTA- specific

thresholds of 90th and 99th percentile. Then, we summed monthly and annual counts of exposure to compound wildfire smoke and extreme heat days (CH days), as well as wildfire smoke-only and extreme heat-only days.

We consider exposure days to compound hazard as occurring within an exposure lag window. Prior research shows health impacts of wildfire smoke and extreme heat occur within an exposure lag window, often strongest around lag days 0-2, where exposure on the measured day was day 0, and exposure one day prior was lag day 1, two days prior was lag day 2. A compound hazard exposure day was defined as a day during which both wildfire smoke and extreme heat occurred within a 2-day lag window of the measured day (day 0) producing a total of sixteen possible combinations. Wildfire smoke-only days were defined as smoke exposure on day 0, and no extreme heat exposure on lag days 0-2. Extreme heat-only days were defined the same way: extreme heat exposure on day 0, and no wildfire smoke exposure on lag days 0-2. Additionally, we tested the sensitivity of exposure definitions for compound hazard, wildfire smoke-only, and extreme heat-only using no lag window and a window of lag 0-3 days.

Descriptive mapping

Choropleth maps were generated using ArcGIS Pro (Version 2.7.0) to show the distribution of annual exposure days for each year. Descriptive summaries of CH exposures over the ten years were mapped as the sum of CH days for each ZCTA, 2011-2020, classified by quintiles, and the number of years in which a ZCTA fell in the top 10% of annual CH days. Additionally, exposure estimates were linked to ZCTA-level population

data from ACS 5-year survey for each year. Lastly, we mapped annual person-days of exposures.

Statistical analysis

We conducted descriptive analyses of exposure days at the ZCTA level. We also examined changes in the frequency of CH days, wildfire smoke-only days, and extreme heat-only days over the ten years. Additionally, we analyzed the relationship of exposure over the 10-year study period with socio-demographic characteristics at the ZCTA level: median income, educational attainment, race and ethnicity, and rural and urban classifications.

We categorized exposure over the ten years as none, moderate, and high based on the number of years a ZCTA was in the top 10% of annual CH exposures statewide, referred to as high CH exposure years. ZCTAs that never had a high CH exposure year were classified as 'none', while ZCTAs with 1-3 years of high CH exposure years were 'moderate', and ZCTAs with 4-7 years were 'high'. There were no ZCTAs with more than seven high CH exposure years out of the study period.

We used one-way ANOVA with post-hoc Tukey HSD test stratified by socio-demographic subgroups to test for significant differences between exposure groups with a 95% confidence interval. Statistical analysis was conducted using RStudio (Version 2023.03.0).

Results

Spatiotemporal distribution of exposure

On average, ZCTAs were exposed to roughly 3-4 days of compound wildfire smoke and extreme heat days annually, from 2011-2020 (see Table 2.1). The highest annual average of statewide ZCTA-level CH days was 9.85 days, occurring in 2020. In recent years, ZCTAs experienced a higher number of exposure days to compound wildfire smoke and extreme heat. For instance, the average ZCTA-level CH days from 2011-2015 is 2.4 CH days and from 2016-2020 the average is more than double with 5.17 CH days across ZCTAs. Additionally, the number of ZCTAs exposed to CH increased over the years, with an average of 49% of ZCTAs exposed from 2011-2015, increasing to an average around 66% from 2016-2020. The proportion of ZCTAs exposed to wildfire smoke-only increased in concert, while exposures to extreme heat-only were more ubiquitous across the state during the study period (Table 2.1). We further characterized exposure by calculating person-days (Figure 2.1). As the number of ZCTAs exposed to CH increased, the number of person-days increased as well.

ZCTAs exposed to the highest sum of CH days (range 0-81 CH days) across the 10-year period were spread from Northern to Southern California, including some regions in the Sierras (Figure 2.2a)., Yet, when considering frequency of CH days, ZCTAs that consistently experienced higher CH days each year were concentrated in Central California (Figure 2.2b). The distribution of CH days for each year is also shown with the distribution of wildfire smoke-only and extreme heat only exposure days (Figure 2.3). These maps illustrate where the differences in geographic distribution between wildfire smoke and extreme heat (e.g., 2018) may be altering the frequency of compound hazard exposures.

For instance, extreme heat exposure has a consistent spatial pattern, but wildfire smoke exposure varied: some years wildfire smoke was limited to Northern California, and other years smoke blanketed the whole state. There were also substantial differences in the geographic distribution of both wildfire smoke and extreme heat from year to year. For example, in 2011 there were few extreme heat and wildfire smoke exposure days across the entire state. However, 2014 saw extensive extreme heat exposure days across the entire state, with wildfire smoke limited to Northern CA.

Seasonality of both events is also a key driver of CH exposure days. We examined monthly tendencies of CH, wildfire smoke-only, and extreme heat-only exposure days (Figure 2.4). Compound hazard exposures occurred most frequently between July and September. Over the 10-year study period, August had the highest total CH days (N = 17,249 ZCTA-days). This coincided with the peaks in wildfire smoke exposures; however, ZCTA-days of extreme heat exposure had a consistent pattern across the months without the same peak from July through September.

Characteristics of exposed populations

Characteristics of communities consistently experiencing a moderate to high number of years at high CH exposure significantly differed by median income, race and ethnicity, and urbanicity relative to communities without any years of high CH exposure (Table 2.2). The average median income for ZCTAs with no high CH exposure years was significantly higher compared to moderate (difference of $5,558.05, p-value<0.001, 95% CI $9,139.26 to $1,976.83; Table S.1) and high (difference of $8,143.17, p-value = 0.0280, 95% CI $15,588.85 to $697.49; Table S.1) CH exposure categories. On average, ZCTAs falling into

the no high CH exposure group also had significantly higher White, non-Hispanic population (60.1%) compared to ZCTAs with 1-3 years (48%) and 4-7 years (39.1%) in the top 10% of annual CH exposures. Additionally, the same ZCTAs had significantly lower Black, Hispanic, Asian, and Other race populations relative to the moderate and high exposure categories. The proportion of Black or African American population within ZCTAs was also significantly highest for ZCTAs experiencing 4-7 years of the top 10% annual CH exposures, (7.5%, p-value <0.001 compared to moderate and none; Table S.1).

Urban and rural classifications also differed significantly between each exposure category. ZCTAs with no high CH exposure year had a significantly higher average percent of rural landscape (40.4%) compared to moderate (31%) and high (8.2%) exposure groups. In contrast, the average percent of urban landscape was significantly lower for ZCTAs in the no exposure group (59.6%) and higher in the moderate (69%) and high (91.8%) exposure groups. There were no significant differences across yearly high CH exposures for levels of educational attainment.

Discussion

Patterns of extreme heat and wildfire smoke in California continue to evolve, yet the deeply complex relationship between these events is not fully understood. There have been numerous calls from the scientific community to investigate impacts, vulnerability, and response actions for compound hazards (Leppold et al., 2022; Simpson et al., 2023; Zscheischler et al., 2018). This study shows that over a ten-year period there were increases in compound events of wildfire and extreme heat. Amidst increasing wildfire smoke exposures and changing wildfire regimes, extreme heat remained a clear threat

across California throughout the study period. Understanding the interplay between wildfire emissions and extreme temperatures is amplified by the inherent links between these two climate-driven hazards. The connection among predictors of extreme heat and wildfire events is complicated, although there is evidence to suggest both hazards have climatic influences that alter occurrences of each other (Fasullo et al., 2023; Vitolo et al., 2019; Wolf et al., 2021). Nonetheless, our results show increasing frequencies and changes in distribution and seasonality influence compound hazard threats of recent years. Additionally, exposures to compound wildfire and extreme heat were disparate across geography and community characteristics.

We show CH exposures greatly impacted ZCTA communities in California's Central Valley region. From 2011-2020, this region not only experienced some of the highest frequencies of overall CH days, but also consistently had the highest exposure within each year. Similarly, a recent study found the frequency of air pollution and heat compound risk in California was highest in inlands tracts, further from coastal and mountainous regions (Masri et al., 2022). Communities in the Central Valley experience greater social vulnerabilities and environmental threats relative to the rest of the state (Huang and London, 2012). This region is an agricultural powerhouse for the nation, yet residents experience many social and environmental injustices, such as high concentrations of poverty and industrial pollution, that may challenge the ability to cope with compound hazard threats (Huang and London, 2012).

Social and place-based disadvantages have been studied extensively in single hazard assessments of wildfire and extreme heat (Anderson et al., 2018; Becha, 2020; Davies et al.,

2018; White-Newsome et al., 2009), but there is a lack of evidence for the association with compound wildfire and extreme heat exposures (Simpson et al., 2023). One study found compound risk for ambient air pollution and heat was significantly higher for populations with higher rates of poverty and unemployment, and lower median income (Masri et al., 2022). Similarly, we show ZCTAs with higher exposure across the study period had significantly lower median income. Income is frequently referenced as a key vulnerability for compound climate events, particularly regarding adaptive capacity (Simpson et al., 2023). Key adaptation tools for both wildfire smoke and extreme heat, such as air conditioning and air filtration, can be a financial strain for low-income populations (Cong et al., 2022). Adaptation to compound events will require a complex integration of response actions within social, political, and environmental spheres; yet there is a lack of research in these areas to guide mitigation of compound climate risks (Simpson et al., 2023).

Additionally, we show communities with higher exposure over the ten-year study period differed significantly by urban and rural classifications. Human influence on the natural and built environment can alter threats of compound climate events. ZCTAs consistently experiencing the highest CH exposures each year were predominantly classified as urban. Urban environments have a unique relationship to both extreme temperatures and wildfire. The urban heat island effect, in which urban structures absorb, contain and generate large amounts of heat (Rizwan et al., 2008), may contribute to the higher risk we found in urban regions for compound wildfire smoke and extreme heat. Despite ZCTAs with zero high CH exposure years having significantly higher compositions of rural landscapes, the risks of wildfire ignitions in wildland-urban interfaces should not be overlooked.

Exposure disparities were also present across racial groups at the ZCTA level. ZCTAs with higher exposure over the ten-year period had significantly greater proportions of Black, Hispanic, Asian, and Other race populations compared to ZCTAs that had no years of high CH exposure. In contrast, ZCTAs with zero high CH exposure years had significantly higher White populations. These results differ from previous work, in which 2020 a study on compound wildfire smoke and extreme heat in California (Rosenthal et al., 2022), and another study (Masri et al., 2022) on compound air pollution and heat in California, 2018-2020, found evidence that White populations were more likely to be exposed to compound hazards and minority groups were less likely to be exposed to wildfire. However, both studies differ by individual hazard metrics and approach to analytically defining compound hazard events. Additionally, we examine socio-demographic characteristics over a ten-year exposure period which allows us to consider multiple levels of CH exposure. Our results are consistent, however, with racial disparities found in single hazard assessments of wildfire and extreme heat exposure.

Few studies have characterized population exposure to compound climate threats in California, but there are many studies across other regions connecting drought, temperature, and wildfire (Libonati et al., 2022; Ramos et al., 2023; Richardson et al., 2022). Globally, the risk of wildfire has increased due to compounding climate events, such as heat or strong winds, which shift intensity and seasonality of wildfires (Richardson et al., 2022). Climate change is the critical driver for changes in wildfire and extreme heat events, yet it is difficult to tease apart how contributing factors of wildfires and extreme heat influence the findings of this study. However, we found temporal and spatial tendencies over the ten-year period for each hazard that may explain the increases in compound

hazard exposures. We also identified large year-to-year fluctuations, likely driven by natural variability in the climate system, which has been found to strongly influence particulate matter pollution (Pienkosz et al., 2019).

Exposures to compound wildfire and extreme heat requires the overlap in seasonality of these events. Recent years show wildfire seasons extending into the hotter months, resulting in increased compound hazard exposures. Masri et al. (2022) found compound risks of heat and ambient air pollution were largely driven by wildfires. Differences in the spatial co-occurrence of wildfires and extreme heat events may explain years in our study with higher single hazard days (wildfire smoke-only and extreme heat-only), yet few CH days, as is evident in 2018 (Figure 2.3). The changing dynamics of wildfire regimes and extreme heat events presents new risks as shifts in duration, intensities, and distribution can each increase threats of compound events.

These results depict worsening compound wildfire and extreme heat events in California's recent past. However, the results presented here incorporate population distribution and, thus, do not depict distribution of hazards in unpopulated regions. This limits the application of these findings for future development considerations where populations have yet to reside. Also, we use ZCTA as the geographic unit of analysis, which is an arbitrary spatial unit stemming from postal routes and may exclude populations that are not serviced, such as an unincorporated town. Spatial mismatch between census data and the ZCTA geography may results in misrepresentation of demographic data (Grubesic and Matisziw, 2006). However, we use fine-resolution data and rigorous methods to aggregate exposure at the ZCTA level. Examining linkage to meaningful community

characteristics provides future research on compound wildfire and extreme heat health outcomes at this spatial scale a foundational understanding of exposure patterns. Additionally, the exposure assessment is limited in depicting the real-world exposure scenarios and does not account for possible adaptations people may use to reduce exposure. Nonetheless, we provide a detailed assessment of potential exposure risks across populated regions.

Lastly, this study is limited in describing the complex relationships between wildfire smoke and extreme heat hazards. There are many contributing factors to both wildfire and extreme heat events, and some evidence suggests they may influence each other. Dependencies between these two hazards would lead to underestimation of risk (Zscheischler et al., 2020). Thresholds for adverse exposures to extreme heat may vary when compounded with wildfire smoke exposures. There is limited evidence on possible synergistic impacts. Lower temperature thresholds could be meaningful for compound hazard exposures. Also, our analysis focuses on spatially and temporally compounding events: however, there are other types of compound events, such as complex fires, to consider in the relationship of wildfires and extreme heat (Zscheischler et al., 2020). For instance, complex fires can result in simultaneous compounding fire events across different regions, which can strain fire response and resources. This exposure assessment does not consider events that may be compounding outside of the exposure lag window or across ZCTA boundaries. There is also a lack of knowledge on the degree of spatial correlation necessary for compound events to elicit adverse events, e.g., exposures, health effects, or response burdens.

Conclusion

As both wildfire smoke and extreme heat hazards worsen, it is critical to understand differences in risk for single hazards compared to compound events. This study provides an assessment of compound wildfire smoke and extreme heat exposures across California's diverse population. Further research should seek to characterize the drivers for compound events, as well as factors influencing exposure. For instance, the changing nature of human activities, such as urbanization and development into wildland interfaces, may uniquely expose populations to compound wildfire smoke and extreme heat. Our findings highlight key vulnerabilities for compound wildfire smoke and extreme heat exposure, which can help guide joint mitigation strategies. Additionally, climate change is threatening future scenarios that would unleash devastating extreme heat and wildfire events in California. Therefore, it is necessary to quickly obtain knowledge of the risks and develop opportunities for future adaptation.

Table 2.1 Descriptive statistics for ZCTA-level exposures to compound hazard (CH) days, 2011-2020. Exposures to wildfire-influenced (WF-Influenced) fine particulate matter ($PM_{2.5}$) and maximum temperature are weighted by the distribution of populations within the ZCTA. Minimum values of each are zero due to unpopulated regions.

ZCTA-level Exposures	2011-2020	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Annual CH days											
Average days	3.79	0.43	1.50	4.90	1.21	3.98	3.72	9.76	1.96	0.56	9.85
Maximum days	15.5	4	12	18	10	17	16	27	14	8	29
Total ZCTA-days, statewide	6,699	766	2,659	8,659	2,139	7,037	6,575	17,263	3,473	993	17,426
Percent of ZCTAs exposed	58	15.38	42.51	74.96	45.62	66.37	74.73	98.08	49.01	20.46	90.11
WF-Influenced-$PM_{2.5}$, $\mu g/m^3$											
Mean	0.09	0.0085	0.0149	0.0559	0.0265	0.0416	0.0704	0.1584	0.2598	0.0388	0.2061
Maximum	100.78	20.39	58.76	58.94	34.85	112.67	37.10	309.44	157.68	33.38	184.56
Maximum Temperature, °F											
Mean	73.1	70.8	73.6	73.5	75.0	73.9	72.8	73.2	72.8	71.5	73.8
Maximum	120.7	119.3	121.2	121.9	117.9	118.0	123.1	121.8	120.8	120.8	122.0

Figure 2.1 Annual million person-days of compound wildfire smoke and extreme heat exposures, as well as exposures to days of wildfire smoke-only (no extreme heat) and extreme heat-only (no wildfire smoke), 2011-2020.

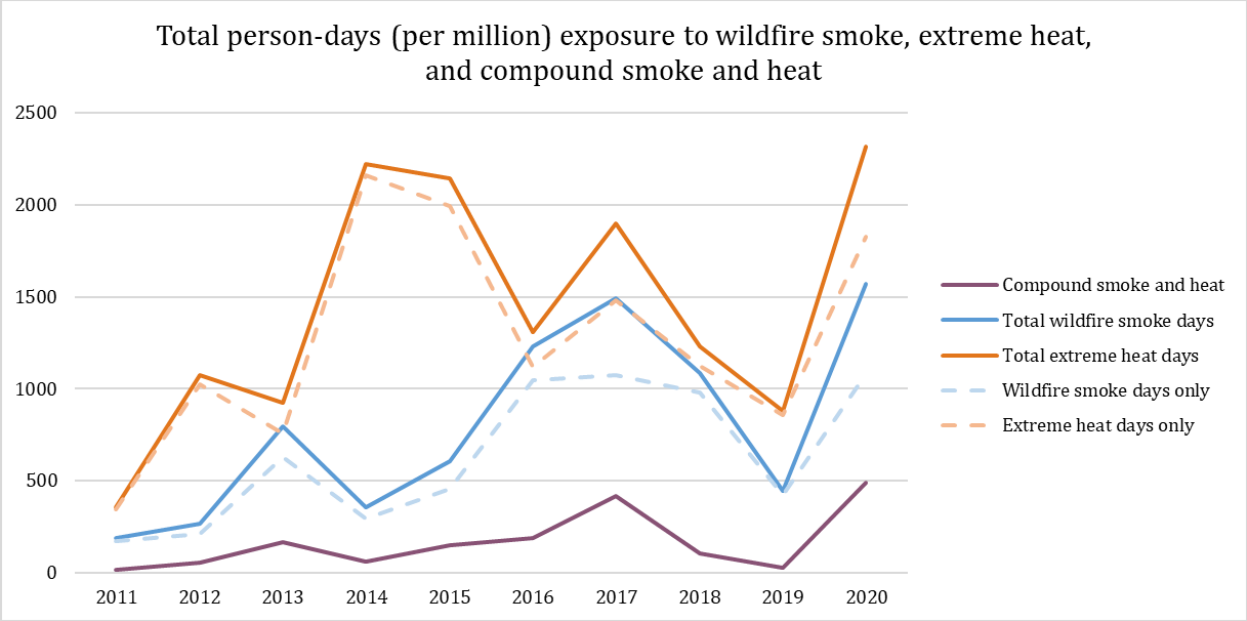


Figure 2.2 Summary of exposure over ten years, 2011-2020. (a) ZCTA-level exposures to compound wildfire smoke and extreme heat summed from 2011-2020. (b) The number of years a ZCTA experiences the top 10% of annual compound wildfire smoke and extreme heat exposure.

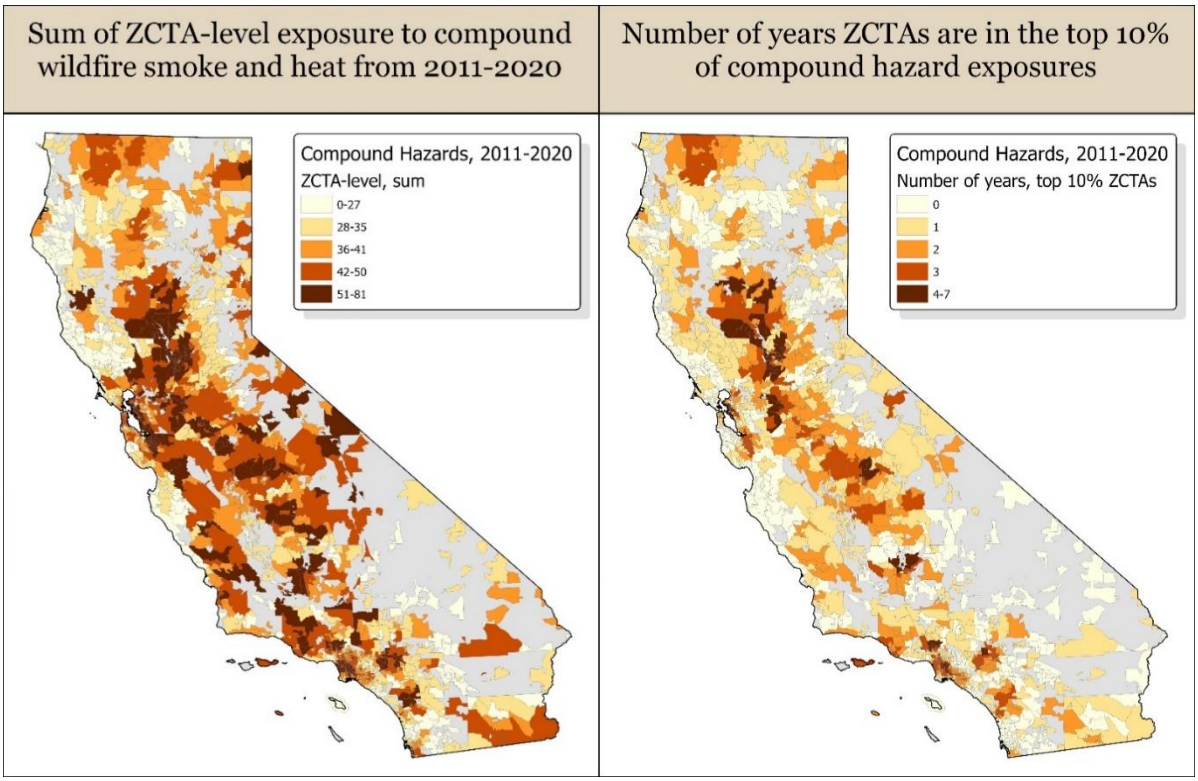


Figure 2.3 Choropleth maps of annual compound hazard exposure days, as well as wildfire smoke-only and extreme heat-only days, at the ZCTA-level, 2011-2020.

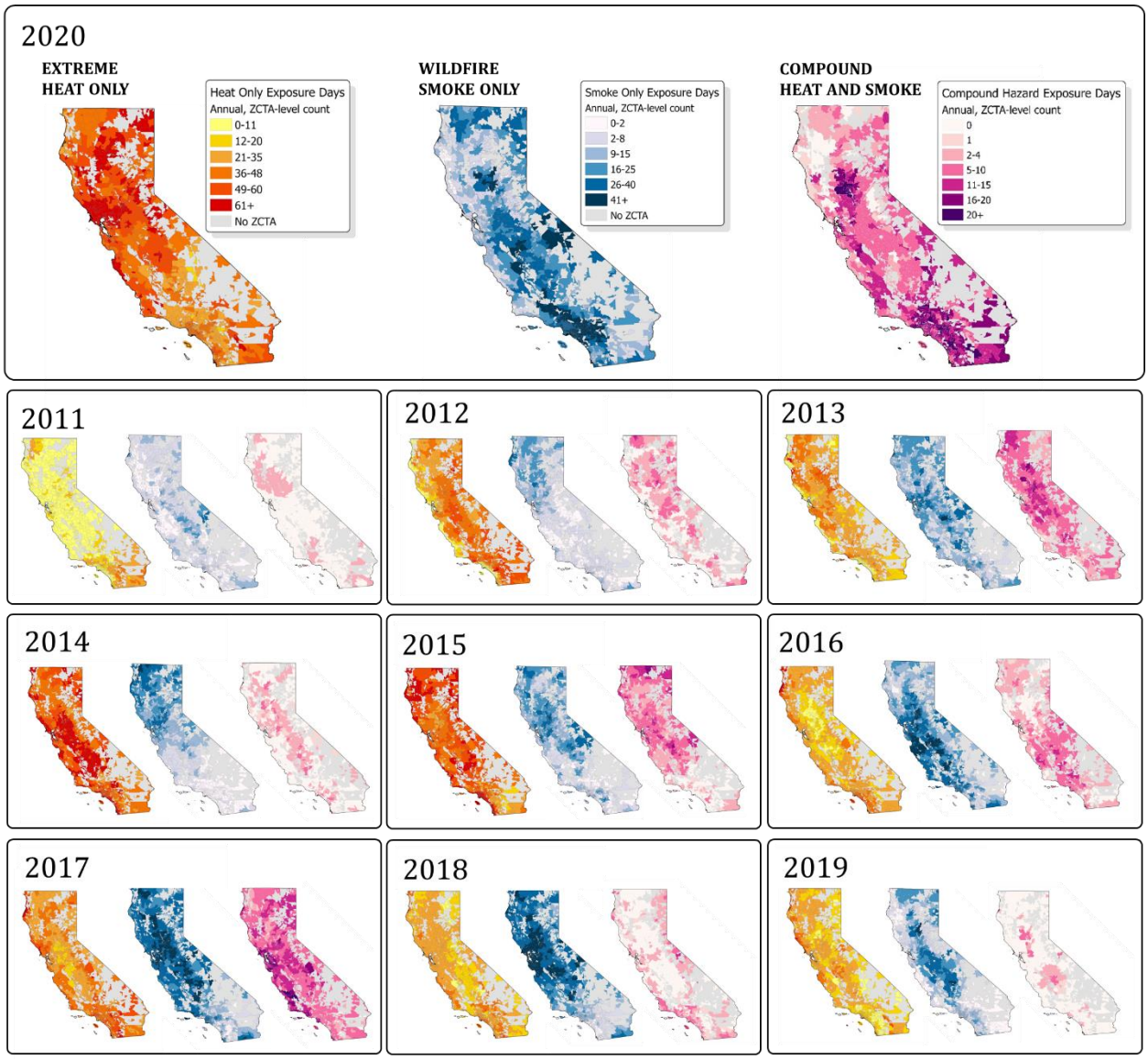


Figure 2.4 Monthly totals of ZCTA-day exposures to compound hazard (CH) days of wildfire smoke and extreme heat, as well as wildfire smoke-only and extreme heat-only, from 2011-2020.

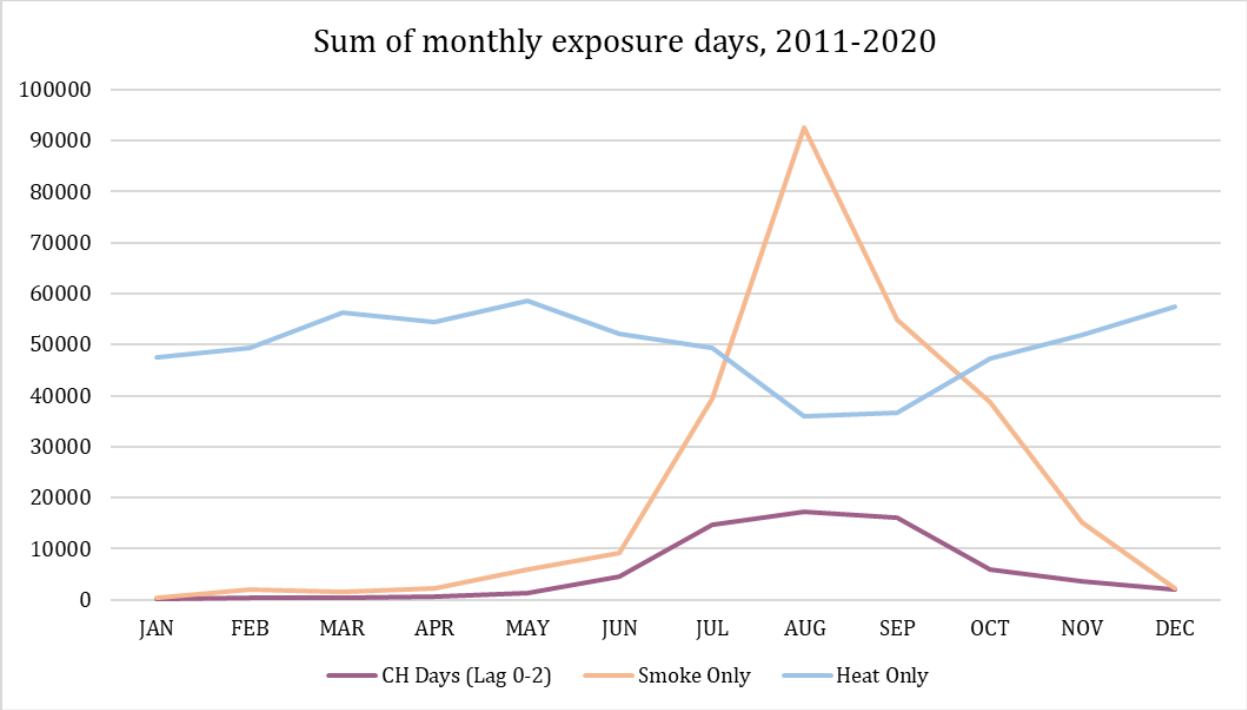


Figure 2.5 Socio-demographic characteristics of ZCTA communities, 2011-2020. Median income tests differences in averages by exposure group. Educational attainment, race and ethnicity, and rural and urban tests differences in proportion of ZCTA population by exposure group, stratified by population subgroup.

	Number of years in the top 10% of annual compound hazard exposures, 2011-2020		
	None (0 years)	*Moderate (1-3 years)*	*High (4-7 years)*
Median Income[ac]			
Average	$67,255.83†‡	$61,697.79†	$59,112.66‡
Educational Attainment[ad]			
Less than high school	14.0%	14.4%	15.8%
High school graduate	30.5%	29.9%	28.4%
Some college	46.3%	46.2%	45.3%
BS or higher	9.2%	9.5%	10.5%
Race/Ethnicity[ad]			
White, Non-hispanic	60.1%†‡	48.0%†*	39.1%‡*
Black or African American	2.8%†‡	4.2%†*	7.5%‡*
Hispanic or Latino	22.1%†‡	28.2%†	31.2%‡
Asian	7.3%†‡	9.5%†	10.8%‡
Pacific Islander	0.3%‡	0.3%*	0.5%‡*
American Indian or Alaska Native	1.4%	1.4%	0.7%
Other	6.1%†‡	8.5%†	10.3%‡
Rural or Urban[bd]			
Rural	40.4%†‡	31.0%†*	8.2%‡*
Urban	59.6%†‡	69.0%†*	91.8%‡*

[a]Census ACS 5-year estimates, 2015-2019.
[b]Decennial Census, 2010.
[c]Estimates are in US currency.
[d]Estimates are proportion of ZCTA population.
†p<0.05 between None and Moderate.
‡p<0.05 between None and High.
*p<0.05 between Moderate and High.

3. Chapter Two: Joint effects of wildfire smoke and extreme heat on hospitalizations in California, 2011-2020

Abstract

Background: Compound wildfire smoke and extreme heat exposures are worsening in California; yet the joint effects on hospitalizations have not been assessed.

Objective: This study estimates joint effects of extreme heat and wildfire smoke exposures on all-natural cause, cardiovascular, cerebrovascular, renal, and respiratory morbidities in California, 2011-2020.

Methods: We apply a case crossover design with time-stratified controls using conditional logistic regression and interaction models to estimate the joint effects at multiplicative and additive scales. Exposures were assigned at the ZCTA level to case and control days for sixteen combinations of exposure lags (lag days 0 to 3) for extreme heat and wildfire influenced $PM_{2.5}$.

Results: In California, 2011-2020, there were over 28 million cases of all-natural cause morbidity predominantly comprised of adults aged 65 years and older (41.4%), English speakers (85.1%), and White, non-Hispanic (49.7%). Cases resided primarily in urban ZCTAs (97.2%). Roughly 8% of respiratory morbidities (95% confidence interval [CI], 2.4-13.8%) were due to the interaction of wildfire smoke and extreme heat effects. Joint effects for cardiovascular (5.5%) and renal morbidities (6.2%) were shown in the study population as well. Joint effects were stronger within population subgroups, with differences observed by sex, age, race and ethnic, and community level factors. Black individuals were associated with the largest additive effects for respiratory (19.2%, 95% CI

6.5-32.1%) and cerebrovascular morbidities (15.7%, 95% CI 4-27.4%). Older adults, age 50 to 64 years, showed the strongest joint effects for renal morbidities (15.4%, 95% CI -1.6-32.6%), although the CI was wide; and joint effects for cardiovascular morbidity was strongest in females (9.8%, 95% CI 2.9-16.7%). Effects for all-natural cause morbidity were small and largely null.

Conclusions: Wildfire smoke and extreme heat events compounding within a short exposure window (4 days) increases hospitalizations for morbidity due to the interaction of effects. Results demonstrate it is important to consider exposures on different days as well as the same day. These findings also highlight the need to develop both heat and wildfire smoke interventions for populations at greater risk.

Background

California has incurred repeated record-breaking seasons of wildfire and extreme heat in recent years. Consequences of climate change have led to increasing frequencies and magnitudes for these climate hazards. Since the 1970s, the state has seen average summer day temperatures increase by approximately 1.4°C amidst a fivefold increase in landscape burned by wildfire (Westerling et al., 2006; Williams et al., 2019). Longer wildfire seasons are driving increasing compound wildfire and extreme heat events, i.e., the combination of multiple hazards contributing to environmental or public health risks (Chapter 1; Masri et al., 2022). However, the resulting health impacts of compound wildfire smoke and extreme heat exposures are not well understood.

Adverse health impacts of wildfire emissions and extreme heat events have been studied extensively in single hazard assessments. Associations with wildfire smoke have

been studied in relationship to multiple air pollutants, such as ozone, NO, and particulate matter, but the primary public health concern has focused on fine particulate matter ($PM_{2.5}$) (Cascio, 2018; Reid et al., 2016a; US EPA National Center for Environmental Assessment and Sacks, 2019). Exposure to $PM_{2.5}$ due to wildfires increases risks of adverse respiratory and cardiovascular outcomes, including asthma, chronic obstructive pulmonary disease (COPD), and cardiac arrest (Cascio, 2018; Chen et al., 2021; Reid et al., 2016a). Similarly, studies of extreme heat show high ambient temperatures increase risks of acute health conditions, such as heat stroke, renal failure, and fluid and electrolyte disorders (Bi et al., 2011; Bobb et al., 2014; Guirguis et al., 2014), as well as exacerbation of underlying illnesses, including respiratory and cardiovascular conditions (Schmeltz et al., 2016); although a variety of definitions are often used to characterize extreme heat (Bi et al., 2011; Bobb et al., 2014; Guirguis et al., 2014; Schmeltz et al., 2016). We focus on the associated effects of single days of extreme temperatures, rather than consecutive days, i.e., heat waves, to examine different combinations of wildfire smoke and extreme heat exposures using the same temporal unit.

Recent studies show synergistic impacts of air pollution and heat, including ambient air pollutants and limited evidence on wildfire emissions (Analitis et al., 2018; Anenberg et al., 2020; Patel et al., 2019; Rahman et al., 2022; Schwarz et al., 2021). A recent review by Anenberg, et al (2020) on synergistic health effects of air pollution, temperature, and pollen exposure obtained the most literature on the effects of heat and air pollution. Authors found sufficient evidence for synergistic all-cause mortality, cardiovascular, and respiratory effects of air pollution and heat (particularly for ozone and particulate matter) (Anenberg et al., 2020). Another study showing interactive effects between heat and air

pollution found peaks in air pollution exposures were linked to wildfire events and high heat index (Austin et al., 2021). Similarly, other studies also suggest wildfires are key to driving exposures and impacts from compound $PM_{2.5}$ and extreme heat (Chapter 1; Masri et al., 2022; Patel et al., 2019). This includes joint effects on emergency department admissions (Patel et al., 2019), and all-cause, respiratory, and cardiovascular mortalities (Rahman et al., 2022).

Joint effects studies have been used extensively in environmental epidemiology (Analitis et al., 2018; Anenberg et al., 2020; Davalos et al., 2017; Patel et al., 2019; Rahman et al., 2022). Interactions can be assessed on both multiplicative and additive scales. Additive scale interaction is recognized as a more relevant measure for public health (Rothman et al., 1980; VanderWeele and Knol, 2014); therefore, we present primary results on the additive scale. This approach provides empirical evidence for the number of hospital admissions attributable to the interaction of wildfire smoke and extreme heat effects. Thus, we can better understand the needs for joint interventions, reducing threats of both wildfire smoke and extreme heat.

Findings from previous epidemiologic studies of ambient air pollutants and extreme heat also indicate joint health effects can be variable across specific social and place-based vulnerabilities (Qin et al., 2017; Schwarz et al., 2021; Simpson et al., 2023). Schwarz et al. (2021) did not observe additive interaction between ozone and heat exposures in the general population, but these joint effects were strong in subpopulation groups such as census tracts with lower median income or higher unemployment. Exposures to compound wildfire smoke and extreme heat in California are also disproportionate by income, race

and ethnicity, and rural-urban typology (Chapter 1). We aim to investigate the joint effects of exposure to compound wildfire smoke and extreme heat in California from 2011-2020 and characterize populations with greater risks of adverse impacts. This study seeks to provide a better understanding of the increasing threats of wildfire and extreme heat events to improve public health adaptations amidst a changing climate.

Methods

Population and health data

We obtained hospital admissions data for California, 2011-2020, from the California Department of Health Care Access and Information (HCAI). International Classification of Disease, Ninth Edition (ICD-9) and Tenth Edition (ICD-10) were used to classify outcomes of interest. Diagnoses were included for adults age ≥ 18 years and excluded accidental conditions due to trauma, injury, or poison. Diagnoses meeting these criteria (e.g., cancer, mental and neurodevelopmental disorders, and complications of pregnancy or childbirth) were classified as all-natural cause morbidity. Cause-specific morbidities were also defined for respiratory-cause morbidity (ICD-9 codes 460-466, 471, 472, 477, 478, 480-487, 490-496, 511, 513-519, 786; ICD-10 codes J00-J06, J12-J18, J20-J22, J30, J31, J33, J34, J38, J39, J40-J47, J80-J86, J90-J92, J94, J96-J99, R04-R07, R09), cardiovascular-cause morbidity (ICD-9 codes 390-398, 401-417, 420-429, 440-449; ICD-10 codes I00-I02, I05-I16, I20-I28, I30-I5A, I70-I79), cerebrovascular-cause morbidity (ICD-9 codes 430-438, ICD-10 codes I60-I69), and renal-cause morbidity (ICD-9 codes 580-589, 591-599, 788; ICD-10 codes N00-N08, N10-N13, N15-N23, N25-N29, R30-R39).

HCAI also provides individual level data for sex, age, preferred language spoken, and race and ethnicity. We characterized preferred language as English, Spanish or other.

Additionally, race and ethnic groups were collapsed due to a small number of cases; therefore, race and ethnicity were defined as White, Hispanic, Black, Asian, and other. Other race includes individuals identifying as Native Hawaiian or Pacific Islander, American Indian or Alaska Native, multiracial, or other in the HCAI reports. We also obtained geographic and temporal data for date of admission, hospital ZIP Code, and patient's residential ZIP Code.

ZIP Code Tabulation Area (ZCTA) level characteristics for social and place-based disadvantages were obtained from US Census 5-year American Community Survey, 2015-2019. We acquired measures of poverty, educational attainment, and rurality to examine community level factors relating to exposure and outcome. Community level factors were operationalized as binary variables for stratified analyses. We characterized higher risk populations for educational attainment as ZCTAs where 50% or more of the adult population has a high school education or less; for poverty as ZCTAs where 25% or more of households are living under poverty; and for rural as ZCTAs with majority (50% or more) rural composition. Additionally, we used ZCTA-level, population-weighted exposure estimates, which were calculated in Chapter 1 with 1-km gridded population data from the Gridded Population of the World V4 (Doxsey-Whitfield et al., 2015).

Environmental data

Daily 4-km gridded maximum temperature (T_{max}) was obtained from the gridMET dataset for our study period and region (Abatzoglou, 2013). This dataset combines data from the Parameter-elevation Regressions on Independent Slopes Model (PRISM) and interpolated data from the NASA North American Land Data Assimilation System (NLDAS) Phase 2.

Wildfire smoke and air quality information was obtained through combination of geostatistical modeled estimates of daily $PM_{2.5}$ and wildfire-specific smoke products. Modeled daily PM2.5 estimates, 3-km spatial resolution gridded over the state of California, is from the NASA Health and Air Quality Applied Sciences Team (HAQAST). This product, as described in Al-Hamdan et al. (2019, 2014, 2009), uses a geostatistical surfacing algorithm combining ground monitored data with satellite information on aerosol optical depth. Daily gridded $PM_{2.5}$ estimates were then combined with smoke plume data from NOAA's Hazard Mapping System (HMS) SMOKE Product to estimate the influence of wildfires on $PM_{2.5}$ using methods from Vargo 2020. Expected smoke-free estimates of $PM_{2.5}$ were modeled for each grid and day of year based on estimates for the same day of year from 2011-2020 without HMS smoke plume present. The HMS data includes spatial vectors of smoke plumes from satellite imagery, thus, if a smoke plume overlapped a grid cell and total $PM_{2.5}$ exceeded the expected smoke-free value, then WF-Influenced $PM_{2.5}$ estimates were calculated by subtracting the expected smoke-free value from the total $PM_{2.5}$ estimate.

Exposure definitions

We classified exposures at the ZCTA level for wildfire smoke and extreme heat as in Chapter 1 of this dissertation. Briefly, gridded estimates were resampled to 1-km and combined with 1-km population data. Then, the product of hazard estimates, T_{max} and WF-Influenced $PM_{2.5}$, and proportion of ZCTA population within the grid cell were aggregated to the ZCTA-level. ZCTA-level estimates reflect exposure across the population distribution within the ZCTA.

We tested the sensitivity of different exposure definitions for wildfire smoke and extreme heat. Daily T_{max} estimates were dichotomized to define single extreme heat days

using month- and ZCTA-specific thresholds at the 90th, 95th, and 99th percentiles. We tested continuous daily T_{max} and health effects per 5°F increments of T_{max}. For wildfire smoke, we tested cutoffs using WF-Influenced $PM_{2.5}$ greater than 0 and greater than 12 μg/m^3, which corresponds to the cutoff for concentrations of heavy density HMS smoke plumes, shown with the WF-Influenced $PM_{2.5}$ metric. Heavy density smoke plumes have been shown to elicit stronger associations with adverse health outcomes (Jones et al., 2020). Models were tested using continuous WF-Influenced $PM_{2.5}$ estimates as well. For the primary analysis, we selected definitions of extreme heat days using the 95th percentile threshold (referred to as extreme heat hereafter) and wildfire smoke as continuous WF-Influenced $PM_{2.5}$ (referred to as wildfire smoke hereafter).

Statistical analysis

We examined the relationship between wildfire smoke and extreme heat using a time-stratified case crossover design. This approach is commonly used for epidemiologic studies of air pollution and extreme heat as it controls for individual level factors, such as demographics and comorbidities, and temporal variation, such as day of week effects and seasonality (Bateson and Schwartz, 2001; Carracedo-Martínez et al., 2010; Janes et al., 2005). The date of hospital admission was considered the case day, and control days were matched by day of week in the same month and year.

Each case and control were assigned daily, ZCTA-level exposure estimates for lag days 0-3. Exposure on lag day 0 is the case or control day, where exposure on lag day 1 is one day prior to the case or control day, lag day 2 is two days prior, and lag day 3 is three days prior. Exposure was assigned using patient's ZIP Code of residence matched to ZCTA. When patient ZIP Code was unmatched (N = 964 case and controls), we used hospital ZIP

Code instead. Additionally, two ZCTAs were missing exposure data and excluded from the analysis (N = 1,745 cases and controls).

We estimated the joint effects of WF-Influenced $PM_{2.5}$ and extreme heat days on all-natural, respiratory, cardiovascular, cerebrovascular, and renal morbidity risks using conditional logistic regression. We modeled each outcome and combination of wildfire smoke and extreme heat exposure lag days separately. Combinations of exposure lags for compound extreme heat and wildfire smoke exposure, CHWF $lag_{X,Y}$, are described using "X,Y" notation representing heat lag day X and smoke lag day Y. Additionally, we conducted stratified models for population subgroups of individual level factors – sex, age group, preferred language spoken, and race and ethnicity – and community factors at the ZCTA level – household income below poverty, low educational attainment, and rurality.

The novel coronavirus (COVID-19) pandemic had significant effects in California in 2020. The state issued a mandatory stay at home order starting March 2020, increasing the proportion of population staying at home (Dave et al., 2021; Zanocco et al., 2021). Subsequently, the pandemic changed hospital utilization during this period (Bhatt et al., 2020; Ojetti et al., 2020). We conducted sensitivity analyses for 2011 to 2019 and 2020, separately. Additionally, we further tested models to examine the change in ICD classifications (from ICD-9 to ICD-10) for each outcome of interest. Renal diagnoses changed meaningfully in annual analyses of admissions data, from 2015 to 2016. Consequently, when ICD coding systems changed, diagnoses of renal conditions changed as well, as described by another study (Watzlaf et al., 2007). Therefore, we tested the sensitivity of models for cause-specific end points for 2011 to 2015 and 2016 to 2019,

separately. Aside from the differences in hospital admissions data by year, we also examined compound wildfire smoke and heat exposure by month. Additional sensitivity analyses were conducted examining models restricted to May through November, when compound wildfire smoke and extreme heat exposures primarily occurred.

The conditional logistic regression models provide interaction effects on the multiplicative scale. We also calculated additive scale interaction *post hoc* by measuring the attributable proportion due to interaction (AP), calculated based on the relative excess risk due to interaction (RERI). Results were reported with 95% confidence intervals (CIs) for the multiplicative interaction and AP, as well as the odd ratios for the effects of wildfire smoke only and extreme heat only. All analyses were performed using R statistical software (version 4.3.1). The InteractionR package was used to get estimates for multiplicative and additive scale interaction terms, using the Delta method to estimate CIs.

This research was reviewed and approved by the California Health and Human Services Agency's Committee for the Protection of Human Subjects (CPHS) (#2022-130) and the University of California, Davis IRB Administration (#1943974-1).

Results

In California, 2011-2020, there were roughly 28 million hospital admissions for all-natural cause morbidity (Table 3.1). There were slight differences in the demographics among the outcomes of interest. Notably, cases of cause-specific end points were older with higher proportions of elderly aged 65 years and older compared to all-natural cause cases. Other demographic factors were comparable across outcomes with a sample predominantly composed of persons identifying as White and English speakers. Exposures

were similar among all outcomes of interest. The highest T_{max} exposures among all cases occurred in 2016 (123.1°F), while the maximum WF-Influenced $PM_{2.5}$ exposure was in 2017 (309.4 μg/m³). Table 2 presents exposure distributions for the different definitions of wildfire smoke and extreme heat in our study.

Our results show the joint effects of compound wildfire smoke and extreme heat differ for all-natural, respiratory-, cardiovascular-, cerebrovascular-, and renal-cause morbidities (Figure 3.1). The pattern of exposure lag days was a factor relating to differences across outcomes. Our primary analysis of extreme heat and wildfire smoke shows strong multiplicative and additive interaction for respiratory, cardiovascular, and renal morbidities primarily for wildfire smoke lag day 3 and extreme heat lag day 0 and 1. The largest additive effect shows around 5% of respiratory morbidities on CHWF $lag_{0,3}$ is due to the interaction of wildfire smoke and extreme heat effects (95% CI 0.5-9.6%, p=0.014; Table S.2).

Effect estimates for all-natural cause morbidity were small and close to null across all analyses. While results for all-natural cause morbidities show many statistically significant p-values, this is likely due to the large sample size; the effect size does not reflect practical significance (Khalilzadeh and Tasci, 2017). The lack of meaningful effects suggest cases of all-natural cause morbidity are not jointly affected by wildfire smoke and extreme heat. Rather, effects are present within cause-specific end points.

Sensitivity analyses

We examined different definitions for extreme heat and wildfire smoke exposure, including binary and continuous estimates. Table 3.2 summarizes the distribution of cases

for binary indicators. Models testing the different cutoffs for extreme heat days (90^{th}, 95^{th}, and 99^{th} percentiles) showed effects of extreme heat followed a dose response, with larger effects for higher temperature exposure days. Effects were diminished for the 90^{th} percentile, particularly for renal morbidities, suggesting risks may be underestimated. On the other hand, the 99^{th} percentile cutoffs were too conservative for the range of T_{max}. Additionally, there were few cases with exposure to wildfire smoke above 12 $\mu g/m^3$. Using a continuous estimate of WF-Influenced $PM_{2.5}$ with heat defined by the 95^{th} percentile provided tighter confidence intervals for effect estimates compared to a binary indicator where WF-Influenced $PM_{2.5}$ is greater than zero. We selected the 95^{th} percentile cutoff to measure extreme heat days and continuous WF-Influenced $PM_{2.5}$ to measure wildfire smoke exposure for our models.

We further tested the sensitivity of our models to meaningful differences during the study period. While ICD coding systems changed from 2015 to 2016, there were additional disruptions in exposure and outcome characterization: medical diagnoses for renal morbidities were systematically refined (Watzlaf et al., 2007), and there were different patterns of extreme heat and wildfire smoke activity. Models subset to 2011 to 2015 and 2016 to 2019 both show additive effects for respiratory morbidity, though the effects are larger in 2011-2015. We found significant additive effects for cardiovascular morbidity from 2016 to 2019 and significant additive effects for cerebrovascular morbidity from 2011 to 2015. However, the patterns of effects across exposure lags were analogous. These results do not fully control for all differences between these two timeframes, i.e., change in coding, diagnostic practices, and exposures. Nonetheless, these findings provide a general sense that the relationships between the outcomes and exposures are robust.

Exposures to compound hazards were highest in 2017 and 2020 (Chapter 1). However, the COVID-19 pandemic beginning in 2020 potentially influenced risk behaviors, health care utilization, and ambient air pollution. Results testing models for these years separately showed significant sub-additive interactions for cerebrovascular, renal, and respiratory morbidities in 2020. In contrast, we found significant super-additive effects for cardiovascular and respiratory morbidities in 2017. For example, during the pandemic we show a sub-additive effect of -12% (95% CI -26-0%, p=0.030 for respiratory morbidity on CHWF $lag_{0,1}$), while in 2017 the same exposure lag and outcome showed a super-additive effect of 8% (95% CI 0-16%, p=0.030 for respiratory morbidity on CHWF $lag_{0,1}$). Pandemic-related factors, such as change in healthcare utilization, adoption of health protective behaviors, and sheltering in place, likely contribute to the difference in joint effects of wildfire smoke and extreme heat. We lack individual level data on these factors; thus, models for primary analysis were restricted to 2011 to 2019.

We also tested the sensitivity of these results restricting the analysis to wildfire and extreme heat seasons, May through November (Figure 3.2). The pattern of effects across exposure lags and outcomes of interest were preserved, although effects in the seasonal months were slightly stronger (Table S.3 & Table S.4). For example, the same respiratory effect on CHWF $lag_{0,3}$ shows the attributable proportion due to interaction (AP) is slightly higher at 8.1%, while the original estimate for all months, 5.5%, is still well within the 95% confidence interval range, 2.3-13.8% (p=0.003; Table S.3).

Analyzing effects within summer months improves characterization of extreme heat events. The average T_{max} on days above the 95^{th} percentile cutoff for all months from 2011

to 2020 was 76.4 degrees Fahrenheit, whereas average T_{max} above this cutoff when restricting to May through November was 82.9 degrees. Other studies suggest joint effects may be inconsistent across all months due to differences in adaptive behaviors or hazards, and burdens are greatest during the summer season (Analitis et al., 2018; Austin et al., 2021). We present additional results for stratified analyses for the months of May through November.

Stratified analyses

Stratified results showed subpopulations experienced significant joint effects of wildfire smoke and extreme heat at additive (Table S.5) and multiplicative scales (Table S.6). Outcomes and exposure lags varied across stratum-specific risks and not all effects persisted at the multiplicative scale. Some patterns were notable in the relationship between individual and community level factors, health outcome, and exposure lags. In some instances, the case population was predominantly composed of one characteristic (e.g., preferred language spoken and rural and urban ZCTA classification) and thus, results are limited in some subgroups. Subgroups with fewer than 10 cases exposed were suppressed.

Sex

Sex-stratified estimates showed males and females had significant joint effects for wildfire smoke and extreme heat that differed by relationship to health outcomes and exposure lags. The strongest sex-stratified additive effects showed roughly 16% of respiratory morbidities in males exposed to heat on the day of hospital admission (lag 0) and wildfire smoke three days prior (lag 3) were attributable to interaction (95% CI 7.7-24.6%, $p<0.001$; Table S.5). This effect was significantly larger in males (16.2%) compared

to females (2.3%). In contrast, additive effects for cardiovascular, cerebrovascular, and renal morbidity were larger and significant among females. Non-significant effects for males were significantly less than females for cerebrovascular morbidity (6.6% for females compared to non-significant -0.2% for males on CHWF $lag_{3,0}$) and differences were near-significant for cardiovascular morbidity (9.8% for females compared to non-significant 1.5% for males on CHWF $lag_{3,0}$). Effects for females persisted at the multiplicative scale for cardiovascular and cerebrovascular morbidities consistent for wildfire smoke exposures on the day of hospital admission and different days of extreme heat lags (CHWF $lag_{2,0}$ and $lag_{3,0}$). Joint effects for respiratory morbidities in males were significant on a multiplicative scale for CHWF $lag_{0,1}$, $lag_{0,3}$, and $lag_{1,3}$.

Age group

There were differences in joint effects across age groups (Figure 3.4), but some relationships varied by combination of exposure lags. For instance, additive effects for respiratory morbidity were largest for young to middle-aged adults, 18 to 49 years of age (AP 14.6%, 95% CI 3.3-25.9%, p=0.0056; Table S.5) on CHWF $lag_{2,0}$. This effect was significantly higher compared to the oldest group, age 65 years or older, on the same lag (-0.7%, non-significant). However, individuals aged 65 years or older did show significant joint effects for respiratory morbidity on CHWF $lag_{1,3}$ (AP 10.3%, 95% CI 2.3-18.3%, p=0.006) that was not significantly less than the effect for 18 to 49 years of age group (AP 12.9%, 95% CI -1-27%, p=0.035) and much higher than the 50 to 64 year old age group (AP 1%, non-significant). On CHWF $lag_{3,0}$, older adults, 50 to 64 years of age, showed a significant proportion of respiratory morbidity was attributable to interaction of wildfire smoke and extreme heat (AP 11.7%, 95% CI 1.4-22.1%, p =0.013), which was similar

among the other age groups, 18 to 49 years (11.1% 95% CI -3.4-25.6%, p=0.067) and ≥ 65 years (AP 5.9% 95% CI -1.9-13.7%, p=0.070). Respiratory effects among each age group were also significant on the multiplicative scale (Table S.6) with similar effect sizes on different lag combinations, e.g., CHWF $lag_{2,0}$ for adults aged 18 to 49 years (Multiplicative 1.17, 95% CI 1.03-1.33, p=0.018); CHWF $lag_{0,1}$ for adults aged 50 to 64 years (Multiplicative 1.13, 95% CI 1.01-1.26, p=0.031); and CHWF $lag_{1,3}$ for adults ≥ 65 years of age (Multiplicative 1.12, 95% CI 1.02-1.22, p=0.017).

Joint effects for cerebrovascular morbidity were higher among older adults, age 50 to 64 years, on CHWF $lag_{1,3}$ (AP 6.6%, 95% CI -0.6-13.8%, p=0.036) compared to the oldest group, 65 years of age and over, (-1.1%, non-significant) and young adults 18 to 49 years of age (-6.7%, non-significant). Individuals aged 50 to 64 years consistently showed significant joint effects for cerebrovascular morbidity across other combinations of exposure lag as well, with a tendency to increase in effect size from smoke lag 0 to 3 (Figure 3.4B). On the other hand, joint effects for cardiovascular morbidity were largest among the oldest age group, 65 years and older (AP, CHWF $lag_{2,0}$ 7.4%, 95% CI 2.3-12.5%, p=0.002). Additionally, a significantly higher proportion of cardiovascular morbidities were attributable to interaction within this age group, adults ≥ 65 years (5.7%, 95% CI 1.1-10.4%, p=0.008), on CHWF $lag_{3,0}$ compared to adults aged 50 to 64 years (-4.3%, non-significant). The additive effects for renal morbidities differed between adults aged 50 to 64 years and ≥ 65 years; however, due to small numbers, results for renal morbidity in the 18 to 49 year age group were suppressed. Among the two age groups compared, the proportion of renal morbidities attributable was larger for adults aged 50 to 64 years (AP,

CHWF $lag_{0,3}$ 15.5% 95% CI -1.6-32.6%, p=0.038 compared to a non-significant 0.2% among adults ≥ 65 years of age).

Preferred language spoken

We also examined joint effects by patient's preferred language reported at hospital admission (Figure 3.5). The case population was predominantly English speakers (85.1%; Table 1); thus, there were few cases exposed to wildfire smoke and extreme heat within the Spanish and Other language groups. We suppressed results with less than 10 exposed cases within the subgroup, which limits many of the results reported for Other (Figure 3.5B) and Spanish (Figure 3.5C) language preference. The effects within the English-speaking subpopulation generally reflect the effects showed among total study population and comparison to other language strata is limited due to small numbers. However, we do show the proportion of cerebrovascular morbidity attributable to interaction of wildfire smoke and extreme heat is significant among Spanish speakers on multiple exposure lag combinations, and effects are much larger compared to English speakers. For example, on CHWF $lag_{3,0}$, 10.7% of cerebrovascular morbidities were attributable to the interaction among Spanish speakers (95% CI -1.5-22.9%, p=0.0428; Table S.5) compared to a non-significant 1.9% among English speakers.

Race and ethnicity

There were race groups with too few individuals to measure effects within all cause-specific endpoints and exposure groups. Results for the "Other" race group are not reported due to small cells. Additionally, results for cardiovascular, renal, and respiratory morbidities in Asian (N=47 effect estimates) and Black (N=27 effect estimates) subgroups were suppressed. We found that Black individuals experienced the greatest joint effects of

wildfire smoke and extreme heat. This group had the largest additive effects for respiratory (AP, CHWF $lag_{0,3}$ 19.2%, 95% CI 6.5-32.1%, p=0.0016; Table S.5) and cerebrovascular morbidities (AP, CHWF $lag_{0,3}$ 15.7%, 95% CI 4-27.4%, p=0.0042; Table S.5) across all analyses. In comparison to the Black subgroup, cerebrovascular effects for White, non-Hispanic (2.3%) and respiratory effects for Hispanic (-5.3%) individuals were significantly smaller. The pattern of exposure lag associations for significant effects among Black individuals is shown in Figure 3.6B.

Patterns for cardiovascular morbidities suggest the Black subpopulation was exposed during heat lags 0 and 1, with limited exposure to heat on lags 2 and 3. This may be due to harvesting effects, where individuals who will get sick succumb to cardiovascular morbidities sooner following a heat exposure. Thus, the burden of cardiovascular morbidity changes over time as individuals have already succumbed to illness. Similarly, exposed cases of respiratory morbidities were lacking for heat lag 3, particularly for exposures to smoke prior to the admissions date. In contrast, the pattern for cerebrovascular morbidities shows a distinct increase in effects across smoke lag 0 to 3, suggesting exposure to wildfire smoke three days prior is a potential driver in this effect among Black individuals.

Additionally, our findings indicate a significant protective effect for cardiovascular morbidities among Black individuals on CHWF $lag_{0,3}$ (AP, -32.3%, 95% CI -68.4-3.7%, p=0.0394; Table S.5). The additive effect has a wide confidence interval, although this effect does persist on the multiplicative scale as well (Multiplicative, 0.75, 95% CI 0.58-0.99, p=0.045; Table S.6). In this instance, the effect of extreme heat, without wildfire smoke,

shows a strong, significantly increased risk of cardiovascular morbidity by roughly 22% (OR 1.22, 95% CI 1.02-1.46, p=0.0293; Table S.7). Yet, when exploring the opposite: the effect of wildfire smoke without extreme heat, and the interaction between extreme heat and wildfire smoke, the findings were null effects. The data may be insufficient to fully estimate the joint effects on cardiovascular morbidity among Black individuals as they only comprise about 10.5% of total cardiovascular cases.

White (CHWF $lag_{1,3}$ and $lag_{2,3}$) and Hispanic (CHWF $lag_{3,2}$) subgroups both showed that roughly 10% of renal morbidities were attributable to the interaction of wildfire smoke and extreme heat. Additionally, the additive effects for cardiovascular morbidity on CHWF $lag_{3,0}$ was slightly higher for White individuals (7.7%) compared to Hispanic (4.8%), although the difference is not significant.

Household poverty, ZCTA level

Significant additive effects for ZCTAs with higher proportion of households living under poverty (≥ 25%) were found for cardiovascular (AP, CHWF $lag_{0,0}$ 7.2%, 95% CI -1.1-15.5%, p=0.045) and respiratory (AP, CHWF $lag_{1,1}$ 10%, 95% CI 0.02-20%, p=0.025) morbidity, limited to a few combinations of exposure lags (Figure 3.7). The cardiovascular and respiratory effects on the same lags were smaller (0.07% and 2.3%, respectively) for ZCTAs with lesser poverty (< 25% of households living under poverty), although not significantly different. Most cases (81.2%) resided in ZCTAs with lesser poverty. Many of the cardiovascular and respiratory effects among cases residing in ZCTAs with lesser poverty persisted on the multiplicative scale; the largest of these showed roughly 10.5% increased risk of respiratory morbidity due to interaction of exposure on CWFH $lag_{0,3}$ (Multiplicative, 1.11, 95% CI 1.02-1.19, p=0.011; Table S.6).

Educational attainment, ZCTA level

Nearly 70% of cases resided in ZCTAs where more than 50% of the population had higher than a high school education. Findings in this group were different than those in ZCTAs having lower education. For instance, higher education ZCTAs showed larger additive effects for respiratory morbidity (AP, CHWF $lag_{0,3}$ 12% 95% CI 4.5-19.4%, $p<0.001$) compared to lower education ZCTAs (AP, CHWF $lag_{0,3}$ 3%, non-significant) across multiple exposure lag combinations. In contrast, lower education ZCTAs showed larger and significant joint effects for cardiovascular and renal morbidity. Around 9% of cardiovascular morbidities in lower education ZCTAs were attributed to interaction of wildfire smoke and extreme heat, compared to 4.3% in higher education ZCTAs for the same exposure lags. Furthermore, renal morbidity risks were significantly larger among the lower education group (13.4%) compared to higher education group (2.1%). This effect persisted on a multiplicative scale, showing renal morbidity risk increased 15.5% in the lower education subgroup due to interaction of wildfire smoke and extreme heat for exposure on CHWF $lag_{2,3}$ (Multiplicative, 1.16, 95% CI 1.03-1.30, p=0.018; Table S.6).

Rural and urban typology, ZCTA level

Most cases resided in predominantly urban ZCTAs (97.2%); thus, the data was not sufficient to estimate joint effects of wildfire smoke and extreme heat in rural populations.

Discussion

California is confronting an emerging threat of compounding climate hazards. Longer wildfire seasons are increasingly exposing populations to both extreme heat and wildfire smoke as the seasons overlap more frequently (Chapter 1). Our study found that compound wildfire smoke and extreme heat jointly impact health with impacts varying by

cause-specific outcome, exposure lags, and population subgroups. There are limited studies on the joint effects of wildfire smoke and extreme heat, and to the author's knowledge, there are no studies examining the joint effects on hospitalizations for all-natural, cardiovascular-, cerebrovascular-, renal-, and respiratory-cause morbidities. Joint effects of wildfire-related air pollution and extreme heat have been shown for all-cause, cardiovascular, and respiratory mortalities (Rahman et al., 2022), as well as emergency department admissions (Patel et al., 2019). Estimating the influence of wildfire smoke in these prior studies, however, was limited. Authors suggest high concentrations of $PM_{2.5}$ are attributable to wildfire activity. One study goes so far as to correlate days with high concentrations of $PM_{2.5}$ with wildfire events (Rahman et al., 2022). In contrast, our study uses a direct estimate of the influence of wildfire smoke on $PM_{2.5}$, (i.e., WF-Influenced $PM_{2.5}$), which was modeled based on empirical knowledge of wildfire smoke (HMS Smoke product) and exceedances of expected smoke-free concentrations.

Additionally, prior studies also examine short-term exposure lag windows, but only assess exposures on the same lag days. We thoroughly examined compound exposures within a short-term exposure lag window, testing sixteen different combinations of exposure lags. Importantly, multiple hazard exposure on the same day does not necessarily dictate the effects. Rather, different combinations of exposure within a short-term window can have interactive health effects.

There were multiple exposure lag patterns relevant to compound extreme heat and wildfire smoke, including increasing effect size from smoke lag 0 to lag 3. We also note that effects of extreme heat, without wildfire smoke, were most often significant on heat lag 0

and 2. This pattern was particularly apparent among renal morbidities. We observed significant effects of wildfire smoke, without extreme heat, on smoke lag days 2 and 3. The differences in the associations of lag days for these individual effects suggest it is important to consider the different combinations of exposure lags when estimating joint effects. Our results show found significant effects of different combinations of wildfire smoke and extreme heat exposure and cause-specific morbidities. These findings indicate that exposure consideration should not be limited to days when both hazards have occurred, but rather short-term periods that capture consecutive or co-occurring hazards.

This study provides evidence for the interactive effects of wildfire smoke and extreme heat on both multiplicative and additive scales for cardiovascular, cerebrovascular, renal, and respiratory morbidities. Effects for all-natural cause morbidity were all small and close to null. However, we found that cause-specific end points showed joint effects that differed across exposure lags and population subgroups. Prior literature shows these outcomes have varied associations when looking at wildfire smoke and extreme heat exposures independently.

There is extensive literature showing significantly increased risk for hospitalizations of respiratory morbidities in association with wildfire smoke exposure (Cascio, 2018; Reid et al., 2016a). Similarly, a review and meta-analysis of extreme temperatures and cardiorespiratory morbidity shows hot days are associated with increased risk of respiratory morbidity (Turner et al., 2012). Our findings suggest that when hazards compound, the effects of wildfire smoke and extreme heat lead to super additive and multiplicative interactions increasing the risk of respiratory morbidities.

Furthermore, a study of extreme heat in New York projects the burden of respiratory admissions due to extreme heat will increase by roughly 2 to 6 times in 2080-2099 compared to 1991-2004 (Lin et al., 2012). While few studies estimate future respiratory health impacts of wildfire smoke under climate change scenarios, current evidence suggests increasing exposures to wildfire smoke will lead to growing respiratory impacts (Reid and Maestas, 2019). It is important to consider how climate change may influence the joint effects we observed for compound wildfire smoke and extreme heat as well.

Turner's meta-analysis found a limited pool of studies on extreme temperatures and cardiovascular morbidity that showed no effects (Turner et al., 2012). A more recent review and meta-analysis from 2016 found the relationship between heat exposure, using heat thresholds like the metric in our study, and cardiovascular morbidities was inconsistent (Phung et al., 2016). The authors reported significant increased risks between heat waves and cardiovascular morbidity. Further, studies more consistently indicate increased risks in cardiovascular mortality compared to cardiovascular morbidity and extreme heat exposures (Åström et al., 2011; Phung et al., 2016). Our results show interactive synergistic effects of extreme heat and wildfire smoke for cardiovascular morbidities. Although increased risk of cardiovascular morbidity is not commonly reported in heat studies, a recent review from Chen et al. on wildfire smoke and cardiovascular health found many studies (25 out of the 38 retrieved) showing increased risks for cardiovascular morbidities (Chen et al., 2021).

There is a lack of evidence for the impact of wildfire smoke on renal health. One study shows increased mortality in a vulnerable population of hemodialysis patients with

end stage kidney disease exposed to wildfire $PM_{2.5}$ (Xi et al., 2020). To our knowledge, no studies have been published exploring the risk of wildfire smoke and renal morbidity in the general population. There is, however, extensive evidence of the impact extreme heat and heat waves have on renal health (Johnson et al., 2019). The kidneys serve a critical role in protecting individuals from heat and dehydration. They do this by maintaining adequate blood volume. When a person experiences heat stress or heatstroke, the kidneys can become overwhelmed, leading to decreased circulating blood volume, resulting in kidney dysfunction. We found joint effects of wildfire smoke and extreme heat for renal morbidity were near-significant in the study population, but these relationships became more apparent in subgroup analyses differed by race and ethnicity, preferred language, and educational attainment.

There is limited evidence on the association of wildfire smoke and cerebrovascular risks in single hazard assessments. One study from Wettstein et al. shows an increased risk for cerebrovascular outcomes associated with wildfire smoke in a similar population of California hospitalizations (Wettstein et al., 2023). Evidence for cerebrovascular health associations with extreme heat, independently, is more extensive (Åström et al., 2011; Bunker et al., 2016; Zhang et al., 2014), although not always consistent (Zorrilla-Vaca et al., 2017). Our results highlight the need to investigate differential effects of these two hazards on cerebrovascular morbidities within population subgroups.

Joint effects differed by individual and community level factors. For example, effect estimates for renal morbidity were stronger and significant for the oldest age group, English speakers, White and Hispanic individuals, and ZCTAs with lower educational

attainment and higher proportions of households living under poverty. We also did not find joint effects of wildfire smoke and extreme heat on cerebrovascular morbidities among the study population but found significant super additive and multiplicative interactions within subgroups. This includes a moderate portion of cerebrovascular morbidities attributable to interaction among Black individuals. This analysis also shows significant joint effects on cerebrovascular morbidities for White, young to middle aged and older adult, and English preferred language groups.

Cardiovascular and respiratory effects differed in stratified analyses as well. For instance, interactive effects for cardiovascular morbidity were stronger within the Black and female subgroups, whereas respiratory joint effects were stronger in males. Prior single hazard assessments have also shown disparate impacts for these health outcomes across similar sociodemographic characteristics, including sex, age, education, and income (Rappold et al., 2012; Reid et al., 2016b, 2009). Our study shows joint effects of wildfire smoke and extreme heat differ across individual and community level risk factors. Differences may be driven or modified by underlying vulnerabilities, social or place-based disadvantages, and risk behaviors.

Sex-differences found in our study show females had higher joint effects for cardiovascular morbidity. Cardiovascular disease is the leading cause of death for women, and with a higher prevalence than men (Appelman et al., 2015). Female-specific biologic risk factors, including preeclampsia, gestational diabetes and menopause onset, and differences in the effects of behavioral risk factors contribute to increased cardiovascular risks for women (Appelman et al., 2015). Males, however, were found to have higher joint

effects for risk of respiratory morbidity in our study. Shin et al (2022) also found higher risk of respiratory hospitalization due to air pollution exposure in males compared to females during the summer months (Shin et al., 2022). These findings suggest that differences may be due to many factors, including physiologic structures, lifestyle, and underlying inflammatory diseases. For instance, a survey of activity patterns found men spend more time in outdoor environments (Matz et al., 2014), which may suggest greater exposures to outdoor air pollutants and extreme temperatures.

Differences in biologic risk and risk behaviors may also explain the differential joints effects by age. There is substantial literature indicating that older populations have higher risks of health impacts to extreme heat and wildfire smoke, independently (Åström et al., 2011; Cascio, 2018; Liu et al., 2017; Zhang et al., 2014). The findings of joint effects for young to middle aged and older adults are also of interest. Increased risks for respiratory morbidities were present across all age groups. However, it is plausible that risk behaviors, underlying comorbidities, and physiologic health are contributing to this effect differently among age groups (Deeks et al., 2009).

Other individual level factors may serve as proxies for social disadvantages. For instance, language preferences can influence access to risk information, an important predictor for the adoption of health protective behaviors. However, interpretations of effects for individuals with a language preference of Spanish and other than English or Spanish in our study are limited due to small number of exposed cases. We are not able to determine if this plays a role in the joint effects of wildfire smoke and extreme heat.

Race and ethnicity effects are also deeply influenced by socioeconomic status and often interpreted in environmental epidemiologic literature to be driven by inequalities among race groups and systemic racism. Minority populations often carry a higher burden of environmental exposures and health impacts. Our results show the strongest joint effects of wildfire smoke and extreme heat within Black populations; although, some of the effects for Black and other minority race groups had to be suppressed, and thus the interpretations are limited.

Neighborhood-level characteristics can also shed light on the relationship of joint effects of wildfire smoke and extreme heat with socioeconomic conditions and often related, the capacity to adapt. Educational attainment and household poverty status are frequently associated with greater environmental exposure burdens and impacts (Bao et al., 2015; Bell and Keita, 2012; Curriero et al., 2002; Rappold et al., 2012; Reid et al., 2009). Those living in poverty often do not have the capacity to afford mitigations (Bao et al., 2015). We did not observe significant differences in the joint effects among communities living in ZCTAs with more households living under the poverty. Our results, however, do show a moderate effect on renal morbidity for ZCTAs where 50% or more of the population obtained a high school education or less. Prior research shows education is a key determinant of renal health outcomes as it can predict occupation, income, and adoption of health protective behaviors (Lombardi et al., 2021; Mirowsky and Ross, 2015). Our results for the lower education group suggest socioeconomic conditions may be a key determinant for the joint effects of wildfire smoke and extreme heat on renal morbidity. However, differences relating to social and place-based disadvantages should be investigated further.

Further, we investigated the joint effects of wildfire smoke and extreme heat by rural and urban typologies. Exposure predominantly covered urban areas; thus, we could not estimate effects in rural areas. Chapter 1 of this dissertation work also shows ZCTAs exposed to compound wildfire smoke and extreme heat within a short-term exposure lag window had significantly higher urban composition compared to unexposed ZCTAs. Urban areas may be more susceptible to these compound events due to the urban heat island effect (Chapman et al., 2017). Additionally, densely populated urban areas present a critical concern for exposure risks.

There are some limitations to this study that should be considered. Exposure misclassification may occur when assigning exposure to residential ZCTA as it roughly approximates exposure and the individual's location during exposure periods. Additionally, the ZCTA geography is a spatial unit that provides information regarding where individuals live (Graham et al., 2015), but primarily serves as an arbitrary unit for postal routes. There is wide variation in the geographic size and population density between ZCTAs. Similar to our approach, other environmental epidemiologic studies have used ZIP Code level analyses in California with adjustments for population distribution within the ZIP Code (Delfino et al., 2009; Guirguis et al., 2018; Knowlton et al., 2009; Riley et al., 2018). We aimed to minimize exposure misclassification by estimating exposure at the ZCTA level based on population distribution. We also cannot assess whether individuals adopted health protective behaviors to mitigate exposure. For instance, staying indoors, reducing outdoor physical activity, or using air filtration and air conditioning devices are examples of behavioral modifications that may influence an individual's exposure to extreme heat or wildfire smoke. Additionally, this study examines single days of extreme temperature and

wildfire smoke, rather than consecutive days, i.e., heat waves and smoke waves. Rosenthal et al. (2022) found co-occurrence of heat waves and smoke waves captured a higher degree of exposure, thus, health effects may be stronger. Further research could investigate how health effects may differ with consecutive or cumulative days of exposure. Lastly, joint effects analysis requires large sample sizes than independent association analyses. Exposures to compound wildfire smoke and extreme heat from 2011 to 2020 were shown to be highest in 2017 and 2020 in Chapter 1's analysis. However, due to effects of the COVID-19 pandemic, we excluded 2020 from the primary and stratified analyses. Thus, exposures within some population subgroups were too small to estimate joint effects. With increasing wildfire activity and extreme heat events, researchers should investigate more recent years of compound wildfire and extreme heat events in California.

Future investigations could explore the relationship between apparent temperature, which accounts for humidity, wildfire smoke, and health outcomes, given that California's climate is becoming more humid (Gershunov and Guirguis, 2012). Likewise, air pollutants, like ozone, may also play a role in the joint effects for extreme heat and wildfire smoke. Incorporating ozone into these analyses may further explain some of the effects we observed. Lastly, we examined wildfire smoke and extreme heat events compounding within a short-term period. Future studies could consider different spatial and temporal components of compound effects, including the effects of events compounding response resources at larger geographic scales rather than just among compounding exposed populations.

Conclusion

This study shows worsening wildfire and extreme heat events in California are leading to stronger morbidity effects due to compound wildfire smoke and extreme heat. Disparities in the joint effects of wildfire smoke and extreme heat highlight the need to target interventions for populations at greater risk, which varies by outcome. It is also important to consider how these effects may be influenced by a changing climate. These extremes are expected to increase; thus, attention should focus on assessing strategies to jointly mitigate risks.

Table 3.1 Demographics and exposure by outcome of interest, 2011-2020.

	All-natural	Cardiovascular	Cerebrovascular	Renal	Respiratory
Case Counts	28268128	63740	89288	33139	49898
Sex					
Male	43.0%	56.4%	50.9%	45.0%	46.5%
Female	57.0%	43.6%	49.1%	55.0%	53.5%
Age Group					
18-34 yr	19.2%	2.3%	1.8%	7.6%	4.8%
35-49 yr	15.7%	8.7%	7.8%	11.6%	10.9%
50-64 yr	23.7%	27.1%	25.8%	23.2%	29.1%
65+ yr	41.4%	62.0%	64.6%	57.6%	55.2%
Preferred Language Spoken					
English	85.1%	84.3%	82.7%	82.8%	84.5%
Spanish	10.5%	10.1%	10.9%	11.9%	10.0%
Other	4.4%	5.6%	6.5%	5.3%	5.5%
Race and Ethnicity					
White	49.7%	53.9%	51.1%	52.2%	52.6%
Black	9.2%	10.5%	9.4%	9.3%	12.1%
Hispanic	27.6%	21.9%	22.8%	26.2%	22.5%
Asian	8.7%	8.8%	11.5%	8.4%	8.5%
American Indian, Alaska Native	0.3%	0.3%	0.3%	0.3%	0.4%
Hawaiian Native, Pacific Islander	2.8%	3.0%	2.9%	2.7%	2.9%
Multiracial	0.2%	0.1%	0.2%	0.1%	0.1%
Other	0.8%	0.7%	0.9%	0.4%	0.5%

Table 3.1 (cont.) Demographics and exposure by outcome of interest, 2011-2020.

	All-natural	Cardiovascular	Cerebrovascular	Renal	Respiratory
Rurality					
Majority urban	97.2%	96.8%	97%	97.4%	96.9%
Majority rural	2.8%	3.2%	3%	2.6%	3.1%
Poverty					
< 25% households living under poverty (lesser risk)	81.2%	81.8%	82.6%	80.9%	79.6%
≥ 25% households living under poverty (higher risk)	18.8%	18.2%	17.4%	19.1%	20.4%
Educational Attainment					
Majority higher than high school	68.2%	68.1%	69.4%	67.7%	65.5%
Majority high school or less	31.8%	31.9%	30.6%	32.3%	34.5%
Exposure					
Mean, Max temperature	75.5°F	74.5°F	75.3°F	75.3°F	76.6°F
No. cases heat exposed	1463144	2442	3305	4559	1775
% cases heat exposed	5.16%	4.86%	5.16%	5.08%	5.33%
Mean, Smoke PM2.5	0.102 μg/m³	0.069 μg/m³	0.093 μg/m³	0.104 μg/m³	0.069 μg/m³
No. cases smoke exposed	703709	894	1508	2278	662
% cases smoke exposed	2.48%	1.78%	2.35%	2.54%	1.99%

Figure 3.1 Joint effects of wildfire smoke and extreme heat on the additive scale. Results show attributable proportion due to interaction for all months in the years 2011-2019, with upper and lower limits (UL and LL, respectively) of 95% confidence intervals (CI).

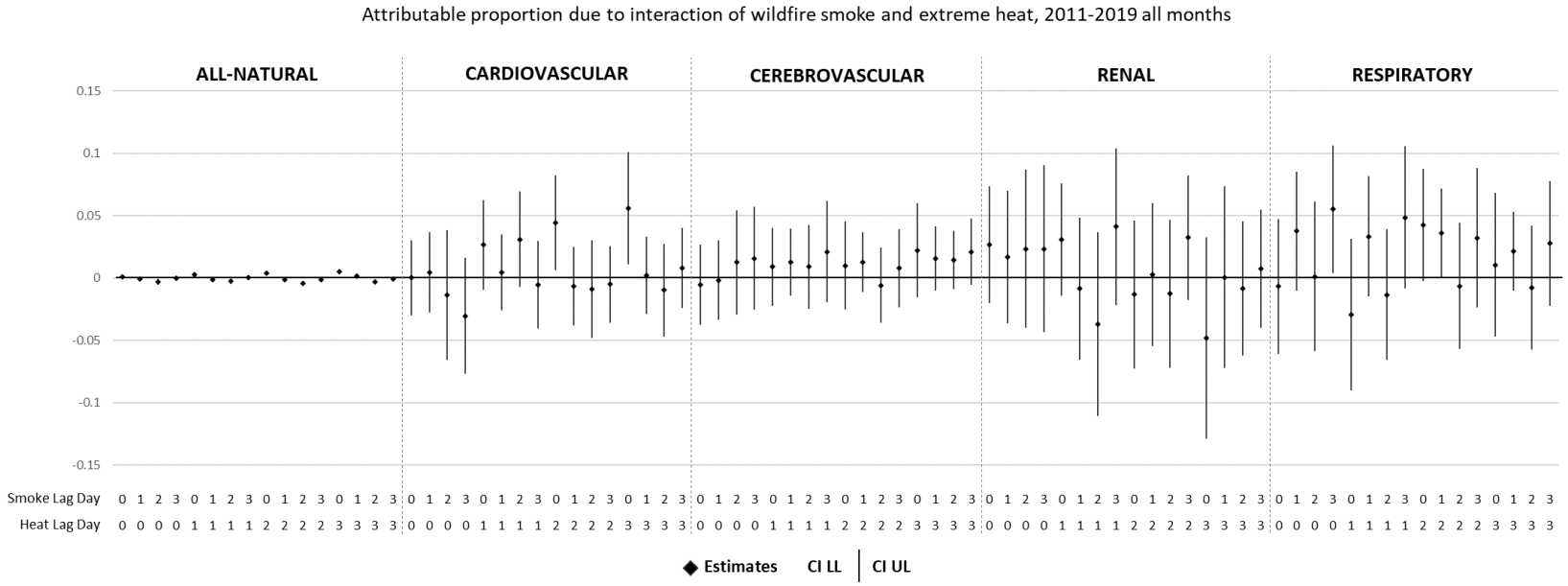


Table 3.2 Distribution of cases by definitions for extreme heat (heat) and wildfire smoke (smoke) exposure. Cutoffs include the month- and ZCTA-specific 90th, 95th, and 99th percentile thresholds for heat and WF-Influenced $PM_{2.5}$ values above 0 and 12 μg/m^3.

	Heat (90th percentile)	**Heat (95th percentile)**	**Heat (99th percentile)**	**Smoke (> 0 μg/m^3)**	**Smoke (> 12 μg/m^3)**
All-natural	2,861,563 (10.1%)	1,463,144 (5.2%)	340,093 (1.2%)	703,709 (2.5%)	36,065 (0.1%)
Respiratory	4,828 (9.6%)	2,442 (4.9%)	560 (1.1%)	894 (1.8%)	38 (0.1%)
Cardiovascular	6,548 (10.2%)	3,305 (5.2%)	779 (1.2%)	1,508 (2.4%)	79 (0.1%)
Cerebrovascular	9,078 (10.1%)	4,559 (5.1%)	1,036 (1.2%)	2,278 (2.5%)	114 (0.1%)
Renal	3,449 (10.4%)	1,775 (5.3%)	408 (1.2%)	662 (2.0%)	28 (0.1%)

Figure 3.2 Joint effects of wildfire smoke and extreme heat on the additive scale. Results show attributable proportion due to interaction for May through November in the years, 2011-2019, with upper and lower limits (UL and LL, respectively) of 95% confidence intervals (CI).

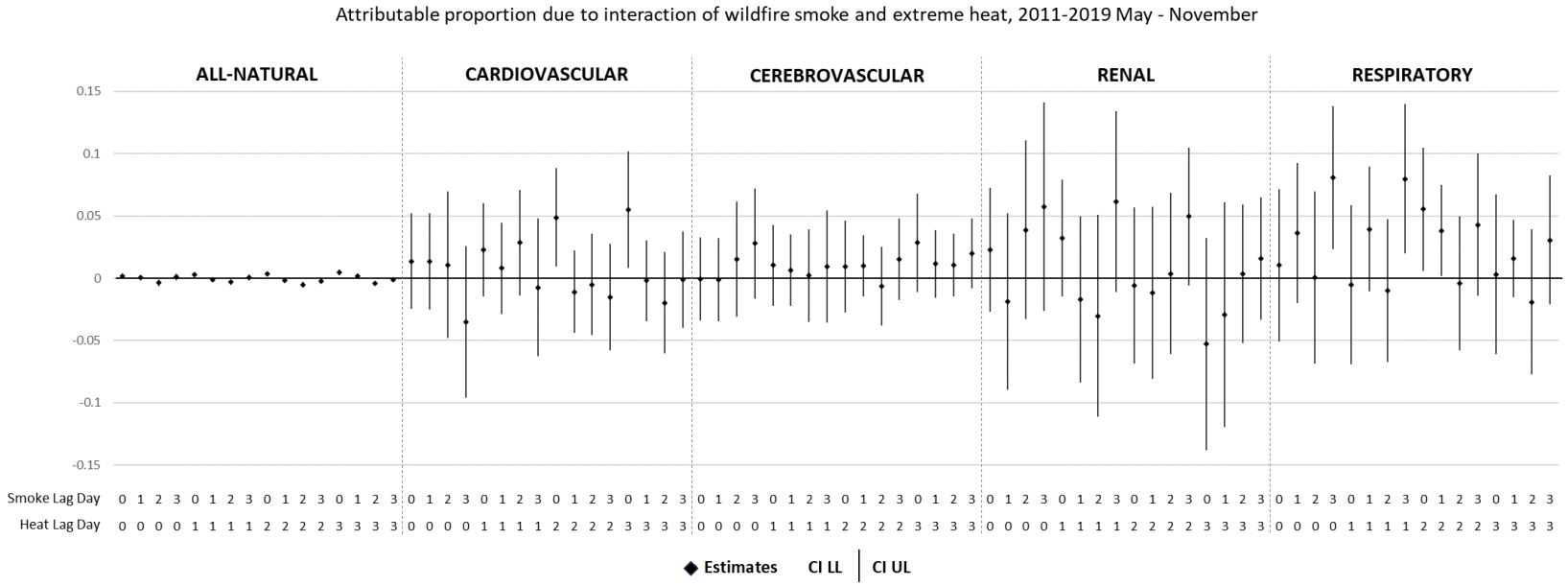


Figure 3.3 Additive effects (attributable proportion due to interaction; AP) of wildfire smoke and extreme heat stratified by sex: A) females, and B) males.

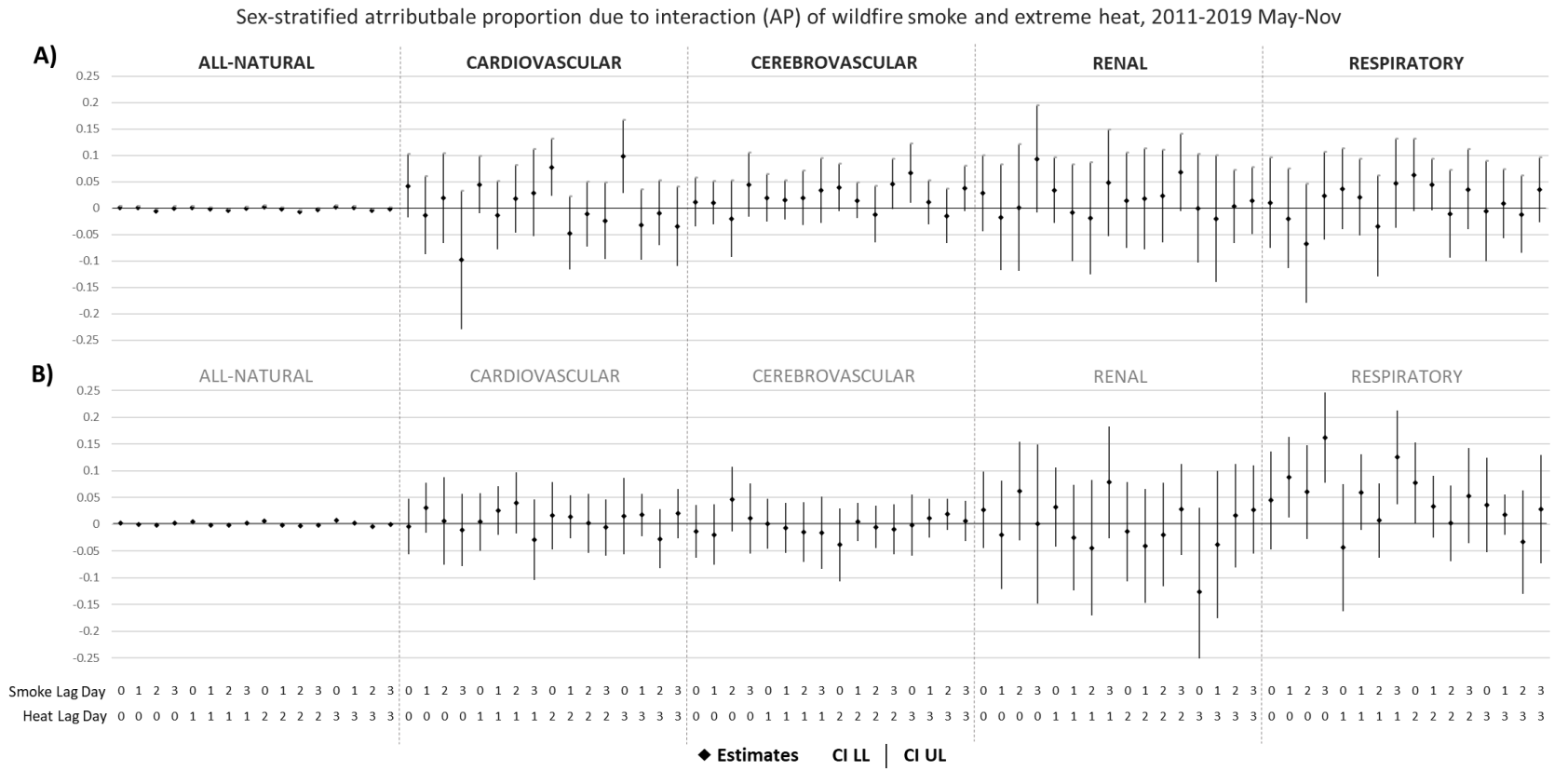


Figure 3.4 Additive effects (attributable proportion due to interaction; AP) of wildfire smoke and extreme heat stratified by age: A) 18-49 years, B) 50-64 years, and C) 65+ years of age. Small cells (< 10 exposed cases) are suppressed.

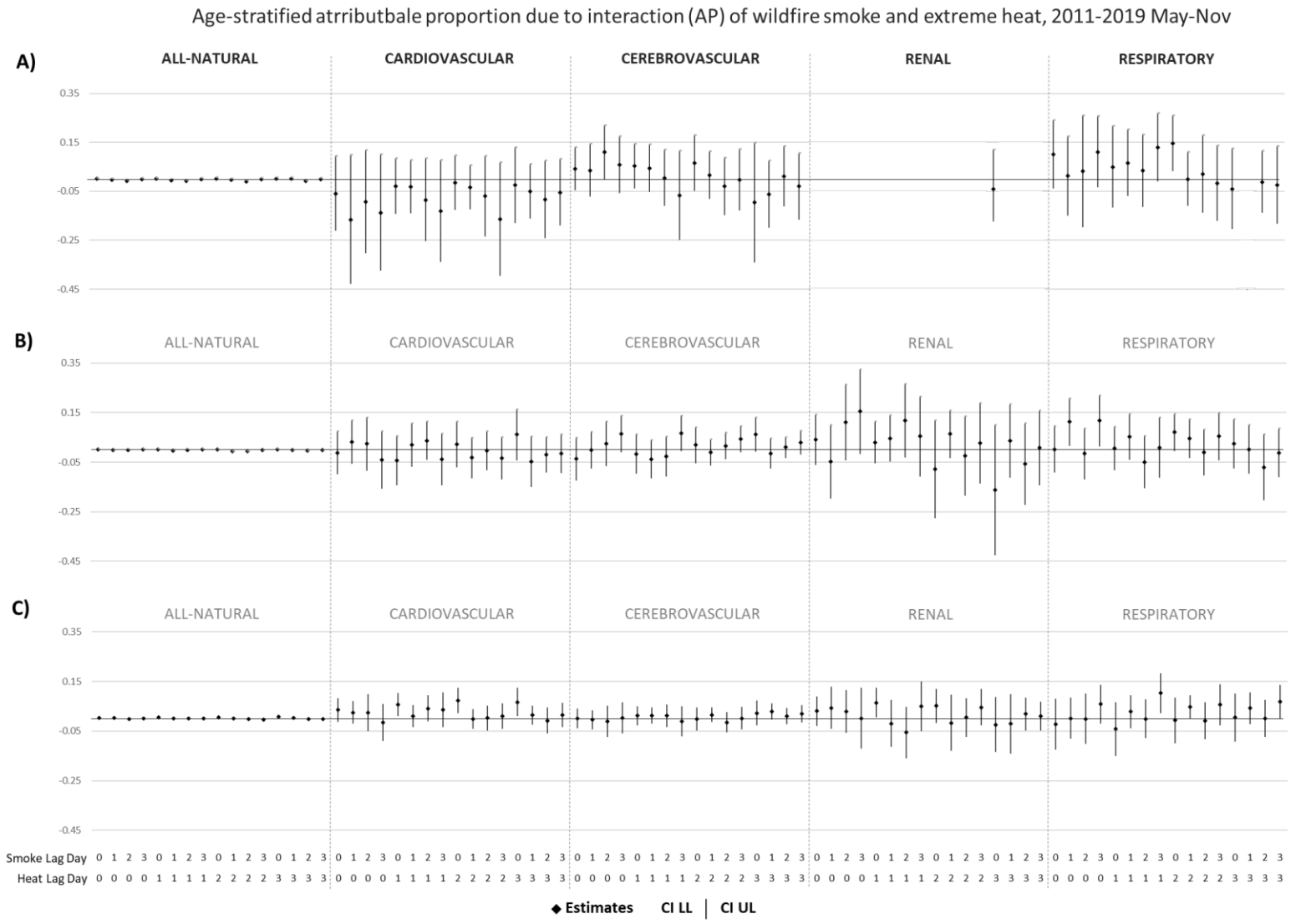


Figure 3.5 Additive effects (attributable proportion due to interaction; AP) of wildfire smoke and extreme heat stratified by preferred language spoken reported at hospital admission: A) English, B) Other, and C) Spanish. Small cells (< 10 exposed cases) are su ppressed.

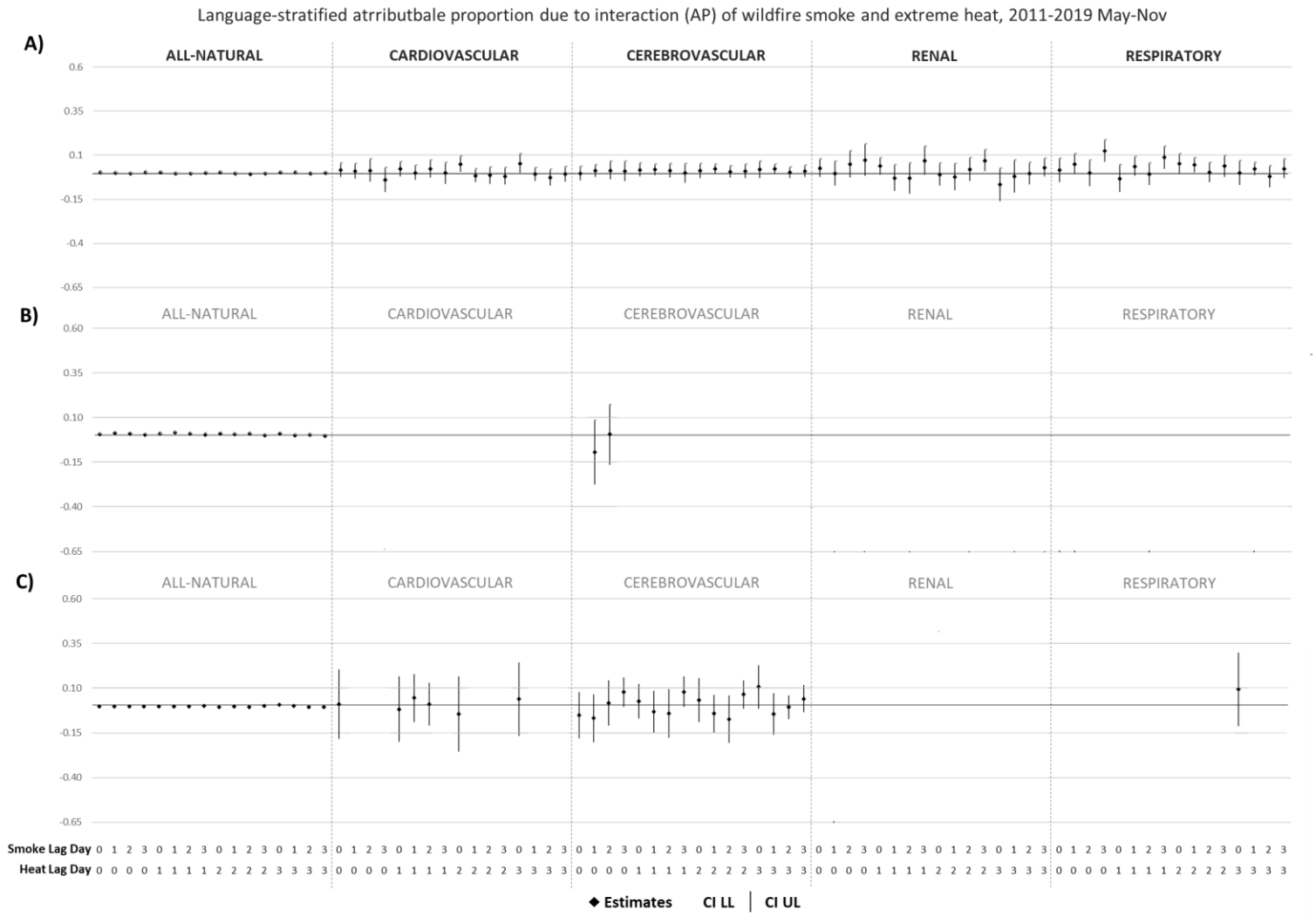


Figure 3.6 Additive effects (attributable proportion due to interaction; AP) of wildfire smoke and extreme heat stratified by race and ethnicity: A) White, B) Black, C) Hispanic, and D) Asian. Small cells (< 10 exposed cases) are suppressed.

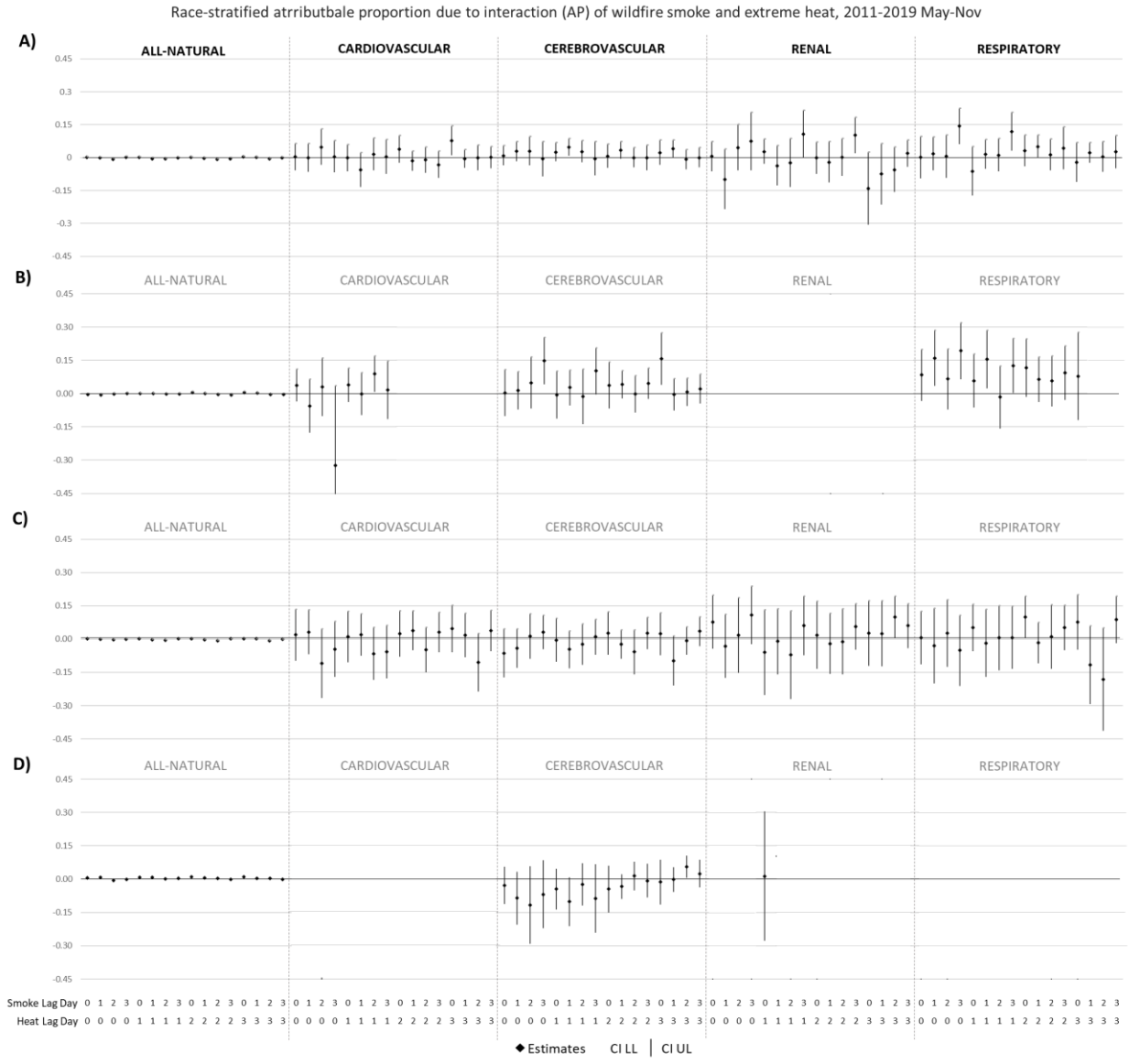


Figure 3.7 Additive effects (attributable proportion due to interaction; AP) of wildfire smoke and extreme heat stratified by proportion of households living under poverty in ZCTA: A) < 25% households living under poverty, and B) ≥ 25% households living under poverty. Small cells (< 10 exposed cases) are suppressed.

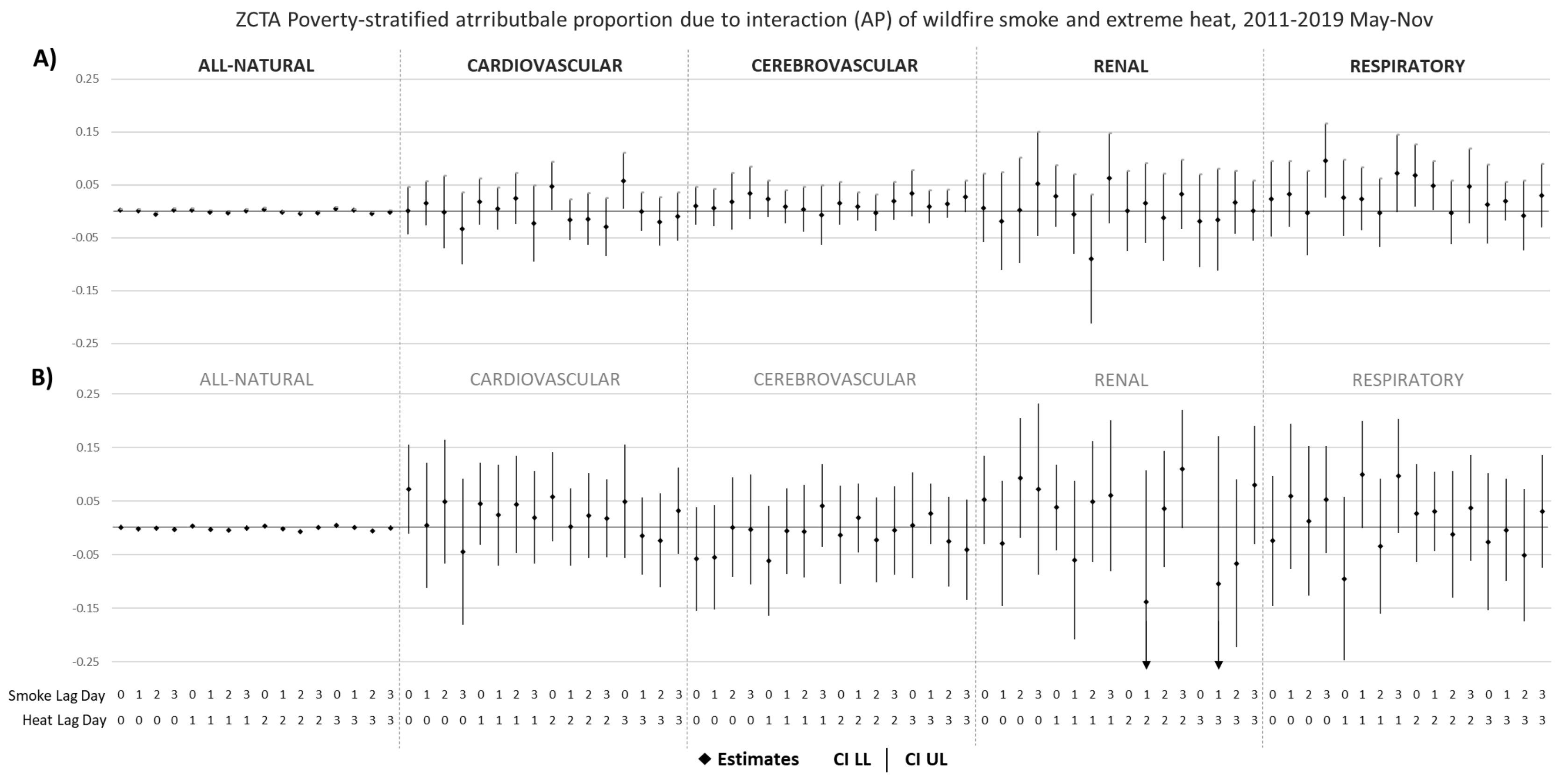
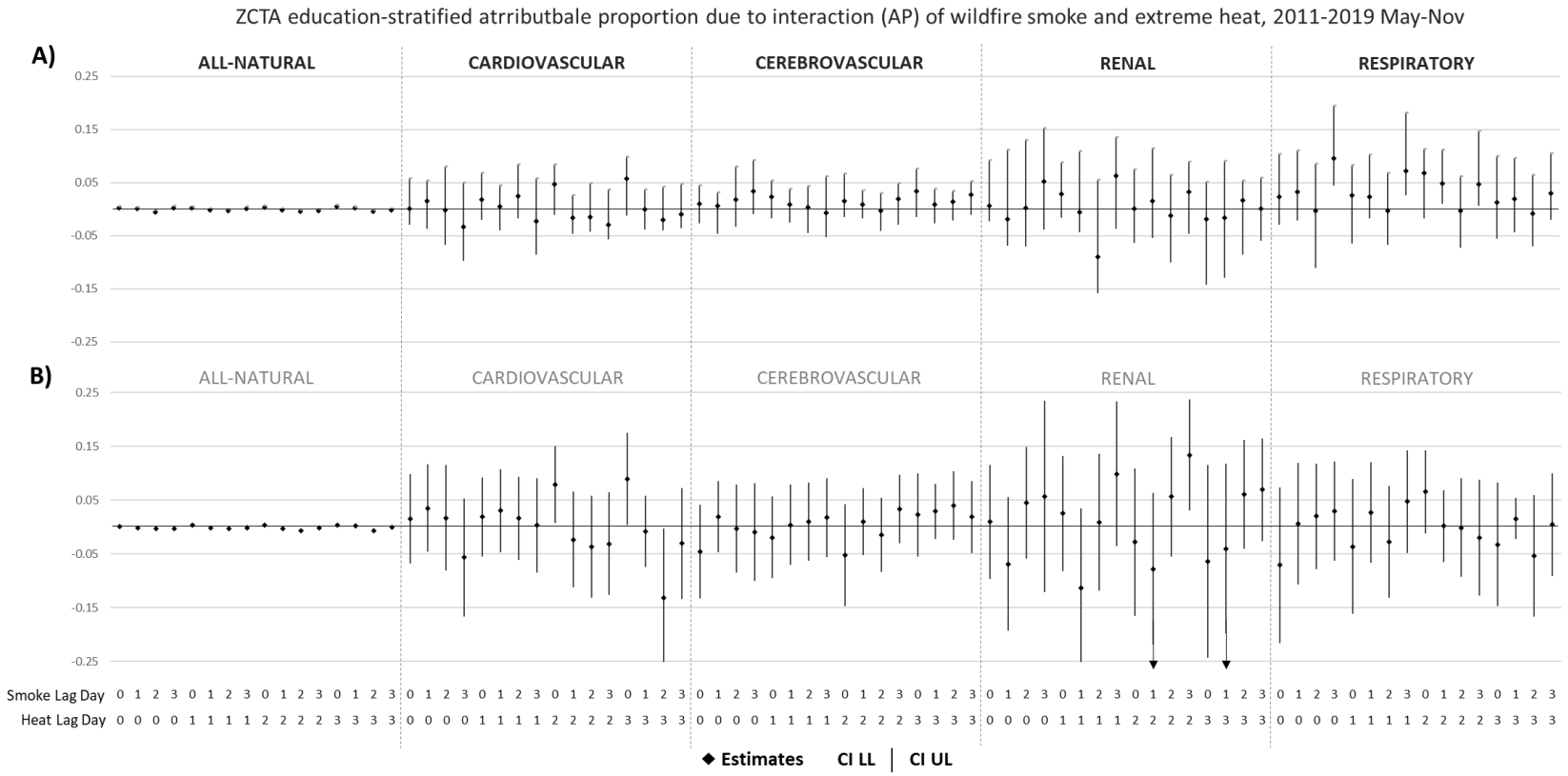


Figure 3.8 Additive effects (attributable proportion due to interaction; AP) of wildfire smoke and extreme heat stratified by proportion ZCTA population obtaining a high school education or less: A) < 50% majority higher than high school education, and B) ≥ 50% majority high school education or less.



4. Chapter Three: Effect modification of temporally compounding wildfire smoke and extreme heat in California

Abstract

Background: Temporally compounding climate hazards, i.e., multiple hazards within the same region over time, are worsening in California. There is critical public health concern regarding compound wildfire smoke and extreme heat.

Objective: This study investigates effect modification of temporally compounding wildfire smoke and extreme heat in two ways, i.e., modifying effects of prior wildfire smoke exposure on heat-related morbidity, and vice versa.

Methods: We apply a time-stratified case crossover design using conditional logistic regression to estimate effect modification. ZCTA-level extreme heat and WF-Influenced $PM_{2.5}$ exposures were assigned to case and control days, lag 0 to 3. We tested six periods of prior exposure for effect modification: 1-2, 2-3, 1-4, 4-8, 8-12, and 1-12 weeks. Three effect modifier periods were selected for stratified analyses of individual and community level factors.

Results: Effect modification of extreme heat exposure on wildfire smoke-related morbidity was minimal. However, heat-related cerebrovascular, renal, and respiratory morbidities showed significantly increased risks modified by wildfire smoke compared to non-modified effects. In stratified analyses, these effects differed across sex, age, race, education, and poverty. Race and ethnic differences were largest, showing Black (OR 3.10, 95% CI 1.60-5.97, p=0.0008) and Asian (OR 1.94, 95% CI 1.23-3.07, p=0.0046) had the highest risks of heat-related renal morbidities modified by wildfire smoke exposure.

Conclusions: Wildfire smoke and extreme heat exposures show synergistic health impacts when wildfire smoke precedes extreme heat. Health impacts of wildfire smoke exposures may increase susceptibility to subsequent extreme heat exposure. Additionally, temporally compounding hazards may strain capacity to physiologically adapt.

Background

Catastrophic wildfires and worsening extreme heat events are compounding public health risks for Californians. Research on compound climate events has garnered more recent attention, recognizing the combination of multiple hazards can lead to increased environmental and public health risks (Leppold et al., 2022; Masri et al., 2022; Simpson et al., 2023; Zscheischler et al., 2020). Specifically, compound wildfire smoke and extreme heat show synergistic health impacts when events occur within the same time and space (Chapter 2; Patel et al., 2019; Rahman et al., 2022). Multiple studies, including the previous chapters of this dissertation work, show interactions of wildfire-related air pollution and high ambient temperatures increase risks of morbidity and mortality.

There are numerous components that define a compound event (e.g., combinations of drivers, hazards, and modulators) that have yet to be fully investigated. Previous studies on compound wildfire smoke and extreme heat have focused on co-occurring hazards, i.e., same time and region (Austin et al., 2021; Heaney et al., 2022; Masri et al., 2022; Patel et al., 2019; Rahman et al., 2022). The spatial and temporal extent to which hazards must co-occur to elicit synergistic health impacts has not been investigated. Temporally compounding hazards are characterized by a fixed study area that experiences a cluster of hazards over a set period of time (Zscheischler et al., 2020). Temporally compounding

hazards may lead to multiple impacts, which modify an individual's or system's capacity to adapt and mitigate risks.

There is growing evidence that ambient air pollution and extreme heat modify each other's effects. Many studies indicate that air pollutants, including coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and ozone (O_3), modify heat-related mortality effect estimates (Analitis et al., 2014; Breitner et al., 2014; Chen et al., 2018; Luo et al., 2017; Rai et al., 2023; Ren et al., 2006; Scortichini et al., 2018). Some evidence suggests the effect modification may differ by season, geography, and population subgroups of sex and age (Analitis et al., 2014; Breitner et al., 2014; Luo et al., 2017; Scortichini et al., 2018). However, this is not evident for all studies on this relationship (Chen et al., 2018). Additionally, effects of heat were often stronger for higher concentrations of air pollutants (Breitner et al., 2014; Rai et al., 2023; Ren et al., 2006). Fewer studies have also shown the reverse, where hot temperatures modify air pollution-mortality effect estimates (Chen et al., 2018; Kim et al., 2015; Qian et al., 2010; Ren et al., 2011; Stafoggia et al., 2008). However, limited studies consider the influence of wildfire smoke on the air pollution and temperature relationship (Heaney et al., 2022; Shaposhnikov et al., 2014).

Additionally, studies for both directions of effect modification for air pollution and temperature primarily focus on short-term exposure windows, e.g., lag days 0-1. There is biologic plausibility for the interaction of air pollution and temperature exposures within such a short timeframe. For instance, these hazardous exposures strain similar physiological pathways (Gordon, 2003; Jones et al., 2020; Khan, 2019). Particulate air pollution, including emissions from wildfires, produces systemic inflammation, disrupting

cardiovascular and respiratory functions (Jones et al., 2020). Additionally, thermoregulatory functions can alter susceptibility to toxicant exposures. For instance, increased respiration due to heat potentially increases inhalation of harmful air pollutants (Gordon, 2003; Khan, 2019).

Furthermore, multiple studies show those with pre-existing conditions are more susceptible to impacts of extreme heat (Lavigne et al., 2014; Schmeltz et al., 2016; Zanobetti et al., 2013). For example, an investigation of temperature and cardiorespiratory morbidity shows increased risks of respiratory emergency room visits for those with comorbid chronic respiratory diseases (Lavigne et al., 2014). This presents a greater concern when hazardous exposures temporally compound. Over the summer months, Californians are frequently exposed to both wildfire smoke and extreme heat. Chapter 1 shows these exposures may not always compound within a short-term exposure lag window of 0-3 days, however, populations still experienced both hazards frequently within each year, 2011-2020.

Building on the evidence of wildfire smoke and extreme heat joint effects on morbidity from the previous chapter, this study aims to investigate effect modification of two hazards: wildfire smoke and extreme heat, temporally compounding within the same season (i.e., same region but in a sequence over time). We seek to understand how a prior exposure to wildfire smoke modifies heat-related morbidity, and vice versa. This study characterizes prior exposures within different timeframes, weeks to months apart, to better understand the extent to which temporally compounding events impact health. We hypothesize individuals experiencing multiple hazard exposures over time may suffer from impaired physiologic functions and a reduced capacity to adapt. Therefore, these results

will improve our understanding of the susceptibility of populations experiencing multiple hazards within a season of wildfires and extreme heat.

Methods

Health and population data

This chapter utilizes the same data as Chapter 2 of this dissertation work. This includes hospital admissions data for California, 2011-2020, from the California Department of Health Care Access and Information (HCAI). The same International Classification of Disease, Ninth Edition (ICD-9) and Tenth Edition (ICD-10) codes were used to classify outcomes of interest: all-natural cause, cardiovascular, cerebrovascular, renal, and respiratory morbidity. Diagnoses were included for adults age ≥ 18 years and excluded conditions due to trauma, injury, or poison. Additionally, individual level data from HCAI was characterized in the same way for sex, age group, and race and ethnicity for stratified analysis. Temporal and geographic data included date of admission, hospital ZIP Code, and residential ZIP Code of the patient.

The same ZIP Code Tabulation Area (ZCTA) level characteristics from US Census 5-year American Community Survey, 2015-2019, were also used to describe social and place-based disadvantages. This includes the proportion of households living under poverty, characterized as higher poverty for ZCTAs where 25% or more of households are living under poverty; as well as educational attainment, where lower education is characterized as ZCTAs where 50% or more of the adult population has a high school education or less.

Exposure data

Data for wildfire smoke and extreme heat estimates are the same as well. Daily 4-km gridded maximum temperature (T_{max}) was obtained from the gridMET dataset (Abatzoglou,

2013). Wildfire smoke and air quality information was obtained through combination of daily 3-km gridded, geostatistical modeled estimates of $PM_{2.5}$ from the NASA Health and Air Quality Applied Sciences Team (HAQAST) and NOAA's Hazard Mapping System (HMS) SMOKE Product (Al-Hamdan et al., 2019, 2014, 2009; Schroeder et al., 2008). The result is a WF-Influenced $PM_{2.5}$ estimate, which identifies and adjusts for exceedances of expected smoke-free background $PM_{2.5}$ when a smoke plume is present. Estimates of T_{max} and WF-Influenced $PM_{2.5}$ were aggregated to the ZCTA-level based on the proportion of the ZCTA population within the grid cell, using the same method described in Chapter 1. Thus, ZCTA-level estimates reflect exposure across the population distribution within the ZCTA.

Estimates were used to define both exposure and effect modifiers for extreme heat and wildfire smoke, separately. Definitions for exposures were selected based on the analysis in Chapter 2, which defines extreme heat as maximum temperature (T_{max}) above a month- and ZCTA-specific 95^{th} percentile and wildfire smoke is a continuous estimate of WF-Influenced $PM_{2.5}$. Effect modifiers for different timeframes of prior exposures were assigned using binary indicator of extreme heat above the 95^{th} percentile and WF-Influenced $PM_{2.5}$ greater than 0 ug/m^3. We tested the sensitivity of six timeframes for effect modifiers to indicate whether cases or controls were exposed to wildfire smoke or extreme heat within lag days 7-13 (1-2 weeks), lag 14-20 (2-3 weeks), lag 7-27 (1-4 weeks), lag 28-55 (4-8 weeks), lag 56-83 (8-12 weeks), and lag 7-83 (1-12 weeks). Lag days indicate the number of days preceding a case or control day, where the case and control days are considered lag 0.

Statistical analysis

A case crossover design using time-stratified controls was applied to study the relationships of wildfire smoke, extreme heat, and morbidity. With this approach, each case serves as their own control at referent periods matched by day of week in the same month and year. Therefore, the design controls for individual and time-varying factors, such as demographics, day of week, and seasonal differences (Bateson and Schwartz, 2001; Carracedo-Martínez et al., 2010; Janes et al., 2005). The date of hospital admission was considered the case or control day.

Exposure was assigned to cases and controls for lag day 0-3 using patient's residential ZIP Code matched to ZCTA. When patient ZIP Code was unmatched, we used hospital ZIP Code instead. As in Chapter 2, two ZCTAs were missing exposure data and excluded from the analysis (N = 400 cases).

We tested relationships of wildfire smoke, extreme heat, and morbidity in two ways: (1) exposure to wildfire smoke with effect modifier of extreme heat; and (2) exposure to extreme heat with effect modifier of wildfire smoke. We fit conditional logistic regression models for each exposure lag, effect modifier period, and outcome of interest, separately. We used a multiplicative interaction term to assess effect modification. Additionally, stratified analyses were conducted to compare effect estimates across population subgroups based on individual level factors (e.g., sex, age, and race and ethnicity) and community level factors (e.g., education and poverty).

Odds ratios and 95% confidence intervals (CIs) for the effect of exposure when the effect modifier is present and effect of exposure when the effect modifier is absent were calculated *post-hoc* using the InteractionR package. Additionally, we tested for significant

differences between the two odds ratios for each combination of exposure lag, effect modifier period, outcome, and strata, using Z test. Models were performed using R statistical software (version 4.3.1) and *post-hoc* calculations for Z test were conducted using Microsoft Excel (version 2306). This research was reviewed and approved by the California Health and Human Services Agency's Committee for the Protection of Human Subjects (CPHS) (#2022-130) and the University of California, Davis IRB Administration (#1943974-1).

Results

There were roughly 15 million cases of all-natural cause morbidity in California during the wildfire and heat seasons, May to November, of 2011-2019 (Table 4.1). Fewer cases of cause-specific morbidity ranged within tens of thousands, which generally showed a higher proportion of elderly adults (age ≥ 65 years) comprising more than 50% of the case populations. Otherwise, demographics were similar across outcomes of interest, with predominantly White and Hispanic populations. The distribution of sex was nearly equally split, with slight variation in proportions for each outcome of interest. We also show the distribution of cases by community level factors for (1) education, characterized by the proportion of ZCTA population with a high school education or less, and (2) poverty, characterized by the proportion of ZCTA population living under poverty (Table 4.1).

The proportion of cases by exposure and effect modifier are shown in Table 4.2. Exposure to wildfire smoke with prior exposure to extreme heat was similar across the case population and for different time periods of effect modification. Exposure to extreme heat with prior wildfire smoke exposure was slightly higher. Additionally, the proportion of

cases was consistently highest for wildfire smoke exposure 1-2 weeks prior to extreme heat exposure.

We tested all six periods for effect modification in the primary analyses: 1-2, 2-3, 1-4, 4-8, 8-12, and 1-12 weeks. The longest period, 1-12 weeks, captured more significant differences of modified effects in the total case analysis (Figure 4.1). However, it is not suitable to compare across each period as they differ in length of one-, three-, four-, and eleven-week windows of time. Thus, it is likely the longer periods would capture more differences. Three of the time periods (1-2, 2-3, and 1-4 weeks) were selected for stratified analyses based on practical public health messaging for risks. Additionally, the longer timeframes are more likely to misclassify exposure.

Wildfire smoke effects, modified by extreme heat

Effect modification of wildfire smoke morbidity by prior extreme heat exposure was minimal (Figure 4.2A & Figure 4.3A). Significant increased risks for modified effects were small and results show only a couple wildfire smoke-morbidity effects were significantly different when modified by prior extreme heat exposure compared to effects without the modifier (Figure 4.1A). This includes cardiovascular morbidity and exposure to wildfire smoke on lag 1 with extreme heat exposure 2-3 weeks prior (p=0.0433; Table S.8), and cerebrovascular morbidity with wildfire smoke on lag 2 and extreme heat 4-8 weeks prior (p=0.0161; Table S.8). However, the increased risks of morbidity modified by extreme heat were small and do not suggest meaningful effects. For example, the cardiovascular effect shows a significant odds ratio of 1.01 (95% CI 1.00-1.02, p=0.0411; Table S.9). The lack of practical significance in the effects despite statistical significance may be due to large sample sizes (Khalilzadeh and Tasci, 2017).

Different timeframes for extreme heat effect modifiers did not influence the relationship with wildfire smoke-morbidity. Stratified results for wildfire smoke morbidity modified by extreme heat also did not show meaningful differences (Table S.10). Significant differences and effect sizes remained small. For example, the cardiovascular effect observed in the total case population was present within the Hispanic subpopulation as well (OR 1.03, 95% CI 1.00-1.06, p=0.0225; Table S.10). Significant increased risk for cardiovascular morbidity modified by extreme heat exposure among Hispanics was found for other timeframes of effect modifier (1-2, 2-3, and 1-4 weeks; Table S.10) and exposure lags. ZCTAs with lower education and higher poverty also showed increased risk for cardiovascular morbidity; although, there were only a few instances of these significant differences. The largest effect showed risk increased roughly 5% for those residing in higher poverty ZCTAs exposed to wildfire smoke on lag 1 with extreme heat exposure 1-4 weeks prior (OR 1.05, 95% CI 1.02-1.09, p=0.0023, Table S.10). Without prior heat exposure, the effect of wildfire smoke was null.

Extreme heat effects, modified by wildfire smoke

Results show extreme heat morbidity is modified by prior wildfire smoke exposure (Figure 4.2B & Figure 4.3B). We find significantly increased risks across multiple cause-specific morbidities, timeframes of previous wildfire smoke exposure, and extreme heat exposure lags. There were meaningful differences for modified effects on cerebrovascular, renal, and respiratory morbidities in the total case population (Figure 4.1B). These effects showed similar significantly increased risks for heat-related morbidities with prior wildfire smoke exposure (OR 1.22, 95% CI 1.08-1.39, p=0.002 for respiratory morbidity with wildfire smoke exposure 8-12 weeks prior; Table S.11) compared to null effects without

the modifier (OR 0.98, 95% CI 0.91-1.06; Table S.11). This relationship was most often apparent for effect modification by wildfire smoke exposure 8-12 and 1-12 weeks prior in the total case analysis.

Stratified analyses of heat-related morbidity showed even stronger effect modification by prior wildfire smoke exposure (Table S.12). There were large racial and ethnic differences, as well as differences by sex, age, poverty, and education. Differential effects were shown for all outcomes of interest and within each effect modifier period, 1-2, 2-3, and 1-4 weeks. There were significant results for exposure to extreme heat on lag 0-3, but most often for lag 0.

We observed the largest differences among racial and ethnic groups. Effect modification showed significantly higher risks for respiratory and renal morbidities in the Black population (Figure 4.4; OR 3.10, 95% CI 1.60-5.97, p=0.0008 for renal morbidity with heat exposure lag 0 and wildfire smoke exposure 2-3 weeks prior). Many of these heat effects were significantly different compared to the effects without modifying wildfire smoke exposure. Similarly, the Asian population showed a large, significantly increased risk for renal morbidities modified by wildfire smoke 1-4 weeks prior (Figure 4.5; OR 1.94, 95% CI 1.23-3.07, p=0.0046). We also found significant risk for cerebrovascular morbidity in the White population (Figure 4.6; OR 1.25, 95% CI 1.04-1.49, p=0.0162 for heat exposure on lag 2 and wildfire smoke exposure 2-3 weeks prior), which was not observed in other race groups. On the other hand, there was significant decreased risk of respiratory morbidities for heat exposures that were not modified by wildfire smoke exposure in the White population (OR 0.89, 95% CI 0.80-0.99, p=0.0354 for heat exposure lag 0 and wildfire smoke exposure 1-2 weeks prior). Modified effects in the Hispanic population did not

meaningfully differ from other groups and were not significantly different from the effects without the modifier (Figure 4.7).

Sex differences showed significant and stronger effect modification of heat-related respiratory and renal morbidities for males (Figure 4.8) and cardiovascular and cerebrovascular morbidities for females (Figure 4.9). There were many significant differences between heat-related morbidities modified by prior wildfire smoke exposure compared to the effects of extreme heat without the modifier (Table S.13). Differences often related to significantly increased risk by effect modification compared to null effects without prior wildfire smoke exposure. One result indicates that males exposed to wildfire smoke 1-4 weeks prior had significantly increased risk for heat-related respiratory morbidity (OR 1.26, 95% CI 1.05-1.50, p=0.012), whereas effects were significantly protective without prior wildfire smoke exposure during this period (OR 0.87, 95% CI 0.76-0.98, p=0.026). Effect modification of renal morbidity in males was large, with roughly 56% increased risk (95% CI 1.13-2.15, p=0.0067 for heat exposure lag 0 and wildfire smoke exposure 2-3 weeks prior).

Modified effects differed by age group (Figures 4.10-4.12), specifically, the oldest age group (≥ 65 years) and adults aged 18-49 years had higher risks for cardiovascular morbidity compared to adults 50-64 years. Significant modified effects for cardiovascular morbidity were similar with up to about 23-24% increased risk among the ≥ 65 (OR 1.24 95% CI 1.02-1.51, p=0.031 for heat exposure on lag 3 and wildfire smoke exposure 2-3 weeks prior) and 18-49 (OR 1.23 95% CI 1.04-1.47, p=0.019 for heat exposure on lag 2 and wildfire smoke exposure 2-3 weeks prior) year age groups. On the other hand, increased risks for renal morbidity were significant among both older adults (age 50-64 years) and

the oldest group (age ≥ 65 years). Adults 65 years and older also showed significant effect modification for cerebrovascular morbidity, which was not shown among other age groups. Wildfire smoke exposure 1-2 weeks prior increased risks for cerebrovascular morbidity by roughly 17% (OR 1.17 95% CI 1.02-1.35, p=0.027 for extreme heat exposure on lag 0).

We did observe some differential effects by community level factors as well. Among populations characterized as having a lower educational attainment, the odds of heat-related cerebrovascular morbidity was 1.35 for exposure to extreme heat on lag 1 and wildfire smoke exposure 2-3 weeks prior (Figure 4.13; 95% CI 1.06-1.71, p=0.015). Comparatively, ZCTAs with higher educational attainment also showed a significant but smaller odds for heat-related cerebrovascular morbidity of 1.17 (Figure 4.14; 95% CI 1.02-1.34, p=0.0269 for exposure lag 0 and modifier 1-2 weeks prior). Additionally, our analysis shows significant effect modification in higher education ZCTAs for renal and respiratory morbidity that are not observed in populations residing in ZCTAs with lower educational attainment. Lastly, we find one instance of effect modification in populations residing in ZCTAs with a higher proportion of households living under poverty (≥ 25%) for renal morbidity that demonstrates around 64% increased risk for heat exposure lag 1 and wildfire smoke exposure 1-2 weeks prior (Figure 4.15; OR 1.64, 95% CI 1.13-2.39, p=0.0097). Results for ZCTA populations with lesser poverty did not reflect meaningful differences in modified effects, shown in Figure 4.16.

Across stratified results for the effects of extreme heat modified by wildfire smoke exposure, we demonstrated the most meaningful differences when wildfire smoke exposure occurs 2-3 weeks prior. Exposure to wildfire smoke 1-4 weeks prior showed the fewest meaningful relationships for effect modification.

Discussion

To the author's knowledge, this is the first study to examine effect modification of wildfire smoke and extreme heat for temporally compounding events. This study shows significant effect modification of heat-related morbidities due to wildfire smoke exposures weeks to months prior. Many associations of effects of extreme heat modified by wildfire smoke and non-modified effects were significantly different. Significantly increased risks were much stronger within certain population subgroups characterized by individual- and community-level factors (i.e., race and ethnicity, sex, age, poverty and education). On the other hand, there were minimal differential effects for exposure to wildfire smoke modified by prior extreme heat exposure.

These findings suggest that wildfire events preceding extreme heat within the same season could lead to synergistic health impacts. Additionally, the effects of temporally compounding hazards in this instance are dependent on the sequence of events. It is possible the difference between wildfire smoke and extreme heat mechanisms of effects partially explains this nuance. Extreme heat exposure can result in immediate physiologic response leading to adverse health effects, such as heat exhaustion or heat stroke (Bi et al., 2011; Hanna et al., 2010). However, the effects are most often temporary and can be resolved with proper care or adaptations. This may explain the lack of long-term modifying effects of extreme heat on wildfire smoke-related morbidity found in this study.

On the contrary, there is great public health concern regarding the long-term impacts of wildfire smoke on health (Black et al., 2017; Grant and Runkle, 2022; O'Dell et al., 2020). Wildfire smoke can cause long-term damage to lung function and increases in chronic respiratory diseases (Grant and Runkle, 2022). Individuals exposed to wildfire

smoke may also report exacerbations of physical health conditions over time (Rosenthal et al., 2021). Although, the studies on the long-term effects of wildfire smoke are limited and there are many gaps in knowledge (Grant and Runkle, 2022). Yet, it is possible the modifying effects of wildfire smoke on extreme heat-related morbidity in this study reflect increased susceptibility to subsequent hazards due to physiologic impairment and underlying co-morbidities caused by previous wildfire smoke exposure.

There is growing evidence that pre-existing conditions increase susceptibility to heat-related mortality and morbidity (Lavigne et al., 2014; Madrigano et al., 2013; Schmeltz et al., 2016; Zanobetti et al., 2013). Underlying respiratory and cardiovascular diseases have been shown to increase adverse outcomes associated with heat exposures and heat-related illnesses (Lavigne et al., 2014; Schmeltz et al., 2016). Our findings indicate that temporally compounding hazards increase morbidity risk, yet we do not assess the influence of pre-existing conditions. It would be reasonable to expect multiple hazard exposures over time to contribute additional risks of morbidity or mortality among individuals. For instance, a prior wildfire smoke exposure may lead to adverse respiratory or cardiovascular health conditions, which makes an individual more susceptible to subsequent heat health impacts.

Wildfire smoke literature provides further emphasis on this relationship. Population subgroups with increased effect modification of wildfire smoke exposure on heat-related morbidities similarly experience greater vulnerabilities in wildfire smoke studies (Kondo et al., 2019; Rappold et al., 2017; Reid et al., 2016b; Schwarz et al., 2023). This includes respiratory effects in males, cardiovascular effects for females, and cardiorespiratory impacts on communities with lower income and education (Jones et al., 2020; Kondo et al.,

2019; Rappold et al., 2017; Schwarz et al., 2023). Additionally, exposure assessments show wildfire smoke disparities across racial and ethnic groups as well as community disadvantages (Davies et al., 2018; Vargo et al., 2023).

Differential effects for race and ethnicity are often recognized in environmental epidemiologic literature as reflections of social disadvantages and systemic racism (Gronlund, 2014; Perry et al., 2021; Schwarz et al., 2021). Our results show minority populations of Black and Asian individuals experienced the largest effects of extreme heat modified by wildfire smoke exposure. A study on joint effects of extreme heat and ozone shows differential effects of race are diminished after controlling for income (Schwarz et al., 2021), suggesting social and economic disadvantages may drive this disparity. However, the effects of education and poverty in our study did not reflect the same scale of effects as race. Using individual level indicators to assess social and economic conditions would provide a better understanding of the relationship between conditions driving differential effects across race and ethnic groups.

Nonetheless, these populations may be more likely to suffer adverse health effects associated with wildfire smoke exposure, which exacerbates susceptibility to extreme heat. Additionally, populations with greater adverse health outcomes associated with wildfire smoke may experience similar vulnerabilities and adaptation barriers for extreme heat events. It is possible these population subgroups experience a strain on resources for mitigation when hazards temporally compound. A sequence of climate health hazards may challenge the capacity of individuals to afford or adopt health protective measures, such as staying indoors, using air conditioning or air filtration, and avoiding outdoor physical activity.

There are some limitations to this study. Exposure misclassification may bias results due to multiple factors. Firstly, we do not know whether individuals mitigated exposure through behavioral adaptations. Adoption of health protective behaviors may contribute to differences in effects within population subgroups, such as sex and age. However, this behavior is not assessed within our population. Also, exposure is assigned to patient's residential ZIP Code. This exposure assignment may not reflect a patient's exposure location if they were not at their residence during the measured timeframe. This misclassification error is more likely to affect longer effect modifier periods further from the date of hospital admission, e.g., 4-8, 8-12, and 1-12 weeks. Lastly, we do not quantify previous exposures throughout the effect modifier periods, but instead use a binary indicator. Significant results within the longer periods may be driven by multiple exposure days or higher concentrations or temperatures.

Future studies should consider an assessment of consecutive exposure days, such as heat waves and smoke waves. Higher concentrations of wildfire smoke may have greater modifying effects. Studies of heat-related mortality modified by air pollution shows a dose-response relationship, where higher concentrations of air pollution are associated with stronger heat-related health impacts (Breitner et al., 2014; Rai et al., 2023; Ren et al., 2006). This study does not assess the relationship of other exposures, such as ozone, with these effects. Studies show ozone can similarly increase effects of extreme heat within a short-term timeframe (Analitis et al., 2014; Rai et al., 2023; Ren et al., 2008; Schwarz et al., 2021). This study focused on wildfire-influenced air pollution and extreme heat. Evidence shows these two hazards are inherently linked and our results provide the first evidence of synergistic health impacts when these two hazards occur even weeks to months apart.

Further investigations are needed to determine the underlying mechanisms for effect modification of heat-related morbidity by wildfire smoke exposure.

Conclusion

Temporally compounding hazards present unique risks for wildfire smoke and extreme heat impacts. Increased risks of heat-related morbidity due to prior wildfire smoke exposure emphasizes a critical factor in susceptibility to climate hazards in California. As climate change is projected to worsen wildfire and extreme heat events, it is important to further investigate the complex relationship between these two hazards on public health risks. These results can be used to improve efforts to jointly mitigate the synergistic impacts of wildfire smoke and extreme heat for populations with greater susceptibility.

Table 4.1 Descriptive summary of morbidity, case demographics, and exposure in 2011-2019, May to November, in California. Heat days are characterized by maximum temperature (T_{max}) above a month- and ZCTA-specific 95th percentile. Smoke days are characterized by WF-Influenced fine particulate matter ($PM_{2.5}$) above zero.

	All-natural	**Cardiovascular**	**Cerebrovascular**	**Renal**	**Respiratory**
Case counts	15,014,852	33,277	47,322	18,930	24,453
Individual level characteristics					
Males	42.4%	56.2%	50.5%	44.1%	46.8%
Females	57.6%	43.8%	49.5%	55.9%	53.2%
18-49 years	36.0%	11.3%	9.7%	19.3%	16.6%
50-64 years	23.8%	27.5%	26.0%	23.4%	29.7%
≥ 65 years	40.2%	61.2%	64.3%	57.2%	53.7%
White	49.8%	54.2%	51.3%	52.4%	52.2%
Black	9.2%	10.6%	9.6%	9.1%	12.4%
Hispanic	27.7%	21.9%	22.7%	26.5%	22.7%
Asian	8.7%	8.6%	11.4%	8.2%	8.4%
ZCTA level characeristics					
Lower education	31.8%	31.8%	30.6%	32.3%	34.5%
Higher education	68.1%	68.0%	69.3%	67.6%	65.4%
Lesser poverty	18.8%	18.2%	17.4%	19.1%	20.4%
Higher poverty	81.2%	81.8%	82.6%	80.9%	79.6%
Exposure					
Average T_{max}	81.3˚F / 27.4˚C	81.3˚F / 27.4˚C	81.1˚F / 27.3˚C	82.3˚F / 27.9˚C	81.3˚F / 27.4˚C
Maximum T_{max}	123.1˚F / 50.6˚C	121.1˚F / 49.5˚C	122.3˚F / 50.2˚C	118˚F / 47.8˚C	121.1˚F / 49.5˚C
No. of cases exposed on heat day	692,887	1,494	2,167	896	1,032
Average T_{max} on heat day	96.3˚F / 35.7˚C	96.2˚F / 35.7˚C	96.1˚F / 35.6˚C	97˚F / 36.1˚C	96.5˚F / 35.8˚C
Average WF-Influenced $PM_{2.5}$	0.14 μg/m^3	0.13 μg/m^3	0.15 μg/m^3	0.09 μg/m^3	0.10 μg/m^3
Maximum WF-Influenced $PM_{2.5}$	157.69 μg/m^3	140.75 μg/m^3	132.55 μg/m^3	104.58 μg/m^3	137.83 μg/m^3
No. of cases exposed on smoke day	538,890	1,171	1,769	541	719

Table 4.2 Proportion of cases by exposure and effect modifier, i.e., prior exposure for wildfire smoke and extreme heat, 2011-2019, May to November, in California.

	All-natural	Cardiovascular	Cerebrovascular	Renal	Respiratory
Extreme Heat modifier and exposed to wildfire smoke					
1-2 weeks	4.17%	4.22%	4.60%	3.21%	3.48%
2-3 weeks	3.48%	3.62%	3.38%	2.57%	2.91%
1-4 weeks	3.83%	3.86%	4.04%	3.16%	3.19%
4-8 weeks	4.17%	4.14%	4.37%	3.53%	3.47%
8-12 weeks	4.51%	4.44%	4.63%	3.81%	3.73%
1-12 weeks	4.08%	4.03%	4.25%	3.39%	3.33%
Wildfire smoke modifier and exposed to extreme heat					
1-2 weeks	5.44%	4.87%	5.56%	5.64%	6.02%
2-3 weeks	4.10%	4.01%	3.77%	4.50%	3.68%
1-4 weeks	5.01%	4.75%	4.78%	5.40%	4.99%
4-8 weeks	4.88%	4.70%	4.88%	4.61%	4.46%
8-12 weeks	4.32%	4.29%	4.37%	4.74%	4.18%
1-12 weeks	4.60%	4.43%	4.55%	4.75%	4.28%

Figure 4.1A The percent change of risk for effects modified by prior exposure relative to non-modified effects for wildfire smoke-related morbidity modified by prior extreme heat exposure. Different periods of prior exposure were used to characterize effect modifiers.

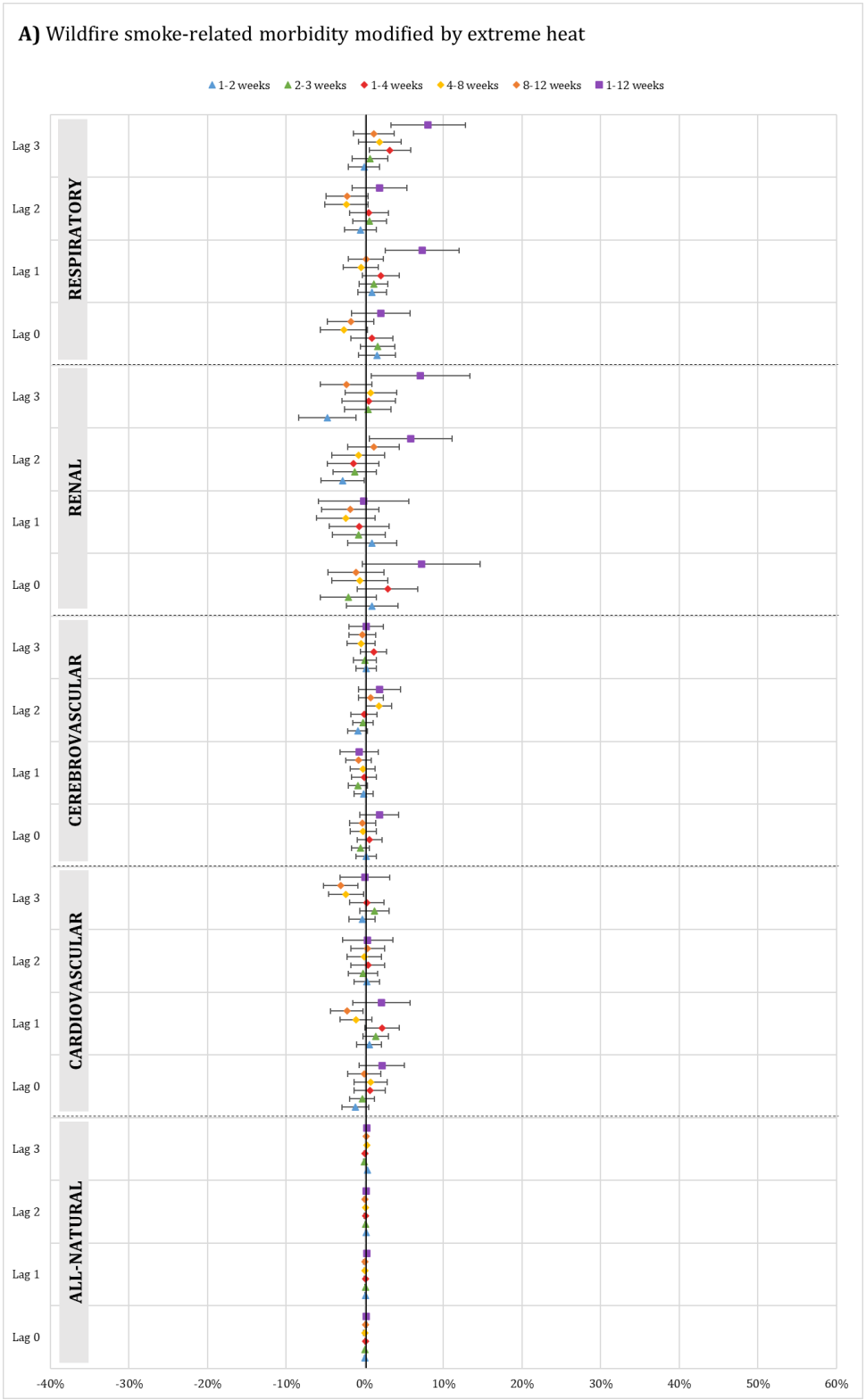


Figure 4.1B The percent change of risk for effects modified by prior exposure relative to non-modified effects for extreme heat-related morbidity modified by prior wildfire smoke exposure. Different periods of prior exposure were used to characterize effect modifiers.

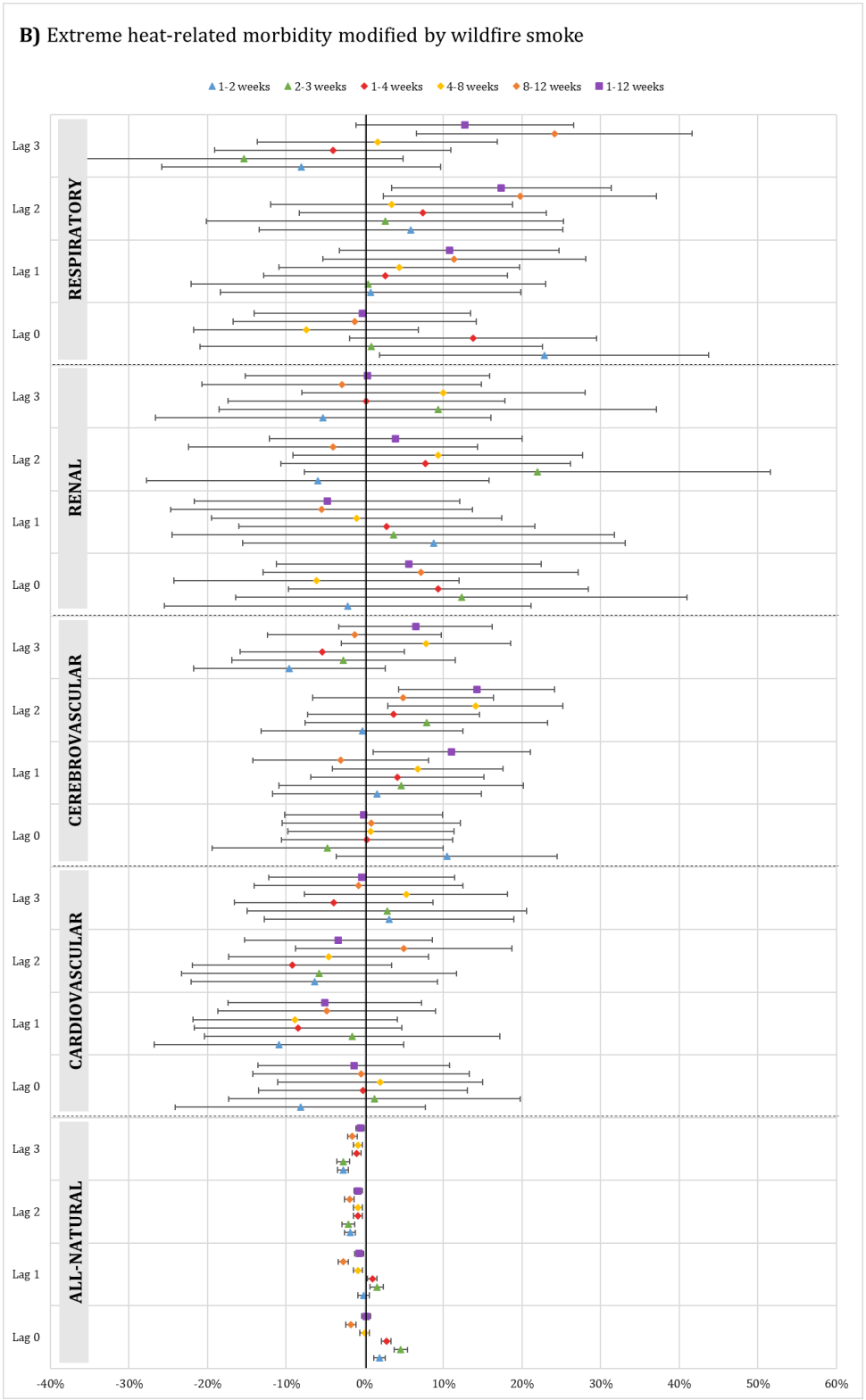


Figure 4.2 Odds ratios with 95% confidence intervals for: a) wildfire smoke-related all-natural cause morbidity modified by extreme heat; and b) extreme heat-related all-natural cause morbidity modified by wildfire smoke. Effect modifiers were tested for six time periods.

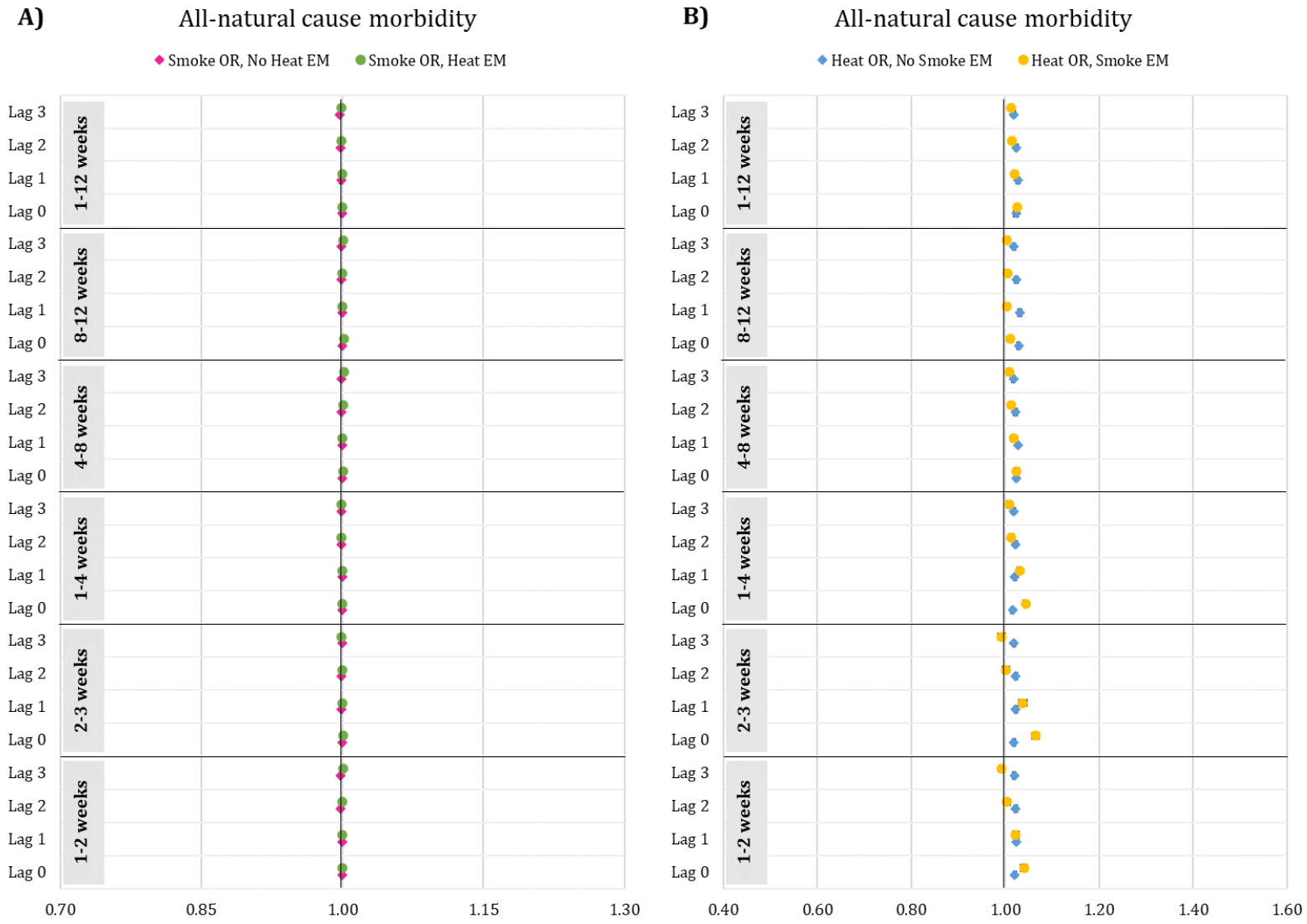


Figure 4.3A Odds ratios with 95% confidence intervals for the effects of wildfire smoke-related morbidity modified by extreme heat. Effect modifiers were tested for six time periods.

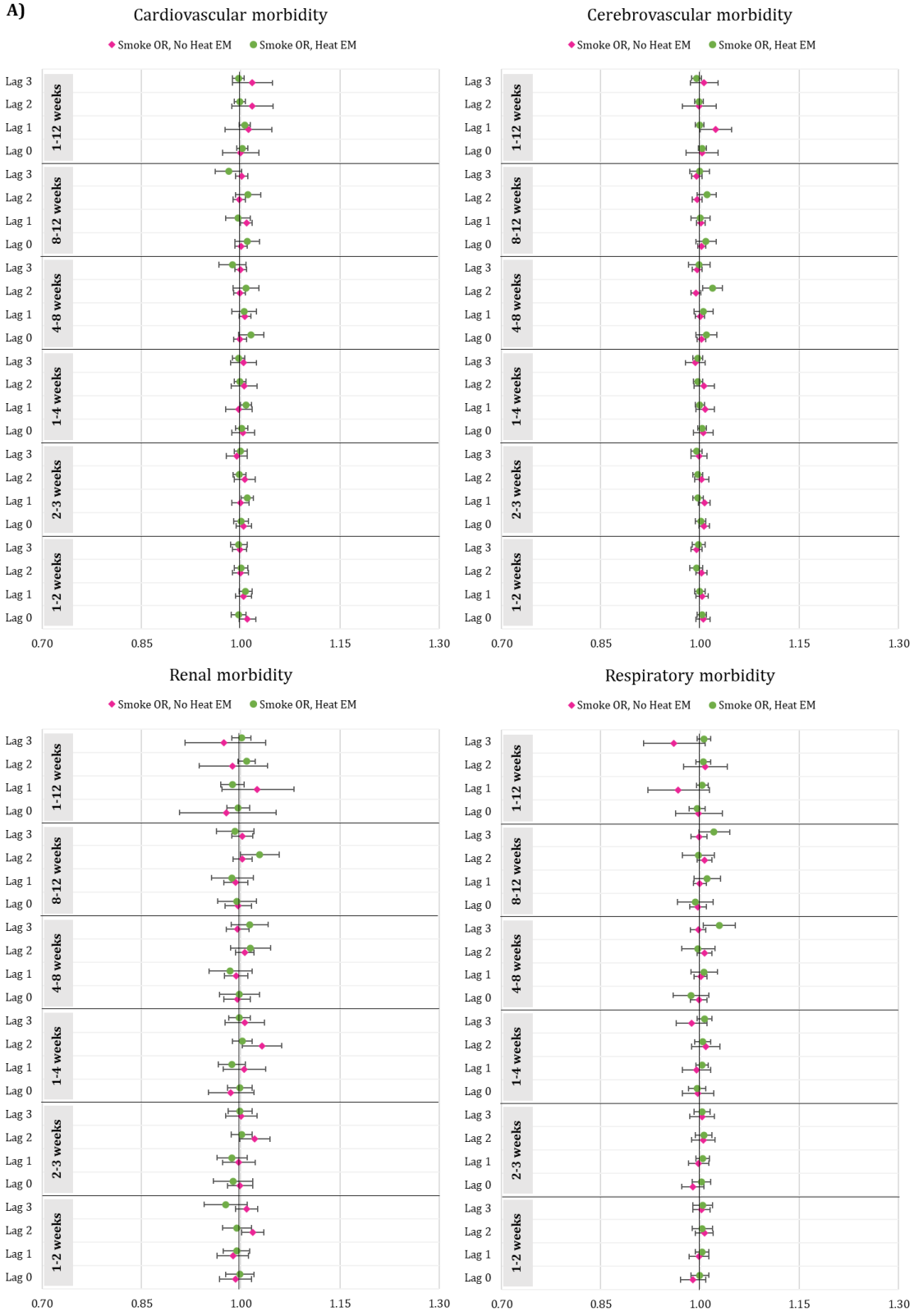


Figure 4.3B Odds ratios with 95% confidence intervals for the effects of extreme heat-related morbidity modified by wildfire smoke. Effect modifiers were tested for six time periods.

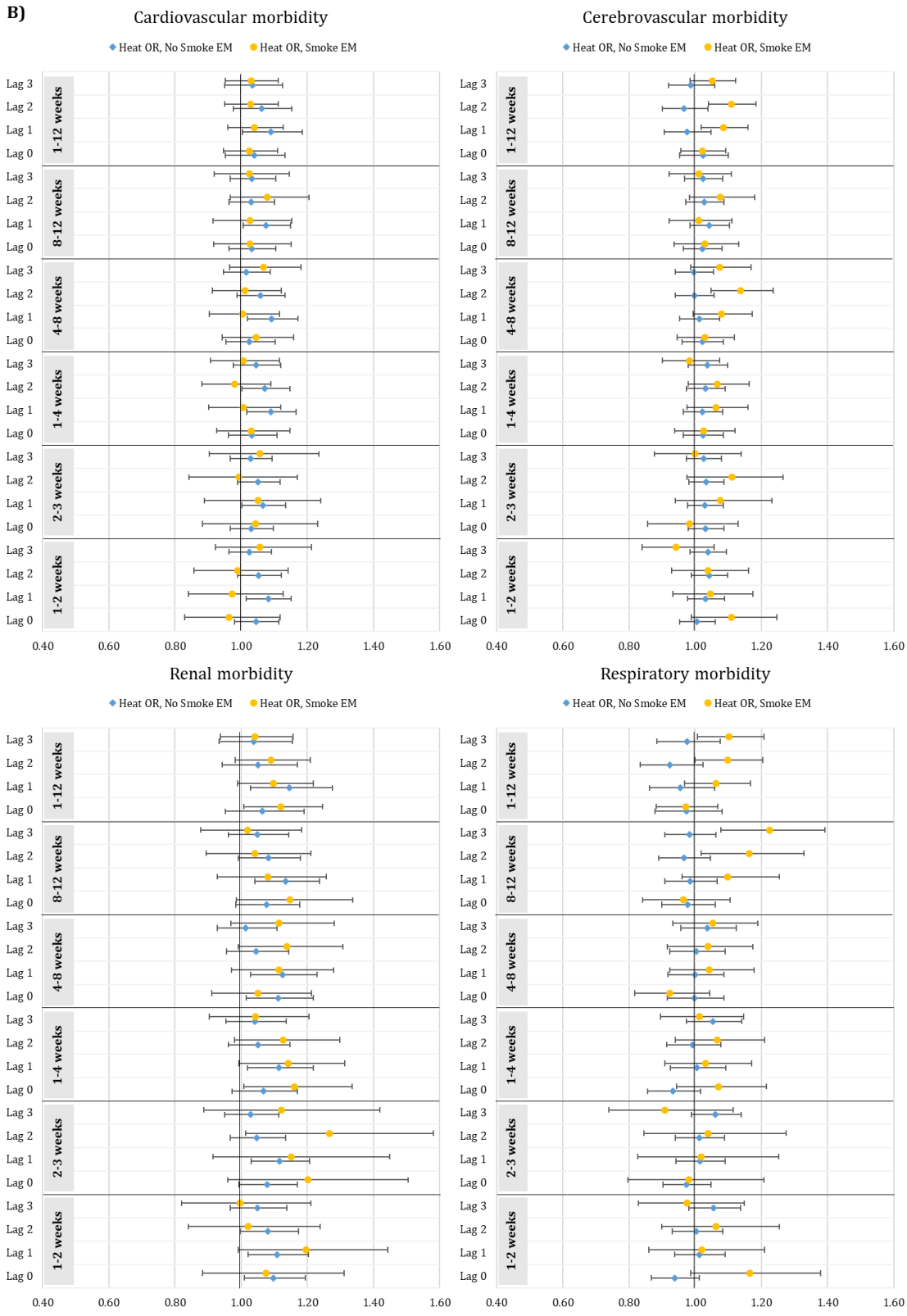


Figure 4.4 Odds ratios with 95% confidence intervals for extreme heat-related morbidity modified by wildfire smoke in the Black population. Exposure is assigned lag 0-3 and effect modifiers were assigned by three time periods: 1-2, 2-3, and 1-4 weeks.

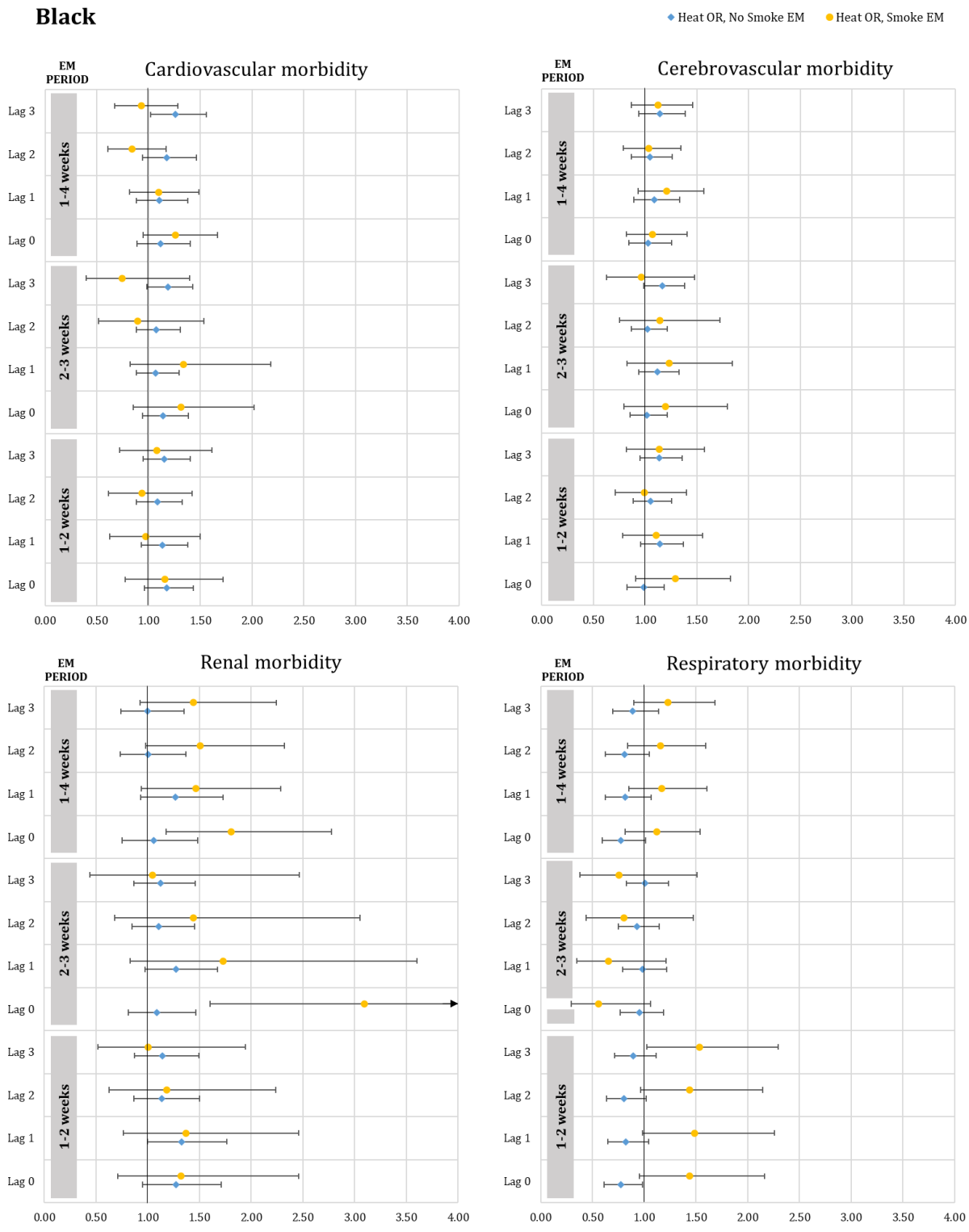


Figure 4.5 Odds ratios with 95% confidence intervals for extreme heat-related morbidity modified by wildfire smoke in the Asian population. Exposure is assigned lag 0-3 and effect modifiers were assigned by three time periods: 1-2, 2-3, and 1-4 weeks.

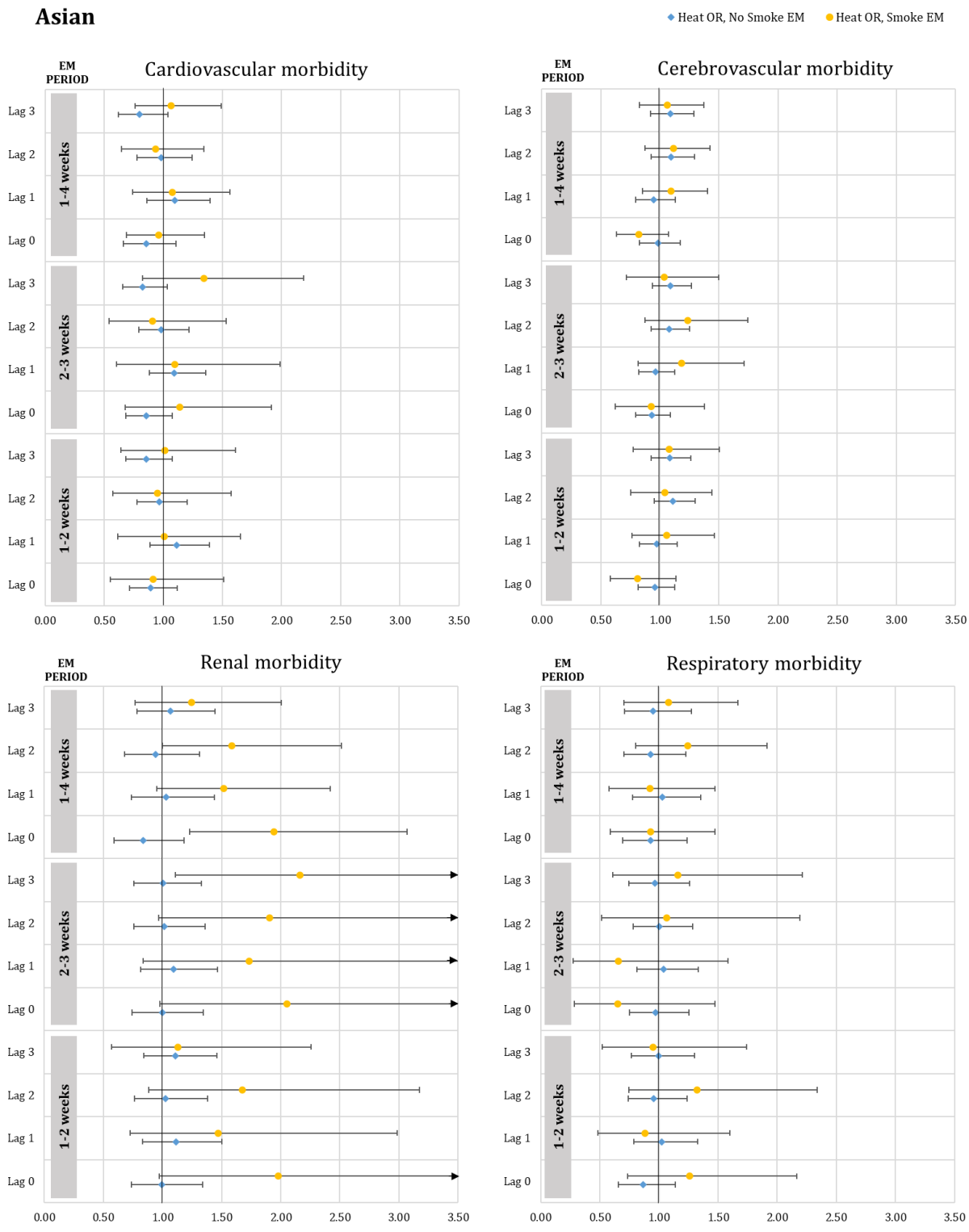


Figure 4.6 Odds ratios with 95% confidence intervals for extreme heat-related morbidity modified by wildfire smoke in the White population. Exposure is assigned lag 0-3 and effect modifiers were assigned by three time periods: 1-2, 2-3, and 1-4 weeks.

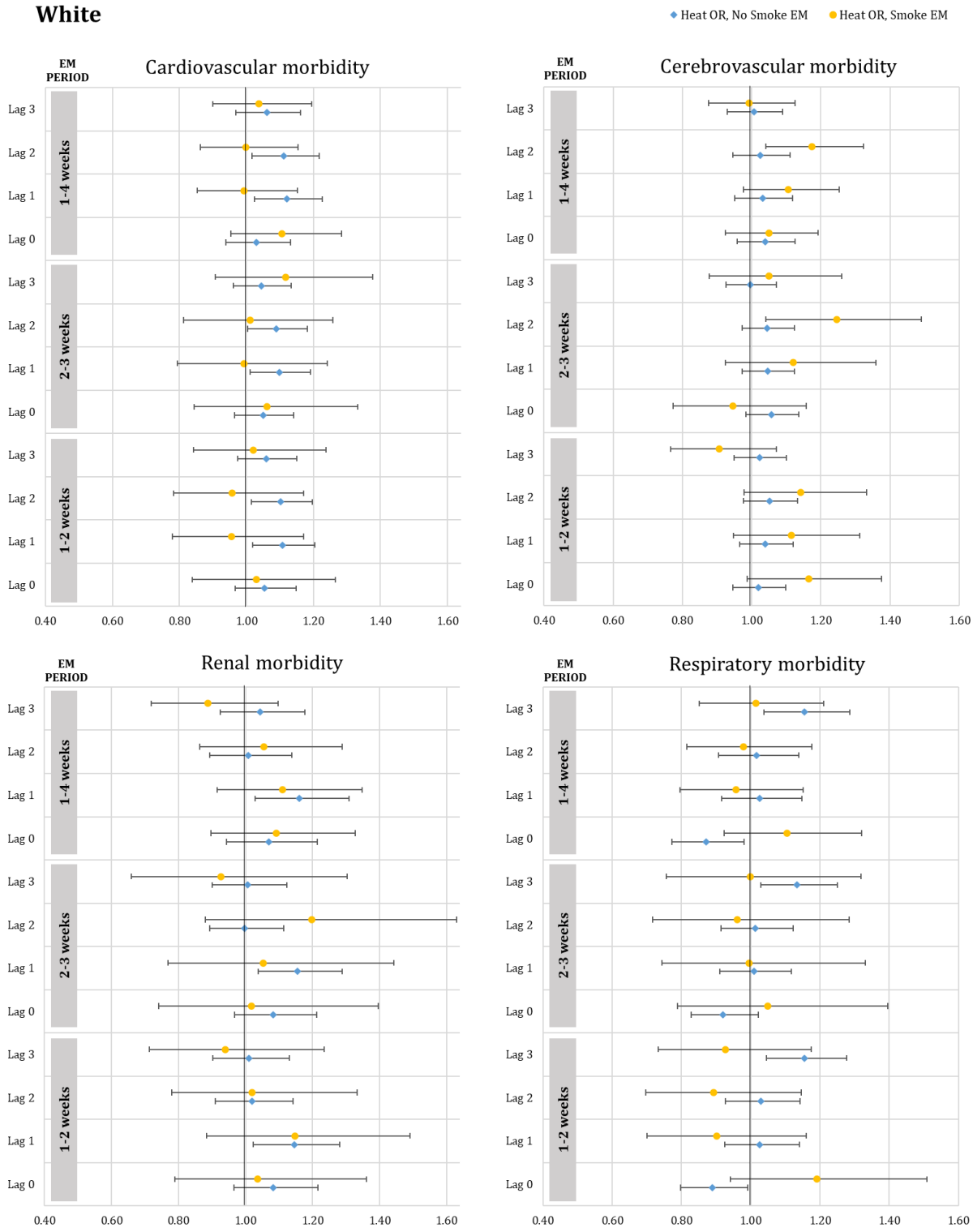


Figure 4.7 Odds ratios with 95% confidence intervals for extreme heat-related morbidity modified by wildfire smoke in the Hispanic population. Exposure is assigned lag 0-3 and effect modifiers were assigned by three time periods: 1-2, 2-3, and 1-4 weeks.

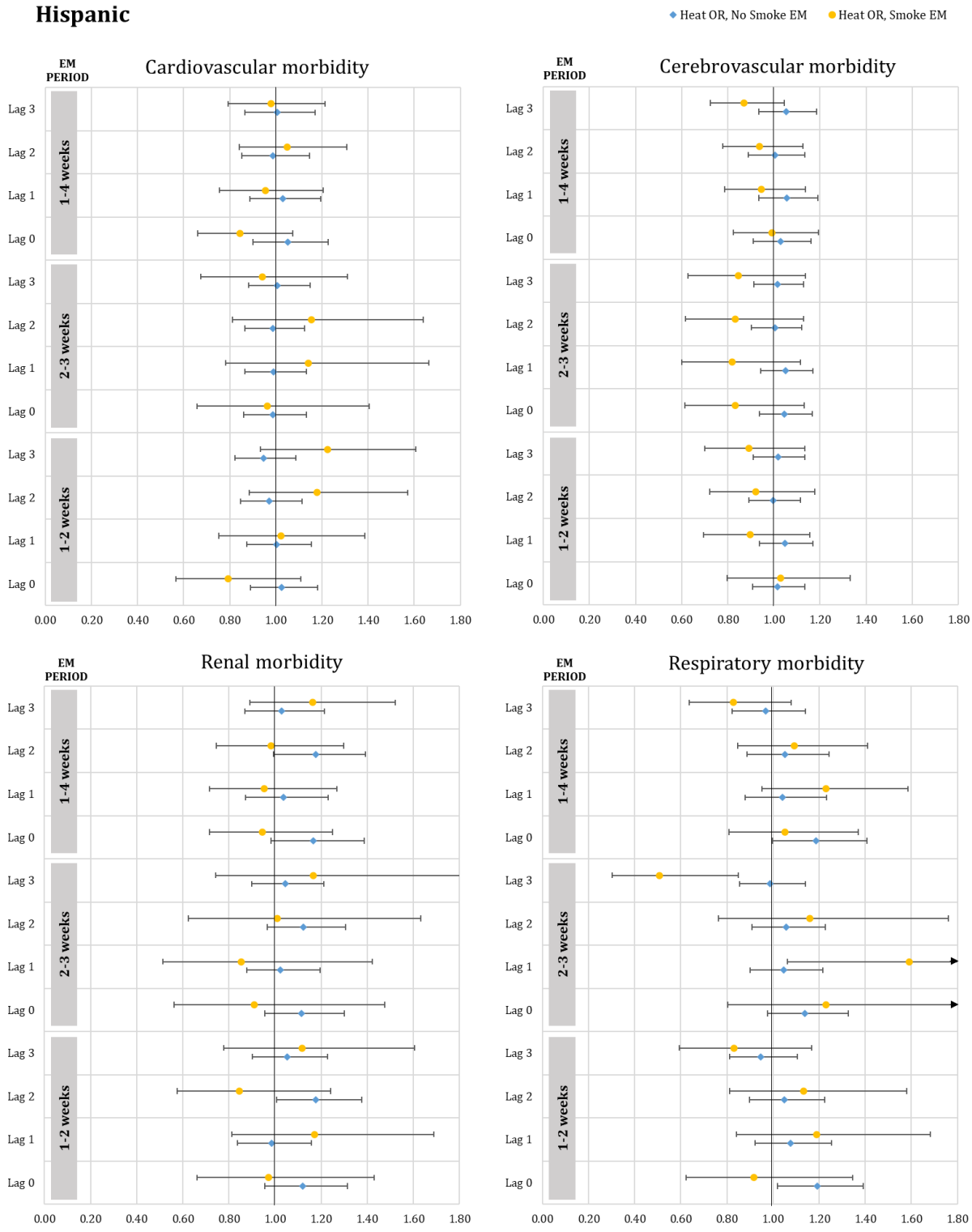


Figure 4.8 Odds ratios with 95% confidence intervals for extreme heat-related morbidity modified by wildfire smoke for males. Exposure is assigned lag 0-3 and effect modifiers were assigned by three time periods: 1-2, 2-3, and 1-4 weeks.

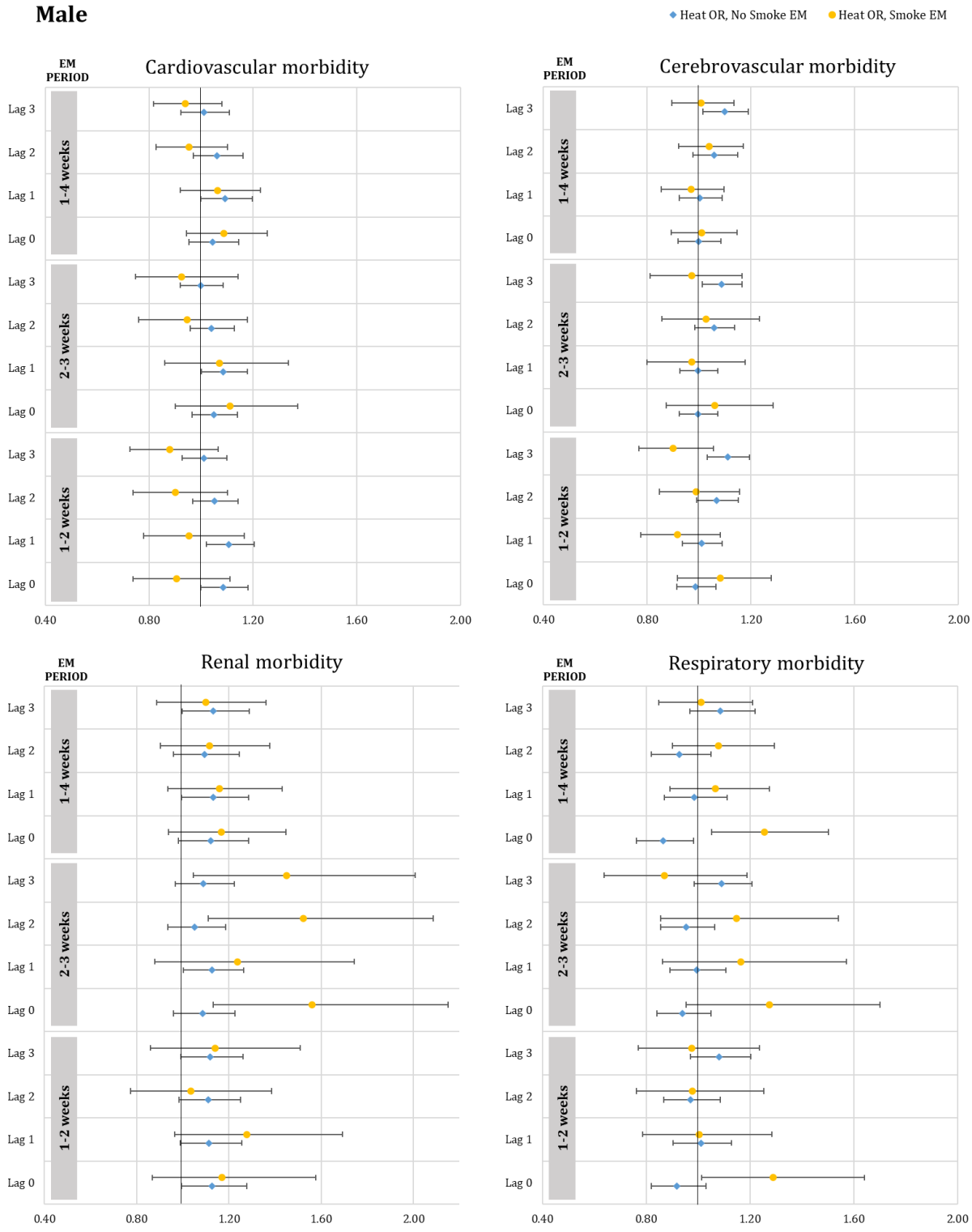


Figure 4.9 Odds ratios with 95% confidence intervals for extreme heat-related morbidity modified by wildfire smoke for females. Exposure is assigned lag 0-3 and effect modifiers were assigned by three time periods: 1-2, 2-3, and 1-4 weeks.

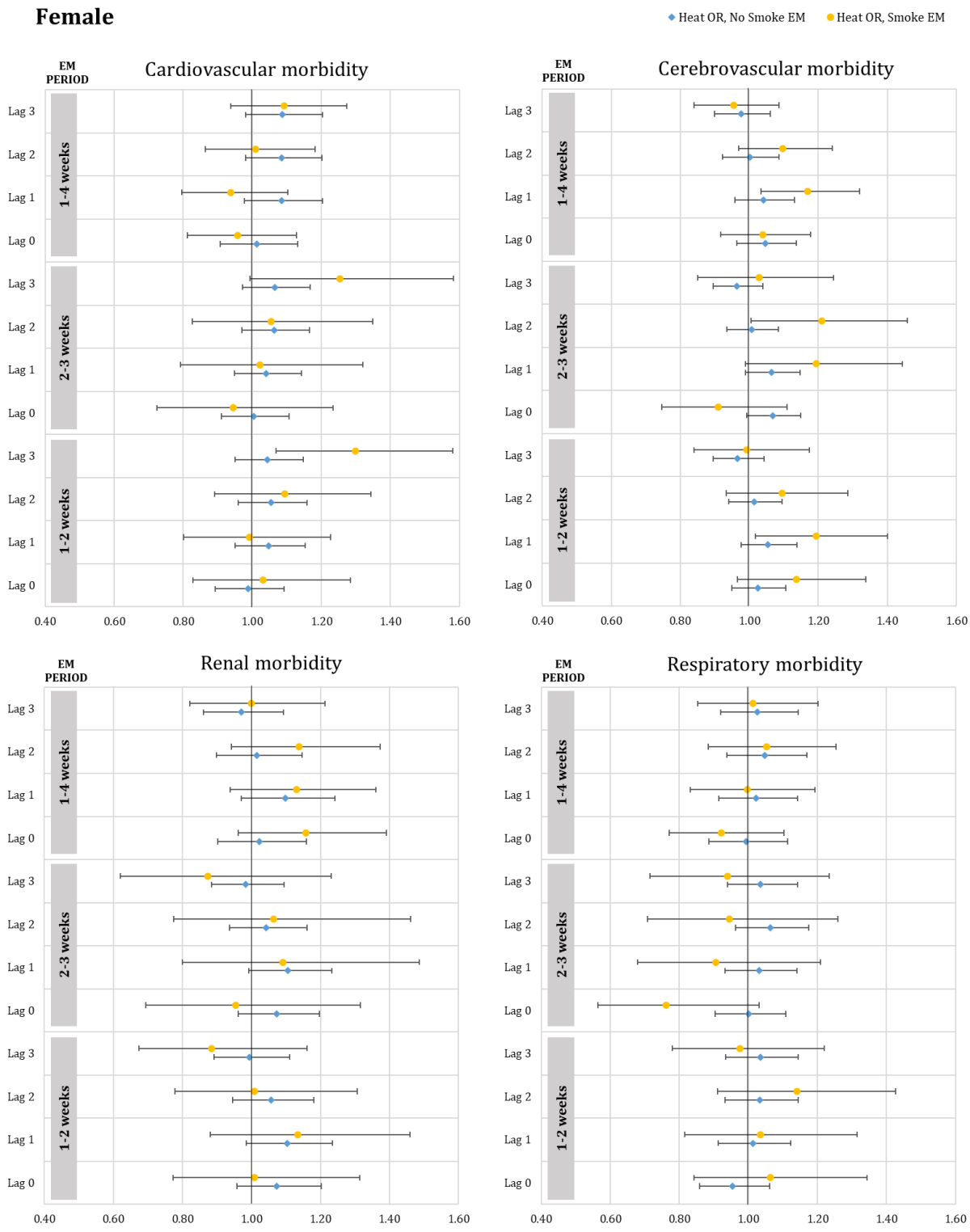


Figure 4.10 Odds ratios with 95% confidence intervals for extreme heat-related morbidity modified by wildfire smoke for young to middle aged adults, 18-49 years. Exposure is assigned lag 0-3 and effect modifiers were assigned by three time periods: 1-2, 2-3, and 1-4 weeks.

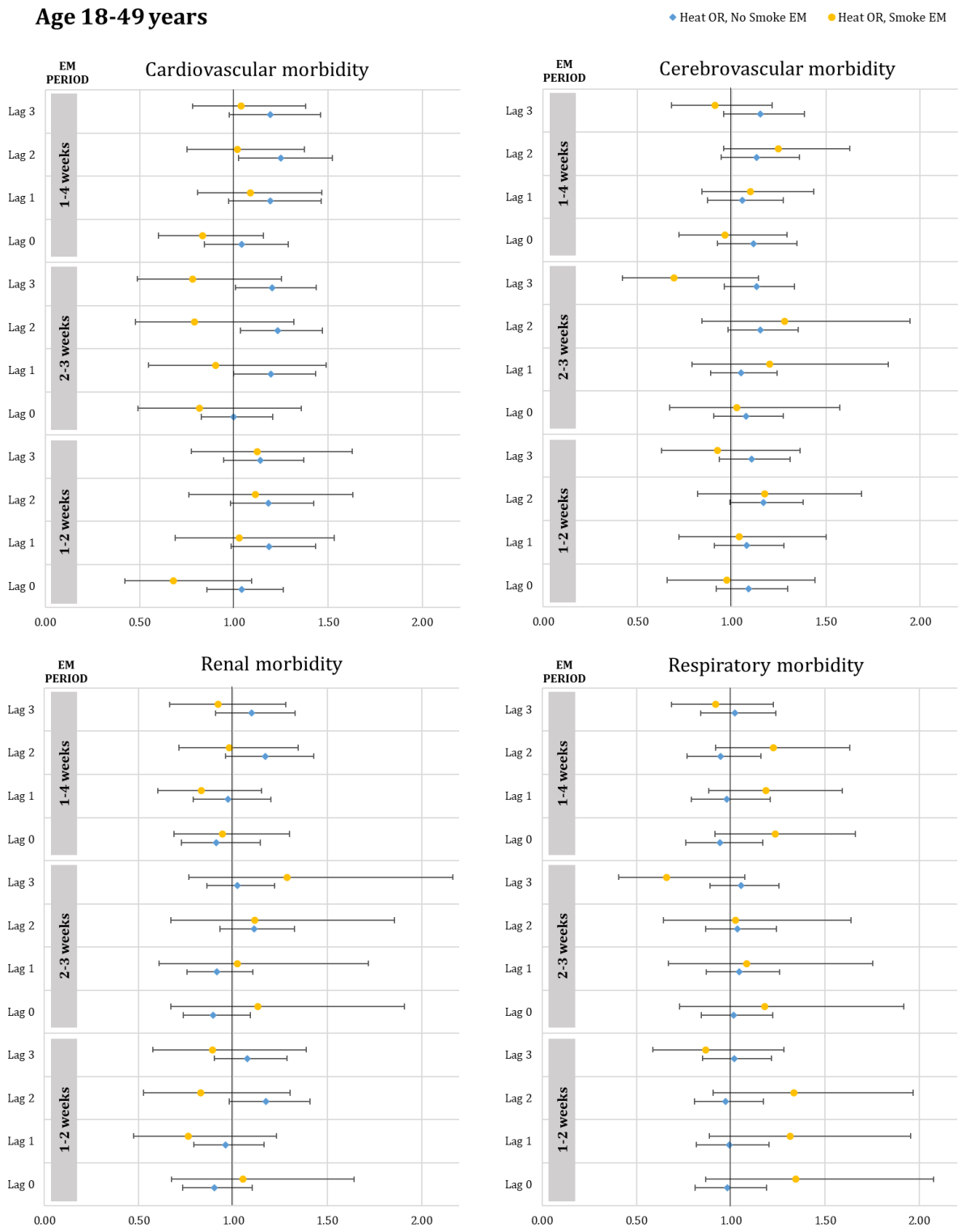


Figure 4.11 Odds ratios with 95% confidence intervals for extreme heat-related morbidity modified by wildfire smoke for older adults, 50-64 years. Exposure is assigned lag 0-3 and effect modifiers were assigned by three time periods: 1-2, 2-3, and 1-4 weeks.

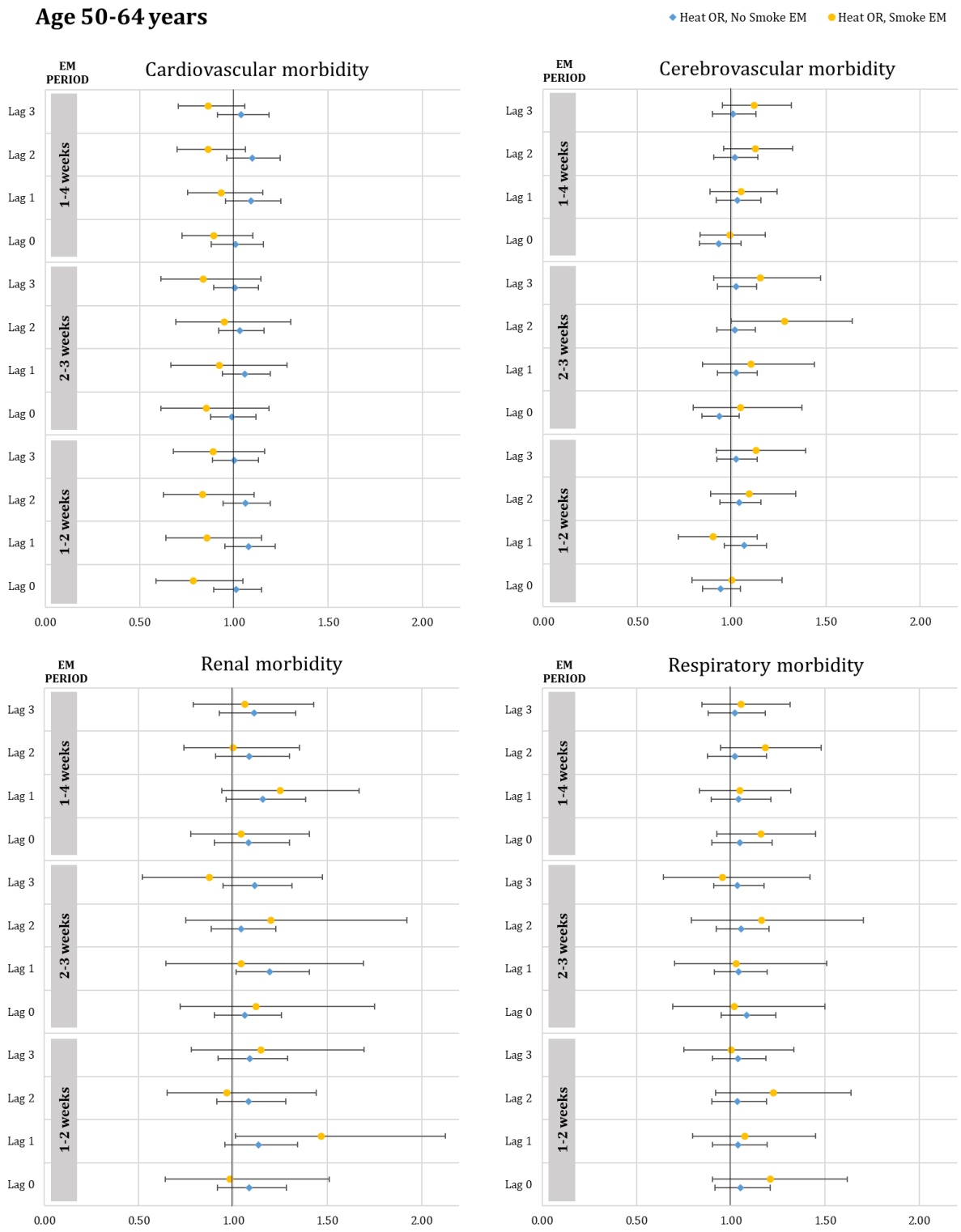


Figure 4.12 Odds ratios with 95% confidence intervals for extreme heat-related morbidity modified by wildfire smoke for elderly adults, ≥ 65 years. Exposure is assigned lag 0-3 and effect modifiers were assigned by three time periods: 1-2, 2-3, and 1-4 weeks.

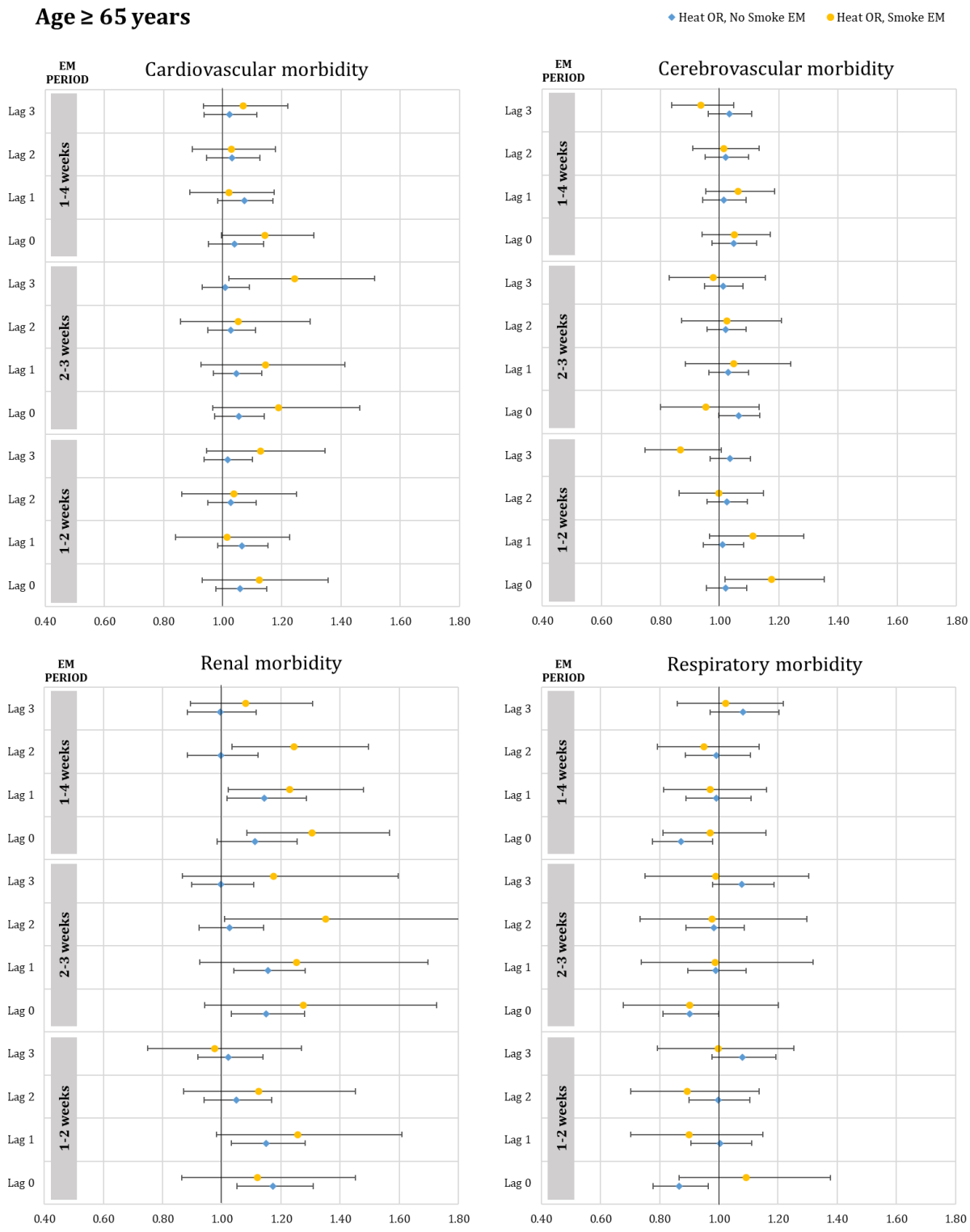


Figure 4.13 Odds ratios with 95% confidence intervals for extreme heat-related morbidity modified by wildfire smoke for populations residing in ZCTAs with ≥ 50% high school education or less (lower education). Exposure is assigned lag 0-3 and effect modifiers were assigned by three time periods: 1-2, 2-3, and 1-4 weeks.

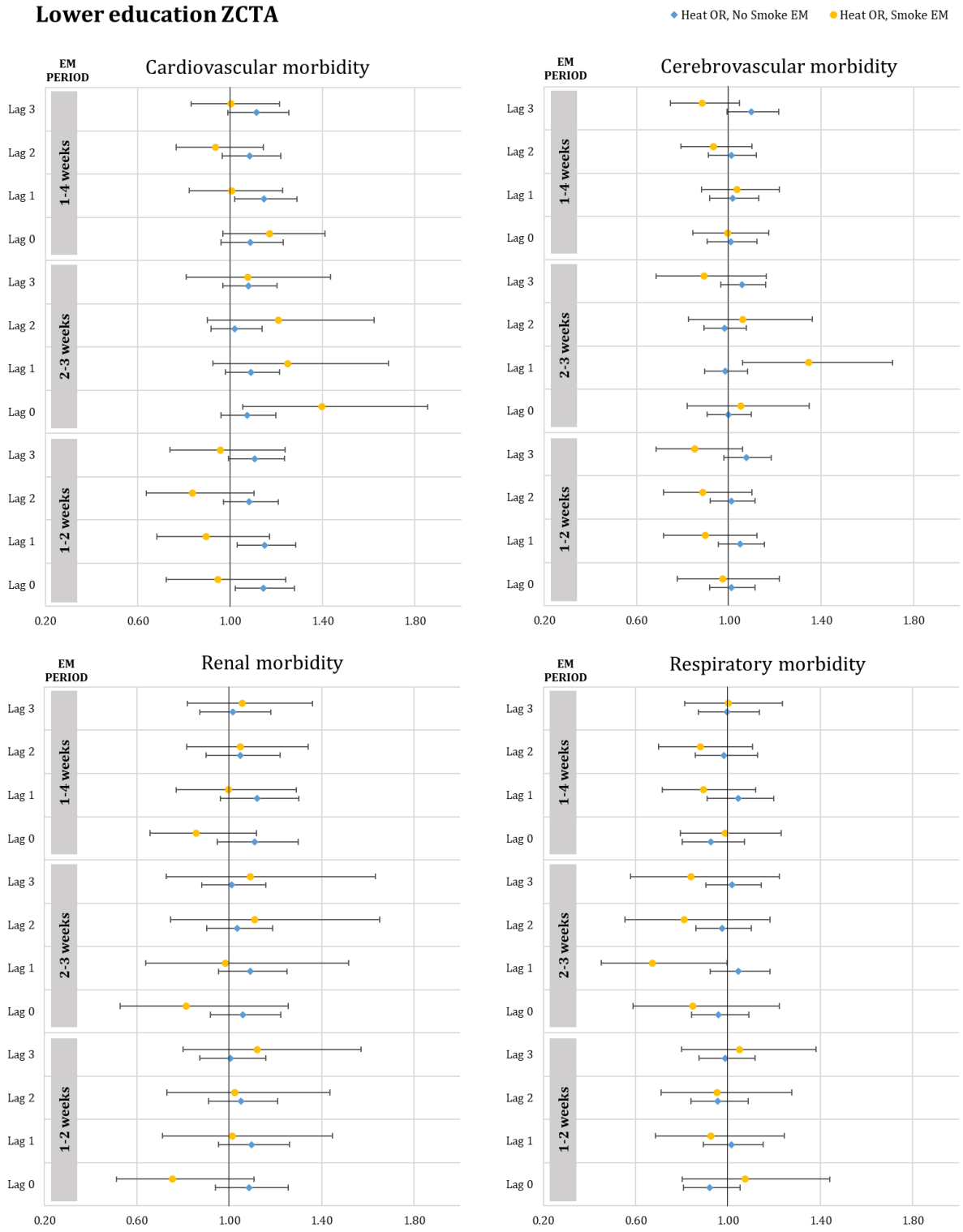


Figure 4.14 Odds ratios with 95% confidence intervals for extreme heat-related morbidity modified by wildfire smoke for populations residing in ZCTAs with < 50% high school education or less (higher education). Exposure is assigned lag 0-3 and effect modifiers were assigned by three time periods: 1-2, 2-3, and 1-4 weeks.

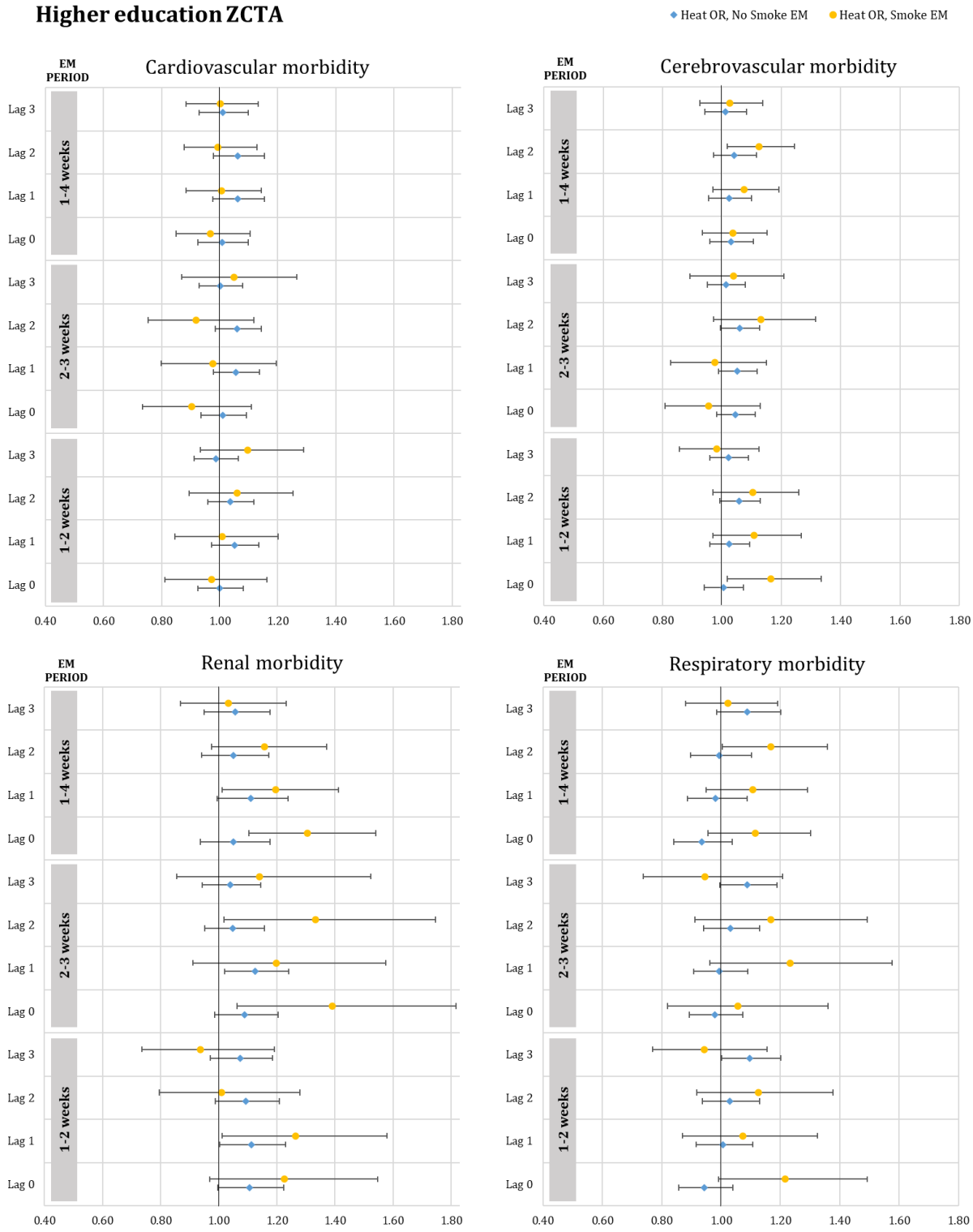


Figure 4.15 Odds ratios with 95% confidence intervals for extreme heat-related morbidity modified by wildfire smoke for populations residing in ZCTAs with ≥ 25% households living under poverty (higher poverty). Exposure is assigned lag 0-3 and effect modifiers were assigned by three time periods: 1-2, 2-3, and 1-4 weeks.

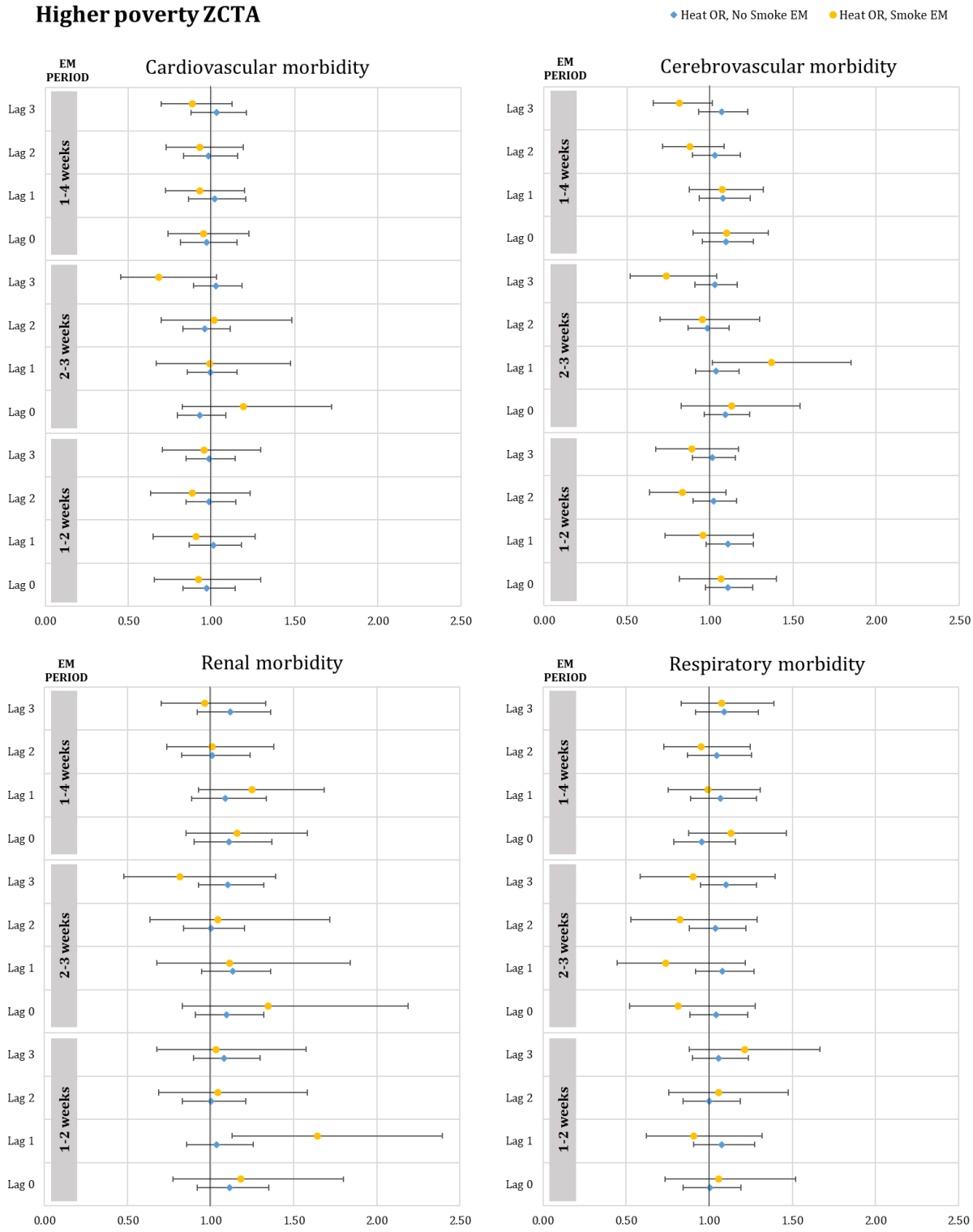
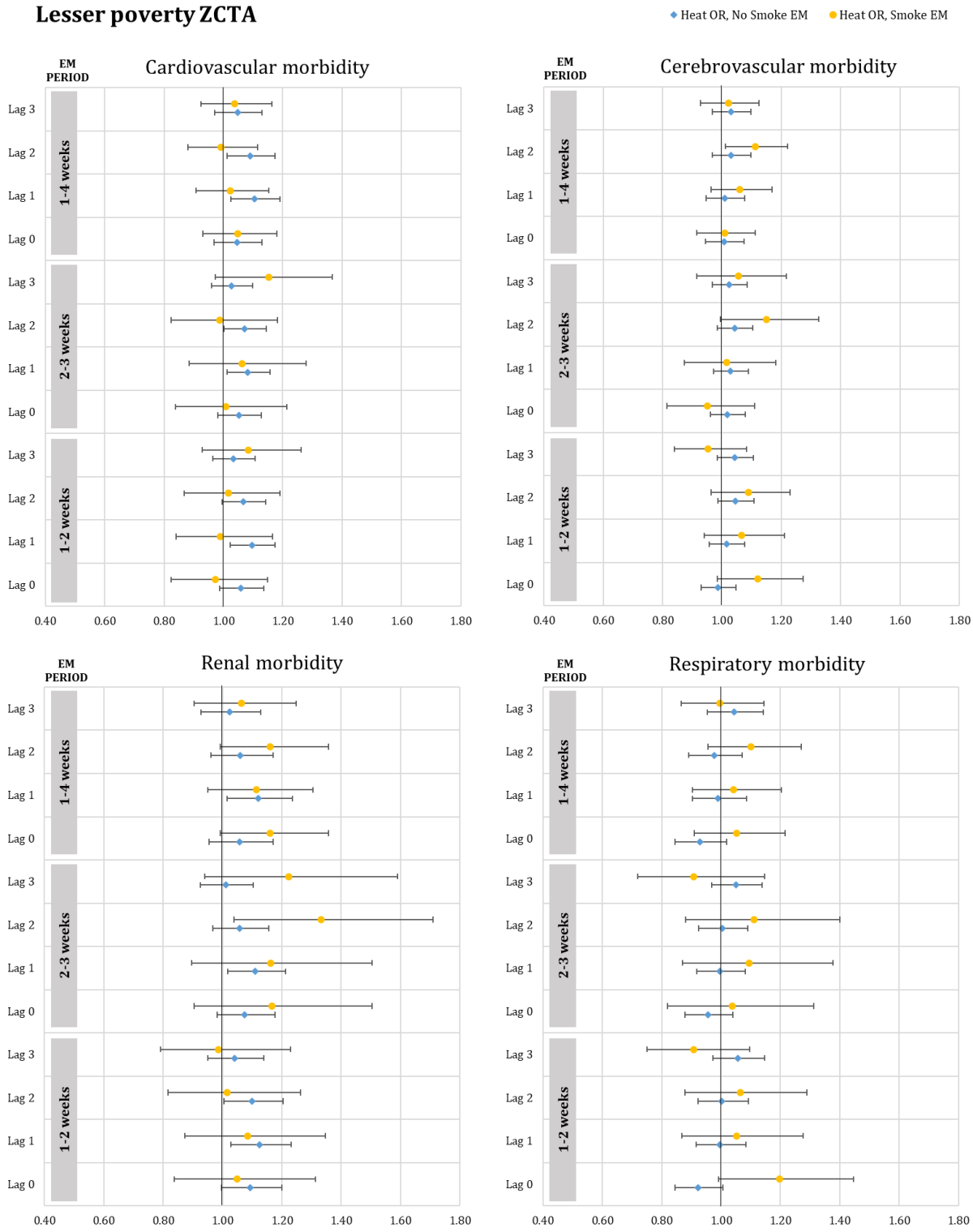


Figure 4.16 Odds ratios with 95% confidence intervals for extreme heat-related morbidity modified by wildfire smoke for populations residing in ZCTAs with < 25% households living under poverty (lesser poverty). Exposure is assigned lag 0-3 and effect modifiers were assigned by three time periods: 1-2, 2-3, and 1-4 weeks.



5. Conclusion

This research contributes a thorough examination of compound wildfire smoke and extreme heat threats in California to address a growing public health concern. Each chapter investigates a different facet of the relationship between wildfire smoke and extreme heat by (1) examining where and when disproportionate exposures to compound wildfire smoke and extreme heat occur; (2) estimating joint effects of compound wildfire smoke and extreme heat exposures within a short-term window of time; and (3) exploring effect modification of temporally compounding hazards, i.e., wildfire smoke and extreme heat within the same region over longer periods of time. The findings highlight key risks for exposure and synergistic health impacts. Together, these studies build an evidence-base to guide the design of public health interventions for compound hazards.

Chapter one provides an initial understanding of the underlying threat of wildfire smoke and extreme heat hazards in California throughout the study period, 2011-2020. Longer seasons of wildfires in recent years increased the number of compound wildfire smoke and extreme heat exposures. The geographic distribution of wildfire smoke also varied year to year. Thus, episodes of wildfire smoke blanketing the whole state present a greater risk with compound extreme heat exposures, although, this is still dependent on the seasonal overlap between the two hazards. For instance, 2018 had high annual exposure days for wildfire smoke and extreme heat, but the different timing between events did not result in a high number of compound hazard days (CH days). Rather, exposures to compound hazards were highest in 2017 and 2020, suggesting there are still many elements to consider when gauging the risk of compound wildfire and extreme heat events. Additionally, communities differed by exposure across the ten years. ZCTAs

consistently experiencing the highest annual CH days (top 10%) showed significantly less White populations, higher minority populations (Black, Hispanic, Asian, Pacific Islander), lower median income, and higher urban classification compared to ZCTAs without any years of high annual CH days. Further research needs to address these concerns within developing regions to better understand future opportunities for risk mitigation. In addition, it is important to build on this knowledge within the contexts of health impacts, as in Chapters two and three.

Chapter two illustrates that wildfire smoke and extreme heat exposures within a short-term exposure lag window synergistically increased risks of morbidity. Hospitalizations for all-natural cause, cardiovascular, cerebrovascular, renal, and respiratory morbidity were significantly attributable to the interaction; yet the relationships varied by exposure lag combinations and population subgroups. Differential effects were shown by sex, age, race and ethnicity, and community characteristics. These findings suggest there may be differences in biologic risks, risk behaviors, capacity to afford or make adaptations, and other societal barriers (e.g., access to risk information and healthcare) may influence overall vulnerability to compound wildfire smoke and extreme heat effects. Importantly, future research should consider that exposures on consecutive days more often resulted in joint health effects, rather than exposure on the same lag day. Short-term windows of both hazards should present public health concerns and prompt joint mitigation efforts.

Additionally, Chapter three shows synergistic health impacts occur even with longer periods of time between exposures for wildfire smoke and extreme heat. The effects are

dependent on wildfire smoke preceding extreme heat exposures. The acute effects of extreme heat minimally modified subsequent wildfire smoke-related morbidity. However, long-term impacts of wildfire smoke showed significant effect modification of extreme heat-related morbidity. Further research could investigate the possible mechanisms for this effect. There are significant gaps in the research on long-term health impacts of wildfire smoke. In addition, it is possible that temporally compounding hazards results in multiple impacts to an individual; therefore, increasing susceptibility to subsequent hazards due to underlying conditions or reducing the capacity to adapt by straining mitigation resources. The effects were especially large within some population subgroups, for instance, renal morbidities for Black and Asian populations.

Prioritizing public health actions in populations with greater risk will help reduce health impacts, but it is also important to consider joint mitigation strategies for wildfires and extreme heat. The synergistic effects of wildfire smoke with extreme heat within a short-term window and when occurring weeks-to-months prior suggests it may be critical to prioritize mitigation for wildfire smoke. New strategies to manage wildfire risk should focus on ecological as well as social components to mitigate increasing threats of climate change. This research opens avenues for studies to explore factors associated with compounding wildfire smoke and extreme heat exposures across the landscape, such as energy grid use and prescriptive power outages. In addition, further research can look at finer temporal scales to examine trends in spatial relationships at daily or hourly units. Changes in climate, landscape use, and utility regulations are making it more important to conduct these types of investigations. Confirming the findings from this research across

different populations, timeframes, or events will be important to expanding this novel area of research.

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S. Supplemental Materials

Figure S.1 Tukey results for significant one-way ANOVA stratified by population subgroup. Median income tests average income by exposure group. Race/ethnicity and landscape test proportion of ZCTA population by exposure group. Significant p-values, less than 0.05, are bolded.

	diff	lwr	upr	p adj
MEDIAN INCOME				
1-3 years-0 years of high CH exposure	-5558.05	-9139.26	-1976.83	**p<0.001**
4-7 years-0 years of high CH exposure	-8143.17	-15588.9	-697.49	**0.0280**
4-7 years-1-3 years of high CH exposure	-2585.12	-9810.99	4640.75	0.6786
WHITE, NON-HISPANIC				
1-3 years-0 years of high CH exposure	-0.1209	-0.1544	-0.0873	**p<0.001**
4-7 years-0 years of high CH exposure	-0.2099	-0.2815	-0.1384	**p<0.001**
4-7 years-1-3 years of high CH exposure	-0.0891	-0.1588	-0.0193	**0.0078**
BLACK				
1-3 years-0 years of high CH exposure	0.0146	0.0064	0.0228	**p<0.001**
4-7 years-0 years of high CH exposure	0.0473	0.0299	0.0648	**p<0.001**
4-7 years-1-3 years of high CH exposure	0.0327	0.0157	0.0498	**p<0.001**
HISPANIC				
1-3 years-0 years of high CH exposure	0.0607	0.0374	0.0839	**p<0.001**
4-7 years-0 years of high CH exposure	0.0906	0.0410	0.140215	**p<0.001**
4-7 years-1-3 years of high CH exposure	0.0299	-0.0185	0.078309	0.3149
ASIAN				
1-3 years-0 years of high CH exposure	0.021725	0.00729	0.036159	**0.0012**
4-7 years-0 years of high CH exposure	0.035428	0.004619	0.066237	**0.0193**
4-7 years-1-3 years of high CH exposure	0.013703	-0.01633	0.043734	0.5326
PACIFIC ISLANDER				
1-3 years-0 years of high CH exposure	0.000157	-0.00073	0.001047	0.9104
4-7 years-0 years of high CH exposure	0.002222	0.000322	0.004122	**0.0169**
4-7 years-1-3 years of high CH exposure	0.002065	0.000213	0.003917	**0.0244**
OTHER				
1-3 years-0 years of high CH exposure	0.023552	0.014192	0.032912	**p<0.001**
4-7 years-0 years of high CH exposure	0.041346	0.021368	0.061324	**p<0.001**
4-7 years-1-3 years of high CH exposure	0.017794	-0.00168	0.037267	0.0816

Table S.1 (cont.)

	diff	lwr	upr	p adj
RURAL				
1-3 years-0 years of high CH exposure	-0.09398	-0.14431	-0.04364	**p<0.001**
4-7 years-0 years of high CH exposure	-0.32171	-0.42959	-0.21383	**p<0.001**
4-7 years-1-3 years of high CH exposure	-0.22773	-0.33295	-0.12252	**p<0.001**
URBAN				
1-3 years-0 years of high CH exposure	0.093978	0.043643	0.144314	**p<0.001**
4-7 years-0 years of high CH exposure	0.321713	0.213833	0.429593	**p<0.001**
4-7 years-1-3 years of high CH exposure	0.227735	0.122519	0.33295	**p<0.001**

Table S.2 Attributable proportion due to interaction (AP) with upper and lower limits (UL and LL, respectively) for 95% confidence intervals (CIs) and p-values (bolded indicates significant p < 0.05) for the joint effects of wildfire smoke and extreme heat, 2011-2019, for all months. Separate models were run for combinations of lag 0-3 and each outcome of interest: all-natural cause, cardiovascular, cerebrovascular, renal, and respiratory morbidity.

OOI	Extreme Heat	Wildfire Smoke	AP	CI LL	CI UL	P-value
All-natural	Lag 0	Lag 0	0.001	-0.001	0.003	0.100
		Lag 1	-0.001	-0.003	0.001	0.165
		Lag 2	-0.003	-0.005	-0.001	**0.002**
		Lag 3	0.000	-0.002	0.002	0.402
	Lag 1	Lag 0	0.003	0.001	0.005	**0.000**
		Lag 1	-0.001	-0.003	0.001	0.110
		Lag 2	-0.002	-0.004	-0.001	**0.005**
		Lag 3	0.000	-0.002	0.002	0.340
	Lag 2	Lag 0	0.004	0.002	0.006	**0.000**
		Lag 1	-0.001	-0.003	0.000	0.080
		Lag 2	-0.004	-0.006	-0.003	**0.000**
		Lag 3	-0.001	-0.003	0.001	0.111
	Lag 3	Lag 0	0.005	0.003	0.007	**0.000**
		Lag 1	0.002	0.000	0.003	**0.025**
		Lag 2	-0.003	-0.005	-0.002	**0.000**
		Lag 3	-0.001	-0.002	0.001	0.217
Cardiovascular	Lag 0	Lag 0	0.000	-0.030	0.031	0.494
		Lag 1	0.005	-0.027	0.037	0.388
		Lag 2	-0.014	-0.066	0.039	0.305
		Lag 3	-0.030	-0.077	0.016	0.101
	Lag 1	Lag 0	0.027	-0.010	0.063	0.075
		Lag 1	0.004	-0.026	0.035	0.389
		Lag 2	0.031	-0.007	0.069	0.057
		Lag 3	-0.005	-0.041	0.030	0.384
	Lag 2	Lag 0	0.045	0.007	0.083	**0.011**
		Lag 1	-0.006	-0.038	0.025	0.346
		Lag 2	-0.009	-0.048	0.030	0.327
		Lag 3	-0.005	-0.036	0.026	0.375
	Lag 3	Lag 0	0.056	0.011	0.101	**0.008**
		Lag 1	0.002	-0.029	0.033	0.445
		Lag 2	-0.010	-0.047	0.027	0.304
		Lag 3	0.008	-0.024	0.040	0.315
Cerebrovascular	Lag 0	Lag 0	-0.006	-0.038	0.027	0.368
		Lag 1	-0.002	-0.033	0.030	0.458
		Lag 2	0.013	-0.029	0.054	0.278
		Lag 3	0.016	-0.025	0.057	0.224
	Lag 1	Lag 0	0.009	-0.022	0.040	0.287

		Lag 1	0.013	-0.014	0.039	0.181
		Lag 2	0.009	-0.025	0.043	0.299
		Lag 3	0.021	-0.020	0.062	0.156
	Lag 2	Lag 0	0.010	-0.025	0.045	0.290
		Lag 1	0.013	-0.011	0.037	0.145
		Lag 2	-0.006	-0.036	0.024	0.353
		Lag 3	0.008	-0.023	0.039	0.308
	Lag 3	Lag 0	0.022	-0.015	0.060	0.121
		Lag 1	0.016	-0.010	0.041	0.116
		Lag 2	0.014	-0.009	0.038	0.114
		Lag 3	0.021	-0.006	0.048	0.061
Renal	Lag 0	Lag 0	0.027	-0.020	0.074	0.130
		Lag 1	0.017	-0.036	0.070	0.267
		Lag 2	0.023	-0.040	0.087	0.235
		Lag 3	0.024	-0.043	0.091	0.245
	Lag 1	Lag 0	0.031	-0.014	0.076	0.089
		Lag 1	-0.009	-0.066	0.049	0.385
		Lag 2	-0.037	-0.111	0.037	0.163
		Lag 3	0.041	-0.022	0.104	0.100
	Lag 2	Lag 0	-0.013	-0.073	0.046	0.332
		Lag 1	0.003	-0.055	0.060	0.462
		Lag 2	-0.013	-0.072	0.047	0.339
		Lag 3	0.032	-0.017	0.082	0.102
	Lag 3	Lag 0	-0.048	-0.129	0.033	0.122
		Lag 1	0.001	-0.072	0.073	0.494
		Lag 2	-0.008	-0.062	0.045	0.380
		Lag 3	0.008	-0.040	0.055	0.378
Respiratory	Lag 0	Lag 0	-0.007	-0.061	0.047	0.403
		Lag 1	0.038	-0.010	0.086	0.060
		Lag 2	0.001	-0.059	0.061	0.483
		Lag 3	0.055	0.004	0.107	**0.017**
	Lag 1	Lag 0	-0.029	-0.090	0.032	0.174
		Lag 1	0.034	-0.015	0.082	0.086
		Lag 2	-0.013	-0.066	0.039	0.309
		Lag 3	0.049	-0.008	0.106	**0.047**
	Lag 2	Lag 0	0.043	-0.003	0.088	**0.032**
		Lag 1	0.036	0.001	0.072	**0.022**
		Lag 2	-0.006	-0.057	0.044	0.402
		Lag 3	0.032	-0.024	0.088	0.129
	Lag 3	Lag 0	0.011	-0.047	0.068	0.359
		Lag 1	0.021	-0.010	0.053	0.093
		Lag 2	-0.008	-0.057	0.042	0.382
		Lag 3	0.028	-0.022	0.078	0.137

Table S.3 Attributable proportion due to interaction (AP) with upper and lower limits (UL and LL, respectively) for 95% confidence intervals (CIs) and p-values (bolded indicates significant p < 0.05) for the joint effects of wildfire smoke and extreme heat, 2011-2019, May to November. Separate models were run for combinations of lag 0-3 and each outcome of interest: all-natural cause, cardiovascular, cerebrovascular, renal, and respiratory morbidity.

OOI	Extreme Heat	Wildfire Smoke	AP	CI LL	CI UL	P-value
All-natural	Lag 0	Lag 0	0.002	0.000	0.004	**0.028**
		Lag 1	0.000	-0.002	0.002	0.368
		Lag 2	-0.004	-0.006	-0.001	**0.003**
		Lag 3	0.001	-0.002	0.003	0.226
	Lag 1	Lag 0	0.003	0.001	0.005	**0.000**
		Lag 1	-0.001	-0.003	0.001	0.084
		Lag 2	-0.003	-0.005	-0.001	**0.002**
		Lag 3	0.001	-0.002	0.003	0.342
	Lag 2	Lag 0	0.004	0.002	0.006	**0.000**
		Lag 1	-0.002	-0.003	0.000	**0.032**
		Lag 2	-0.005	-0.007	-0.003	**0.000**
		Lag 3	-0.002	-0.004	0.000	**0.022**
	Lag 3	Lag 0	0.005	0.002	0.007	**0.000**
		Lag 1	0.002	0.000	0.003	**0.046**
		Lag 2	-0.004	-0.006	-0.002	**0.000**
		Lag 3	-0.001	-0.003	0.001	0.116
Cardiovascular	Lag 0	Lag 0	0.014	-0.025	0.052	0.244
		Lag 1	0.014	-0.025	0.052	0.245
		Lag 2	0.011	-0.048	0.069	0.361
		Lag 3	-0.035	-0.096	0.026	0.129
	Lag 1	Lag 0	0.023	-0.014	0.061	0.113
		Lag 1	0.008	-0.029	0.044	0.334
		Lag 2	0.028	-0.014	0.071	0.094
		Lag 3	-0.007	-0.063	0.048	0.397
	Lag 2	Lag 0	0.049	0.009	0.088	**0.008**
		Lag 1	-0.011	-0.044	0.022	0.259
		Lag 2	-0.005	-0.046	0.036	0.405
		Lag 3	-0.015	-0.058	0.027	0.240
	Lag 3	Lag 0	0.055	0.008	0.102	**0.011**
		Lag 1	-0.002	-0.034	0.031	0.457
		Lag 2	-0.020	-0.060	0.021	0.170
		Lag 3	-0.001	-0.040	0.038	0.477
Cerebrovascular	Lag 0	Lag 0	-0.001	-0.034	0.033	0.482
		Lag 1	-0.001	-0.034	0.032	0.473
		Lag 2	0.015	-0.031	0.061	0.262
		Lag 3	0.028	-0.016	0.072	0.109
	Lag 1	Lag 0	0.010	-0.022	0.042	0.267

		Lag 1	0.006	-0.022	0.035	0.331
		Lag 2	0.002	-0.035	0.039	0.456
		Lag 3	0.009	-0.035	0.054	0.340
	Lag 2	Lag 0	0.009	-0.027	0.046	0.309
		Lag 1	0.010	-0.015	0.034	0.217
		Lag 2	-0.007	-0.038	0.025	0.339
		Lag 3	0.015	-0.017	0.048	0.178
	Lag 3	Lag 0	0.028	-0.011	0.068	0.078
		Lag 1	0.012	-0.016	0.039	0.202
		Lag 2	0.010	-0.015	0.035	0.207
		Lag 3	0.020	-0.008	0.048	0.084
Renal	Lag 0	Lag 0	0.023	-0.027	0.073	0.185
		Lag 1	-0.019	-0.090	0.052	0.303
		Lag 2	0.039	-0.033	0.111	0.145
		Lag 3	0.057	-0.026	0.141	0.089
	Lag 1	Lag 0	0.032	-0.015	0.079	0.089
		Lag 1	-0.017	-0.084	0.050	0.309
		Lag 2	-0.030	-0.111	0.051	0.233
		Lag 3	0.062	-0.011	0.134	**0.048**
	Lag 2	Lag 0	-0.006	-0.068	0.057	0.429
		Lag 1	-0.012	-0.081	0.057	0.369
		Lag 2	0.004	-0.061	0.068	0.455
		Lag 3	0.050	-0.006	0.105	**0.039**
	Lag 3	Lag 0	-0.053	-0.138	0.032	0.111
		Lag 1	-0.029	-0.120	0.061	0.262
		Lag 2	0.004	-0.052	0.059	0.449
		Lag 3	0.016	-0.033	0.065	0.264
Respiratory	Lag 0	Lag 0	0.010	-0.051	0.072	0.368
		Lag 1	0.036	-0.020	0.092	0.104
		Lag 2	0.001	-0.068	0.070	0.494
		Lag 3	0.081	0.024	0.138	**0.003**
	Lag 1	Lag 0	-0.005	-0.069	0.058	0.435
		Lag 1	0.039	-0.011	0.089	0.062
		Lag 2	-0.010	-0.067	0.047	0.368
		Lag 3	0.080	0.020	0.140	**0.005**
	Lag 2	Lag 0	0.056	0.006	0.105	**0.014**
		Lag 1	0.038	0.001	0.075	**0.021**
		Lag 2	-0.004	-0.058	0.049	0.437
		Lag 3	0.043	-0.014	0.100	0.071
	Lag 3	Lag 0	0.003	-0.061	0.067	0.461
		Lag 1	0.016	-0.015	0.047	0.158
		Lag 2	-0.019	-0.077	0.039	0.260
		Lag 3	0.031	-0.021	0.083	0.123

Table S.4 Multiplicative odds ratio with upper and lower limits (UL and LL, respectively) for 95% confidence intervals (CIs) and p-values (bolded indicates significant $p < 0.05$) for the joint effects of wildfire smoke and extreme heat. Separate models were run for combinations of lag 0-3 and each outcome of interest: all-natural cause, cardiovascular, cerebrovascular, renal, and respiratory morbidity.

OOI	Extreme Heat	Wildfire Smoke	Multiplicative	CI LL	CI UL	P-value
All-natural	Lag 0	Lag 0	1.002	1.000	1.004	0.057
		Lag 1	1.000	0.998	1.002	0.734
		Lag 2	0.996	0.994	0.999	**0.007**
		Lag 3	1.001	0.999	1.003	0.443
	Lag 1	Lag 0	1.003	1.001	1.005	**0.001**
		Lag 1	0.999	0.997	1.001	0.170
		Lag 2	0.997	0.995	0.999	**0.004**
		Lag 3	1.001	0.998	1.003	0.673
	Lag 2	Lag 0	1.004	1.002	1.006	**0.000**
		Lag 1	0.998	0.997	1.000	0.065
		Lag 2	0.995	0.993	0.997	**0.000**
		Lag 3	0.998	0.996	1.000	**0.045**
	Lag 3	Lag 0	1.005	1.002	1.007	**0.000**
		Lag 1	1.002	1.000	1.003	0.092
		Lag 2	0.996	0.994	0.998	**0.000**
		Lag 3	0.999	0.997	1.001	0.238
Cardiovascular	Lag 0	Lag 0	1.014	0.975	1.054	0.492
		Lag 1	1.014	0.975	1.054	0.499
		Lag 2	1.011	0.952	1.073	0.724
		Lag 3	0.966	0.911	1.025	0.250
	Lag 1	Lag 0	1.024	0.985	1.064	0.235
		Lag 1	1.008	0.971	1.046	0.683
		Lag 2	1.029	0.985	1.075	0.194
		Lag 3	0.993	0.940	1.049	0.796
	Lag 2	Lag 0	1.051	1.008	1.096	**0.018**
		Lag 1	0.989	0.957	1.022	0.507
		Lag 2	0.995	0.955	1.036	0.810
		Lag 3	0.985	0.944	1.027	0.479
	Lag 3	Lag 0	1.058	1.007	1.112	**0.025**
		Lag 1	0.998	0.966	1.031	0.906
		Lag 2	0.981	0.942	1.020	0.336
		Lag 3	0.999	0.961	1.038	0.956
Cerebrovascular	Lag 0	Lag 0	0.999	0.966	1.033	0.961
		Lag 1	0.999	0.966	1.032	0.944
		Lag 2	1.015	0.969	1.064	0.526
		Lag 3	1.029	0.983	1.077	0.223
	Lag 1	Lag 0	1.010	0.978	1.044	0.540
		Lag 1	1.006	0.978	1.036	0.665

		Lag 2	1.002	0.965	1.040	0.910
		Lag 3	1.010	0.965	1.056	0.677
	Lag 2	Lag 0	1.009	0.972	1.048	0.626
		Lag 1	1.010	0.985	1.035	0.438
		Lag 2	0.993	0.963	1.025	0.681
		Lag 3	1.016	0.983	1.050	0.354
	Lag 3	Lag 0	1.029	0.988	1.072	0.163
		Lag 1	1.012	0.984	1.040	0.407
		Lag 2	1.011	0.985	1.036	0.416
		Lag 3	1.020	0.991	1.050	0.170
Renal	Lag 0	Lag 0	1.024	0.973	1.078	0.366
		Lag 1	0.982	0.916	1.053	0.618
		Lag 2	1.040	0.965	1.121	0.307
		Lag 3	1.061	0.971	1.160	0.191
	Lag 1	Lag 0	1.034	0.985	1.086	0.177
		Lag 1	0.984	0.921	1.051	0.637
		Lag 2	0.970	0.896	1.050	0.446
		Lag 3	1.066	0.986	1.152	0.107
	Lag 2	Lag 0	0.995	0.934	1.059	0.865
		Lag 1	0.989	0.923	1.059	0.751
		Lag 2	1.003	0.940	1.071	0.923
		Lag 3	1.052	0.993	1.115	0.086
	Lag 3	Lag 0	0.950	0.876	1.030	0.213
		Lag 1	0.972	0.890	1.061	0.523
		Lag 2	1.003	0.949	1.061	0.907
		Lag 3	1.016	0.967	1.068	0.531
Respiratory	Lag 0	Lag 0	1.010	0.950	1.075	0.741
		Lag 1	1.038	0.979	1.100	0.215
		Lag 2	1.001	0.934	1.072	0.984
		Lag 3	1.088	1.022	1.158	**0.008**
	Lag 1	Lag 0	0.995	0.934	1.060	0.871
		Lag 1	1.041	0.988	1.097	0.131
		Lag 2	0.990	0.935	1.048	0.733
		Lag 3	1.087	1.018	1.160	**0.013**
	Lag 2	Lag 0	1.059	1.005	1.116	**0.032**
		Lag 1	1.040	1.001	1.080	**0.046**
		Lag 2	0.996	0.944	1.050	0.872
		Lag 3	1.045	0.984	1.109	0.151
	Lag 3	Lag 0	1.003	0.941	1.070	0.919
		Lag 1	1.016	0.984	1.049	0.323
		Lag 2	0.981	0.926	1.039	0.512
		Lag 3	1.032	0.978	1.089	0.256

Table S.5 Stratified results for attributable proportion due to interaction (AP) with upper and lower limits (UL and LL, respectively) for 95% confidence intervals (CIs) and p-values (bolded indicates significant p < 0.05) for the joint effects of wildfire smoke and extreme heat, 2011-2019, May to Nov. Subgroups of individual and community level factors were tested in stratified models. Separate models were run for combinations of lag 0-3 and each outcome of interest: all-natural cause, cardiovascular, cerebrovascular, renal, and respiratory morbidity. Results with fewer than 10 exposed cases are suppressed.

Subgroup	OOI	Extreme Heat	Wildfire Smoke	AP	CI LL	CI UL	P-value	Exposed Case Counts
Male	All-natural	Lag 0	Lag 0	0.003	0.000	0.006	**0.027**	26016
			Lag 1	0.000	-0.003	0.003	0.440	23718
			Lag 2	-0.001	-0.005	0.003	0.314	23468
			Lag 3	0.002	-0.002	0.006	0.134	23296
		Lag 1	Lag 0	0.005	0.002	0.007	**0.000**	25713
			Lag 1	-0.002	-0.004	0.001	0.121	25405
			Lag 2	-0.001	-0.004	0.002	0.195	25439
			Lag 3	0.002	-0.002	0.006	0.126	25484
		Lag 2	Lag 0	0.006	0.003	0.009	**0.000**	23047
			Lag 1	-0.002	-0.004	0.001	0.088	25442
			Lag 2	-0.003	-0.006	0.000	**0.013**	25563
			Lag 3	-0.001	-0.004	0.002	0.229	25702
		Lag 3	Lag 0	0.007	0.004	0.011	**0.000**	23314
			Lag 1	0.002	-0.001	0.005	0.094	23420
			Lag 2	-0.004	-0.006	-0.001	**0.002**	23683
			Lag 3	0.000	-0.003	0.002	0.376	23935
	Cardiovascular	Lag 0	Lag 0	-0.004	-0.056	0.047	0.434	55
			Lag 1	0.031	-0.016	0.078	0.100	63
			Lag 2	0.006	-0.075	0.088	0.442	59
			Lag 3	-0.011	-0.078	0.056	0.374	56
		Lag 1	Lag 0	0.005	-0.049	0.059	0.431	57
			Lag 1	0.025	-0.020	0.071	0.140	62
			Lag 2	0.040	-0.017	0.097	0.086	59
			Lag 3	-0.029	-0.104	0.046	0.226	58
		Lag 2	Lag 0	0.016	-0.047	0.079	0.305	58
			Lag 1	0.014	-0.027	0.054	0.254	71
			Lag 2	0.002	-0.053	0.057	0.473	67
			Lag 3	-0.006	-0.058	0.047	0.414	63
		Lag 3	Lag 0	0.015	-0.056	0.087	0.336	69
			Lag 1	0.017	-0.023	0.057	0.196	60
			Lag 2	-0.027	-0.083	0.028	0.170	54
			Lag 3	0.020	-0.026	0.066	0.200	51
	Cerebrovascular	Lag 0	Lag 0	-0.013	-0.062	0.036	0.305	94
			Lag 1	-0.020	-0.076	0.037	0.249	92
			Lag 2	0.047	-0.014	0.108	0.065	91
			Lag 3	0.011	-0.055	0.076	0.372	93

		Lag 1	Lag 0	0.001	-0.046	0.048	0.483	99
			Lag 1	-0.007	-0.054	0.039	0.379	99
			Lag 2	-0.015	-0.071	0.041	0.299	99
			Lag 3	-0.016	-0.083	0.051	0.319	101
		Lag 2	Lag 0	-0.039	-0.107	0.030	0.135	75
			Lag 1	0.004	-0.032	0.040	0.407	106
			Lag 2	-0.005	-0.044	0.034	0.404	105
			Lag 3	-0.009	-0.057	0.038	0.349	108
		Lag 3	Lag 0	-0.002	-0.059	0.055	0.473	87
			Lag 1	0.012	-0.025	0.048	0.267	102
			Lag 2	0.019	-0.010	0.048	0.103	103
			Lag 3	0.006	-0.032	0.044	0.375	104
	Renal	Lag 0	Lag 0	0.027	-0.045	0.098	0.231	32
			Lag 1	-0.019	-0.120	0.081	0.353	36
			Lag 2	0.062	-0.031	0.154	0.096	34
			Lag 3	0.001	-0.148	0.149	0.496	34
		Lag 1	Lag 0	0.032	-0.042	0.107	0.198	28
			Lag 1	-0.025	-0.123	0.073	0.308	36
			Lag 2	-0.044	-0.171	0.082	0.247	36
			Lag 3	0.078	-0.026	0.183	0.071	36
		Lag 2	Lag 0	-0.014	-0.107	0.079	0.386	17
			Lag 1	-0.041	-0.148	0.066	0.227	26
			Lag 2	-0.019	-0.116	0.077	0.347	27
			Lag 3	0.028	-0.057	0.113	0.261	27
		Lag 3	Lag 0	-0.126	-0.282	0.030	0.057	23
			Lag 1	-0.038	-0.176	0.100	0.295	28
			Lag 2	0.016	-0.080	0.113	0.371	29
			Lag 3	0.027	-0.055	0.110	0.257	28
	Respiratory	Lag 0	Lag 0	0.045	-0.047	0.136	0.169	39
			Lag 1	0.088	0.013	0.163	**0.011**	40
			Lag 2	0.060	-0.028	0.148	0.089	40
			Lag 3	0.162	0.077	0.247	**0.000**	39
		Lag 1	Lag 0	-0.044	-0.163	0.075	0.236	29
			Lag 1	0.060	-0.010	0.130	**0.047**	43
			Lag 2	0.007	-0.063	0.077	0.423	43
			Lag 3	0.125	0.038	0.213	**0.003**	42
		Lag 2	Lag 0	0.077	0.002	0.152	**0.023**	42
			Lag 1	0.033	-0.025	0.091	0.134	43
			Lag 2	0.002	-0.069	0.073	0.479	46
			Lag 3	0.054	-0.035	0.142	0.118	44
		Lag 3	Lag 0	0.036	-0.052	0.125	0.212	43
			Lag 1	0.018	-0.020	0.056	0.176	30
			Lag 2	-0.033	-0.130	0.064	0.251	33
			Lag 3	0.028	-0.073	0.130	0.293	31
Female	All-natural	Lag 0	Lag 0	0.001	-0.001	0.004	0.203	34010
			Lag 1	0.001	-0.002	0.004	0.289	31215

		Lag 2	-0.006	-0.009	-0.002	**0.001**	30865
		Lag 3	0.000	-0.003	0.003	0.484	30480
	Lag 1	Lag 0	0.002	-0.001	0.004	0.098	32905
		Lag 1	-0.001	-0.004	0.001	0.205	33417
		Lag 2	-0.004	-0.007	-0.002	**0.001**	33523
		Lag 3	-0.001	-0.004	0.003	0.314	33483
	Lag 2	Lag 0	0.002	-0.001	0.004	0.088	29774
		Lag 1	-0.001	-0.004	0.001	0.099	32884
		Lag 2	-0.007	-0.009	-0.004	**0.000**	33052
		Lag 3	-0.003	-0.005	0.000	**0.020**	33075
	Lag 3	Lag 0	0.002	-0.001	0.005	0.053	30912
		Lag 1	0.001	-0.001	0.004	0.139	30692
		Lag 2	-0.004	-0.007	-0.002	**0.000**	31006
		Lag 3	-0.002	-0.004	0.001	0.095	31233
Cardiovascular	Lag 0	Lag 0	0.042	-0.017	0.102	0.081	56
		Lag 1	-0.014	-0.088	0.060	0.357	52
		Lag 2	0.019	-0.066	0.104	0.331	51
		Lag 3	-0.098	-0.229	0.032	0.070	51
	Lag 1	Lag 0	0.044	-0.009	0.098	0.052	54
		Lag 1	-0.014	-0.078	0.051	0.338	53
		Lag 2	0.018	-0.046	0.082	0.291	53
		Lag 3	0.029	-0.053	0.112	0.245	53
	Lag 2	Lag 0	0.077	0.023	0.131	**0.003**	55
		Lag 1	-0.047	-0.116	0.022	0.090	55
		Lag 2	-0.011	-0.072	0.050	0.362	55
		Lag 3	-0.024	-0.097	0.049	0.258	55
	Lag 3	Lag 0	0.098	0.029	0.167	**0.003**	63
		Lag 1	-0.031	-0.098	0.035	0.176	52
		Lag 2	-0.009	-0.070	0.052	0.385	53
		Lag 3	-0.034	-0.109	0.041	0.185	53
Cerebrovascular	Lag 0	Lag 0	0.011	-0.035	0.057	0.316	89
		Lag 1	0.010	-0.031	0.051	0.315	87
		Lag 2	-0.021	-0.093	0.052	0.289	90
		Lag 3	0.044	-0.016	0.105	0.076	91
	Lag 1	Lag 0	0.019	-0.026	0.064	0.201	95
		Lag 1	0.016	-0.021	0.052	0.203	110
		Lag 2	0.019	-0.033	0.071	0.235	116
		Lag 3	0.033	-0.028	0.094	0.142	117
	Lag 2	Lag 0	0.039	-0.006	0.084	**0.043**	85
		Lag 1	0.015	-0.019	0.048	0.194	98
		Lag 2	-0.012	-0.065	0.042	0.336	102
		Lag 3	0.045	-0.002	0.092	**0.031**	102
	Lag 3	Lag 0	0.066	0.010	0.122	**0.010**	86
		Lag 1	0.011	-0.030	0.052	0.301	76
		Lag 2	-0.015	-0.066	0.036	0.285	79
		Lag 3	0.037	-0.005	0.080	**0.043**	76

	Renal	Lag 0	Lag 0	0.028	-0.044	0.100	0.221	39
			Lag 1	-0.018	-0.118	0.082	0.364	28
			Lag 2	0.001	-0.119	0.121	0.494	28
			Lag 3	0.093	-0.008	0.195	**0.036**	29
		Lag 1	Lag 0	0.034	-0.028	0.096	0.139	38
			Lag 1	-0.009	-0.101	0.083	0.425	31
			Lag 2	-0.019	-0.125	0.086	0.360	34
			Lag 3	0.048	-0.054	0.149	0.178	36
		Lag 2	Lag 0	0.015	-0.076	0.105	0.376	33
			Lag 1	0.018	-0.078	0.113	0.357	32
			Lag 2	0.023	-0.065	0.111	0.304	34
			Lag 3	0.067	-0.006	0.141	**0.036**	38
		Lag 3	Lag 0	0.000	-0.103	0.102	0.498	33
			Lag 1	-0.020	-0.140	0.100	0.371	29
			Lag 2	0.003	-0.067	0.072	0.467	32
			Lag 3	0.014	-0.049	0.077	0.330	32
	Respiratory	Lag 0	Lag 0	0.010	-0.076	0.095	0.411	46
			Lag 1	-0.019	-0.114	0.075	0.343	36
			Lag 2	-0.067	-0.179	0.046	0.122	36
			Lag 3	0.023	-0.060	0.106	0.291	35
		Lag 1	Lag 0	0.037	-0.039	0.113	0.171	49
			Lag 1	0.021	-0.051	0.093	0.283	38
			Lag 2	-0.034	-0.129	0.061	0.241	38
			Lag 3	0.047	-0.037	0.131	0.136	37
		Lag 2	Lag 0	0.063	-0.005	0.131	**0.035**	54
			Lag 1	0.044	-0.005	0.092	**0.038**	48
			Lag 2	-0.011	-0.093	0.072	0.401	49
			Lag 3	0.036	-0.039	0.111	0.176	47
		Lag 3	Lag 0	-0.006	-0.101	0.088	0.450	56
			Lag 1	0.008	-0.057	0.074	0.401	35
			Lag 2	-0.012	-0.085	0.061	0.375	39
			Lag 3	0.035	-0.026	0.096	0.132	39
Age 18-49 year	All-natural	Lag 0	Lag 0	0.001	-0.002	0.004	0.233	21442
			Lag 1	-0.002	-0.006	0.002	0.133	19677
			Lag 2	-0.008	-0.012	-0.003	**0.000**	19427
			Lag 3	0.000	-0.005	0.004	0.424	19164
		Lag 1	Lag 0	0.001	-0.002	0.004	0.173	20621
			Lag 1	-0.004	-0.008	-0.001	**0.004**	20970
			Lag 2	-0.009	-0.012	-0.005	**0.000**	21004
			Lag 3	0.000	-0.004	0.004	0.477	20948
		Lag 2	Lag 0	0.002	-0.001	0.005	0.103	18757
			Lag 1	-0.002	-0.005	0.001	0.070	20318
			Lag 2	-0.009	-0.012	-0.006	**0.000**	20397
			Lag 3	0.000	-0.003	0.004	0.418	20392
		Lag 3	Lag 0	0.002	-0.002	0.006	0.145	19793
			Lag 1	0.003	0.000	0.006	**0.045**	19032

		Lag 2	-0.007	-0.010	-0.004	**0.000**	19163
		Lag 3	0.000	-0.003	0.003	0.484	19285
Cardiovascular	Lag 0	Lag 0	-0.059	-0.212	0.094	0.226	14
		Lag 1	-0.165	-0.428	0.098	0.109	11
		Lag 2	-0.093	-0.304	0.118	0.195	10
		Lag 3	-0.137	-0.375	0.101	0.129	10
	Lag 1	Lag 0	-0.030	-0.143	0.084	0.304	17
		Lag 1	-0.031	-0.139	0.078	0.289	14
		Lag 2	-0.085	-0.254	0.084	0.163	13
		Lag 3	-0.131	-0.338	0.076	0.108	14
	Lag 2	Lag 0	-0.015	-0.126	0.096	0.395	18
		Lag 1	-0.035	-0.124	0.055	0.225	16
		Lag 2	-0.070	-0.235	0.095	0.203	17
		Lag 3	-0.164	-0.395	0.067	0.082	17
	Lag 3	Lag 0	-0.025	-0.179	0.130	0.376	16
		Lag 1	-0.050	-0.161	0.061	0.188	13
		Lag 2	-0.084	-0.242	0.074	0.148	13
		Lag 3	-0.054	-0.190	0.081	0.216	14
Cerebrovascular	Lag 0	Lag 0	0.042	-0.046	0.130	0.177	16
		Lag 1	0.036	-0.073	0.144	0.259	16
		Lag 2	0.109	0.000	0.219	**0.025**	16
		Lag 3	0.058	-0.058	0.175	0.164	16
	Lag 1	Lag 0	0.053	-0.038	0.144	0.128	18
		Lag 1	0.045	-0.052	0.141	0.184	21
		Lag 2	0.005	-0.110	0.120	0.466	22
		Lag 3	-0.067	-0.250	0.116	0.236	22
	Lag 2	Lag 0	0.066	-0.047	0.179	0.127	16
		Lag 1	0.016	-0.081	0.113	0.372	22
		Lag 2	-0.030	-0.147	0.087	0.308	24
		Lag 3	-0.003	-0.128	0.122	0.481	22
	Lag 3	Lag 0	-0.096	-0.341	0.149	0.221	10
		Lag 1	-0.062	-0.199	0.075	0.188	13
		Lag 2	0.011	-0.113	0.134	0.433	14
		Lag 3	-0.029	-0.166	0.107	0.336	11
Renal	Lag 0	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 1	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 2	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10

		Lag 3	Lag 0	-0.040	-0.200	0.120	0.313	10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Respiratory	Lag 0	Lag 0	0.100	-0.040	0.240	0.080	18
			Lag 1	0.013	-0.148	0.174	0.438	12
			Lag 2	0.032	-0.197	0.260	0.393	12
			Lag 3	0.111	-0.034	0.257	0.067	11
		Lag 1	Lag 0	0.050	-0.118	0.217	0.280	18
			Lag 1	0.067	-0.070	0.203	0.170	16
			Lag 2	0.034	-0.114	0.182	0.325	16
			Lag 3	0.129	-0.011	0.270	**0.035**	16
		Lag 2	Lag 0	0.146	0.033	0.259	**0.006**	24
			Lag 1	0.000	-0.110	0.110	0.499	15
			Lag 2	0.020	-0.139	0.179	0.403	16
			Lag 3	-0.018	-0.171	0.136	0.410	16
		Lag 3	Lag 0	-0.040	-0.205	0.125	0.316	20
			Lag 1	-	-	-	-	< 10
			Lag 2	-0.012	-0.139	0.115	0.427	10
			Lag 3	-0.024	-0.183	0.134	0.382	10
Age 50-64 year	All-natural	Lag 0	Lag 0	0.001	-0.003	0.005	0.319	14664
			Lag 1	-0.002	-0.006	0.003	0.218	13520
			Lag 2	-0.001	-0.006	0.005	0.420	13405
			Lag 3	0.002	-0.003	0.007	0.208	13277
		Lag 1	Lag 0	0.002	-0.001	0.006	0.092	14349
			Lag 1	-0.003	-0.007	0.001	0.064	14309
			Lag 2	0.000	-0.005	0.004	0.409	14351
			Lag 3	0.002	-0.003	0.007	0.218	14369
		Lag 2	Lag 0	0.001	-0.003	0.005	0.314	12914
			Lag 1	-0.006	-0.010	-0.003	**0.000**	14183
			Lag 2	-0.007	-0.010	-0.003	**0.000**	14260
			Lag 3	-0.002	-0.006	0.002	0.172	14293
		Lag 3	Lag 0	0.002	-0.003	0.007	0.193	13140
			Lag 1	-0.002	-0.006	0.002	0.176	13361
			Lag 2	-0.004	-0.007	0.000	**0.013**	13545
			Lag 3	-0.001	-0.005	0.002	0.243	13639
	Cardiovascular	Lag 0	Lag 0	-0.012	-0.100	0.077	0.398	23
			Lag 1	0.032	-0.057	0.121	0.240	36
			Lag 2	0.024	-0.084	0.132	0.331	34
			Lag 3	-0.040	-0.157	0.076	0.248	33
		Lag 1	Lag 0	-0.043	-0.143	0.057	0.198	26
			Lag 1	0.020	-0.068	0.108	0.327	29
			Lag 2	0.038	-0.041	0.117	0.176	29
			Lag 3	-0.038	-0.143	0.067	0.240	29
		Lag 2	Lag 0	0.023	-0.070	0.116	0.315	24
			Lag 1	-0.032	-0.116	0.052	0.226	32

		Lag 2	-0.004	-0.083	0.076	0.465	31
		Lag 3	-0.034	-0.121	0.053	0.222	31
	Lag 3	Lag 0	0.062	-0.042	0.165	0.122	37
		Lag 1	-0.046	-0.149	0.056	0.188	28
		Lag 2	-0.020	-0.093	0.053	0.295	28
		Lag 3	-0.015	-0.095	0.064	0.353	29
Cerebrovascular	Lag 0	Lag 0	-0.037	-0.125	0.051	0.206	42
		Lag 1	-0.001	-0.076	0.074	0.486	47
		Lag 2	0.025	-0.067	0.116	0.299	48
		Lag 3	0.065	-0.010	0.140	**0.046**	47
	Lag 1	Lag 0	-0.016	-0.096	0.063	0.344	49
		Lag 1	-0.038	-0.116	0.041	0.174	45
		Lag 2	-0.027	-0.108	0.055	0.260	45
		Lag 3	0.066	-0.006	0.138	**0.036**	47
	Lag 2	Lag 0	0.020	-0.054	0.093	0.300	41
		Lag 1	-0.009	-0.063	0.044	0.364	52
		Lag 2	0.017	-0.039	0.072	0.280	51
		Lag 3	0.043	-0.010	0.096	0.056	53
	Lag 3	Lag 0	0.062	-0.007	0.132	**0.040**	55
		Lag 1	-0.014	-0.075	0.047	0.327	52
		Lag 2	0.010	-0.033	0.053	0.323	53
		Lag 3	0.030	-0.019	0.078	0.116	54
Renal	Lag 0	Lag 0	0.042	-0.061	0.145	0.213	16
		Lag 1	-0.047	-0.196	0.102	0.266	16
		Lag 2	0.111	-0.043	0.266	0.079	15
		Lag 3	0.155	-0.016	0.326	**0.038**	15
	Lag 1	Lag 0	0.031	-0.055	0.116	0.242	11
		Lag 1	0.047	-0.049	0.142	0.168	19
		Lag 2	0.119	-0.031	0.268	0.060	20
		Lag 3	0.055	-0.107	0.216	0.254	21
	Lag 2	Lag 0	-	-	-	-	< 10
		Lag 1	0.064	-0.033	0.161	0.098	20
		Lag 2	-0.024	-0.184	0.137	0.385	21
		Lag 3	0.027	-0.137	0.191	0.375	22
	Lag 3	Lag 0	-	-	-	-	< 10
		Lag 1	0.037	-0.113	0.187	0.315	15
		Lag 2	-0.057	-0.222	0.109	0.251	17
		Lag 3	0.009	-0.143	0.160	0.455	17
Respiratory	Lag 0	Lag 0	0.002	-0.091	0.096	0.481	30
		Lag 1	0.112	0.017	0.208	**0.011**	31
		Lag 2	-0.016	-0.120	0.089	0.384	30
		Lag 3	0.117	0.014	0.221	**0.013**	30
	Lag 1	Lag 0	0.006	-0.084	0.096	0.446	28
		Lag 1	0.052	-0.042	0.146	0.138	26
		Lag 2	-0.049	-0.154	0.057	0.181	26
		Lag 3	0.010	-0.112	0.132	0.439	26

		Lag 2	Lag 0	0.071	-0.005	0.146	**0.034**	35
			Lag 1	0.046	-0.033	0.124	0.128	35
			Lag 2	-0.010	-0.104	0.084	0.419	36
			Lag 3	0.055	-0.042	0.151	0.134	37
		Lag 3	Lag 0	0.025	-0.076	0.125	0.316	34
			Lag 1	0.002	-0.097	0.101	0.484	23
			Lag 2	-0.070	-0.204	0.063	0.152	24
			Lag 3	-0.011	-0.110	0.088	0.410	25
Age 65+ year	All-natural	Lag 0	Lag 0	0.003	0.000	0.006	**0.027**	23923
			Lag 1	0.003	0.000	0.007	**0.016**	21739
			Lag 2	-0.002	-0.006	0.002	0.208	21503
			Lag 3	0.001	-0.002	0.005	0.236	21337
		Lag 1	Lag 0	0.005	0.002	0.007	**0.000**	23651
			Lag 1	0.002	-0.001	0.005	0.076	23546
			Lag 2	0.000	-0.003	0.003	0.478	23609
			Lag 3	0.000	-0.004	0.004	0.499	23652
		Lag 2	Lag 0	0.006	0.003	0.009	**0.000**	21151
			Lag 1	0.001	-0.001	0.004	0.163	23829
			Lag 2	-0.001	-0.004	0.002	0.282	23961
			Lag 3	-0.004	-0.007	-0.001	**0.004**	24095
		Lag 3	Lag 0	0.008	0.005	0.011	**0.000**	21294
			Lag 1	0.002	0.000	0.005	**0.039**	21721
			Lag 2	-0.002	-0.004	0.001	0.082	21982
			Lag 3	-0.002	-0.005	0.001	0.101	22245
	Cardiovascular	Lag 0	Lag 0	0.035	-0.012	0.082	0.072	74
			Lag 1	0.025	-0.021	0.070	0.142	68
			Lag 2	0.025	-0.050	0.100	0.257	66
			Lag 3	-0.014	-0.089	0.060	0.354	64
		Lag 1	Lag 0	0.057	0.011	0.104	**0.008**	68
			Lag 1	0.011	-0.033	0.055	0.315	72
			Lag 2	0.041	-0.011	0.094	0.062	70
			Lag 3	0.037	-0.034	0.107	0.153	68
		Lag 2	Lag 0	0.074	0.023	0.125	**0.002**	71
			Lag 1	-0.001	-0.041	0.039	0.481	78
			Lag 2	0.003	-0.047	0.053	0.453	74
			Lag 3	0.010	-0.040	0.061	0.343	70
		Lag 3	Lag 0	0.067	0.010	0.125	**0.011**	79
			Lag 1	0.014	-0.024	0.051	0.234	71
			Lag 2	-0.007	-0.060	0.046	0.397	66
			Lag 3	0.015	-0.033	0.064	0.266	61
	Cerebrovascular	Lag 0	Lag 0	0.001	-0.038	0.041	0.473	125
			Lag 1	-0.005	-0.044	0.035	0.408	116
			Lag 2	-0.011	-0.073	0.051	0.364	117
			Lag 3	0.003	-0.060	0.066	0.462	121
		Lag 1	Lag 0	0.012	-0.027	0.050	0.275	127
			Lag 1	0.012	-0.020	0.045	0.227	143

			Lag 2	0.012	-0.033	0.057	0.301	148
			Lag 3	-0.011	-0.072	0.049	0.359	149
		Lag 2	Lag 0	-0.002	-0.049	0.045	0.466	103
			Lag 1	0.016	-0.013	0.045	0.145	130
			Lag 2	-0.015	-0.056	0.026	0.242	132
			Lag 3	0.002	-0.044	0.047	0.473	135
		Lag 3	Lag 0	0.023	-0.027	0.072	0.187	108
			Lag 1	0.029	-0.003	0.061	**0.040**	113
			Lag 2	0.011	-0.021	0.043	0.255	115
			Lag 3	0.020	-0.016	0.056	0.141	115
	Renal	Lag 0	Lag 0	0.030	-0.030	0.090	0.161	48
			Lag 1	0.044	-0.041	0.130	0.156	42
			Lag 2	0.029	-0.057	0.115	0.255	41
			Lag 3	0.002	-0.121	0.124	0.489	42
		Lag 1	Lag 0	0.065	0.005	0.125	**0.016**	51
			Lag 1	-0.020	-0.114	0.075	0.341	43
			Lag 2	-0.056	-0.160	0.048	0.146	45
			Lag 3	0.050	-0.050	0.150	0.162	46
		Lag 2	Lag 0	0.052	-0.017	0.121	0.070	34
			Lag 1	-0.017	-0.131	0.097	0.386	31
			Lag 2	0.005	-0.073	0.083	0.452	33
			Lag 3	0.047	-0.026	0.119	0.104	36
		Lag 3	Lag 0	-0.024	-0.135	0.087	0.334	37
			Lag 1	-0.020	-0.140	0.100	0.371	34
			Lag 2	0.019	-0.047	0.084	0.288	35
			Lag 3	0.011	-0.047	0.069	0.355	34
	Respiratory	Lag 0	Lag 0	-0.022	-0.124	0.081	0.338	37
			Lag 1	0.002	-0.081	0.085	0.481	33
			Lag 2	-0.001	-0.102	0.101	0.496	34
			Lag 3	0.059	-0.020	0.137	0.070	33
		Lag 1	Lag 0	-0.042	-0.150	0.066	0.223	32
			Lag 1	0.028	-0.038	0.095	0.200	39
			Lag 2	-0.001	-0.079	0.077	0.492	39
			Lag 3	0.103	0.023	0.183	**0.006**	37
		Lag 2	Lag 0	-0.007	-0.099	0.085	0.441	37
			Lag 1	0.047	0.000	0.095	**0.026**	41
			Lag 2	-0.008	-0.083	0.067	0.416	43
			Lag 3	0.056	-0.026	0.139	0.090	38
		Lag 3	Lag 0	0.005	-0.093	0.102	0.463	45
			Lag 1	0.042	-0.022	0.106	0.098	33
			Lag 2	0.000	-0.074	0.075	0.497	38
			Lag 3	0.068	0.000	0.136	**0.026**	35
English, preferred language	All-natural	Lag 0	Lag 0	0.002	0.000	0.004	0.064	51173
			Lag 1	-0.001	-0.003	0.002	0.257	46427
			Lag 2	-0.005	-0.008	-0.002	**0.001**	45897
			Lag 3	0.001	-0.002	0.004	0.192	45400

	Lag 1	Lag 0	0.003	0.001	0.005	**0.001**	50170
		Lag 1	-0.003	-0.005	-0.001	**0.005**	50102
		Lag 2	-0.004	-0.006	-0.002	**0.000**	50221
		Lag 3	0.000	-0.002	0.003	0.422	50217
	Lag 2	Lag 0	0.004	0.002	0.006	**0.000**	45298
		Lag 1	-0.002	-0.004	-0.001	**0.005**	49702
		Lag 2	-0.006	-0.008	-0.004	**0.000**	49944
		Lag 3	-0.002	-0.005	0.000	**0.013**	50088
	Lag 3	Lag 0	0.004	0.002	0.006	**0.000**	46350
		Lag 1	0.002	0.000	0.003	0.061	46285
		Lag 2	-0.005	-0.006	-0.003	**0.000**	46775
		Lag 3	-0.001	-0.003	0.001	0.283	47171
Cardiovascular	Lag 0	Lag 0	0.017	-0.022	0.057	0.198	97
		Lag 1	0.009	-0.032	0.050	0.335	100
		Lag 2	0.014	-0.050	0.078	0.337	96
		Lag 3	-0.040	-0.108	0.028	0.125	94
	Lag 1	Lag 0	0.021	-0.020	0.062	0.159	94
		Lag 1	0.000	-0.041	0.042	0.492	99
		Lag 2	0.023	-0.026	0.072	0.176	96
		Lag 3	-0.001	-0.062	0.060	0.482	96
	Lag 2	Lag 0	0.050	0.006	0.093	**0.013**	97
		Lag 1	-0.016	-0.053	0.022	0.208	111
		Lag 2	-0.015	-0.061	0.032	0.267	107
		Lag 3	-0.020	-0.067	0.028	0.209	104
	Lag 3	Lag 0	0.053	0.000	0.107	**0.026**	114
		Lag 1	-0.008	-0.045	0.029	0.335	95
		Lag 2	-0.028	-0.074	0.019	0.120	90
		Lag 3	-0.008	-0.051	0.036	0.365	88
Cerebrovascular	Lag 0	Lag 0	-0.004	-0.043	0.034	0.417	143
		Lag 1	0.012	-0.023	0.046	0.249	146
		Lag 2	0.014	-0.038	0.066	0.296	147
		Lag 3	0.010	-0.047	0.066	0.367	149
	Lag 1	Lag 0	0.017	-0.020	0.054	0.185	155
		Lag 1	0.018	-0.012	0.048	0.122	172
		Lag 2	0.013	-0.028	0.053	0.268	177
		Lag 3	-0.002	-0.056	0.052	0.472	178
	Lag 2	Lag 0	0.011	-0.031	0.053	0.304	128
		Lag 1	0.021	-0.005	0.048	0.056	167
		Lag 2	0.007	-0.026	0.040	0.344	170
		Lag 3	0.009	-0.029	0.048	0.317	171
	Lag 3	Lag 0	0.019	-0.029	0.066	0.221	136
		Lag 1	0.021	-0.008	0.050	0.081	150
		Lag 2	0.002	-0.029	0.033	0.451	152
		Lag 3	0.010	-0.024	0.044	0.278	149
Renal	Lag 0	Lag 0	0.026	-0.025	0.077	0.156	61
		Lag 1	-0.004	-0.074	0.066	0.454	56

			Lag 2	0.049	-0.028	0.125	0.106	54
			Lag 3	0.073	-0.016	0.163	0.055	55
		Lag 1	Lag 0	0.039	-0.009	0.086	0.055	55
			Lag 1	-0.029	-0.103	0.045	0.223	55
			Lag 2	-0.030	-0.117	0.057	0.247	58
			Lag 3	0.069	-0.012	0.150	**0.047**	60
		Lag 2	Lag 0	-0.009	-0.073	0.055	0.394	41
			Lag 1	-0.023	-0.099	0.053	0.276	48
			Lag 2	0.020	-0.047	0.086	0.282	50
			Lag 3	0.070	0.011	0.129	**0.010**	54
		Lag 3	Lag 0	-0.068	-0.161	0.026	0.079	48
			Lag 1	-0.021	-0.114	0.071	0.326	47
			Lag 2	-0.004	-0.066	0.058	0.448	50
			Lag 3	0.031	-0.020	0.081	0.118	49
	Respiratory	Lag 0	Lag 0	0.015	-0.052	0.082	0.335	75
			Lag 1	0.050	-0.008	0.107	**0.046**	68
			Lag 2	-0.001	-0.076	0.073	0.486	68
			Lag 3	0.125	0.061	0.188	**0.000**	66
		Lag 1	Lag 0	-0.033	-0.110	0.045	0.204	66
			Lag 1	0.036	-0.018	0.091	0.096	71
			Lag 2	-0.008	-0.071	0.054	0.395	71
			Lag 3	0.087	0.022	0.151	**0.004**	69
		Lag 2	Lag 0	0.052	-0.004	0.107	**0.035**	82
			Lag 1	0.045	0.004	0.086	**0.017**	80
			Lag 2	0.004	-0.053	0.060	0.448	84
			Lag 3	0.038	-0.022	0.099	0.107	80
		Lag 3	Lag 0	-0.002	-0.070	0.067	0.481	82
			Lag 1	0.021	-0.015	0.058	0.125	60
			Lag 2	-0.022	-0.083	0.040	0.244	67
			Lag 3	0.024	-0.031	0.078	0.200	65
Spanish, preferred language	All-natural	Lag 0	Lag 0	-0.001	-0.007	0.005	0.404	6227
			Lag 1	-0.001	-0.007	0.006	0.413	6083
			Lag 2	-0.001	-0.008	0.006	0.373	6037
			Lag 3	-0.003	-0.009	0.004	0.225	6006
		Lag 1	Lag 0	-0.001	-0.007	0.005	0.345	5960
			Lag 1	-0.003	-0.009	0.003	0.191	6011
			Lag 2	-0.003	-0.009	0.003	0.168	6027
			Lag 3	0.000	-0.006	0.007	0.458	6040
		Lag 2	Lag 0	-0.005	-0.011	0.002	0.086	5296
			Lag 1	-0.002	-0.008	0.004	0.244	5983
			Lag 2	-0.005	-0.011	0.001	**0.046**	6018
			Lag 3	0.000	-0.006	0.006	0.477	6030
		Lag 3	Lag 0	0.008	0.000	0.015	**0.022**	5701
			Lag 1	0.002	-0.005	0.008	0.296	5518
			Lag 2	-0.005	-0.011	0.001	**0.038**	5559
			Lag 3	-0.005	-0.011	0.001	0.060	5605

Cardiovascular	Lag 0	Lag 0	0.011	-0.183	0.204	0.457	10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 1	Lag 0	-0.017	-0.199	0.166	0.428	13
		Lag 1	0.045	-0.089	0.178	0.255	10
		Lag 2	0.012	-0.108	0.132	0.424	10
		Lag 3	-	-	-	-	< 10
	Lag 2	Lag 0	-0.045	-0.256	0.167	0.339	11
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 3	Lag 0	0.040	-0.166	0.245	0.353	14
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
Cerebrovascular	Lag 0	Lag 0	-0.052	-0.181	0.078	0.217	21
		Lag 1	-0.069	-0.202	0.065	0.156	24
		Lag 2	0.018	-0.109	0.144	0.391	25
		Lag 3	0.078	-0.004	0.160	**0.032**	25
	Lag 1	Lag 0	0.027	-0.071	0.124	0.296	22
		Lag 1	-0.033	-0.151	0.085	0.293	22
		Lag 2	-0.041	-0.178	0.096	0.279	23
		Lag 3	0.079	-0.007	0.165	**0.036**	24
	Lag 2	Lag 0	0.033	-0.091	0.157	0.303	22
		Lag 1	-0.043	-0.149	0.063	0.215	24
		Lag 2	-0.074	-0.206	0.058	0.136	25
		Lag 3	0.065	-0.015	0.144	0.055	26
	Lag 3	Lag 0	0.107	-0.015	0.229	**0.043**	25
		Lag 1	-0.045	-0.160	0.071	0.224	18
		Lag 2	-0.006	-0.073	0.061	0.430	20
		Lag 3	0.040	-0.036	0.117	0.151	20
Renal	Lag 0	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 1	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 2	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 3	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10

			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Respiratory	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	0.094	-0.111	0.299	0.185	11
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
Other, preferred language	All-natural	Lag 0	Lag 0	0.007	0.000	0.014	**0.018**	2629
			Lag 1	0.014	0.007	0.022	**0.000**	2426
			Lag 2	0.009	-0.003	0.020	0.066	2401
			Lag 3	0.004	-0.005	0.014	0.186	2372
		Lag 1	Lag 0	0.009	0.003	0.015	**0.002**	2491
			Lag 1	0.016	0.009	0.022	**0.000**	2712
			Lag 2	0.010	0.003	0.018	**0.004**	2716
			Lag 3	0.005	-0.006	0.016	0.209	2712
		Lag 2	Lag 0	0.011	0.004	0.018	**0.001**	2228
			Lag 1	0.008	0.002	0.013	**0.004**	2645
			Lag 2	0.009	0.002	0.015	**0.004**	2656
			Lag 3	-0.001	-0.008	0.007	0.418	2662
		Lag 3	Lag 0	0.010	0.002	0.018	**0.007**	2176
			Lag 1	0.002	-0.005	0.008	0.330	2311
			Lag 2	0.003	-0.003	0.008	0.196	2356
			Lag 3	-0.003	-0.010	0.004	0.215	2393
	Cardiovascular	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10

	Lag 3	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
Cerebrovascular	Lag 0	Lag 0	0.045	-0.032	0.121	0.126	19
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-0.013	-0.193	0.167	0.444	10
	Lag 1	Lag 0	-0.040	-0.152	0.073	0.244	17
		Lag 1	-0.077	-0.203	0.050	0.117	15
		Lag 2	-0.063	-0.224	0.098	0.220	15
		Lag 3	-0.157	-0.426	0.112	0.127	16
	Lag 2	Lag 0	-0.014	-0.121	0.093	0.398	10
		Lag 1	-0.059	-0.174	0.056	0.158	13
		Lag 2	-0.130	-0.324	0.064	0.095	12
		Lag 3	-0.021	-0.146	0.104	0.370	13
	Lag 3	Lag 0	0.031	-0.058	0.121	0.246	12
		Lag 1	-0.027	-0.131	0.077	0.306	10
		Lag 2	0.048	-0.012	0.108	0.057	10
		Lag 3	0.057	-0.019	0.132	0.070	11
Renal	Lag 0	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 1	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 2	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 3	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
Respiratory	Lag 0	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 1	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 2	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10

			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
White	All-natural	Lag 0	Lag 0	0.002	-0.001	0.004	0.141	29020
			Lag 1	0.000	-0.003	0.003	0.445	25632
			Lag 2	-0.006	-0.010	-0.002	**0.002**	25284
			Lag 3	0.002	-0.002	0.006	0.220	24938
		Lag 1	Lag 0	0.002	0.000	0.005	**0.041**	28772
			Lag 1	-0.004	-0.007	-0.001	**0.001**	28242
			Lag 2	-0.005	-0.009	-0.002	**0.001**	28284
			Lag 3	-0.001	-0.005	0.003	0.281	28256
		Lag 2	Lag 0	0.002	-0.001	0.005	0.068	26330
			Lag 1	-0.004	-0.006	-0.001	**0.001**	28421
			Lag 2	-0.007	-0.010	-0.005	**0.000**	28582
			Lag 3	-0.004	-0.007	-0.001	**0.009**	28650
		Lag 3	Lag 0	0.004	0.001	0.007	**0.005**	26605
			Lag 1	0.001	-0.002	0.003	0.257	27009
			Lag 2	-0.005	-0.008	-0.003	**0.000**	27290
			Lag 3	-0.001	-0.003	0.002	0.302	27472
	Cardiovascular	Lag 0	Lag 0	0.004	-0.057	0.064	0.452	62
			Lag 1	0.000	-0.064	0.064	0.500	70
			Lag 2	0.049	-0.032	0.130	0.118	66
			Lag 3	0.005	-0.067	0.077	0.446	65
		Lag 1	Lag 0	-0.001	-0.062	0.059	0.483	61
			Lag 1	-0.056	-0.134	0.022	0.080	66
			Lag 2	0.015	-0.057	0.088	0.339	64
			Lag 3	0.004	-0.074	0.082	0.455	63
		Lag 2	Lag 0	0.039	-0.024	0.101	0.112	67
			Lag 1	-0.015	-0.059	0.029	0.254	78
			Lag 2	-0.010	-0.069	0.048	0.365	75
			Lag 3	-0.032	-0.093	0.029	0.154	73
		Lag 3	Lag 0	0.077	0.011	0.143	**0.012**	80
			Lag 1	-0.006	-0.046	0.035	0.395	67
			Lag 2	0.000	-0.057	0.058	0.494	63
			Lag 3	0.001	-0.048	0.050	0.484	61
	Cerebrovascular	Lag 0	Lag 0	0.010	-0.034	0.054	0.331	99
			Lag 1	0.028	-0.017	0.074	0.111	88
			Lag 2	0.030	-0.035	0.095	0.182	91
			Lag 3	-0.006	-0.085	0.074	0.443	91
		Lag 1	Lag 0	0.026	-0.017	0.069	0.121	106
			Lag 1	0.048	0.009	0.086	**0.007**	110
			Lag 2	0.028	-0.022	0.077	0.137	116
			Lag 3	-0.004	-0.080	0.072	0.460	115

		Lag 2	Lag 0	0.007	-0.047	0.061	0.396	78
			Lag 1	0.034	-0.005	0.072	**0.043**	96
			Lag 2	0.000	-0.044	0.045	0.492	102
			Lag 3	0.000	-0.057	0.057	0.499	102
		Lag 3	Lag 0	0.023	-0.033	0.080	0.208	78
			Lag 1	0.041	0.001	0.081	**0.022**	89
			Lag 2	-0.008	-0.053	0.036	0.358	93
			Lag 3	0.001	-0.044	0.046	0.488	91
	Renal	Lag 0	Lag 0	0.006	-0.061	0.072	0.436	32
			Lag 1	-0.099	-0.235	0.038	0.078	30
			Lag 2	0.046	-0.057	0.150	0.191	30
			Lag 3	0.074	-0.058	0.207	0.136	30
		Lag 1	Lag 0	0.027	-0.029	0.084	0.169	31
			Lag 1	-0.036	-0.126	0.054	0.216	36
			Lag 2	-0.023	-0.133	0.088	0.343	40
			Lag 3	0.108	0.001	0.215	**0.024**	41
		Lag 2	Lag 0	-0.002	-0.074	0.071	0.483	24
			Lag 1	-0.020	-0.114	0.073	0.336	31
			Lag 2	0.001	-0.084	0.086	0.490	34
			Lag 3	0.102	0.021	0.183	**0.007**	36
		Lag 3	Lag 0	-0.140	-0.305	0.025	**0.048**	25
			Lag 1	-0.075	-0.213	0.064	0.145	28
			Lag 2	-0.055	-0.158	0.047	0.146	30
			Lag 3	0.020	-0.042	0.081	0.264	29
	Respiratory	Lag 0	Lag 0	0.001	-0.094	0.096	0.492	42
			Lag 1	0.018	-0.058	0.094	0.319	38
			Lag 2	0.006	-0.092	0.104	0.455	37
			Lag 3	0.143	0.061	0.226	**0.000**	36
		Lag 1	Lag 0	-0.062	-0.174	0.051	0.141	37
			Lag 1	0.015	-0.052	0.081	0.333	40
			Lag 2	0.012	-0.063	0.088	0.376	39
			Lag 3	0.119	0.031	0.206	**0.004**	38
		Lag 2	Lag 0	0.032	-0.039	0.103	0.191	46
			Lag 1	0.051	-0.001	0.103	**0.027**	47
			Lag 2	0.013	-0.058	0.084	0.356	48
			Lag 3	0.043	-0.053	0.139	0.189	45
		Lag 3	Lag 0	-0.020	-0.110	0.069	0.327	48
			Lag 1	0.023	-0.022	0.068	0.162	34
			Lag 2	0.003	-0.066	0.072	0.464	38
			Lag 3	0.026	-0.049	0.101	0.247	35
Black	All-natural	Lag 0	Lag 0	-0.003	-0.008	0.002	0.123	5850
			Lag 1	-0.005	-0.011	0.001	**0.038**	5603
			Lag 2	-0.002	-0.009	0.005	0.322	5574
			Lag 3	0.000	-0.007	0.007	0.488	5550
		Lag 1	Lag 0	0.001	-0.004	0.006	0.306	5580
			Lag 1	0.000	-0.005	0.005	0.467	5929

		Lag 2	-0.002	-0.008	0.003	0.193	5969
		Lag 3	-0.001	-0.008	0.006	0.388	5990
	Lag 2	Lag 0	0.006	0.001	0.012	**0.013**	4870
		Lag 1	0.000	-0.005	0.004	0.471	5585
		Lag 2	-0.004	-0.009	0.001	**0.049**	5605
		Lag 3	-0.005	-0.011	0.000	**0.027**	5623
	Lag 3	Lag 0	0.005	-0.001	0.012	0.061	5043
		Lag 1	0.003	-0.002	0.008	0.130	4930
		Lag 2	-0.004	-0.008	0.001	0.055	4976
		Lag 3	-0.003	-0.008	0.002	0.138	5022
Cardiovascular	Lag 0	Lag 0	0.038	-0.035	0.111	0.155	14
		Lag 1	-0.055	-0.176	0.066	0.186	14
		Lag 2	0.031	-0.101	0.163	0.322	14
		Lag 3	-0.323	-0.684	0.037	**0.039**	14
	Lag 1	Lag 0	0.039	-0.037	0.116	0.156	10
		Lag 1	-0.001	-0.098	0.096	0.491	14
		Lag 2	0.089	0.007	0.171	**0.016**	14
		Lag 3	0.016	-0.116	0.149	0.404	15
	Lag 2	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 3	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
Cerebrovascular	Lag 0	Lag 0	0.004	-0.102	0.110	0.474	19
		Lag 1	0.014	-0.073	0.101	0.376	23
		Lag 2	0.049	-0.068	0.166	0.206	23
		Lag 3	0.148	0.041	0.254	**0.003**	23
	Lag 1	Lag 0	-0.005	-0.113	0.103	0.463	20
		Lag 1	0.027	-0.054	0.108	0.253	25
		Lag 2	-0.014	-0.139	0.111	0.414	25
		Lag 3	0.102	-0.004	0.208	**0.030**	25
	Lag 2	Lag 0	0.038	-0.067	0.143	0.239	21
		Lag 1	0.042	-0.022	0.105	0.098	25
		Lag 2	-0.001	-0.086	0.083	0.490	25
		Lag 3	0.047	-0.024	0.117	0.096	25
	Lag 3	Lag 0	0.157	0.040	0.274	**0.004**	23
		Lag 1	-0.004	-0.076	0.069	0.462	22
		Lag 2	0.007	-0.057	0.071	0.416	21
		Lag 3	0.022	-0.045	0.088	0.263	21
Renal	Lag 0	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10

		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Respiratory	Lag 0	Lag 0	0.084	-0.033	0.201	0.079	19
			Lag 1	0.160	0.034	0.287	**0.006**	16
			Lag 2	0.066	-0.071	0.204	0.172	17
			Lag 3	0.193	0.065	0.321	**0.002**	17
		Lag 1	Lag 0	0.059	-0.062	0.179	0.171	15
			Lag 1	0.155	0.024	0.287	**0.010**	16
			Lag 2	-0.016	-0.158	0.126	0.412	17
			Lag 3	0.127	0.004	0.250	**0.022**	17
		Lag 2	Lag 0	0.116	-0.014	0.247	**0.040**	14
			Lag 1	0.064	-0.038	0.166	0.108	16
			Lag 2	0.056	-0.058	0.171	0.166	17
			Lag 3	0.094	-0.029	0.217	0.067	18
		Lag 3	Lag 0	0.078	-0.120	0.277	0.219	10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
Hispanic	All-natural	Lag 0	Lag 0	0.003	-0.001	0.007	0.068	17224
			Lag 1	0.000	-0.004	0.004	0.465	16433
			Lag 2	-0.002	-0.007	0.002	0.178	16322
			Lag 3	0.001	-0.004	0.005	0.402	16218
		Lag 1	Lag 0	0.002	-0.002	0.005	0.151	16664
			Lag 1	-0.002	-0.006	0.002	0.123	16697
			Lag 2	-0.004	-0.008	0.000	**0.020**	16758
			Lag 3	0.001	-0.003	0.006	0.274	16781
		Lag 2	Lag 0	0.001	-0.003	0.005	0.235	14871
			Lag 1	-0.002	-0.006	0.001	0.120	16582
			Lag 2	-0.007	-0.011	-0.003	**0.000**	16642
			Lag 3	0.001	-0.003	0.005	0.307	16666
		Lag 3	Lag 0	0.003	-0.002	0.007	0.109	15821
			Lag 1	0.001	-0.003	0.005	0.334	15157
			Lag 2	-0.007	-0.010	-0.003	**0.000**	15308
			Lag 3	-0.001	-0.005	0.003	0.276	15464
	Cardiovascular	Lag 0	Lag 0	0.019	-0.097	0.135	0.374	23
			Lag 1	0.033	-0.069	0.134	0.265	18

		Lag 2	-0.109	-0.266	0.047	0.085	17
		Lag 3	-0.045	-0.171	0.080	0.241	15
	Lag 1	Lag 0	0.011	-0.105	0.128	0.425	27
		Lag 1	0.020	-0.074	0.114	0.338	20
		Lag 2	-0.065	-0.185	0.055	0.143	20
		Lag 3	-0.057	-0.178	0.064	0.179	19
	Lag 2	Lag 0	0.024	-0.080	0.128	0.324	26
		Lag 1	0.039	-0.050	0.129	0.196	26
		Lag 2	-0.049	-0.151	0.054	0.176	26
		Lag 3	0.031	-0.060	0.122	0.251	24
	Lag 3	Lag 0	0.048	-0.059	0.154	0.190	32
		Lag 1	0.017	-0.083	0.117	0.369	25
		Lag 2	-0.104	-0.235	0.028	0.061	25
		Lag 3	0.039	-0.054	0.132	0.204	23
Cerebrovascular	Lag 0	Lag 0	-0.063	-0.173	0.047	0.130	37
		Lag 1	-0.042	-0.131	0.047	0.179	40
		Lag 2	0.013	-0.090	0.116	0.402	41
		Lag 3	0.032	-0.045	0.109	0.207	41
	Lag 1	Lag 0	-0.004	-0.102	0.094	0.467	43
		Lag 1	-0.046	-0.132	0.039	0.144	40
		Lag 2	-0.024	-0.117	0.069	0.307	41
		Lag 3	0.010	-0.070	0.090	0.400	42
	Lag 2	Lag 0	0.027	-0.070	0.124	0.291	40
		Lag 1	-0.023	-0.090	0.044	0.249	43
		Lag 2	-0.058	-0.159	0.043	0.130	43
		Lag 3	0.026	-0.047	0.099	0.242	44
	Lag 3	Lag 0	0.024	-0.072	0.120	0.312	45
		Lag 1	-0.097	-0.210	0.015	**0.045**	33
		Lag 2	-0.006	-0.070	0.057	0.422	34
		Lag 3	0.035	-0.032	0.102	0.151	34
Renal	Lag 0	Lag 0	0.077	-0.044	0.199	0.107	20
		Lag 1	-0.031	-0.175	0.113	0.335	14
		Lag 2	0.018	-0.153	0.189	0.418	13
		Lag 3	0.109	-0.023	0.241	0.052	14
	Lag 1	Lag 0	-0.060	-0.253	0.133	0.271	12
		Lag 1	-0.010	-0.159	0.138	0.446	13
		Lag 2	-0.071	-0.270	0.129	0.245	13
		Lag 3	0.060	-0.073	0.194	0.188	14
	Lag 2	Lag 0	0.018	-0.135	0.172	0.408	13
		Lag 1	-0.020	-0.157	0.117	0.387	17
		Lag 2	-0.011	-0.160	0.138	0.442	17
		Lag 3	0.057	-0.049	0.162	0.146	18
	Lag 3	Lag 0	0.026	-0.121	0.174	0.363	17
		Lag 1	0.026	-0.122	0.173	0.367	16
		Lag 2	0.101	0.006	0.195	**0.019**	17
		Lag 3	0.061	-0.040	0.162	0.119	16

	Respiratory	Lag 0	Lag 0	0.005	-0.115	0.126	0.465	18
			Lag 1	-0.030	-0.201	0.141	0.366	12
			Lag 2	0.027	-0.125	0.179	0.365	12
			Lag 3	-0.051	-0.212	0.109	0.266	11
		Lag 1	Lag 0	0.051	-0.056	0.159	0.174	17
			Lag 1	-0.018	-0.171	0.135	0.409	17
			Lag 2	0.006	-0.140	0.152	0.468	17
			Lag 3	0.007	-0.135	0.150	0.459	16
		Lag 2	Lag 0	0.100	0.006	0.195	**0.019**	24
			Lag 1	-0.015	-0.109	0.078	0.373	20
			Lag 2	0.011	-0.135	0.157	0.440	21
			Lag 3	0.052	-0.049	0.154	0.157	19
		Lag 3	Lag 0	0.077	-0.049	0.203	0.115	27
			Lag 1	-0.116	-0.294	0.062	0.100	13
			Lag 2	-0.181	-0.414	0.052	0.064	14
			Lag 3	0.088	-0.020	0.195	0.054	13
Asian	All-natural	Lag 0	Lag 0	0.005	0.000	0.010	**0.020**	5393
			Lag 1	0.007	0.002	0.012	**0.006**	4847
			Lag 2	-0.006	-0.015	0.002	0.065	4760
			Lag 3	-0.001	-0.009	0.006	0.378	4698
		Lag 1	Lag 0	0.008	0.004	0.013	**0.000**	5083
			Lag 1	0.009	0.004	0.013	**0.000**	5355
			Lag 2	0.002	-0.004	0.007	0.247	5348
			Lag 3	0.004	-0.004	0.012	0.151	5344
		Lag 2	Lag 0	0.011	0.006	0.016	**0.000**	4500
			Lag 1	0.006	0.002	0.010	**0.003**	5123
			Lag 2	0.003	-0.002	0.008	0.112	5147
			Lag 3	-0.001	-0.007	0.004	0.338	5187
		Lag 3	Lag 0	0.011	0.005	0.017	**0.000**	4487
			Lag 1	0.004	-0.001	0.009	0.056	4626
			Lag 2	0.002	-0.002	0.007	0.133	4690
			Lag 3	0.000	-0.005	0.005	0.481	4750
	Cardiovascular	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10

		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
Cerebrovascular	Lag 0	Lag 0	-0.028	-0.113	0.056	0.256	17
		Lag 1	-0.086	-0.206	0.033	0.079	19
		Lag 2	-0.117	-0.292	0.058	0.095	18
		Lag 3	-0.068	-0.222	0.085	0.192	20
	Lag 1	Lag 0	-0.045	-0.137	0.047	0.169	19
		Lag 1	-0.102	-0.211	0.008	**0.035**	26
		Lag 2	-0.024	-0.120	0.072	0.312	26
		Lag 3	-0.087	-0.242	0.068	0.135	28
	Lag 2	Lag 0	-0.045	-0.150	0.060	0.199	15
		Lag 1	-0.033	-0.089	0.022	0.120	29
		Lag 2	0.014	-0.051	0.078	0.341	27
		Lag 3	-0.008	-0.084	0.069	0.423	28
	Lag 3	Lag 0	-0.013	-0.114	0.088	0.400	20
		Lag 1	-0.002	-0.058	0.054	0.473	24
		Lag 2	0.055	0.005	0.105	**0.016**	24
		Lag 3	0.024	-0.038	0.087	0.223	24
Renal	Lag 0	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 1	Lag 0	0.013	-0.278	0.304	0.465	10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 2	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 3	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
Respiratory	Lag 0	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 1	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 2	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10

		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
Other Grouped Races	All-natural	Lag 0	Lag 0	0.004	-0.005	0.014	0.179	2542
			Lag 1	0.005	-0.006	0.016	0.184	2421
			Lag 2	0.009	-0.004	0.023	0.083	2395
			Lag 3	0.005	-0.007	0.017	0.210	2374
		Lag 1	Lag 0	0.007	-0.002	0.016	0.069	2522
			Lag 1	-0.004	-0.013	0.006	0.230	2602
			Lag 2	0.007	-0.003	0.018	0.080	2605
			Lag 3	0.002	-0.011	0.015	0.389	2598
		Lag 2	Lag 0	0.005	-0.006	0.015	0.191	2251
			Lag 1	-0.009	-0.018	0.001	**0.033**	2619
			Lag 2	0.002	-0.008	0.011	0.352	2642
			Lag 3	-0.003	-0.014	0.007	0.273	2654
		Lag 3	Lag 0	-0.003	-0.015	0.010	0.335	2271
			Lag 1	0.002	-0.008	0.012	0.344	2392
			Lag 2	0.001	-0.007	0.010	0.371	2426
			Lag 3	-0.009	-0.019	0.001	**0.039**	2461
	Cardiovascular	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Cerebrovascular	Lag 0	Lag 0	0.179	0.032	0.326	**0.009**	11
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	0.047	-0.090	0.183	0.252	11

			Lag 2	0.026	-0.247	0.300	0.425	10
			Lag 3	0.114	-0.085	0.314	0.131	11
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	0.036	-0.169	0.240	0.366	10
			Lag 2	0.066	-0.184	0.316	0.303	10
			Lag 3	0.154	-0.058	0.367	0.077	10
	Renal	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Respiratory	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
Higher Education (< 50% high school education or less)	All-natural	Lag 0	Lag 0	0.002	0.000	0.004	**0.020**	39608
			Lag 1	0.001	-0.001	0.004	0.155	35830
			Lag 2	-0.004	-0.008	-0.001	**0.005**	35466
			Lag 3	0.003	0.000	0.006	**0.036**	35132
		Lag 1	Lag 0	0.003	0.001	0.005	**0.003**	38335
			Lag 1	-0.001	-0.003	0.001	0.133	38928
			Lag 2	-0.003	-0.005	0.000	**0.011**	39031
			Lag 3	0.001	-0.002	0.004	0.196	39035

	Lag 2	Lag 0	0.004	0.001	0.006	**0.001**	34605
		Lag 1	-0.001	-0.003	0.001	0.135	38473
		Lag 2	-0.004	-0.006	-0.002	**0.000**	38704
		Lag 3	-0.002	-0.004	0.000	**0.043**	38828
	Lag 3	Lag 0	0.005	0.002	0.007	**0.000**	35172
		Lag 1	0.001	-0.001	0.003	0.201	35858
		Lag 2	-0.003	-0.005	-0.001	**0.000**	36299
		Lag 3	-0.001	-0.004	0.001	0.091	36669
Cardiovascular	Lag 0	Lag 0	0.014	-0.029	0.058	0.261	74
		Lag 1	0.008	-0.037	0.053	0.364	79
		Lag 2	0.006	-0.067	0.080	0.434	75
		Lag 3	-0.024	-0.098	0.049	0.258	74
	Lag 1	Lag 0	0.024	-0.020	0.068	0.142	67
		Lag 1	0.002	-0.040	0.044	0.460	76
		Lag 2	0.033	-0.018	0.084	0.100	74
		Lag 3	-0.014	-0.086	0.057	0.347	76
	Lag 2	Lag 0	0.037	-0.011	0.084	0.066	76
		Lag 1	-0.010	-0.046	0.026	0.290	83
		Lag 2	0.002	-0.043	0.048	0.458	81
		Lag 3	-0.010	-0.057	0.037	0.334	79
	Lag 3	Lag 0	0.043	-0.012	0.098	0.064	92
		Lag 1	0.000	-0.038	0.037	0.491	78
		Lag 2	0.001	-0.040	0.042	0.482	75
		Lag 3	0.006	-0.035	0.047	0.393	73
Cerebrovascular	Lag 0	Lag 0	0.009	-0.027	0.045	0.310	136
		Lag 1	-0.007	-0.046	0.031	0.354	120
		Lag 2	0.023	-0.033	0.080	0.208	121
		Lag 3	0.041	-0.010	0.092	0.056	122
	Lag 1	Lag 0	0.018	-0.018	0.053	0.164	143
		Lag 1	0.006	-0.025	0.037	0.346	152
		Lag 2	-0.001	-0.045	0.043	0.483	155
		Lag 3	0.004	-0.053	0.061	0.444	156
	Lag 2	Lag 0	0.026	-0.015	0.067	0.104	124
		Lag 1	0.009	-0.018	0.036	0.253	139
		Lag 2	-0.005	-0.041	0.030	0.386	140
		Lag 3	0.009	-0.029	0.048	0.321	144
	Lag 3	Lag 0	0.030	-0.015	0.076	0.096	124
		Lag 1	0.006	-0.027	0.038	0.367	115
		Lag 2	0.006	-0.022	0.034	0.330	116
		Lag 3	0.020	-0.011	0.052	0.099	115
Renal	Lag 0	Lag 0	0.035	-0.023	0.092	0.118	49
		Lag 1	0.021	-0.069	0.112	0.323	44
		Lag 2	0.030	-0.071	0.130	0.280	43
		Lag 3	0.057	-0.038	0.152	0.120	44
	Lag 1	Lag 0	0.036	-0.017	0.088	0.090	46
		Lag 1	0.032	-0.044	0.109	0.204	49

			Lag 2	-0.052	-0.158	0.054	0.169	50
			Lag 3	0.049	-0.037	0.136	0.131	52
		Lag 2	Lag 0	0.006	-0.063	0.075	0.433	31
			Lag 1	0.030	-0.054	0.114	0.244	38
			Lag 2	-0.018	-0.100	0.064	0.331	40
			Lag 3	0.021	-0.047	0.089	0.271	42
		Lag 3	Lag 0	-0.046	-0.143	0.051	0.175	34
			Lag 1	-0.019	-0.129	0.091	0.365	31
			Lag 2	-0.016	-0.086	0.053	0.321	34
			Lag 3	-0.001	-0.060	0.058	0.491	35
	Respiratory	Lag 0	Lag 0	0.037	-0.029	0.103	0.138	60
			Lag 1	0.044	-0.021	0.110	0.092	50
			Lag 2	-0.013	-0.111	0.085	0.396	50
			Lag 3	0.120	0.045	0.194	**0.001**	49
		Lag 1	Lag 0	0.009	-0.064	0.082	0.408	54
			Lag 1	0.042	-0.017	0.102	0.082	49
			Lag 2	0.000	-0.067	0.068	0.496	49
			Lag 3	0.104	0.026	0.182	**0.005**	48
		Lag 2	Lag 0	0.048	-0.017	0.113	0.074	58
			Lag 1	0.061	0.011	0.111	**0.009**	58
			Lag 2	-0.006	-0.073	0.061	0.433	61
			Lag 3	0.077	0.007	0.146	**0.016**	59
		Lag 3	Lag 0	0.022	-0.055	0.099	0.289	67
			Lag 1	0.026	-0.044	0.096	0.236	43
			Lag 2	-0.003	-0.070	0.064	0.461	49
			Lag 3	0.043	-0.019	0.104	0.089	49
Lower Education (> 50% high school education or less)	All-natural	Lag 0	Lag 0	0.000	-0.003	0.004	0.401	20355
			Lag 1	-0.002	-0.006	0.002	0.154	19057
			Lag 2	-0.002	-0.007	0.002	0.136	18846
			Lag 3	-0.003	-0.007	0.001	0.091	18633
		Lag 1	Lag 0	0.003	0.000	0.007	**0.019**	20223
			Lag 1	-0.002	-0.005	0.002	0.204	19850
			Lag 2	-0.003	-0.007	0.000	**0.035**	19900
			Lag 3	-0.001	-0.005	0.003	0.307	19914
		Lag 2	Lag 0	0.003	0.000	0.006	**0.029**	18139
			Lag 1	-0.003	-0.006	0.000	**0.040**	19791
			Lag 2	-0.007	-0.011	-0.003	**0.000**	19872
			Lag 3	-0.002	-0.006	0.002	0.141	19926
		Lag 3	Lag 0	0.004	0.000	0.008	**0.018**	18980
			Lag 1	0.003	0.000	0.006	**0.042**	18189
			Lag 2	-0.006	-0.010	-0.003	**0.000**	18337
			Lag 3	0.000	-0.004	0.003	0.442	18468
	Cardiovascular	Lag 0	Lag 0	0.016	-0.068	0.099	0.357	37
			Lag 1	0.035	-0.046	0.116	0.199	36
			Lag 2	0.017	-0.081	0.115	0.367	35
			Lag 3	-0.057	-0.166	0.053	0.156	33

	Lag 1	Lag 0	0.019	-0.054	0.092	0.307	44
		Lag 1	0.030	-0.047	0.108	0.223	39
		Lag 2	0.016	-0.062	0.094	0.343	38
		Lag 3	0.003	-0.084	0.090	0.472	35
	Lag 2	Lag 0	0.079	0.007	0.151	**0.016**	37
		Lag 1	-0.023	-0.112	0.066	0.304	42
		Lag 2	-0.037	-0.132	0.059	0.226	40
		Lag 3	-0.031	-0.126	0.064	0.261	38
	Lag 3	Lag 0	0.090	0.004	0.176	**0.020**	40
		Lag 1	-0.008	-0.074	0.059	0.410	34
		Lag 2	-0.132	-0.261	-0.002	**0.023**	32
		Lag 3	-0.030	-0.133	0.073	0.281	31
Cerebrovascular	Lag 0	Lag 0	-0.046	-0.133	0.041	0.149	47
		Lag 1	0.019	-0.047	0.085	0.287	59
		Lag 2	-0.003	-0.084	0.078	0.472	60
		Lag 3	-0.009	-0.101	0.082	0.420	62
	Lag 1	Lag 0	-0.019	-0.095	0.057	0.310	51
		Lag 1	0.004	-0.070	0.079	0.456	57
		Lag 2	0.010	-0.063	0.083	0.394	60
		Lag 3	0.017	-0.056	0.090	0.321	62
	Lag 2	Lag 0	-0.053	-0.147	0.042	0.138	36
		Lag 1	0.011	-0.052	0.073	0.370	65
		Lag 2	-0.014	-0.083	0.055	0.344	67
		Lag 3	0.033	-0.030	0.097	0.153	66
	Lag 3	Lag 0	0.023	-0.054	0.100	0.282	49
		Lag 1	0.029	-0.022	0.080	0.135	63
		Lag 2	0.040	-0.024	0.104	0.112	65
		Lag 3	0.019	-0.048	0.086	0.290	65
Renal	Lag 0	Lag 0	0.010	-0.096	0.115	0.429	22
		Lag 1	-0.069	-0.192	0.055	0.138	20
		Lag 2	0.045	-0.058	0.149	0.195	19
		Lag 3	0.057	-0.120	0.235	0.264	19
	Lag 1	Lag 0	0.025	-0.082	0.132	0.323	20
		Lag 1	-0.113	-0.262	0.035	0.067	18
		Lag 2	0.009	-0.118	0.136	0.447	20
		Lag 3	0.099	-0.036	0.233	0.076	20
	Lag 2	Lag 0	-0.028	-0.165	0.109	0.345	19
		Lag 1	-0.078	-0.218	0.063	0.139	20
		Lag 2	0.056	-0.055	0.167	0.160	21
		Lag 3	0.134	0.030	0.238	**0.006**	23
	Lag 3	Lag 0	-0.064	-0.244	0.115	0.242	22
		Lag 1	-0.040	-0.198	0.117	0.308	26
		Lag 2	0.060	-0.041	0.162	0.121	27
		Lag 3	0.069	-0.026	0.165	0.078	25
Respiratory	Lag 0	Lag 0	-0.071	-0.215	0.073	0.168	25
		Lag 1	0.006	-0.106	0.119	0.455	25

			Lag 2	0.020	-0.078	0.118	0.345	26
			Lag 3	0.030	-0.062	0.122	0.263	25
		Lag 1	Lag 0	-0.036	-0.162	0.089	0.286	24
			Lag 1	0.027	-0.067	0.120	0.289	31
			Lag 2	-0.028	-0.132	0.076	0.300	32
			Lag 3	0.047	-0.048	0.143	0.167	31
		Lag 2	Lag 0	0.065	-0.012	0.142	**0.048**	38
			Lag 1	0.002	-0.065	0.069	0.476	32
			Lag 2	-0.001	-0.093	0.090	0.490	34
			Lag 3	-0.020	-0.128	0.088	0.358	32
		Lag 3	Lag 0	-0.032	-0.147	0.082	0.290	32
			Lag 1	0.015	-0.023	0.054	0.215	21
			Lag 2	-0.053	-0.166	0.059	0.176	23
			Lag 3	0.004	-0.092	0.100	0.465	21
Lesser poverty (<25% households living under poverty)	All-natural	Lag 0	Lag 0	0.002	0.000	0.004	**0.039**	47779
			Lag 1	0.001	-0.001	0.003	0.206	42041
			Lag 2	-0.005	-0.008	-0.002	**0.001**	41560
			Lag 3	0.002	0.000	0.005	0.052	41129
		Lag 1	Lag 0	0.003	0.001	0.005	**0.002**	46248
			Lag 1	-0.001	-0.003	0.001	0.162	46782
			Lag 2	-0.003	-0.005	0.000	**0.013**	46844
			Lag 3	0.001	-0.002	0.004	0.314	46798
		Lag 2	Lag 0	0.004	0.002	0.006	**0.000**	41676
			Lag 1	-0.002	-0.003	0.000	0.050	46270
			Lag 2	-0.005	-0.007	-0.002	**0.000**	46530
			Lag 3	-0.003	-0.005	-0.001	**0.005**	46651
		Lag 3	Lag 0	0.005	0.002	0.007	**0.000**	42465
			Lag 1	0.002	0.000	0.004	**0.046**	42950
			Lag 2	-0.004	-0.006	-0.002	**0.000**	43445
			Lag 3	-0.001	-0.003	0.001	0.077	43860
	Cardiovascular	Lag 0	Lag 0	0.001	-0.044	0.045	0.487	81
			Lag 1	0.015	-0.026	0.056	0.238	91
			Lag 2	-0.001	-0.070	0.067	0.483	86
			Lag 3	-0.033	-0.101	0.035	0.172	84
		Lag 1	Lag 0	0.018	-0.025	0.061	0.209	84
			Lag 1	0.005	-0.035	0.045	0.405	90
			Lag 2	0.025	-0.023	0.073	0.158	89
			Lag 3	-0.023	-0.095	0.048	0.263	90
		Lag 2	Lag 0	0.047	0.002	0.092	**0.019**	86
			Lag 1	-0.016	-0.055	0.022	0.201	102
			Lag 2	-0.015	-0.063	0.033	0.275	99
			Lag 3	-0.030	-0.084	0.025	0.143	95
		Lag 3	Lag 0	0.057	0.005	0.110	**0.016**	104
			Lag 1	-0.001	-0.038	0.036	0.479	91
			Lag 2	-0.020	-0.065	0.026	0.202	85
			Lag 3	-0.010	-0.055	0.035	0.331	82

Cerebrovascular	Lag 0	Lag 0	0.010	-0.025	0.046	0.290	154
		Lag 1	0.007	-0.028	0.041	0.349	149
		Lag 2	0.019	-0.035	0.072	0.247	150
		Lag 3	0.034	-0.015	0.084	0.086	153
	Lag 1	Lag 0	0.023	-0.011	0.057	0.096	166
		Lag 1	0.008	-0.022	0.039	0.299	176
		Lag 2	0.004	-0.038	0.045	0.433	180
		Lag 3	-0.008	-0.063	0.048	0.395	183
	Lag 2	Lag 0	0.015	-0.025	0.056	0.232	136
		Lag 1	0.009	-0.018	0.035	0.259	166
		Lag 2	-0.003	-0.037	0.031	0.430	169
		Lag 3	0.020	-0.016	0.055	0.140	175
	Lag 3	Lag 0	0.034	-0.009	0.077	0.061	148
		Lag 1	0.008	-0.023	0.040	0.300	147
		Lag 2	0.015	-0.012	0.041	0.137	149
		Lag 3	0.027	-0.002	0.057	**0.034**	151
Renal	Lag 0	Lag 0	0.006	-0.059	0.071	0.425	54
		Lag 1	-0.019	-0.110	0.073	0.344	45
		Lag 2	0.002	-0.097	0.101	0.486	43
		Lag 3	0.052	-0.047	0.150	0.152	43
	Lag 1	Lag 0	0.029	-0.030	0.087	0.168	50
		Lag 1	-0.005	-0.080	0.070	0.446	51
		Lag 2	-0.090	-0.212	0.032	0.073	52
		Lag 3	0.062	-0.023	0.147	0.075	53
	Lag 2	Lag 0	0.000	-0.075	0.076	0.496	41
		Lag 1	0.015	-0.060	0.090	0.345	47
		Lag 2	-0.012	-0.093	0.070	0.390	48
		Lag 3	0.032	-0.033	0.097	0.167	50
	Lag 3	Lag 0	-0.018	-0.106	0.069	0.339	49
		Lag 1	-0.016	-0.112	0.080	0.371	45
		Lag 2	0.017	-0.042	0.076	0.287	49
		Lag 3	0.001	-0.055	0.058	0.481	48
Respiratory	Lag 0	Lag 0	0.023	-0.048	0.095	0.260	65
		Lag 1	0.032	-0.030	0.094	0.154	59
		Lag 2	-0.004	-0.083	0.076	0.465	58
		Lag 3	0.095	0.025	0.165	**0.004**	57
	Lag 1	Lag 0	0.026	-0.046	0.097	0.241	63
		Lag 1	0.023	-0.036	0.082	0.218	62
		Lag 2	-0.003	-0.067	0.061	0.465	60
		Lag 3	0.072	-0.001	0.145	**0.027**	59
	Lag 2	Lag 0	0.067	0.009	0.126	**0.012**	75
		Lag 1	0.048	0.003	0.094	**0.019**	72
		Lag 2	-0.002	-0.063	0.058	0.469	74
		Lag 3	0.047	-0.023	0.118	0.095	71
	Lag 3	Lag 0	0.013	-0.061	0.087	0.362	79
		Lag 1	0.019	-0.017	0.055	0.152	50

			Lag 2	-0.008	-0.074	0.058	0.401	56
			Lag 3	0.030	-0.030	0.090	0.164	55
Higher poverty (>25% households living under poverty)	All-natural	Lag 0	Lag 0	0.001	-0.003	0.006	0.242	12242
			Lag 1	-0.002	-0.006	0.002	0.194	12892
			Lag 2	-0.001	-0.006	0.004	0.378	12774
			Lag 3	-0.003	-0.007	0.002	0.101	12649
		Lag 1	Lag 0	0.004	0.000	0.008	**0.022**	12365
			Lag 1	-0.002	-0.007	0.002	0.140	12039
			Lag 2	-0.004	-0.008	0.000	**0.027**	12118
			Lag 3	0.000	-0.005	0.005	0.475	12171
		Lag 2	Lag 0	0.003	-0.001	0.007	0.051	11139
			Lag 1	-0.002	-0.005	0.002	0.192	12052
			Lag 2	-0.007	-0.011	-0.003	**0.001**	12086
			Lag 3	0.001	-0.003	0.005	0.362	12126
		Lag 3	Lag 0	0.005	0.000	0.009	**0.022**	11756
			Lag 1	0.001	-0.003	0.005	0.342	11158
			Lag 2	-0.005	-0.009	-0.002	**0.002**	11241
			Lag 3	0.000	-0.004	0.004	0.445	11306
	Cardiovascular	Lag 0	Lag 0	0.072	-0.011	0.156	**0.045**	30
			Lag 1	0.005	-0.112	0.122	0.468	24
			Lag 2	0.049	-0.066	0.165	0.202	24
			Lag 3	-0.045	-0.181	0.092	0.262	23
		Lag 1	Lag 0	0.045	-0.032	0.122	0.126	27
			Lag 1	0.024	-0.071	0.118	0.311	25
			Lag 2	0.044	-0.047	0.135	0.173	23
			Lag 3	0.020	-0.067	0.107	0.328	21
		Lag 2	Lag 0	0.058	-0.025	0.141	0.084	27
			Lag 1	0.002	-0.070	0.074	0.480	24
			Lag 2	0.023	-0.056	0.102	0.285	23
			Lag 3	0.018	-0.055	0.090	0.315	23
		Lag 3	Lag 0	0.050	-0.056	0.155	0.178	28
			Lag 1	-0.015	-0.087	0.057	0.342	21
			Lag 2	-0.023	-0.111	0.065	0.302	22
			Lag 3	0.032	-0.048	0.112	0.219	22
	Cerebrovascular	Lag 0	Lag 0	-0.058	-0.154	0.039	0.121	29
			Lag 1	-0.055	-0.152	0.043	0.135	30
			Lag 2	0.001	-0.091	0.094	0.488	31
			Lag 3	-0.003	-0.105	0.099	0.477	31
		Lag 1	Lag 0	-0.061	-0.163	0.041	0.120	28
			Lag 1	-0.006	-0.086	0.074	0.441	33
			Lag 2	-0.006	-0.092	0.080	0.443	35
			Lag 3	0.042	-0.036	0.119	0.146	35
		Lag 2	Lag 0	-0.013	-0.105	0.079	0.392	24
			Lag 1	0.019	-0.046	0.083	0.284	38
			Lag 2	-0.022	-0.101	0.057	0.293	38
			Lag 3	-0.004	-0.087	0.078	0.458	35

		Lag 3	Lag 0	0.005	-0.094	0.104	0.461	25
			Lag 1	0.027	-0.030	0.083	0.177	31
			Lag 2	-0.025	-0.109	0.058	0.276	33
			Lag 3	-0.041	-0.134	0.053	0.198	29
	Renal	Lag 0	Lag 0	0.052	-0.030	0.135	0.106	17
			Lag 1	-0.029	-0.145	0.088	0.316	19
			Lag 2	0.093	-0.019	0.205	0.051	19
			Lag 3	0.073	-0.087	0.233	0.186	20
		Lag 1	Lag 0	0.038	-0.042	0.118	0.174	16
			Lag 1	-0.060	-0.208	0.087	0.212	16
			Lag 2	0.049	-0.064	0.162	0.197	18
			Lag 3	0.060	-0.081	0.202	0.202	19
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-0.138	-0.384	0.107	0.134	11
			Lag 2	0.036	-0.073	0.144	0.260	13
			Lag 3	0.110	-0.001	0.220	**0.026**	15
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-0.105	-0.380	0.171	0.228	12
			Lag 2	-0.066	-0.222	0.090	0.203	12
			Lag 3	0.080	-0.030	0.190	0.078	12
	Respiratory	Lag 0	Lag 0	-0.024	-0.146	0.097	0.348	20
			Lag 1	0.059	-0.077	0.195	0.198	17
			Lag 2	0.013	-0.127	0.153	0.426	18
			Lag 3	0.053	-0.048	0.153	0.151	17
		Lag 1	Lag 0	-0.095	-0.248	0.058	0.113	15
			Lag 1	0.100	0.000	0.200	**0.025**	19
			Lag 2	-0.034	-0.160	0.092	0.297	21
			Lag 3	0.097	-0.009	0.204	**0.037**	20
		Lag 2	Lag 0	0.028	-0.065	0.120	0.279	21
			Lag 1	0.031	-0.043	0.105	0.208	19
			Lag 2	-0.012	-0.130	0.107	0.422	21
			Lag 3	0.037	-0.061	0.135	0.228	20
		Lag 3	Lag 0	-0.026	-0.154	0.102	0.345	20
			Lag 1	-0.004	-0.100	0.091	0.467	15
			Lag 2	-0.050	-0.174	0.073	0.212	16
			Lag 3	0.031	-0.074	0.137	0.281	15
Majority Rural (>50%)	All-natural	Lag 0	Lag 0	0.002	-0.012	0.017	0.371	1672
			Lag 1	-0.039	-0.064	-0.015	**0.001**	1332
			Lag 2	-0.028	-0.052	-0.005	**0.010**	1171
			Lag 3	-0.017	-0.048	0.015	0.149	1065
		Lag 1	Lag 0	0.005	-0.008	0.019	0.222	1747
			Lag 1	-0.025	-0.042	-0.009	**0.001**	1522
			Lag 2	-0.028	-0.050	-0.005	**0.008**	1436
			Lag 3	-0.050	-0.079	-0.021	**0.000**	1322
		Lag 2	Lag 0	0.001	-0.009	0.011	0.446	1659
			Lag 1	-0.020	-0.035	-0.006	**0.003**	1709

		Lag 2	-0.023	-0.040	-0.006	**0.004**	1635
		Lag 3	-0.043	-0.069	-0.017	**0.001**	1546
	Lag 3	Lag 0	0.006	-0.004	0.015	0.127	1756
		Lag 1	0.002	-0.007	0.012	0.321	1701
		Lag 2	-0.007	-0.021	0.007	0.178	1690
		Lag 3	-0.011	-0.027	0.005	0.095	1627
Cardiovascular	Lag 0	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 1	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 2	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 3	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
Cerebrovascular	Lag 0	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 1	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 2	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 3	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
Renal	Lag 0	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 1	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10

		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Respiratory	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
Majority Urban	All-natural	Lag 0	Lag 0	0.002	0.000	0.004	**0.033**	58356
			Lag 1	0.001	-0.001	0.003	0.272	53603
			Lag 2	-0.003	-0.006	-0.001	**0.007**	53164
			Lag 3	0.001	-0.001	0.003	0.213	52713
		Lag 1	Lag 0	0.003	0.001	0.005	**0.000**	56873
			Lag 1	-0.001	-0.003	0.001	0.153	57302
			Lag 2	-0.003	-0.005	-0.001	**0.004**	57528
			Lag 3	0.001	-0.002	0.003	0.231	57647
		Lag 2	Lag 0	0.004	0.002	0.006	**0.000**	51162
			Lag 1	-0.001	-0.003	0.000	0.062	56619
			Lag 2	-0.005	-0.007	-0.003	**0.000**	56983
			Lag 3	-0.002	-0.004	0.000	**0.038**	57233
		Lag 3	Lag 0	0.004	0.002	0.007	**0.000**	52470
			Lag 1	0.002	0.000	0.003	0.052	52411
			Lag 2	-0.004	-0.006	-0.002	**0.000**	52999
			Lag 3	-0.001	-0.003	0.001	0.143	53541
	Cardiovascular	Lag 0	Lag 0	0.016	-0.023	0.054	0.215	109
			Lag 1	0.017	-0.022	0.055	0.194	115
			Lag 2	0.016	-0.043	0.074	0.299	110
			Lag 3	-0.030	-0.091	0.030	0.161	107
		Lag 1	Lag 0	0.024	-0.014	0.061	0.108	109
			Lag 1	0.011	-0.025	0.047	0.276	113

		Lag 2	0.029	-0.014	0.071	0.091	111
		Lag 3	-0.006	-0.061	0.049	0.420	110
	Lag 2	Lag 0	0.050	0.010	0.090	**0.007**	111
		Lag 1	-0.012	-0.045	0.022	0.245	121
		Lag 2	-0.008	-0.049	0.034	0.355	117
		Lag 3	-0.014	-0.056	0.028	0.261	113
	Lag 3	Lag 0	0.058	0.011	0.105	**0.008**	128
		Lag 1	-0.006	-0.042	0.029	0.359	107
		Lag 2	-0.018	-0.059	0.022	0.187	105
		Lag 3	-0.006	-0.047	0.034	0.378	102
Cerebrovascular	Lag 0	Lag 0	-0.002	-0.035	0.032	0.463	176
		Lag 1	-0.002	-0.036	0.031	0.446	174
		Lag 2	0.016	-0.030	0.063	0.243	176
		Lag 3	0.027	-0.018	0.071	0.122	180
	Lag 1	Lag 0	0.010	-0.023	0.042	0.276	187
		Lag 1	0.005	-0.024	0.034	0.370	202
		Lag 2	0.005	-0.032	0.042	0.392	209
		Lag 3	0.012	-0.033	0.057	0.302	214
	Lag 2	Lag 0	0.011	-0.026	0.048	0.283	154
		Lag 1	0.011	-0.014	0.035	0.200	199
		Lag 2	-0.006	-0.038	0.026	0.352	199
		Lag 3	0.017	-0.016	0.050	0.153	204
	Lag 3	Lag 0	0.028	-0.012	0.068	0.084	166
		Lag 1	0.010	-0.017	0.038	0.228	173
		Lag 2	0.009	-0.016	0.034	0.237	174
		Lag 3	0.020	-0.008	0.048	0.081	175
Renal	Lag 0	Lag 0	0.029	-0.022	0.080	0.136	67
		Lag 1	-0.022	-0.094	0.050	0.278	62
		Lag 2	0.027	-0.053	0.107	0.251	61
		Lag 3	0.066	-0.018	0.150	0.063	62
	Lag 1	Lag 0	0.034	-0.014	0.081	0.081	64
		Lag 1	-0.012	-0.078	0.054	0.363	66
		Lag 2	-0.020	-0.099	0.060	0.315	70
		Lag 3	0.069	-0.004	0.143	**0.031**	72
	Lag 2	Lag 0	-0.004	-0.066	0.059	0.455	49
		Lag 1	-0.006	-0.074	0.062	0.427	57
		Lag 2	0.007	-0.058	0.072	0.422	61
		Lag 3	0.052	-0.003	0.108	**0.032**	64
	Lag 3	Lag 0	-0.053	-0.139	0.034	0.116	54
		Lag 1	-0.025	-0.115	0.064	0.288	56
		Lag 2	0.007	-0.048	0.062	0.400	60
		Lag 3	0.017	-0.032	0.066	0.251	59
Respiratory	Lag 0	Lag 0	0.013	-0.048	0.074	0.343	83
		Lag 1	0.034	-0.023	0.091	0.123	73
		Lag 2	0.014	-0.054	0.083	0.341	75
		Lag 3	0.078	0.020	0.135	**0.004**	73

		Lag 1	Lag 0	-0.004	-0.067	0.060	0.454	77
			Lag 1	0.041	-0.009	0.092	0.055	78
			Lag 2	-0.001	-0.057	0.055	0.487	79
			Lag 3	0.080	0.019	0.140	**0.005**	78
		Lag 2	Lag 0	0.056	0.007	0.106	**0.013**	96
			Lag 1	0.039	0.002	0.076	**0.019**	89
			Lag 2	0.002	-0.051	0.056	0.464	94
			Lag 3	0.041	-0.017	0.098	0.082	91
		Lag 3	Lag 0	0.007	-0.056	0.071	0.412	99
			Lag 1	-0.017	-0.076	0.042	0.289	60
			Lag 2	-0.013	-0.071	0.045	0.332	69
			Lag 3	0.032	-0.020	0.084	0.112	69

Table S.6 Stratified results for multiplicative odds ratio with upper and lower limits (UL and LL, respectively) for 95% confidence intervals (CIs) and p-values (bolded indicates significant $p < 0.05$) for the joint effects of wildfire smoke and extreme heat. Subgroups of individual and community level factors were tested in stratified models. Separate models were run for combinations of lag 0-3 and each outcome of interest: all-natural cause, cardiovascular, cerebrovascular, renal, and respiratory morbidity. Results with fewer than 10 exposed cases are suppressed.

Subgroup	OOI	Extreme Heat	Wildfire Smoke	Estimate	CI LL	CI UL	P-value	Exposed Case Count
Male	All-natural	Lag 0	Lag 0	1.003	1.000	1.006	0.056	26016
			Lag 1	1.000	0.997	1.003	0.882	23718
			Lag 2	0.999	0.995	1.003	0.633	23468
			Lag 3	1.002	0.998	1.006	0.263	23296
		Lag 1	Lag 0	1.005	1.002	1.007	**0.000**	25713
			Lag 1	0.998	0.996	1.001	0.243	25405
			Lag 2	0.999	0.996	1.002	0.395	25439
			Lag 3	1.002	0.998	1.006	0.248	25484
		Lag 2	Lag 0	1.006	1.003	1.009	**0.000**	23047
			Lag 1	0.998	0.996	1.001	0.175	25442
			Lag 2	0.997	0.994	1.000	**0.027**	25563
			Lag 3	0.999	0.996	1.002	0.465	25702
		Lag 3	Lag 0	1.007	1.004	1.011	**0.000**	23314
			Lag 1	1.002	0.999	1.005	0.188	23420
			Lag 2	0.996	0.994	0.999	**0.003**	23683
			Lag 3	1.000	0.997	1.002	0.758	23935
	Cardiovascular	Lag 0	Lag 0	0.995	0.945	1.048	0.864	55
			Lag 1	1.031	0.982	1.083	0.215	63
			Lag 2	1.006	0.927	1.092	0.886	59
			Lag 3	0.989	0.925	1.057	0.739	56
		Lag 1	Lag 0	1.005	0.951	1.061	0.868	57
			Lag 1	1.025	0.978	1.074	0.300	62
			Lag 2	1.041	0.981	1.106	0.183	59
			Lag 3	0.972	0.903	1.045	0.439	58
		Lag 2	Lag 0	1.017	0.954	1.084	0.615	58
			Lag 1	1.014	0.973	1.056	0.519	71
			Lag 2	1.002	0.948	1.059	0.948	67
			Lag 3	0.994	0.943	1.047	0.822	63
		Lag 3	Lag 0	1.016	0.944	1.092	0.675	69
			Lag 1	1.018	0.977	1.060	0.394	60
			Lag 2	0.974	0.922	1.028	0.334	54
			Lag 3	1.020	0.973	1.070	0.403	51
	Cerebrovascular	Lag 0	Lag 0	0.987	0.940	1.036	0.607	94
			Lag 1	0.981	0.928	1.037	0.494	92
			Lag 2	1.049	0.984	1.118	0.140	91
			Lag 3	1.011	0.946	1.080	0.744	93

		Lag 1	Lag 0	1.001	0.955	1.049	0.965	99
			Lag 1	0.993	0.948	1.040	0.758	99
			Lag 2	0.985	0.933	1.041	0.595	99
			Lag 3	0.984	0.921	1.052	0.636	101
		Lag 2	Lag 0	0.963	0.901	1.028	0.259	75
			Lag 1	1.004	0.968	1.042	0.815	106
			Lag 2	0.995	0.957	1.035	0.807	105
			Lag 3	0.991	0.945	1.038	0.698	108
		Lag 3	Lag 0	0.998	0.943	1.056	0.941	87
			Lag 1	1.012	0.975	1.050	0.537	102
			Lag 2	1.019	0.989	1.050	0.210	103
			Lag 3	1.006	0.968	1.046	0.748	104
	Renal	Lag 0	Lag 0	1.031	0.957	1.111	0.415	32
			Lag 1	0.981	0.888	1.084	0.707	36
			Lag 2	1.064	0.963	1.175	0.222	34
			Lag 3	1.000	0.861	1.161	0.997	34
		Lag 1	Lag 0	1.037	0.960	1.121	0.357	28
			Lag 1	0.976	0.886	1.074	0.617	36
			Lag 2	0.955	0.846	1.079	0.461	36
			Lag 3	1.084	0.967	1.215	0.164	36
		Lag 2	Lag 0	0.989	0.901	1.084	0.810	17
			Lag 1	0.961	0.867	1.065	0.448	26
			Lag 2	0.979	0.890	1.077	0.666	27
			Lag 3	1.028	0.942	1.122	0.538	27
		Lag 3	Lag 0	0.890	0.775	1.023	0.102	23
			Lag 1	0.964	0.843	1.101	0.586	28
			Lag 2	1.014	0.919	1.120	0.775	29
			Lag 3	1.028	0.944	1.119	0.531	28
	Respiratory	Lag 0	Lag 0	1.047	0.951	1.152	0.348	39
			Lag 1	1.096	1.010	1.190	**0.028**	40
			Lag 2	1.064	0.969	1.168	0.192	40
			Lag 3	1.193	1.079	1.320	**0.001**	39
		Lag 1	Lag 0	0.958	0.855	1.074	0.461	29
			Lag 1	1.064	0.987	1.146	0.105	43
			Lag 2	1.007	0.939	1.080	0.846	43
			Lag 3	1.143	1.034	1.264	**0.009**	42
		Lag 2	Lag 0	1.084	0.999	1.176	0.054	42
			Lag 1	1.034	0.974	1.098	0.274	43
			Lag 2	1.002	0.933	1.076	0.957	46
			Lag 3	1.057	0.962	1.160	0.248	44
		Lag 3	Lag 0	1.037	0.946	1.137	0.437	43
			Lag 1	1.018	0.980	1.058	0.361	30
			Lag 2	0.968	0.881	1.063	0.495	33
			Lag 3	1.029	0.927	1.142	0.594	31

Female	All-natural	Lag 0	Lag 0	1.001	0.999	1.004	0.406	34010
			Lag 1	1.001	0.998	1.004	0.576	31215
			Lag 2	0.994	0.991	0.998	**0.001**	30865
			Lag 3	1.000	0.997	1.003	0.976	30480
		Lag 1	Lag 0	1.002	0.999	1.004	0.196	32905
			Lag 1	0.999	0.997	1.001	0.412	33417
			Lag 2	0.996	0.993	0.998	**0.002**	33523
			Lag 3	0.999	0.996	1.003	0.637	33483
		Lag 2	Lag 0	1.002	0.999	1.004	0.176	29774
			Lag 1	0.999	0.996	1.001	0.199	32884
			Lag 2	0.994	0.991	0.996	**0.000**	33052
			Lag 3	0.997	0.995	1.000	**0.042**	33075
		Lag 3	Lag 0	1.002	0.999	1.005	0.107	30912
			Lag 1	1.001	0.999	1.004	0.277	30692
			Lag 2	0.996	0.994	0.998	**0.000**	31006
			Lag 3	0.998	0.996	1.001	0.193	31233
	Cardiovascular	Lag 0	Lag 0	1.044	0.982	1.111	0.170	56
			Lag 1	0.986	0.917	1.061	0.712	52
			Lag 2	1.019	0.935	1.111	0.666	51
			Lag 3	0.911	0.809	1.025	0.121	51
		Lag 1	Lag 0	1.046	0.989	1.107	0.112	54
			Lag 1	0.987	0.926	1.052	0.678	53
			Lag 2	1.018	0.954	1.087	0.582	53
			Lag 3	1.031	0.947	1.122	0.486	53
		Lag 2	Lag 0	1.084	1.022	1.149	**0.007**	55
			Lag 1	0.955	0.894	1.020	0.171	55
			Lag 2	0.989	0.931	1.051	0.728	55
			Lag 3	0.978	0.911	1.050	0.533	55
		Lag 3	Lag 0	1.109	1.027	1.197	**0.008**	63
			Lag 1	0.970	0.909	1.034	0.351	52
			Lag 2	0.991	0.933	1.053	0.779	53
			Lag 3	0.968	0.901	1.041	0.386	53
	Cerebrovascular	Lag 0	Lag 0	1.011	0.965	1.059	0.639	89
			Lag 1	1.010	0.969	1.053	0.633	87
			Lag 2	0.980	0.913	1.052	0.576	90
			Lag 3	1.046	0.982	1.115	0.159	91
		Lag 1	Lag 0	1.019	0.974	1.067	0.414	95
			Lag 1	1.016	0.979	1.054	0.412	110
			Lag 2	1.020	0.967	1.075	0.469	116
			Lag 3	1.035	0.972	1.102	0.284	117
		Lag 2	Lag 0	1.041	0.993	1.091	0.094	85
			Lag 1	1.015	0.981	1.050	0.394	98
			Lag 2	0.989	0.938	1.042	0.673	102
			Lag 3	1.047	0.997	1.101	0.067	102

		Lag 3	Lag 0	1.071	1.009	1.137	**0.025**	86
			Lag 1	1.011	0.970	1.054	0.602	76
			Lag 2	0.985	0.937	1.036	0.564	79
			Lag 3	1.038	0.994	1.085	0.094	76
	Renal	Lag 0	Lag 0	1.029	0.955	1.108	0.456	39
			Lag 1	0.983	0.891	1.085	0.740	28
			Lag 2	1.001	0.888	1.128	0.988	28
			Lag 3	1.103	0.987	1.234	0.085	29
		Lag 1	Lag 0	1.035	0.970	1.104	0.298	38
			Lag 1	0.993	0.906	1.088	0.877	31
			Lag 2	0.981	0.884	1.089	0.719	34
			Lag 3	1.051	0.945	1.169	0.361	36
		Lag 2	Lag 0	1.014	0.925	1.112	0.761	33
			Lag 1	1.019	0.925	1.123	0.705	32
			Lag 2	1.024	0.936	1.120	0.611	34
			Lag 3	1.073	0.992	1.161	0.080	38
		Lag 3	Lag 0	1.000	0.902	1.108	0.999	33
			Lag 1	0.980	0.872	1.102	0.735	29
			Lag 2	1.003	0.936	1.075	0.934	32
			Lag 3	1.014	0.952	1.081	0.664	32
	Respiratory	Lag 0	Lag 0	1.009	0.926	1.099	0.838	46
			Lag 1	0.981	0.894	1.076	0.683	36
			Lag 2	0.938	0.843	1.042	0.232	36
			Lag 3	1.024	0.941	1.114	0.586	35
		Lag 1	Lag 0	1.039	0.960	1.123	0.343	49
			Lag 1	1.022	0.949	1.100	0.571	38
			Lag 2	0.967	0.881	1.060	0.473	38
			Lag 3	1.049	0.961	1.145	0.283	37
		Lag 2	Lag 0	1.069	0.994	1.149	0.071	54
			Lag 1	1.046	0.994	1.101	0.083	48
			Lag 2	0.989	0.911	1.074	0.792	49
			Lag 3	1.037	0.959	1.121	0.360	47
		Lag 3	Lag 0	0.995	0.906	1.092	0.913	56
			Lag 1	1.008	0.944	1.077	0.803	35
			Lag 2	0.988	0.919	1.062	0.744	39
			Lag 3	1.036	0.972	1.104	0.273	39
Age 18-49 year	All-natural	Lag 0	Lag 0	1.001	0.998	1.004	0.468	21442
			Lag 1	0.998	0.994	1.002	0.263	19677
			Lag 2	0.992	0.988	0.997	**0.000**	19427
			Lag 3	1.000	0.995	1.004	0.855	19164
		Lag 1	Lag 0	1.001	0.998	1.004	0.349	20621
			Lag 1	0.996	0.993	0.999	**0.008**	20970
			Lag 2	0.992	0.988	0.995	**0.000**	21004
			Lag 3	1.000	0.996	1.004	0.947	20948

	Lag 2	Lag 0	1.002	0.999	1.005	0.207	18757
		Lag 1	0.998	0.995	1.001	0.138	20318
		Lag 2	0.991	0.988	0.994	**0.000**	20397
		Lag 3	1.000	0.997	1.004	0.829	20392
	Lag 3	Lag 0	1.002	0.998	1.006	0.292	19793
		Lag 1	1.003	1.000	1.006	0.091	19032
		Lag 2	0.993	0.990	0.996	**0.000**	19163
		Lag 3	1.000	0.997	1.003	0.975	19285
Cardiovascular	Lag 0	Lag 0	0.945	0.817	1.092	0.440	14
		Lag 1	0.858	0.684	1.076	0.186	11
		Lag 2	0.915	0.754	1.110	0.369	10
		Lag 3	0.879	0.714	1.084	0.228	10
	Lag 1	Lag 0	0.970	0.868	1.083	0.589	17
		Lag 1	0.968	0.870	1.077	0.549	14
		Lag 2	0.921	0.787	1.077	0.304	13
		Lag 3	0.885	0.737	1.063	0.192	14
	Lag 2	Lag 0	0.984	0.882	1.098	0.773	18
		Lag 1	0.964	0.883	1.053	0.416	16
		Lag 2	0.934	0.800	1.090	0.386	17
		Lag 3	0.860	0.705	1.049	0.137	17
	Lag 3	Lag 0	0.975	0.838	1.134	0.740	16
		Lag 1	0.950	0.854	1.057	0.348	13
		Lag 2	0.921	0.796	1.067	0.274	13
		Lag 3	0.949	0.834	1.080	0.429	14
Cerebrovascular	Lag 0	Lag 0	1.045	0.953	1.145	0.351	16
		Lag 1	1.038	0.928	1.161	0.511	16
		Lag 2	1.123	0.993	1.270	0.064	16
		Lag 3	1.064	0.940	1.203	0.328	16
	Lag 1	Lag 0	1.057	0.960	1.163	0.259	18
		Lag 1	1.048	0.947	1.159	0.365	21
		Lag 2	1.005	0.896	1.128	0.928	22
		Lag 3	0.939	0.791	1.114	0.470	22
	Lag 2	Lag 0	1.073	0.950	1.212	0.256	16
		Lag 1	1.019	0.924	1.125	0.703	22
		Lag 2	0.972	0.867	1.089	0.620	24
		Lag 3	1.001	0.883	1.134	0.989	22
	Lag 3	Lag 0	0.913	0.730	1.142	0.427	10
		Lag 1	0.943	0.829	1.073	0.373	13
		Lag 2	1.011	0.892	1.146	0.862	14
		Lag 3	0.973	0.853	1.111	0.687	11
Renal	Lag 0	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10

		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	0.962	0.825	1.122	0.619	10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Respiratory	Lag 0	Lag 0	1.112	0.952	1.297	0.180	18
			Lag 1	1.013	0.861	1.193	0.872	12
			Lag 2	1.033	0.816	1.307	0.790	12
			Lag 3	1.125	0.955	1.325	0.158	11
		Lag 1	Lag 0	1.053	0.883	1.255	0.565	18
			Lag 1	1.072	0.926	1.240	0.352	16
			Lag 2	1.036	0.888	1.207	0.655	16
			Lag 3	1.149	0.978	1.349	0.091	16
		Lag 2	Lag 0	1.171	1.027	1.335	**0.018**	24
			Lag 1	1.001	0.896	1.117	0.992	15
			Lag 2	1.020	0.868	1.200	0.807	16
			Lag 3	0.983	0.845	1.143	0.820	16
		Lag 3	Lag 0	0.961	0.821	1.126	0.625	20
			Lag 1	-	-	-	-	< 10
			Lag 2	0.988	0.872	1.120	0.853	10
			Lag 3	0.976	0.836	1.139	0.760	10
Age 50-64 year	All-natural	Lag 0	Lag 0	1.001	0.997	1.005	0.636	14664
			Lag 1	0.998	0.994	1.003	0.439	13520
			Lag 2	0.999	0.994	1.005	0.844	13405
			Lag 3	1.002	0.997	1.007	0.411	13277
		Lag 1	Lag 0	1.002	0.999	1.006	0.183	14349
			Lag 1	0.997	0.993	1.001	0.129	14309
			Lag 2	1.000	0.995	1.004	0.825	14351
			Lag 3	1.002	0.997	1.007	0.432	14369
		Lag 2	Lag 0	1.001	0.997	1.005	0.626	12914
			Lag 1	0.994	0.991	0.997	**0.001**	14183
			Lag 2	0.994	0.990	0.997	**0.001**	14260
			Lag 3	0.998	0.994	1.002	0.349	14293
		Lag 3	Lag 0	1.002	0.997	1.007	0.386	13140
			Lag 1	0.998	0.994	1.002	0.353	13361
			Lag 2	0.996	0.993	1.000	**0.026**	13545
			Lag 3	0.999	0.995	1.002	0.490	13639

Cardiovascular	Lag 0	Lag 0	0.988	0.906	1.078	0.792	23
		Lag 1	1.033	0.942	1.132	0.489	36
		Lag 2	1.025	0.917	1.145	0.666	34
		Lag 3	0.961	0.860	1.074	0.485	33
	Lag 1	Lag 0	0.959	0.871	1.055	0.389	26
		Lag 1	1.021	0.933	1.116	0.655	29
		Lag 2	1.039	0.957	1.128	0.360	29
		Lag 3	0.964	0.871	1.066	0.475	29
	Lag 2	Lag 0	1.023	0.931	1.126	0.632	24
		Lag 1	0.969	0.893	1.051	0.445	32
		Lag 2	0.997	0.921	1.078	0.931	31
		Lag 3	0.967	0.889	1.052	0.438	31
	Lag 3	Lag 0	1.065	0.954	1.189	0.260	37
		Lag 1	0.956	0.866	1.054	0.364	28
		Lag 2	0.980	0.913	1.053	0.586	28
		Lag 3	0.985	0.911	1.065	0.702	29
Cerebrovascular	Lag 0	Lag 0	0.965	0.886	1.050	0.409	42
		Lag 1	0.999	0.927	1.077	0.980	47
		Lag 2	1.025	0.934	1.125	0.605	48
		Lag 3	1.069	0.987	1.157	0.104	47
	Lag 1	Lag 0	0.984	0.909	1.064	0.680	49
		Lag 1	0.963	0.893	1.039	0.336	45
		Lag 2	0.974	0.900	1.055	0.517	45
		Lag 3	1.071	0.992	1.157	0.080	47
	Lag 2	Lag 0	1.020	0.946	1.099	0.611	41
		Lag 1	0.990	0.939	1.044	0.718	52
		Lag 2	1.017	0.961	1.076	0.559	51
		Lag 3	1.045	0.989	1.105	0.117	53
	Lag 3	Lag 0	1.066	0.990	1.149	0.091	55
		Lag 1	0.986	0.928	1.047	0.644	52
		Lag 2	1.010	0.967	1.056	0.644	53
		Lag 3	1.031	0.980	1.083	0.236	54
Renal	Lag 0	Lag 0	1.045	0.938	1.164	0.429	16
		Lag 1	0.957	0.830	1.103	0.543	16
		Lag 2	1.126	0.946	1.339	0.181	15
		Lag 3	1.184	0.967	1.449	0.102	15
	Lag 1	Lag 0	1.034	0.945	1.132	0.468	11
		Lag 1	1.056	0.953	1.169	0.297	19
		Lag 2	1.137	0.959	1.348	0.139	20
		Lag 3	1.060	0.893	1.259	0.504	21
	Lag 2	Lag 0	-	-	-	-	< 10
		Lag 1	1.070	0.966	1.187	0.196	20
		Lag 2	0.977	0.835	1.143	0.774	21
		Lag 3	1.028	0.869	1.217	0.746	22

		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	1.041	0.891	1.216	0.611	15
			Lag 2	0.947	0.809	1.108	0.498	17
			Lag 3	1.010	0.867	1.177	0.897	17
	Respiratory	Lag 0	Lag 0	1.002	0.912	1.101	0.969	30
			Lag 1	1.126	1.011	1.255	**0.031**	31
			Lag 2	0.982	0.886	1.090	0.739	30
			Lag 3	1.132	1.006	1.274	**0.040**	30
		Lag 1	Lag 0	1.006	0.919	1.102	0.896	28
			Lag 1	1.055	0.955	1.165	0.292	26
			Lag 2	0.952	0.860	1.053	0.341	26
			Lag 3	1.009	0.891	1.142	0.888	26
		Lag 2	Lag 0	1.076	0.991	1.167	0.079	35
			Lag 1	1.047	0.964	1.138	0.272	35
			Lag 2	0.989	0.900	1.086	0.811	36
			Lag 3	1.057	0.954	1.172	0.292	37
		Lag 3	Lag 0	1.025	0.924	1.137	0.638	34
			Lag 1	1.002	0.907	1.107	0.971	23
			Lag 2	0.933	0.823	1.058	0.282	24
			Lag 3	0.988	0.895	1.090	0.811	25
Age 65+ year	All-natural	Lag 0	Lag 0	1.003	1.000	1.006	0.054	23923
			Lag 1	1.004	1.000	1.007	**0.032**	21739
			Lag 2	0.998	0.994	1.002	0.421	21503
			Lag 3	1.001	0.998	1.005	0.465	21337
		Lag 1	Lag 0	1.005	1.002	1.007	**0.000**	23651
			Lag 1	1.002	0.999	1.005	0.150	23546
			Lag 2	1.000	0.997	1.003	0.948	23609
			Lag 3	1.000	0.996	1.004	0.993	23652
		Lag 2	Lag 0	1.006	1.003	1.009	**0.000**	21151
			Lag 1	1.001	0.999	1.004	0.323	23829
			Lag 2	0.999	0.996	1.002	0.570	23961
			Lag 3	0.996	0.993	0.999	**0.009**	24095
		Lag 3	Lag 0	1.008	1.005	1.011	**0.000**	21294
			Lag 1	1.002	1.000	1.005	0.078	21721
			Lag 2	0.998	0.996	1.001	0.166	21982
			Lag 3	0.998	0.995	1.001	0.205	22245
	Cardiovascular	Lag 0	Lag 0	1.036	0.987	1.088	0.153	74
			Lag 1	1.025	0.978	1.074	0.301	68
			Lag 2	1.026	0.950	1.108	0.519	66
			Lag 3	0.986	0.916	1.061	0.705	64
		Lag 1	Lag 0	1.060	1.009	1.114	**0.020**	68
			Lag 1	1.010	0.966	1.057	0.646	72
			Lag 2	1.043	0.987	1.103	0.133	70
			Lag 3	1.038	0.965	1.117	0.314	68

	Lag 2	Lag 0	1.080	1.022	1.141	**0.006**	71
		Lag 1	0.999	0.960	1.039	0.952	78
		Lag 2	1.003	0.954	1.054	0.906	74
		Lag 3	1.011	0.960	1.064	0.689	70
	Lag 3	Lag 0	1.072	1.008	1.140	**0.028**	79
		Lag 1	1.014	0.976	1.053	0.480	71
		Lag 2	0.993	0.942	1.047	0.793	66
		Lag 3	1.016	0.967	1.067	0.535	61
Cerebrovascular	Lag 0	Lag 0	1.001	0.962	1.042	0.952	125
		Lag 1	0.995	0.957	1.035	0.814	116
		Lag 2	0.989	0.930	1.052	0.727	117
		Lag 3	1.003	0.942	1.068	0.921	121
	Lag 1	Lag 0	1.012	0.973	1.052	0.556	127
		Lag 1	1.012	0.980	1.046	0.458	143
		Lag 2	1.012	0.967	1.059	0.604	148
		Lag 3	0.989	0.931	1.050	0.718	149
	Lag 2	Lag 0	0.998	0.952	1.046	0.930	103
		Lag 1	1.016	0.986	1.046	0.295	130
		Lag 2	0.986	0.947	1.026	0.481	132
		Lag 3	1.002	0.957	1.048	0.944	135
	Lag 3	Lag 0	1.023	0.972	1.077	0.380	108
		Lag 1	1.030	0.996	1.064	0.084	113
		Lag 2	1.011	0.979	1.044	0.512	115
		Lag 3	1.020	0.983	1.058	0.287	115
Renal	Lag 0	Lag 0	1.033	0.970	1.100	0.317	48
		Lag 1	1.048	0.958	1.147	0.304	42
		Lag 2	1.028	0.940	1.123	0.547	41
		Lag 3	1.001	0.885	1.132	0.991	42
	Lag 1	Lag 0	1.072	1.004	1.144	**0.036**	51
		Lag 1	0.982	0.895	1.078	0.708	43
		Lag 2	0.945	0.856	1.043	0.260	45
		Lag 3	1.052	0.946	1.169	0.347	46
	Lag 2	Lag 0	1.055	0.981	1.135	0.148	34
		Lag 1	0.984	0.880	1.101	0.779	31
		Lag 2	1.004	0.928	1.086	0.920	33
		Lag 3	1.049	0.971	1.132	0.223	36
	Lag 3	Lag 0	0.976	0.876	1.088	0.665	37
		Lag 1	0.980	0.872	1.103	0.742	34
		Lag 2	1.019	0.953	1.090	0.583	35
		Lag 3	1.011	0.953	1.073	0.715	34
Respiratory	Lag 0	Lag 0	0.978	0.885	1.081	0.663	37
		Lag 1	1.002	0.922	1.089	0.958	33
		Lag 2	0.999	0.903	1.106	0.986	34
		Lag 3	1.062	0.977	1.153	0.157	33

		Lag 1	Lag 0	0.960	0.866	1.064	0.435	32
			Lag 1	1.029	0.962	1.102	0.406	39
			Lag 2	0.999	0.924	1.080	0.983	39
			Lag 3	1.115	1.020	1.218	**0.017**	37
		Lag 2	Lag 0	0.993	0.907	1.088	0.880	37
			Lag 1	1.050	0.998	1.104	0.058	41
			Lag 2	0.992	0.921	1.068	0.830	43
			Lag 3	1.059	0.971	1.156	0.194	38
		Lag 3	Lag 0	1.005	0.911	1.108	0.920	45
			Lag 1	1.044	0.977	1.116	0.205	33
			Lag 2	1.001	0.929	1.078	0.989	38
			Lag 3	1.073	0.998	1.154	0.058	35
English, preferred language	All-natural	Lag 0	Lag 0	1.002	1.000	1.004	0.127	51173
			Lag 1	0.999	0.997	1.002	0.517	46427
			Lag 2	0.995	0.992	0.998	**0.001**	45897
			Lag 3	1.001	0.999	1.004	0.375	45400
		Lag 1	Lag 0	1.003	1.001	1.005	**0.002**	50170
			Lag 1	0.997	0.995	0.999	**0.010**	50102
			Lag 2	0.996	0.994	0.998	**0.000**	50221
			Lag 3	1.000	0.998	1.003	0.831	50217
		Lag 2	Lag 0	1.004	1.002	1.006	**0.000**	45298
			Lag 1	0.998	0.996	0.999	**0.009**	49702
			Lag 2	0.994	0.992	0.996	**0.000**	49944
			Lag 3	0.998	0.995	1.000	**0.028**	50088
		Lag 3	Lag 0	1.004	1.002	1.006	**0.001**	46350
			Lag 1	1.002	1.000	1.004	0.122	46285
			Lag 2	0.995	0.994	0.997	**0.000**	46775
			Lag 3	0.999	0.997	1.001	0.575	47171
	Cardiovascular	Lag 0	Lag 0	1.017	0.977	1.059	0.400	97
			Lag 1	1.009	0.968	1.052	0.677	100
			Lag 2	1.014	0.950	1.082	0.676	96
			Lag 3	0.962	0.900	1.027	0.242	94
		Lag 1	Lag 0	1.021	0.979	1.065	0.325	94
			Lag 1	1.000	0.960	1.042	0.991	99
			Lag 2	1.024	0.974	1.077	0.360	96
			Lag 3	0.999	0.940	1.062	0.967	96
		Lag 2	Lag 0	1.052	1.005	1.102	**0.029**	97
			Lag 1	0.984	0.948	1.022	0.405	111
			Lag 2	0.985	0.941	1.032	0.529	107
			Lag 3	0.981	0.936	1.028	0.416	104
		Lag 3	Lag 0	1.056	0.998	1.118	0.058	114
			Lag 1	0.992	0.956	1.029	0.663	95
			Lag 2	0.973	0.930	1.018	0.232	90
			Lag 3	0.993	0.951	1.036	0.734	88

Cerebrovascular	Lag 0	Lag 0	0.996	0.958	1.035	0.829	143
		Lag 1	1.012	0.977	1.048	0.500	146
		Lag 2	1.015	0.962	1.070	0.593	147
		Lag 3	1.010	0.954	1.069	0.732	149
	Lag 1	Lag 0	1.017	0.979	1.057	0.378	155
		Lag 1	1.018	0.987	1.051	0.248	172
		Lag 2	1.013	0.972	1.055	0.536	177
		Lag 3	0.998	0.946	1.054	0.950	178
	Lag 2	Lag 0	1.011	0.969	1.055	0.615	128
		Lag 1	1.022	0.995	1.050	0.115	167
		Lag 2	1.007	0.974	1.041	0.685	170
		Lag 3	1.010	0.971	1.050	0.628	171
	Lag 3	Lag 0	1.019	0.971	1.069	0.448	136
		Lag 1	1.021	0.991	1.053	0.166	150
		Lag 2	1.002	0.971	1.034	0.898	152
		Lag 3	1.010	0.977	1.045	0.554	149
Renal	Lag 0	Lag 0	1.027	0.974	1.083	0.317	61
		Lag 1	0.996	0.929	1.069	0.919	56
		Lag 2	1.050	0.969	1.139	0.232	54
		Lag 3	1.079	0.980	1.189	0.123	55
	Lag 1	Lag 0	1.041	0.990	1.094	0.116	55
		Lag 1	0.973	0.905	1.045	0.450	55
		Lag 2	0.969	0.890	1.055	0.470	58
		Lag 3	1.074	0.985	1.172	0.107	60
	Lag 2	Lag 0	0.991	0.930	1.056	0.787	41
		Lag 1	0.978	0.908	1.053	0.554	48
		Lag 2	1.019	0.952	1.091	0.581	50
		Lag 3	1.076	1.009	1.147	**0.025**	54
	Lag 3	Lag 0	0.937	0.858	1.023	0.144	48
		Lag 1	0.979	0.894	1.072	0.651	47
		Lag 2	0.995	0.936	1.059	0.886	50
		Lag 3	1.032	0.979	1.087	0.242	49
Respiratory	Lag 0	Lag 0	1.014	0.948	1.085	0.680	75
		Lag 1	1.052	0.991	1.118	0.098	68
		Lag 2	0.999	0.928	1.076	0.984	68
		Lag 3	1.143	1.063	1.228	**0.000**	66
	Lag 1	Lag 0	0.968	0.898	1.044	0.399	66
		Lag 1	1.038	0.981	1.098	0.200	71
		Lag 2	0.992	0.932	1.055	0.792	71
		Lag 3	1.095	1.020	1.175	**0.012**	69
	Lag 2	Lag 0	1.054	0.994	1.118	0.077	82
		Lag 1	1.047	1.003	1.093	**0.038**	80
		Lag 2	1.004	0.948	1.062	0.899	84
		Lag 3	1.040	0.976	1.108	0.224	80

		Lag 3	Lag 0	0.999	0.932	1.070	0.970	82
			Lag 1	1.022	0.984	1.061	0.260	60
			Lag 2	0.978	0.921	1.039	0.475	67
			Lag 3	1.024	0.968	1.083	0.413	65
Spanish, preferred language	All-natural	Lag 0	Lag 0	0.999	0.993	1.005	0.806	6227
			Lag 1	0.999	0.993	1.006	0.824	6083
			Lag 2	0.999	0.992	1.006	0.752	6037
			Lag 3	0.997	0.991	1.004	0.455	6006
		Lag 1	Lag 0	0.999	0.993	1.005	0.689	5960
			Lag 1	0.997	0.991	1.003	0.380	6011
			Lag 2	0.997	0.991	1.003	0.341	6027
			Lag 3	1.000	0.994	1.007	0.911	6040
		Lag 2	Lag 0	0.995	0.989	1.002	0.172	5296
			Lag 1	0.998	0.992	1.004	0.485	5983
			Lag 2	0.995	0.989	1.001	0.093	6018
			Lag 3	1.000	0.994	1.006	0.948	6030
		Lag 3	Lag 0	1.008	1.000	1.015	**0.044**	5701
			Lag 1	1.002	0.995	1.008	0.594	5518
			Lag 2	0.995	0.989	1.001	0.077	5559
			Lag 3	0.995	0.989	1.001	0.121	5605
	Cardiovascular	Lag 0	Lag 0	1.012	0.832	1.232	0.903	10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	0.982	0.820	1.177	0.847	13
			Lag 1	1.046	0.908	1.204	0.535	10
			Lag 2	1.011	0.894	1.142	0.864	10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	0.959	0.783	1.175	0.688	11
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	1.044	0.843	1.294	0.691	14
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Cerebrovascular	Lag 0	Lag 0	0.950	0.840	1.075	0.419	21
			Lag 1	0.935	0.825	1.060	0.294	24
			Lag 2	1.017	0.894	1.158	0.796	25
			Lag 3	1.084	0.991	1.186	0.076	25
		Lag 1	Lag 0	1.028	0.930	1.136	0.588	22
			Lag 1	0.969	0.864	1.086	0.588	22
			Lag 2	0.962	0.843	1.098	0.564	23
			Lag 3	1.086	0.990	1.192	0.081	24

		Lag 2	Lag 0	1.034	0.910	1.175	0.607	22
			Lag 1	0.959	0.866	1.062	0.425	24
			Lag 2	0.932	0.824	1.054	0.262	25
			Lag 3	1.070	0.983	1.165	0.119	26
		Lag 3	Lag 0	1.120	0.977	1.285	0.103	25
			Lag 1	0.957	0.857	1.070	0.442	18
			Lag 2	0.995	0.931	1.063	0.876	20
			Lag 3	1.042	0.963	1.129	0.307	20
	Renal	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Respiratory	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	1.097	0.879	1.368	0.413	11
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
Other, preferred language	All-natural	Lag 0	Lag 0	1.007	1.000	1.014	**0.038**	2629
			Lag 1	1.014	1.007	1.022	**0.000**	2426
			Lag 2	1.009	0.997	1.020	0.135	2401
			Lag 3	1.004	0.995	1.014	0.373	2372

	Lag 1	Lag 0	1.009	1.003	1.015	**0.004**	2491
		Lag 1	1.016	1.009	1.023	**0.000**	2712
		Lag 2	1.010	1.003	1.018	**0.008**	2716
		Lag 3	1.005	0.993	1.016	0.419	2712
	Lag 2	Lag 0	1.011	1.004	1.019	**0.002**	2228
		Lag 1	1.008	1.002	1.014	**0.009**	2645
		Lag 2	1.009	1.002	1.016	**0.009**	2656
		Lag 3	0.999	0.992	1.007	0.836	2662
	Lag 3	Lag 0	1.010	1.002	1.019	**0.016**	2176
		Lag 1	1.002	0.995	1.008	0.663	2311
		Lag 2	1.003	0.997	1.008	0.394	2356
		Lag 3	0.997	0.990	1.004	0.430	2393
Cardiovascular	Lag 0	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 1	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 2	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 3	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
Cerebrovascular	Lag 0	Lag 0	1.047	0.967	1.134	0.261	19
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	0.986	0.826	1.177	0.875	10
	Lag 1	Lag 0	0.961	0.863	1.072	0.478	17
		Lag 1	0.927	0.824	1.044	0.212	15
		Lag 2	0.941	0.809	1.095	0.430	15
		Lag 3	0.865	0.686	1.092	0.222	16
	Lag 2	Lag 0	0.986	0.887	1.096	0.792	10
		Lag 1	0.943	0.845	1.052	0.292	13
		Lag 2	0.886	0.746	1.052	0.166	12
		Lag 3	0.981	0.868	1.109	0.755	13
	Lag 3	Lag 0	1.032	0.941	1.132	0.499	12
		Lag 1	0.974	0.879	1.078	0.607	10
		Lag 2	1.050	0.987	1.118	0.122	10
		Lag 3	1.060	0.979	1.147	0.149	11

	Renal	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Respiratory	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
White	All-natural	Lag 0	Lag 0	1.002	0.999	1.004	0.280	29020
			Lag 1	1.000	0.997	1.003	0.894	25632
			Lag 2	0.994	0.990	0.998	**0.004**	25284
			Lag 3	1.002	0.998	1.006	0.433	24938
		Lag 1	Lag 0	1.002	1.000	1.005	0.080	28772
			Lag 1	0.996	0.993	0.999	**0.003**	28242
			Lag 2	0.995	0.992	0.998	**0.002**	28284
			Lag 3	0.999	0.995	1.003	0.569	28256
		Lag 2	Lag 0	1.002	0.999	1.005	0.136	26330
			Lag 1	0.996	0.994	0.999	**0.003**	28421
			Lag 2	0.993	0.990	0.996	**0.000**	28582
			Lag 3	0.996	0.993	0.999	**0.018**	28650

	Lag 3	Lag 0	1.004	1.001	1.007	**0.011**	26605
		Lag 1	1.001	0.998	1.003	0.511	27009
		Lag 2	0.995	0.992	0.997	**0.000**	27290
		Lag 3	0.999	0.997	1.002	0.613	27472
Cardiovascular	Lag 0	Lag 0	1.004	0.944	1.067	0.909	62
		Lag 1	1.000	0.937	1.067	0.999	70
		Lag 2	1.051	0.965	1.145	0.250	66
		Lag 3	1.005	0.935	1.081	0.892	65
	Lag 1	Lag 0	0.998	0.940	1.061	0.960	61
		Lag 1	0.947	0.879	1.020	0.148	66
		Lag 2	1.015	0.943	1.094	0.686	64
		Lag 3	1.004	0.929	1.086	0.911	63
	Lag 2	Lag 0	1.040	0.975	1.110	0.236	67
		Lag 1	0.985	0.943	1.029	0.502	78
		Lag 2	0.989	0.934	1.049	0.721	75
		Lag 3	0.969	0.913	1.029	0.301	73
	Lag 3	Lag 0	1.083	1.008	1.164	**0.030**	80
		Lag 1	0.994	0.955	1.036	0.788	67
		Lag 2	1.000	0.945	1.059	0.993	63
		Lag 3	1.001	0.953	1.051	0.968	61
Cerebrovascular	Lag 0	Lag 0	1.010	0.966	1.056	0.670	99
		Lag 1	1.029	0.982	1.079	0.228	88
		Lag 2	1.031	0.964	1.103	0.373	91
		Lag 3	0.994	0.919	1.076	0.886	91
	Lag 1	Lag 0	1.026	0.982	1.073	0.253	106
		Lag 1	1.051	1.009	1.094	**0.017**	110
		Lag 2	1.029	0.977	1.083	0.282	116
		Lag 3	0.996	0.923	1.075	0.920	115
	Lag 2	Lag 0	1.007	0.954	1.063	0.803	78
		Lag 1	1.035	0.995	1.077	0.089	96
		Lag 2	1.000	0.957	1.046	0.985	102
		Lag 3	1.000	0.944	1.059	0.997	102
	Lag 3	Lag 0	1.024	0.966	1.085	0.421	78
		Lag 1	1.043	1.000	1.087	**0.048**	89
		Lag 2	0.992	0.949	1.037	0.714	93
		Lag 3	1.001	0.957	1.047	0.976	91
Renal	Lag 0	Lag 0	1.005	0.939	1.075	0.886	32
		Lag 1	0.910	0.803	1.031	0.138	30
		Lag 2	1.048	0.940	1.169	0.400	30
		Lag 3	1.080	0.936	1.246	0.292	30
	Lag 1	Lag 0	1.028	0.969	1.090	0.364	31
		Lag 1	0.966	0.884	1.054	0.434	36
		Lag 2	0.976	0.876	1.088	0.666	40
		Lag 3	1.121	0.993	1.265	0.064	41

		Lag 2	Lag 0	0.998	0.929	1.073	0.963	24
			Lag 1	0.980	0.894	1.074	0.670	31
			Lag 2	1.001	0.919	1.090	0.983	34
			Lag 3	1.114	1.018	1.219	**0.019**	36
		Lag 3	Lag 0	0.877	0.758	1.014	0.076	25
			Lag 1	0.930	0.818	1.058	0.272	28
			Lag 2	0.948	0.860	1.045	0.279	30
			Lag 3	1.020	0.958	1.086	0.533	29
	Respiratory	Lag 0	Lag 0	1.001	0.910	1.101	0.985	42
			Lag 1	1.019	0.943	1.101	0.633	38
			Lag 2	1.006	0.912	1.111	0.900	37
			Lag 3	1.169	1.062	1.287	**0.001**	36
		Lag 1	Lag 0	0.942	0.847	1.047	0.268	37
			Lag 1	1.015	0.948	1.086	0.669	40
			Lag 2	1.012	0.938	1.093	0.755	39
			Lag 3	1.135	1.028	1.254	**0.013**	38
		Lag 2	Lag 0	1.033	0.960	1.111	0.389	46
			Lag 1	1.054	0.998	1.113	0.060	47
			Lag 2	1.014	0.943	1.089	0.715	48
			Lag 3	1.045	0.945	1.156	0.390	45
		Lag 3	Lag 0	0.980	0.897	1.070	0.653	48
			Lag 1	1.023	0.976	1.072	0.341	34
			Lag 2	1.002	0.935	1.074	0.951	38
			Lag 3	1.025	0.949	1.108	0.526	35
Black	All-natural	Lag 0	Lag 0	0.997	0.992	1.002	0.246	5850
			Lag 1	0.995	0.989	1.000	0.073	5603
			Lag 2	0.998	0.991	1.005	0.643	5574
			Lag 3	1.000	0.993	1.007	0.978	5550
		Lag 1	Lag 0	1.001	0.996	1.006	0.612	5580
			Lag 1	1.000	0.995	1.005	0.927	5929
			Lag 2	0.998	0.992	1.003	0.384	5969
			Lag 3	0.999	0.992	1.006	0.777	5990
		Lag 2	Lag 0	1.006	1.001	1.012	**0.026**	4870
			Lag 1	1.000	0.995	1.004	0.937	5585
			Lag 2	0.996	0.991	1.001	0.098	5605
			Lag 3	0.995	0.990	1.000	0.053	5623
		Lag 3	Lag 0	1.005	0.999	1.012	0.122	5043
			Lag 1	1.003	0.998	1.008	0.262	4930
			Lag 2	0.996	0.992	1.001	0.110	4976
			Lag 3	0.997	0.992	1.002	0.277	5022
	Cardiovascular	Lag 0	Lag 0	1.041	0.964	1.124	0.311	14
			Lag 1	0.944	0.840	1.060	0.329	14
			Lag 2	1.032	0.900	1.183	0.654	14
			Lag 3	0.756	0.576	0.994	**0.045**	14

	Lag 1	Lag 0	1.042	0.962	1.128	0.317	10
		Lag 1	0.997	0.904	1.099	0.948	14
		Lag 2	1.098	1.004	1.202	**0.042**	14
		Lag 3	1.018	0.889	1.165	0.797	15
	Lag 2	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 3	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
Cerebrovascular	Lag 0	Lag 0	1.004	0.903	1.117	0.939	19
		Lag 1	1.014	0.929	1.107	0.748	23
		Lag 2	1.052	0.931	1.189	0.419	23
		Lag 3	1.173	1.036	1.329	**0.012**	23
	Lag 1	Lag 0	0.997	0.895	1.110	0.951	20
		Lag 1	1.029	0.947	1.119	0.498	25
		Lag 2	0.988	0.873	1.117	0.845	25
		Lag 3	1.115	0.990	1.254	0.072	25
	Lag 2	Lag 0	1.040	0.933	1.159	0.479	21
		Lag 1	1.044	0.977	1.115	0.201	25
		Lag 2	0.999	0.919	1.087	0.989	25
		Lag 3	1.049	0.975	1.130	0.200	25
	Lag 3	Lag 0	1.188	1.035	1.365	**0.015**	23
		Lag 1	0.997	0.927	1.072	0.942	22
		Lag 2	1.009	0.945	1.076	0.797	21
		Lag 3	1.023	0.955	1.096	0.514	21
Renal	Lag 0	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 1	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 2	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10
	Lag 3	Lag 0	-	-	-	-	< 10
		Lag 1	-	-	-	-	< 10
		Lag 2	-	-	-	-	< 10
		Lag 3	-	-	-	-	< 10

	Respiratory	Lag 0	Lag 0	1.088	0.961	1.232	0.183	19
			Lag 1	1.190	1.025	1.381	**0.023**	16
			Lag 2	1.072	0.926	1.241	0.355	17
			Lag 3	1.240	1.059	1.452	**0.007**	17
		Lag 1	Lag 0	1.060	0.934	1.203	0.364	15
			Lag 1	1.183	1.014	1.381	**0.033**	16
			Lag 2	0.985	0.856	1.132	0.827	17
			Lag 3	1.146	0.996	1.319	0.057	17
		Lag 2	Lag 0	1.128	0.976	1.305	0.103	14
			Lag 1	1.068	0.959	1.190	0.231	16
			Lag 2	1.060	0.940	1.196	0.341	17
			Lag 3	1.105	0.965	1.265	0.150	18
		Lag 3	Lag 0	1.085	0.876	1.344	0.456	10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
Hispanic	All-natural	Lag 0	Lag 0	1.003	0.999	1.007	0.139	17224
			Lag 1	1.000	0.996	1.004	0.934	16433
			Lag 2	0.998	0.993	1.002	0.362	16322
			Lag 3	1.001	0.996	1.005	0.795	16218
		Lag 1	Lag 0	1.002	0.998	1.005	0.306	16664
			Lag 1	0.998	0.994	1.002	0.248	16697
			Lag 2	0.996	0.992	1.000	**0.042**	16758
			Lag 3	1.001	0.997	1.006	0.541	16781
		Lag 2	Lag 0	1.001	0.997	1.005	0.474	14871
			Lag 1	0.998	0.994	1.001	0.241	16582
			Lag 2	0.993	0.989	0.997	**0.000**	16642
			Lag 3	1.001	0.997	1.005	0.607	16666
		Lag 3	Lag 0	1.003	0.998	1.007	0.220	15821
			Lag 1	1.001	0.997	1.005	0.665	15157
			Lag 2	0.993	0.990	0.997	**0.000**	15308
			Lag 3	0.999	0.995	1.003	0.557	15464
	Cardiovascular	Lag 0	Lag 0	1.020	0.906	1.148	0.749	23
			Lag 1	1.034	0.931	1.148	0.532	18
			Lag 2	0.901	0.783	1.038	0.149	17
			Lag 3	0.957	0.849	1.079	0.473	15
		Lag 1	Lag 0	1.011	0.899	1.138	0.852	27
			Lag 1	1.020	0.927	1.124	0.681	20
			Lag 2	0.939	0.839	1.051	0.271	20
			Lag 3	0.946	0.844	1.061	0.344	19
		Lag 2	Lag 0	1.025	0.921	1.140	0.653	26
			Lag 1	1.041	0.948	1.143	0.402	26
			Lag 2	0.954	0.865	1.052	0.341	26
			Lag 3	1.032	0.940	1.134	0.508	24

	Lag 3	Lag 0	1.050	0.939	1.175	0.391	32
		Lag 1	1.018	0.918	1.127	0.739	25
		Lag 2	0.906	0.804	1.021	0.104	25
		Lag 3	1.041	0.945	1.147	0.417	23
Cerebrovascular	Lag 0	Lag 0	0.940	0.848	1.043	0.245	37
		Lag 1	0.960	0.881	1.046	0.347	40
		Lag 2	1.013	0.913	1.125	0.805	41
		Lag 3	1.033	0.954	1.119	0.421	41
	Lag 1	Lag 0	0.996	0.903	1.098	0.933	43
		Lag 1	0.955	0.880	1.037	0.276	40
		Lag 2	0.977	0.892	1.070	0.610	41
		Lag 3	1.011	0.932	1.096	0.799	42
	Lag 2	Lag 0	1.028	0.931	1.136	0.587	40
		Lag 1	0.978	0.916	1.044	0.495	43
		Lag 2	0.945	0.859	1.040	0.247	43
		Lag 3	1.027	0.953	1.106	0.490	44
	Lag 3	Lag 0	1.025	0.929	1.130	0.628	45
		Lag 1	0.911	0.822	1.010	0.076	33
		Lag 2	0.994	0.933	1.058	0.843	34
		Lag 3	1.036	0.967	1.110	0.311	34
Renal	Lag 0	Lag 0	1.093	0.959	1.246	0.182	20
		Lag 1	0.972	0.845	1.118	0.689	14
		Lag 2	1.018	0.856	1.212	0.837	13
		Lag 3	1.125	0.970	1.304	0.120	14
	Lag 1	Lag 0	0.946	0.790	1.132	0.543	12
		Lag 1	0.990	0.855	1.147	0.895	13
		Lag 2	0.934	0.775	1.126	0.475	13
		Lag 3	1.064	0.924	1.226	0.388	14
	Lag 2	Lag 0	1.028	0.880	1.202	0.725	13
		Lag 1	0.983	0.859	1.125	0.802	17
		Lag 2	0.989	0.853	1.146	0.884	17
		Lag 3	1.062	0.950	1.188	0.290	18
	Lag 3	Lag 0	1.033	0.889	1.200	0.674	17
		Lag 1	1.028	0.883	1.196	0.723	16
		Lag 2	1.112	1.001	1.236	**0.048**	17
		Lag 3	1.066	0.957	1.187	0.244	16
Respiratory	Lag 0	Lag 0	1.008	0.893	1.138	0.897	18
		Lag 1	0.972	0.823	1.148	0.735	12
		Lag 2	1.027	0.877	1.201	0.742	12
		Lag 3	0.955	0.820	1.113	0.557	11
	Lag 1	Lag 0	1.056	0.943	1.183	0.346	17
		Lag 1	0.983	0.845	1.143	0.823	17
		Lag 2	1.005	0.867	1.166	0.942	17
		Lag 3	1.010	0.876	1.166	0.887	16

		Lag 2	Lag 0	1.113	1.002	1.236	**0.046**	24
			Lag 1	0.985	0.898	1.080	0.751	20
			Lag 2	1.011	0.872	1.172	0.884	21
			Lag 3	1.057	0.950	1.177	0.307	19
		Lag 3	Lag 0	1.081	0.945	1.237	0.256	27
			Lag 1	0.896	0.764	1.050	0.176	13
			Lag 2	0.847	0.695	1.032	0.099	14
			Lag 3	1.092	0.973	1.225	0.133	13
Asian	All-natural	Lag 0	Lag 0	1.005	1.000	1.010	**0.041**	5393
			Lag 1	1.007	1.002	1.012	**0.011**	4847
			Lag 2	0.994	0.985	1.002	0.129	4760
			Lag 3	0.999	0.991	1.006	0.761	4698
		Lag 1	Lag 0	1.008	1.004	1.013	**0.000**	5083
			Lag 1	1.009	1.004	1.014	**0.000**	5355
			Lag 2	1.002	0.996	1.008	0.492	5348
			Lag 3	1.004	0.996	1.012	0.301	5344
		Lag 2	Lag 0	1.011	1.006	1.016	**0.000**	4500
			Lag 1	1.006	1.002	1.010	**0.005**	5123
			Lag 2	1.003	0.998	1.008	0.222	5147
			Lag 3	0.999	0.993	1.004	0.679	5187
		Lag 3	Lag 0	1.011	1.005	1.017	**0.000**	4487
			Lag 1	1.004	0.999	1.009	0.113	4626
			Lag 2	1.002	0.998	1.007	0.265	4690
			Lag 3	1.000	0.995	1.005	0.966	4750
	Cardiovascular	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Cerebrovascular	Lag 0	Lag 0	0.973	0.896	1.057	0.518	17
			Lag 1	0.921	0.825	1.029	0.145	19
			Lag 2	0.895	0.765	1.047	0.166	18
			Lag 3	0.936	0.811	1.080	0.364	20

		Lag 1	Lag 0	0.957	0.876	1.045	0.329	19
			Lag 1	0.907	0.821	1.003	0.057	26
			Lag 2	0.977	0.889	1.073	0.620	26
			Lag 3	0.920	0.798	1.061	0.251	28
		Lag 2	Lag 0	0.956	0.864	1.057	0.378	15
			Lag 1	0.966	0.915	1.020	0.218	29
			Lag 2	1.014	0.949	1.082	0.688	27
			Lag 3	0.993	0.920	1.071	0.856	28
		Lag 3	Lag 0	0.986	0.892	1.090	0.788	20
			Lag 1	0.997	0.942	1.055	0.923	24
			Lag 2	1.058	1.003	1.115	**0.037**	24
			Lag 3	1.025	0.962	1.093	0.443	24
	Renal	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	1.024	0.763	1.374	0.875	10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Respiratory	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10

Other Grouped Races	All-natural	Lag 0	Lag 0	1.004	0.995	1.014	0.363	2542
			Lag 1	1.005	0.994	1.016	0.371	2421
			Lag 2	1.009	0.996	1.023	0.169	2395
			Lag 3	1.005	0.993	1.017	0.418	2374
		Lag 1	Lag 0	1.007	0.998	1.016	0.140	2522
			Lag 1	0.996	0.987	1.006	0.458	2602
			Lag 2	1.007	0.997	1.018	0.162	2605
			Lag 3	1.002	0.989	1.015	0.778	2598
		Lag 2	Lag 0	1.005	0.994	1.015	0.387	2251
			Lag 1	0.991	0.982	1.001	0.065	2619
			Lag 2	1.002	0.992	1.011	0.705	2642
			Lag 3	0.997	0.986	1.008	0.548	2654
		Lag 3	Lag 0	0.997	0.985	1.010	0.666	2271
			Lag 1	1.002	0.992	1.012	0.689	2392
			Lag 2	1.001	0.993	1.010	0.742	2426
			Lag 3	0.991	0.981	1.001	0.076	2461
	Cardiovascular	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Cerebrovascular	Lag 0	Lag 0	1.217	1.019	1.453	**0.031**	11
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	1.047	0.909	1.207	0.521	11
			Lag 2	1.026	0.776	1.356	0.859	10
			Lag 3	1.123	0.902	1.398	0.298	11

		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	1.037	0.839	1.281	0.737	10
			Lag 2	1.070	0.820	1.395	0.619	10
			Lag 3	1.180	0.922	1.509	0.188	10
	Renal	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Respiratory	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
Higher Education (< 50% high school education or less)	All-natural	Lag 0	Lag 0	1.002	1.000	1.004	**0.040**	39608
			Lag 1	1.001	0.999	1.004	0.309	35830
			Lag 2	0.996	0.992	0.999	**0.009**	35466
			Lag 3	1.003	1.000	1.006	0.069	35132
		Lag 1	Lag 0	1.003	1.001	1.005	**0.005**	38335
			Lag 1	0.999	0.997	1.001	0.268	38928
			Lag 2	0.997	0.995	1.000	**0.024**	39031
			Lag 3	1.001	0.998	1.005	0.384	39035

	Lag 2	Lag 0	1.004	1.001	1.006	**0.002**	34605
		Lag 1	0.999	0.997	1.001	0.272	38473
		Lag 2	0.996	0.994	0.998	**0.000**	38704
		Lag 3	0.998	0.996	1.000	0.088	38828
	Lag 3	Lag 0	1.005	1.002	1.007	**0.000**	35172
		Lag 1	1.001	0.999	1.003	0.402	35858
		Lag 2	0.997	0.995	0.999	**0.001**	36299
		Lag 3	0.999	0.996	1.001	0.187	36669
Cardiovascular	Lag 0	Lag 0	1.014	0.971	1.060	0.525	74
		Lag 1	1.008	0.963	1.055	0.729	79
		Lag 2	1.006	0.934	1.084	0.868	75
		Lag 3	0.976	0.909	1.049	0.511	74
	Lag 1	Lag 0	1.024	0.980	1.071	0.290	67
		Lag 1	1.002	0.960	1.045	0.926	76
		Lag 2	1.034	0.981	1.090	0.207	74
		Lag 3	0.986	0.919	1.058	0.693	76
	Lag 2	Lag 0	1.038	0.988	1.091	0.139	76
		Lag 1	0.990	0.955	1.026	0.572	83
		Lag 2	1.002	0.958	1.049	0.915	81
		Lag 3	0.990	0.945	1.037	0.670	79
	Lag 3	Lag 0	1.045	0.986	1.107	0.137	92
		Lag 1	1.000	0.963	1.038	0.981	78
		Lag 2	1.001	0.961	1.043	0.963	75
		Lag 3	1.006	0.965	1.048	0.786	73
Cerebrovascular	Lag 0	Lag 0	1.009	0.973	1.046	0.627	136
		Lag 1	0.993	0.955	1.032	0.704	120
		Lag 2	1.024	0.967	1.085	0.421	121
		Lag 3	1.043	0.989	1.100	0.119	122
	Lag 1	Lag 0	1.018	0.982	1.055	0.337	143
		Lag 1	1.006	0.975	1.038	0.696	152
		Lag 2	0.999	0.956	1.044	0.971	155
		Lag 3	1.004	0.948	1.063	0.883	156
	Lag 2	Lag 0	1.027	0.985	1.070	0.219	124
		Lag 1	1.009	0.982	1.037	0.513	139
		Lag 2	0.995	0.960	1.031	0.779	140
		Lag 3	1.010	0.971	1.050	0.633	144
	Lag 3	Lag 0	1.031	0.984	1.081	0.200	124
		Lag 1	1.006	0.974	1.039	0.736	115
		Lag 2	1.006	0.979	1.035	0.658	116
		Lag 3	1.021	0.989	1.054	0.201	115
Renal	Lag 0	Lag 0	1.036	0.975	1.100	0.251	49
		Lag 1	1.024	0.933	1.123	0.619	44
		Lag 2	1.030	0.929	1.143	0.572	43
		Lag 3	1.060	0.958	1.173	0.256	44

		Lag 1	Lag 0	1.037	0.982	1.096	0.194	46
			Lag 1	1.036	0.957	1.122	0.383	49
			Lag 2	0.950	0.859	1.051	0.322	50
			Lag 3	1.052	0.960	1.152	0.278	52
		Lag 2	Lag 0	1.006	0.938	1.078	0.874	31
			Lag 1	1.032	0.946	1.126	0.474	38
			Lag 2	0.982	0.905	1.064	0.655	40
			Lag 3	1.021	0.953	1.095	0.550	42
		Lag 3	Lag 0	0.956	0.871	1.049	0.338	34
			Lag 1	0.982	0.882	1.094	0.741	31
			Lag 2	0.984	0.918	1.054	0.637	34
			Lag 3	0.999	0.942	1.060	0.980	35
	Respiratory	Lag 0	Lag 0	1.038	0.969	1.111	0.287	60
			Lag 1	1.046	0.977	1.120	0.193	50
			Lag 2	0.987	0.896	1.087	0.791	50
			Lag 3	1.136	1.044	1.236	**0.003**	49
		Lag 1	Lag 0	1.009	0.937	1.086	0.812	54
			Lag 1	1.044	0.981	1.111	0.173	49
			Lag 2	1.000	0.935	1.070	0.994	49
			Lag 3	1.116	1.023	1.217	**0.014**	48
		Lag 2	Lag 0	1.051	0.982	1.125	0.154	58
			Lag 1	1.065	1.009	1.123	**0.022**	58
			Lag 2	0.994	0.930	1.063	0.860	61
			Lag 3	1.083	1.004	1.168	**0.039**	59
		Lag 3	Lag 0	1.023	0.945	1.108	0.571	67
			Lag 1	1.026	0.955	1.103	0.480	43
			Lag 2	0.996	0.932	1.065	0.913	49
			Lag 3	1.045	0.979	1.114	0.187	49
Lower Education (> 50% high school education or less)	All-natural	Lag 0	Lag 0	1.000	0.997	1.004	0.808	20355
			Lag 1	0.998	0.994	1.002	0.308	19057
			Lag 2	0.998	0.993	1.002	0.275	18846
			Lag 3	0.997	0.993	1.001	0.184	18633
		Lag 1	Lag 0	1.003	1.000	1.007	**0.039**	20223
			Lag 1	0.998	0.995	1.002	0.408	19850
			Lag 2	0.997	0.993	1.000	0.070	19900
			Lag 3	0.999	0.995	1.003	0.618	19914
		Lag 2	Lag 0	1.003	1.000	1.006	0.059	18139
			Lag 1	0.997	0.994	1.000	0.080	19791
			Lag 2	0.993	0.990	0.997	**0.000**	19872
			Lag 3	0.998	0.994	1.002	0.283	19926
		Lag 3	Lag 0	1.004	1.000	1.008	**0.037**	18980
			Lag 1	1.003	1.000	1.006	0.084	18189
			Lag 2	0.994	0.990	0.997	**0.000**	18337
			Lag 3	1.000	0.996	1.003	0.888	18468

Cardiovascular	Lag 0	Lag 0	1.015	0.932	1.105	0.736	37
		Lag 1	1.035	0.951	1.126	0.426	36
		Lag 2	1.017	0.920	1.124	0.742	35
		Lag 3	0.946	0.853	1.050	0.299	33
	Lag 1	Lag 0	1.018	0.944	1.098	0.638	44
		Lag 1	1.030	0.950	1.116	0.474	39
		Lag 2	1.016	0.938	1.100	0.694	38
		Lag 3	1.003	0.919	1.095	0.943	35
	Lag 2	Lag 0	1.085	1.004	1.174	**0.040**	37
		Lag 1	0.977	0.895	1.066	0.594	42
		Lag 2	0.964	0.880	1.057	0.441	40
		Lag 3	0.970	0.884	1.064	0.516	38
	Lag 3	Lag 0	1.098	0.999	1.207	0.053	40
		Lag 1	0.991	0.927	1.059	0.793	34
		Lag 2	0.883	0.787	0.990	**0.033**	32
		Lag 3	0.970	0.878	1.073	0.558	31
Cerebrovascular	Lag 0	Lag 0	0.956	0.880	1.039	0.288	47
		Lag 1	1.019	0.953	1.090	0.578	59
		Lag 2	0.997	0.920	1.081	0.944	60
		Lag 3	0.991	0.905	1.084	0.840	62
	Lag 1	Lag 0	0.981	0.910	1.057	0.615	51
		Lag 1	1.004	0.932	1.082	0.912	57
		Lag 2	1.010	0.938	1.087	0.790	60
		Lag 3	1.018	0.945	1.096	0.644	62
	Lag 2	Lag 0	0.950	0.868	1.040	0.265	36
		Lag 1	1.011	0.949	1.076	0.741	65
		Lag 2	0.986	0.921	1.055	0.686	67
		Lag 3	1.034	0.969	1.105	0.314	66
	Lag 3	Lag 0	1.023	0.945	1.107	0.570	49
		Lag 1	1.030	0.977	1.086	0.276	63
		Lag 2	1.041	0.974	1.113	0.235	65
		Lag 3	1.019	0.952	1.091	0.583	65
Renal	Lag 0	Lag 0	1.011	0.909	1.125	0.837	22
		Lag 1	0.935	0.833	1.051	0.260	20
		Lag 2	1.047	0.939	1.168	0.407	19
		Lag 3	1.061	0.879	1.280	0.538	19
	Lag 1	Lag 0	1.029	0.922	1.149	0.607	20
		Lag 1	0.898	0.785	1.026	0.113	18
		Lag 2	1.007	0.886	1.146	0.911	20
		Lag 3	1.110	0.956	1.289	0.169	20
	Lag 2	Lag 0	0.975	0.853	1.113	0.705	19
		Lag 1	0.928	0.814	1.057	0.260	20
		Lag 2	1.059	0.941	1.192	0.340	21
		Lag 3	1.155	1.026	1.301	**0.018**	23

		Lag 3	Lag 0	0.941	0.795	1.113	0.476	22
			Lag 1	0.961	0.826	1.118	0.609	26
			Lag 2	1.064	0.955	1.186	0.260	27
			Lag 3	1.074	0.970	1.190	0.168	25
	Respiratory	Lag 0	Lag 0	0.934	0.816	1.069	0.322	25
			Lag 1	1.007	0.899	1.128	0.908	25
			Lag 2	1.021	0.924	1.127	0.689	26
			Lag 3	1.031	0.938	1.134	0.524	25
		Lag 1	Lag 0	0.965	0.855	1.090	0.566	24
			Lag 1	1.027	0.933	1.131	0.583	31
			Lag 2	0.973	0.879	1.077	0.595	32
			Lag 3	1.050	0.949	1.160	0.345	31
		Lag 2	Lag 0	1.070	0.986	1.162	0.105	38
			Lag 1	1.002	0.938	1.071	0.949	32
			Lag 2	0.999	0.912	1.094	0.983	34
			Lag 3	0.981	0.882	1.090	0.720	32
		Lag 3	Lag 0	0.969	0.867	1.082	0.574	32
			Lag 1	1.016	0.977	1.056	0.434	21
			Lag 2	0.949	0.853	1.056	0.340	23
			Lag 3	1.004	0.912	1.106	0.930	21
Lesser poverty (<25% households living under poverty)	All-natural	Lag 0	Lag 0	1.002	1.000	1.004	0.078	47779
			Lag 1	1.001	0.999	1.003	0.411	42041
			Lag 2	0.995	0.992	0.998	**0.002**	41560
			Lag 3	1.002	1.000	1.005	0.101	41129
		Lag 1	Lag 0	1.003	1.001	1.005	**0.004**	46248
			Lag 1	0.999	0.997	1.001	0.326	46782
			Lag 2	0.997	0.995	1.000	**0.027**	46844
			Lag 3	1.001	0.998	1.004	0.616	46798
		Lag 2	Lag 0	1.004	1.002	1.006	**0.001**	41676
			Lag 1	0.998	0.997	1.000	0.101	46270
			Lag 2	0.995	0.993	0.998	**0.000**	46530
			Lag 3	0.997	0.995	0.999	**0.011**	46651
		Lag 3	Lag 0	1.005	1.002	1.007	**0.000**	42465
			Lag 1	1.002	1.000	1.004	0.091	42950
			Lag 2	0.996	0.994	0.998	**0.000**	43445
			Lag 3	0.999	0.997	1.001	0.159	43860
	Cardiovascular	Lag 0	Lag 0	1.001	0.957	1.046	0.978	81
			Lag 1	1.015	0.973	1.058	0.484	91
			Lag 2	0.999	0.933	1.069	0.969	86
			Lag 3	0.968	0.907	1.034	0.339	84
		Lag 1	Lag 0	1.018	0.974	1.064	0.426	84
			Lag 1	1.005	0.965	1.046	0.820	90
			Lag 2	1.025	0.976	1.077	0.319	89
			Lag 3	0.978	0.911	1.048	0.525	90

	Lag 2	Lag 0	1.050	1.001	1.101	**0.044**	86
		Lag 1	0.984	0.947	1.022	0.392	102
		Lag 2	0.986	0.940	1.034	0.551	99
		Lag 3	0.971	0.921	1.024	0.281	95
	Lag 3	Lag 0	1.061	1.003	1.121	**0.038**	104
		Lag 1	0.999	0.963	1.036	0.951	91
		Lag 2	0.981	0.938	1.026	0.402	85
		Lag 3	0.990	0.947	1.035	0.664	82
Cerebrovascular	Lag 0	Lag 0	1.010	0.974	1.047	0.583	154
		Lag 1	1.007	0.973	1.042	0.700	149
		Lag 2	1.019	0.965	1.076	0.498	150
		Lag 3	1.035	0.984	1.090	0.180	153
	Lag 1	Lag 0	1.023	0.988	1.060	0.199	166
		Lag 1	1.008	0.978	1.040	0.602	176
		Lag 2	1.004	0.963	1.046	0.864	180
		Lag 3	0.993	0.939	1.049	0.793	183
	Lag 2	Lag 0	1.015	0.974	1.058	0.475	136
		Lag 1	1.009	0.982	1.036	0.524	166
		Lag 2	0.997	0.963	1.032	0.863	169
		Lag 3	1.020	0.984	1.058	0.279	175
	Lag 3	Lag 0	1.035	0.990	1.082	0.131	148
		Lag 1	1.008	0.977	1.041	0.603	147
		Lag 2	1.015	0.988	1.042	0.276	149
		Lag 3	1.028	0.998	1.060	0.071	151
Renal	Lag 0	Lag 0	1.007	0.944	1.076	0.824	54
		Lag 1	0.982	0.898	1.075	0.699	45
		Lag 2	1.001	0.906	1.106	0.980	43
		Lag 3	1.054	0.950	1.170	0.318	43
	Lag 1	Lag 0	1.031	0.971	1.096	0.319	50
		Lag 1	0.996	0.924	1.073	0.916	51
		Lag 2	0.917	0.820	1.025	0.127	52
		Lag 3	1.066	0.974	1.168	0.165	53
	Lag 2	Lag 0	1.001	0.928	1.080	0.970	41
		Lag 1	1.016	0.942	1.097	0.676	47
		Lag 2	0.988	0.911	1.071	0.769	48
		Lag 3	1.033	0.966	1.105	0.343	50
	Lag 3	Lag 0	0.982	0.901	1.070	0.683	49
		Lag 1	0.984	0.896	1.082	0.746	45
		Lag 2	1.017	0.958	1.080	0.582	49
		Lag 3	1.001	0.946	1.060	0.963	48
Respiratory	Lag 0	Lag 0	1.024	0.952	1.101	0.529	65
		Lag 1	1.033	0.969	1.102	0.314	59
		Lag 2	0.997	0.921	1.079	0.934	58
		Lag 3	1.105	1.023	1.194	**0.011**	57

		Lag 1	Lag 0	1.026	0.954	1.104	0.487	63
			Lag 1	1.024	0.964	1.088	0.443	62
			Lag 2	0.997	0.935	1.063	0.929	60
			Lag 3	1.077	0.996	1.166	0.064	59
		Lag 2	Lag 0	1.072	1.007	1.142	**0.030**	75
			Lag 1	1.051	1.001	1.103	**0.044**	72
			Lag 2	0.998	0.939	1.060	0.937	74
			Lag 3	1.050	0.975	1.130	0.201	71
		Lag 3	Lag 0	1.014	0.940	1.093	0.722	79
			Lag 1	1.019	0.982	1.058	0.310	50
			Lag 2	0.991	0.929	1.059	0.798	56
			Lag 3	1.031	0.969	1.096	0.338	55
Higher poverty (>25% households living under poverty)	All-natural	Lag 0	Lag 0	1.001	0.997	1.006	0.487	12242
			Lag 1	0.998	0.994	1.002	0.388	12892
			Lag 2	0.999	0.994	1.004	0.757	12774
			Lag 3	0.997	0.993	1.002	0.201	12649
		Lag 1	Lag 0	1.004	1.000	1.008	**0.045**	12365
			Lag 1	0.998	0.994	1.002	0.280	12039
			Lag 2	0.996	0.992	1.000	0.053	12118
			Lag 3	1.000	0.995	1.005	0.951	12171
		Lag 2	Lag 0	1.003	0.999	1.007	0.102	11139
			Lag 1	0.998	0.995	1.002	0.385	12052
			Lag 2	0.993	0.989	0.997	**0.001**	12086
			Lag 3	1.001	0.997	1.005	0.723	12126
		Lag 3	Lag 0	1.005	1.000	1.009	**0.045**	11756
			Lag 1	1.001	0.997	1.005	0.684	11158
			Lag 2	0.995	0.991	0.998	**0.004**	11241
			Lag 3	1.000	0.996	1.004	0.889	11306
	Cardiovascular	Lag 0	Lag 0	1.078	0.985	1.178	0.101	30
			Lag 1	1.006	0.894	1.132	0.922	24
			Lag 2	1.052	0.932	1.189	0.411	24
			Lag 3	0.957	0.840	1.091	0.515	23
		Lag 1	Lag 0	1.047	0.966	1.134	0.263	27
			Lag 1	1.025	0.930	1.130	0.620	25
			Lag 2	1.046	0.951	1.151	0.355	23
			Lag 3	1.020	0.934	1.115	0.659	21
		Lag 2	Lag 0	1.061	0.973	1.158	0.181	27
			Lag 1	1.003	0.933	1.078	0.938	24
			Lag 2	1.024	0.944	1.111	0.566	23
			Lag 3	1.018	0.946	1.096	0.631	23
		Lag 3	Lag 0	1.052	0.942	1.175	0.369	28
			Lag 1	0.986	0.918	1.059	0.695	21
			Lag 2	0.978	0.897	1.065	0.605	22
			Lag 3	1.033	0.951	1.122	0.443	22

Cerebrovascular	Lag 0	Lag 0	0.945	0.863	1.036	0.230	29
		Lag 1	0.948	0.865	1.040	0.261	30
		Lag 2	1.002	0.913	1.099	0.971	31
		Lag 3	0.997	0.900	1.104	0.950	31
	Lag 1	Lag 0	0.942	0.856	1.038	0.227	28
		Lag 1	0.994	0.918	1.077	0.889	33
		Lag 2	0.994	0.912	1.083	0.889	35
		Lag 3	1.043	0.962	1.131	0.304	35
	Lag 2	Lag 0	0.987	0.902	1.081	0.783	24
		Lag 1	1.019	0.954	1.088	0.573	38
		Lag 2	0.978	0.905	1.057	0.580	38
		Lag 3	0.996	0.917	1.081	0.916	35
	Lag 3	Lag 0	1.005	0.910	1.110	0.922	25
		Lag 1	1.027	0.970	1.089	0.361	31
		Lag 2	0.975	0.899	1.058	0.546	33
		Lag 3	0.961	0.878	1.051	0.386	29
Renal	Lag 0	Lag 0	1.055	0.966	1.152	0.237	17
		Lag 1	0.972	0.866	1.091	0.628	19
		Lag 2	1.102	0.973	1.248	0.125	19
		Lag 3	1.079	0.908	1.283	0.386	20
	Lag 1	Lag 0	1.039	0.955	1.130	0.377	16
		Lag 1	0.942	0.819	1.085	0.410	16
		Lag 2	1.051	0.932	1.185	0.419	18
		Lag 3	1.065	0.916	1.238	0.413	19
	Lag 2	Lag 0	-	-	-	-	< 10
		Lag 1	0.878	0.708	1.090	0.238	11
		Lag 2	1.037	0.926	1.161	0.529	13
		Lag 3	1.123	0.993	1.270	0.065	15
	Lag 3	Lag 0	-	-	-	-	< 10
		Lag 1	0.905	0.705	1.162	0.434	12
		Lag 2	0.937	0.808	1.086	0.385	12
		Lag 3	1.087	0.965	1.226	0.170	12
Respiratory	Lag 0	Lag 0	0.976	0.867	1.099	0.692	20
		Lag 1	1.063	0.920	1.227	0.409	17
		Lag 2	1.013	0.879	1.168	0.854	18
		Lag 3	1.056	0.950	1.174	0.315	17
	Lag 1	Lag 0	0.913	0.794	1.051	0.205	15
		Lag 1	1.111	0.995	1.241	0.061	19
		Lag 2	0.966	0.855	1.092	0.585	21
		Lag 3	1.108	0.985	1.247	0.089	20
	Lag 2	Lag 0	1.028	0.935	1.131	0.563	21
		Lag 1	1.032	0.956	1.113	0.420	19
		Lag 2	0.988	0.879	1.111	0.843	21
		Lag 3	1.039	0.938	1.150	0.464	20

		Lag 3	Lag 0	0.974	0.860	1.104	0.684	20
			Lag 1	0.997	0.906	1.097	0.949	15
			Lag 2	0.951	0.846	1.071	0.409	16
			Lag 3	1.032	0.926	1.151	0.566	15
Majority Rural (>50%)	All-natural	Lag 0	Lag 0	1.002	0.988	1.017	0.744	1672
			Lag 1	0.962	0.939	0.985	**0.001**	1332
			Lag 2	0.972	0.950	0.995	**0.018**	1171
			Lag 3	0.984	0.954	1.014	0.294	1065
		Lag 1	Lag 0	1.005	0.992	1.019	0.448	1747
			Lag 1	0.975	0.960	0.991	**0.002**	1522
			Lag 2	0.973	0.952	0.995	**0.015**	1436
			Lag 3	0.952	0.926	0.979	**0.001**	1322
		Lag 2	Lag 0	1.001	0.991	1.011	0.890	1659
			Lag 1	0.980	0.966	0.994	**0.005**	1709
			Lag 2	0.978	0.961	0.994	**0.008**	1635
			Lag 3	0.959	0.935	0.983	**0.001**	1546
		Lag 3	Lag 0	1.006	0.996	1.016	0.257	1756
			Lag 1	1.002	0.993	1.012	0.643	1701
			Lag 2	0.993	0.980	1.007	0.355	1690
			Lag 3	0.989	0.974	1.005	0.189	1627
	Cardiovascular	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Cerebrovascular	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10

		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Renal	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
	Respiratory	Lag 0	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 1	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 2	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
		Lag 3	Lag 0	-	-	-	-	< 10
			Lag 1	-	-	-	-	< 10
			Lag 2	-	-	-	-	< 10
			Lag 3	-	-	-	-	< 10
Majority Urban	All-natural	Lag 0	Lag 0	1.002	1.000	1.004	0.067	58356
			Lag 1	1.001	0.999	1.003	0.541	53603
			Lag 2	0.997	0.994	0.999	**0.013**	53164
			Lag 3	1.001	0.999	1.003	0.416	52713

	Lag 1	Lag 0	1.003	1.001	1.005	**0.001**	56873
		Lag 1	0.999	0.997	1.001	0.308	57302
		Lag 2	0.997	0.995	0.999	**0.008**	57528
		Lag 3	1.001	0.998	1.003	0.451	57647
	Lag 2	Lag 0	1.004	1.002	1.006	**0.000**	51162
		Lag 1	0.999	0.997	1.000	0.125	56619
		Lag 2	0.995	0.993	0.997	**0.000**	56983
		Lag 3	0.998	0.996	1.000	0.078	57233
	Lag 3	Lag 0	1.005	1.002	1.007	**0.000**	52470
		Lag 1	1.002	1.000	1.003	0.103	52411
		Lag 2	0.996	0.994	0.998	**0.000**	52999
		Lag 3	0.999	0.997	1.001	0.293	53541
Cardiovascular	Lag 0	Lag 0	1.016	0.977	1.056	0.435	109
		Lag 1	1.017	0.978	1.058	0.397	115
		Lag 2	1.016	0.957	1.078	0.601	110
		Lag 3	0.970	0.915	1.029	0.316	107
	Lag 1	Lag 0	1.024	0.985	1.064	0.224	109
		Lag 1	1.011	0.974	1.049	0.567	113
		Lag 2	1.030	0.986	1.076	0.189	111
		Lag 3	0.995	0.941	1.051	0.844	110
	Lag 2	Lag 0	1.053	1.010	1.098	**0.016**	111
		Lag 1	0.988	0.956	1.021	0.477	121
		Lag 2	0.992	0.952	1.034	0.709	117
		Lag 3	0.986	0.946	1.029	0.522	113
	Lag 3	Lag 0	1.061	1.009	1.116	**0.020**	128
		Lag 1	0.993	0.959	1.029	0.709	107
		Lag 2	0.982	0.944	1.022	0.370	105
		Lag 3	0.994	0.955	1.034	0.759	102
Cerebrovascular	Lag 0	Lag 0	0.998	0.965	1.032	0.921	176
		Lag 1	0.998	0.965	1.031	0.891	174
		Lag 2	1.017	0.970	1.066	0.488	176
		Lag 3	1.027	0.981	1.076	0.249	180
	Lag 1	Lag 0	1.010	0.977	1.044	0.558	187
		Lag 1	1.005	0.976	1.035	0.742	202
		Lag 2	1.005	0.968	1.044	0.783	209
		Lag 3	1.012	0.967	1.059	0.603	214
	Lag 2	Lag 0	1.011	0.974	1.049	0.573	154
		Lag 1	1.011	0.986	1.036	0.405	199
		Lag 2	0.994	0.963	1.026	0.706	199
		Lag 3	1.018	0.984	1.052	0.306	204
	Lag 3	Lag 0	1.029	0.988	1.072	0.174	166
		Lag 1	1.010	0.983	1.039	0.460	173
		Lag 2	1.009	0.984	1.035	0.475	174
		Lag 3	1.021	0.992	1.050	0.164	175

	Renal	Lag 0	Lag 0	1.030	0.977	1.086	0.273	67
			Lag 1	0.979	0.913	1.051	0.565	62
			Lag 2	1.028	0.946	1.116	0.518	61
			Lag 3	1.071	0.978	1.172	0.139	62
		Lag 1	Lag 0	1.036	0.986	1.088	0.164	64
			Lag 1	0.989	0.926	1.056	0.744	66
			Lag 2	0.980	0.906	1.060	0.614	70
			Lag 3	1.075	0.993	1.163	0.072	72
		Lag 2	Lag 0	0.997	0.936	1.061	0.914	49
			Lag 1	0.994	0.929	1.064	0.865	57
			Lag 2	1.006	0.942	1.074	0.854	61
			Lag 3	1.055	0.995	1.119	0.071	64
		Lag 3	Lag 0	0.950	0.875	1.031	0.222	54
			Lag 1	0.975	0.894	1.064	0.576	56
			Lag 2	1.007	0.952	1.065	0.807	60
			Lag 3	1.017	0.967	1.070	0.506	59
	Respiratory	Lag 0	Lag 0	1.013	0.952	1.077	0.690	83
			Lag 1	1.035	0.976	1.098	0.254	73
			Lag 2	1.015	0.946	1.088	0.683	75
			Lag 3	1.084	1.018	1.154	**0.011**	73
		Lag 1	Lag 0	0.996	0.935	1.061	0.908	77
			Lag 1	1.043	0.990	1.099	0.117	78
			Lag 2	0.999	0.944	1.057	0.973	79
			Lag 3	1.087	1.018	1.160	**0.013**	78
		Lag 2	Lag 0	1.060	1.006	1.117	**0.030**	96
			Lag 1	1.041	1.002	1.082	**0.041**	89
			Lag 2	1.002	0.950	1.058	0.929	94
			Lag 3	1.043	0.982	1.107	0.173	91
		Lag 3	Lag 0	1.007	0.945	1.074	0.822	99
			Lag 1	0.984	0.928	1.042	0.575	60
			Lag 2	0.987	0.932	1.045	0.658	69
			Lag 3	1.033	0.979	1.090	0.234	69

Table S.7 Stratified results for odds ratio for wildfire smoke effect, without extreme heat (OR01), and extreme heat effect, without wildfire smoke (OR10), with upper and lower limits (UL and LL, respectively) for 95% confidence intervals (CIs) and p-values (bolded indicates significant p < 0.05) for the joint effects of wildfire smoke and extreme heat. Separate models were run for combinations of lag 0-3 and each outcome of interest: all-natural cause, cardiovascular, cerebrovascular, renal, and respiratory morbidity.

Mod	OOI	Extreme Heat	Wildfire Smoke	Measure	Estimate	CI LL	CI UL	P-value
Age 18-49 years	All-natural	Lag 0	Lag 0	OR01	1.000	1.000	1.001	0.427
				OR10	1.022	1.017	1.027	**0.000**
			Lag 1	OR01	1.000	1.000	1.001	0.248
				OR10	1.023	1.018	1.028	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	**0.017**
				OR10	1.024	1.019	1.029	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	**0.005**
				OR10	1.022	1.018	1.027	**0.000**
		Lag 1	Lag 0	OR01	1.000	1.000	1.001	0.474
				OR10	1.023	1.018	1.028	**0.000**
			Lag 1	OR01	1.000	1.000	1.001	0.154
				OR10	1.024	1.020	1.029	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	**0.036**
				OR10	1.026	1.021	1.030	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	**0.004**
				OR10	1.023	1.019	1.028	**0.000**
		Lag 2	Lag 0	OR01	1.000	1.000	1.001	0.422
				OR10	1.016	1.012	1.021	**0.000**
			Lag 1	OR01	1.000	1.000	1.001	0.217
				OR10	1.017	1.013	1.022	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	0.065
				OR10	1.019	1.015	1.024	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	**0.003**
				OR10	1.017	1.012	1.021	**0.000**
		Lag 3	Lag 0	OR01	1.000	1.000	1.001	0.375
				OR10	1.016	1.011	1.020	**0.000**
			Lag 1	OR01	1.000	1.000	1.001	0.504
				OR10	1.016	1.011	1.020	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	0.062
				OR10	1.018	1.014	1.023	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	**0.004**
				OR10	1.016	1.012	1.021	**0.000**
	Cardiovascular	Lag 0	Lag 0	OR01	1.010	0.989	1.030	0.355
				OR10	0.986	0.824	1.181	0.880
			Lag 1	OR01	1.018	0.993	1.043	0.167
				OR10	1.002	0.836	1.200	0.986

			Lag 2	OR01	1.005	0.977	1.034	0.717
				OR10	0.989	0.826	1.184	0.903
			Lag 3	OR01	0.994	0.968	1.022	0.686
				OR10	0.994	0.831	1.190	0.951
		Lag 1	Lag 0	OR01	1.009	0.989	1.030	0.380
				OR10	1.166	0.982	1.384	0.080
			Lag 1	OR01	1.016	0.991	1.041	0.225
				OR10	1.166	0.982	1.384	0.080
			Lag 2	OR01	1.006	0.977	1.035	0.686
				OR10	1.179	0.992	1.401	0.061
			Lag 3	OR01	0.995	0.968	1.022	0.712
				OR10	1.183	0.996	1.404	0.055
		Lag 2	Lag 0	OR01	1.009	0.988	1.029	0.407
				OR10	1.174	0.993	1.389	0.060
			Lag 1	OR01	1.017	0.992	1.044	0.190
				OR10	1.182	1.000	1.397	0.051
			Lag 2	OR01	1.006	0.977	1.035	0.697
				OR10	1.186	1.003	1.403	**0.046**
			Lag 3	OR01	0.996	0.970	1.024	0.799
				OR10	1.206	1.019	1.427	**0.029**
		Lag 3	Lag 0	OR01	1.009	0.988	1.029	0.406
				OR10	1.142	0.966	1.349	0.120
			Lag 1	OR01	1.017	0.992	1.043	0.182
				OR10	1.151	0.974	1.360	0.098
			Lag 2	OR01	1.008	0.979	1.038	0.589
				OR10	1.157	0.979	1.367	0.087
			Lag 3	OR01	0.994	0.966	1.022	0.666
				OR10	1.154	0.976	1.364	0.095
	Cerebrovascular	Lag 0	Lag 0	OR01	0.982	0.955	1.009	0.190
				OR10	1.057	0.899	1.242	0.502
			Lag 1	OR01	0.980	0.954	1.006	0.125
				OR10	1.060	0.902	1.246	0.477
			Lag 2	OR01	0.992	0.971	1.014	0.492
				OR10	1.035	0.879	1.218	0.678
			Lag 3	OR01	0.970	0.934	1.008	0.124
				OR10	1.056	0.898	1.241	0.511
		Lag 1	Lag 0	OR01	0.982	0.955	1.009	0.183
				OR10	1.056	0.902	1.236	0.499
			Lag 1	OR01	0.979	0.953	1.005	0.116
				OR10	1.056	0.901	1.237	0.502
			Lag 2	OR01	0.995	0.975	1.016	0.660
				OR10	1.069	0.913	1.253	0.407
			Lag 3	OR01	0.978	0.945	1.013	0.217
				OR10	1.085	0.927	1.270	0.308

		Lag 2	Lag 0	OR01	0.983	0.957 1.009	0.204
				OR10	1.151	0.988 1.341	0.070
			Lag 1	OR01	0.980	0.954 1.006	0.134
				OR10	1.164	0.999 1.357	0.052
			Lag 2	OR01	0.996	0.976 1.017	0.720
				OR10	1.178	1.010 1.373	**0.037**
			Lag 3	OR01	0.974	0.939 1.011	0.168
				OR10	1.172	1.005 1.367	**0.043**
		Lag 3	Lag 0	OR01	0.987	0.963 1.012	0.299
				OR10	1.088	0.930 1.273	0.293
			Lag 1	OR01	0.985	0.960 1.010	0.224
				OR10	1.092	0.933 1.277	0.272
			Lag 2	OR01	0.995	0.974 1.016	0.649
				OR10	1.072	0.916 1.255	0.386
			Lag 3	OR01	0.977	0.943 1.013	0.208
				OR10	1.085	0.927 1.270	0.309
	Renal	Lag 0	Lag 0	OR01	1.000	0.972 1.029	0.987
				OR10	0.937	0.776 1.131	0.498
			Lag 1	OR01	1.017	0.988 1.046	0.256
				OR10	0.958	0.795 1.156	0.656
			Lag 2	OR01	1.002	0.967 1.038	0.906
				OR10	0.929	0.770 1.121	0.441
			Lag 3	OR01	0.970	0.924 1.019	0.224
				OR10	0.902	0.747 1.088	0.281
		Lag 1	Lag 0	OR01	1.003	0.976 1.031	0.840
				OR10	0.958	0.800 1.147	0.640
			Lag 1	OR01	1.016	0.988 1.046	0.267
				OR10	0.957	0.800 1.145	0.631
			Lag 2	OR01	1.005	0.970 1.040	0.790
				OR10	0.952	0.795 1.140	0.593
			Lag 3	OR01	0.968	0.920 1.018	0.208
				OR10	0.904	0.754 1.084	0.277
		Lag 2	Lag 0	OR01	1.004	0.977 1.032	0.782
				OR10	1.152	0.972 1.367	0.103
			Lag 1	OR01	1.017	0.988 1.047	0.259
				OR10	1.139	0.961 1.350	0.132
			Lag 2	OR01	0.999	0.964 1.036	0.978
				OR10	1.107	0.932 1.314	0.247
			Lag 3	OR01	0.959	0.905 1.016	0.156
				OR10	1.091	0.919 1.296	0.319
		Lag 3	Lag 0	OR01	0.999	0.971 1.029	0.972
				OR10	1.058	0.895 1.251	0.510
			Lag 1	OR01	1.015	0.987 1.044	0.304
				OR10	1.072	0.907 1.268	0.415

			Lag 2	OR01	1.001	0.966	1.038	0.954
				OR10	1.050	0.888	1.242	0.569
			Lag 3	OR01	0.970	0.921	1.021	0.247
				OR10	1.042	0.880	1.233	0.633
	Respiratory	Lag 0	Lag 0	OR01	0.978	0.941	1.017	0.274
				OR10	1.004	0.838	1.202	0.965
			Lag 1	OR01	0.985	0.955	1.017	0.357
				OR10	1.030	0.863	1.229	0.746
			Lag 2	OR01	0.998	0.969	1.028	0.905
				OR10	1.027	0.861	1.225	0.769
			Lag 3	OR01	0.995	0.970	1.021	0.720
				OR10	1.005	0.841	1.201	0.954
		Lag 1	Lag 0	OR01	0.982	0.946	1.020	0.343
				OR10	1.036	0.868	1.235	0.698
			Lag 1	OR01	0.983	0.952	1.015	0.303
				OR10	1.030	0.864	1.227	0.745
			Lag 2	OR01	0.997	0.968	1.028	0.862
				OR10	1.037	0.871	1.236	0.682
			Lag 3	OR01	0.995	0.969	1.021	0.689
				OR10	1.013	0.849	1.209	0.884
		Lag 2	Lag 0	OR01	0.970	0.929	1.013	0.165
				OR10	0.990	0.833	1.175	0.905
			Lag 1	OR01	0.986	0.955	1.018	0.380
				OR10	1.032	0.870	1.223	0.720
			Lag 2	OR01	0.998	0.969	1.028	0.893
				OR10	1.026	0.865	1.217	0.767
			Lag 3	OR01	0.998	0.974	1.023	0.882
				OR10	1.034	0.872	1.226	0.701
		Lag 3	Lag 0	OR01	0.987	0.951	1.024	0.473
				OR10	0.999	0.847	1.178	0.987
			Lag 1	OR01	0.992	0.964	1.022	0.612
				OR10	1.019	0.865	1.202	0.819
			Lag 2	OR01	0.999	0.970	1.030	0.964
				OR10	0.992	0.842	1.170	0.926
			Lag 3	OR01	0.998	0.974	1.023	0.892
				OR10	0.995	0.843	1.174	0.952
Age 50-64 years	All-natural	Lag 0	Lag 0	OR01	1.000	0.999	1.000	0.458
				OR10	1.021	1.016	1.027	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.317
				OR10	1.022	1.016	1.028	**0.000**
			Lag 2	OR01	0.999	0.998	1.000	**0.040**
				OR10	1.022	1.016	1.028	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	**0.006**
				OR10	1.021	1.015	1.027	**0.000**

		Lag 1	Lag 0	OR01	1.000	0.999	1.000	0.350
				OR10	1.020	1.014	1.026	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.383
				OR10	1.021	1.016	1.027	**0.000**
			Lag 2	OR01	0.999	0.998	1.000	**0.037**
				OR10	1.021	1.015	1.026	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	**0.006**
				OR10	1.020	1.014	1.026	**0.000**
		Lag 2	Lag 0	OR01	1.000	0.999	1.000	0.505
				OR10	1.019	1.013	1.025	**0.000**
			Lag 1	OR01	1.000	0.999	1.001	0.653
				OR10	1.021	1.016	1.027	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	0.136
				OR10	1.021	1.016	1.027	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	**0.013**
				OR10	1.020	1.014	1.026	**0.000**
		Lag 3	Lag 0	OR01	1.000	0.999	1.000	0.487
				OR10	1.015	1.009	1.021	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.361
				OR10	1.016	1.010	1.022	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	0.101
				OR10	1.017	1.011	1.022	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	**0.012**
				OR10	1.016	1.010	1.022	**0.000**
	Cardiovascular	Lag 0	Lag 0	OR01	0.995	0.978	1.012	0.547
				OR10	0.973	0.866	1.094	0.649
			Lag 1	OR01	0.996	0.980	1.012	0.597
				OR10	0.962	0.856	1.082	0.523
			Lag 2	OR01	0.999	0.984	1.014	0.888
				OR10	0.966	0.859	1.085	0.557
			Lag 3	OR01	0.997	0.981	1.012	0.663
				OR10	0.978	0.870	1.098	0.703
		Lag 1	Lag 0	OR01	0.996	0.979	1.013	0.609
				OR10	1.051	0.937	1.179	0.398
			Lag 1	OR01	0.996	0.980	1.012	0.619
				OR10	1.035	0.922	1.161	0.562
			Lag 2	OR01	0.998	0.983	1.014	0.810
				OR10	1.028	0.915	1.154	0.641
			Lag 3	OR01	0.997	0.981	1.012	0.676
				OR10	1.048	0.934	1.175	0.424
		Lag 2	Lag 0	OR01	0.994	0.976	1.011	0.469
				OR10	1.016	0.909	1.135	0.780
			Lag 1	OR01	0.998	0.982	1.014	0.802
				OR10	1.029	0.921	1.149	0.615

		Lag 2	OR01	0.999	0.984	1.015	0.943
			OR10	1.022	0.914	1.142	0.708
		Lag 3	OR01	0.997	0.982	1.013	0.718
			OR10	1.029	0.921	1.149	0.618
	Lag 3	Lag 0	OR01	0.993	0.976	1.011	0.428
			OR10	0.968	0.865	1.083	0.566
		Lag 1	OR01	0.998	0.983	1.014	0.816
			OR10	0.989	0.884	1.106	0.845
		Lag 2	OR01	1.000	0.985	1.016	0.959
			OR10	0.985	0.881	1.101	0.791
		Lag 3	OR01	0.996	0.981	1.012	0.656
			OR10	0.984	0.880	1.100	0.772
Cerebrovascular	Lag 0	Lag 0	OR01	1.010	0.998	1.022	0.101
			OR10	0.958	0.868	1.058	0.401
		Lag 1	OR01	1.007	0.996	1.019	0.217
			OR10	0.950	0.860	1.050	0.318
		Lag 2	OR01	0.996	0.983	1.009	0.588
			OR10	0.946	0.856	1.044	0.269
		Lag 3	OR01	0.993	0.980	1.007	0.330
			OR10	0.937	0.849	1.035	0.201
	Lag 1	Lag 0	OR01	1.010	0.998	1.022	0.115
			OR10	1.039	0.943	1.145	0.434
		Lag 1	OR01	1.008	0.997	1.020	0.168
			OR10	1.046	0.949	1.153	0.366
		Lag 2	OR01	0.998	0.985	1.011	0.710
			OR10	1.043	0.946	1.149	0.398
		Lag 3	OR01	0.993	0.979	1.007	0.320
			OR10	1.019	0.924	1.123	0.708
	Lag 2	Lag 0	OR01	1.009	0.997	1.021	0.150
			OR10	1.046	0.952	1.150	0.348
		Lag 1	OR01	1.008	0.996	1.019	0.199
			OR10	1.054	0.959	1.158	0.279
		Lag 2	OR01	0.996	0.983	1.009	0.546
			OR10	1.046	0.951	1.150	0.353
		Lag 3	OR01	0.992	0.979	1.007	0.290
			OR10	1.037	0.943	1.140	0.450
	Lag 3	Lag 0	OR01	1.008	0.996	1.020	0.206
			OR10	1.028	0.935	1.131	0.565
		Lag 1	OR01	1.008	0.996	1.019	0.188
			OR10	1.047	0.953	1.152	0.338
		Lag 2	OR01	0.996	0.982	1.010	0.545
			OR10	1.040	0.946	1.143	0.418
		Lag 3	OR01	0.993	0.979	1.007	0.313
			OR10	1.033	0.939	1.136	0.509

Renal	Lag 0	Lag 0	OR01	0.986	0.948	1.025	0.476
			OR10	1.060	0.905	1.243	0.469
		Lag 1	OR01	0.974	0.934	1.016	0.226
			OR10	1.087	0.928	1.275	0.301
		Lag 2	OR01	0.987	0.954	1.021	0.435
			OR10	1.049	0.895	1.231	0.553
		Lag 3	OR01	0.982	0.942	1.023	0.389
			OR10	1.049	0.896	1.229	0.550
	Lag 1	Lag 0	OR01	0.984	0.945	1.025	0.440
			OR10	1.175	1.006	1.373	**0.041**
		Lag 1	OR01	0.959	0.914	1.006	0.085
			OR10	1.175	1.005	1.374	**0.043**
		Lag 2	OR01	0.985	0.952	1.020	0.407
			OR10	1.156	0.987	1.352	0.072
		Lag 3	OR01	0.984	0.945	1.025	0.446
			OR10	1.173	1.004	1.371	**0.044**
	Lag 2	Lag 0	OR01	0.995	0.960	1.031	0.777
			OR10	1.074	0.919	1.256	0.368
		Lag 1	OR01	0.959	0.915	1.006	0.084
			OR10	1.052	0.900	1.231	0.523
		Lag 2	OR01	0.991	0.960	1.022	0.563
			OR10	1.069	0.913	1.251	0.406
		Lag 3	OR01	0.986	0.946	1.027	0.487
			OR10	1.059	0.905	1.240	0.475
	Lag 3	Lag 0	OR01	0.998	0.963	1.034	0.897
			OR10	1.119	0.957	1.309	0.158
		Lag 1	OR01	0.968	0.927	1.010	0.136
			OR10	1.091	0.932	1.277	0.276
		Lag 2	OR01	0.992	0.962	1.023	0.628
			OR10	1.110	0.949	1.299	0.193
		Lag 3	OR01	0.986	0.946	1.027	0.499
			OR10	1.098	0.937	1.286	0.248
Respiratory	Lag 0	Lag 0	OR01	1.005	0.984	1.027	0.621
			OR10	1.080	0.950	1.228	0.242
		Lag 1	OR01	1.006	0.989	1.023	0.495
			OR10	1.048	0.921	1.194	0.474
		Lag 2	OR01	1.027	1.007	1.049	**0.010**
			OR10	1.083	0.953	1.232	0.222
		Lag 3	OR01	1.018	0.999	1.037	0.059
			OR10	1.055	0.927	1.200	0.419
	Lag 1	Lag 0	OR01	1.005	0.984	1.027	0.632
			OR10	1.042	0.916	1.185	0.534
		Lag 1	OR01	1.007	0.990	1.025	0.402
			OR10	1.030	0.904	1.172	0.660

			Lag 2	OR01	1.029	1.008	1.051	**0.007**
				OR10	1.054	0.926	1.199	0.426
			Lag 3	OR01	1.020	1.002	1.039	**0.032**
				OR10	1.042	0.916	1.186	0.532
		Lag 2	Lag 0	OR01	1.001	0.978	1.024	0.947
				OR10	1.043	0.917	1.187	0.520
			Lag 1	OR01	1.007	0.990	1.024	0.442
				OR10	1.051	0.924	1.196	0.449
			Lag 2	OR01	1.027	1.006	1.049	**0.011**
				OR10	1.068	0.939	1.215	0.318
			Lag 3	OR01	1.019	1.000	1.038	**0.048**
				OR10	1.052	0.924	1.197	0.445
		Lag 3	Lag 0	OR01	1.005	0.984	1.026	0.671
				OR10	1.024	0.903	1.160	0.714
			Lag 1	OR01	1.009	0.992	1.026	0.315
				OR10	1.029	0.908	1.167	0.650
			Lag 2	OR01	1.029	1.008	1.050	**0.006**
				OR10	1.043	0.921	1.182	0.509
			Lag 3	OR01	1.021	1.002	1.040	**0.028**
				OR10	1.033	0.911	1.170	0.617
Age ≥ 65 years	All-natural	Lag 0	Lag 0	OR01	1.000	0.999	1.001	0.875
				OR10	1.027	1.022	1.031	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.093
				OR10	1.027	1.022	1.031	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	**0.017**
				OR10	1.028	1.023	1.032	**0.000**
			Lag 3	OR01	0.999	0.999	1.000	**0.004**
				OR10	1.027	1.023	1.032	**0.000**
		Lag 1	Lag 0	OR01	1.000	0.999	1.000	0.820
				OR10	1.025	1.020	1.029	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.096
				OR10	1.026	1.021	1.030	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	**0.010**
				OR10	1.026	1.022	1.031	**0.000**
			Lag 3	OR01	0.999	0.999	1.000	**0.005**
				OR10	1.026	1.022	1.031	**0.000**
		Lag 2	Lag 0	OR01	1.000	0.999	1.001	0.888
				OR10	1.019	1.015	1.024	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.103
				OR10	1.021	1.016	1.025	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	**0.013**
				OR10	1.021	1.017	1.026	**0.000**
			Lag 3	OR01	0.999	0.999	1.000	**0.014**
				OR10	1.022	1.018	1.027	**0.000**

	Lag 3	Lag 0	OR01	1.000	0.999	1.001	0.883
			OR10	1.011	1.007	1.015	**0.000**
		Lag 1	OR01	1.000	0.999	1.000	0.101
			OR10	1.012	1.008	1.016	**0.000**
		Lag 2	OR01	0.999	0.999	1.000	**0.022**
			OR10	1.013	1.009	1.018	**0.000**
		Lag 3	OR01	0.999	0.999	1.000	**0.008**
			OR10	1.013	1.009	1.018	**0.000**
Cardiovascular	Lag 0	Lag 0	OR01	1.003	0.992	1.014	0.641
			OR10	1.058	0.981	1.141	0.145
		Lag 1	OR01	1.008	0.998	1.018	0.123
			OR10	1.062	0.985	1.145	0.119
		Lag 2	OR01	1.000	0.989	1.010	0.936
			OR10	1.064	0.986	1.148	0.108
		Lag 3	OR01	1.001	0.990	1.011	0.912
			OR10	1.072	0.994	1.156	0.072
	Lag 1	Lag 0	OR01	1.002	0.991	1.013	0.771
			OR10	1.041	0.967	1.122	0.286
		Lag 1	OR01	1.009	0.998	1.019	0.102
			OR10	1.053	0.977	1.134	0.176
		Lag 2	OR01	0.999	0.988	1.009	0.788
			OR10	1.047	0.971	1.128	0.231
		Lag 3	OR01	1.000	0.989	1.011	0.934
			OR10	1.050	0.975	1.131	0.200
	Lag 2	Lag 0	OR01	1.001	0.990	1.013	0.796
			OR10	1.012	0.940	1.091	0.745
		Lag 1	OR01	1.009	0.999	1.020	0.081
			OR10	1.029	0.956	1.108	0.448
		Lag 2	OR01	1.000	0.989	1.010	0.965
			OR10	1.029	0.955	1.108	0.454
		Lag 3	OR01	1.000	0.989	1.011	0.968
			OR10	1.027	0.954	1.106	0.479
	Lag 3	Lag 0	OR01	1.002	0.991	1.013	0.692
			OR10	1.020	0.947	1.099	0.606
		Lag 1	OR01	1.008	0.998	1.019	0.122
			OR10	1.030	0.957	1.109	0.432
		Lag 2	OR01	1.000	0.990	1.011	0.976
			OR10	1.036	0.962	1.116	0.344
		Lag 3	OR01	0.999	0.989	1.011	0.928
			OR10	1.030	0.957	1.110	0.430
Cerebrovascular	Lag 0	Lag 0	OR01	1.003	0.996	1.011	0.366
			OR10	1.046	0.984	1.113	0.149
		Lag 1	OR01	1.001	0.993	1.009	0.831
			OR10	1.048	0.986	1.114	0.134

			Lag 2	OR01	1.000	0.992	1.007	0.953
				OR10	1.049	0.986	1.115	0.129
			Lag 3	OR01	0.998	0.990	1.006	0.581
				OR10	1.046	0.984	1.112	0.152
		Lag 1	Lag 0	OR01	1.003	0.996	1.010	0.416
				OR10	1.024	0.963	1.089	0.443
			Lag 1	OR01	1.000	0.992	1.008	0.997
				OR10	1.024	0.963	1.089	0.457
			Lag 2	OR01	0.999	0.991	1.007	0.849
				OR10	1.025	0.963	1.090	0.442
			Lag 3	OR01	0.998	0.990	1.006	0.615
				OR10	1.030	0.968	1.095	0.353
		Lag 2	Lag 0	OR01	1.003	0.996	1.011	0.345
				OR10	1.019	0.959	1.083	0.547
			Lag 1	OR01	1.000	0.992	1.008	0.918
				OR10	1.013	0.953	1.077	0.681
			Lag 2	OR01	1.000	0.992	1.008	0.982
				OR10	1.023	0.962	1.087	0.475
			Lag 3	OR01	0.998	0.990	1.006	0.573
				OR10	1.018	0.957	1.082	0.572
		Lag 3	Lag 0	OR01	1.003	0.996	1.010	0.419
				OR10	0.999	0.940	1.061	0.966
			Lag 1	OR01	0.999	0.991	1.007	0.836
				OR10	0.995	0.936	1.057	0.866
			Lag 2	OR01	0.999	0.991	1.007	0.795
				OR10	1.000	0.941	1.062	0.994
			Lag 3	OR01	0.997	0.989	1.005	0.448
				OR10	0.997	0.938	1.060	0.929
	Renal	Lag 0	Lag 0	OR01	0.989	0.963	1.017	0.441
				OR10	1.156	1.043	1.281	**0.006**
			Lag 1	OR01	0.985	0.961	1.009	0.223
				OR10	1.154	1.040	1.279	**0.007**
			Lag 2	OR01	1.015	0.999	1.031	0.071
				OR10	1.158	1.045	1.284	**0.005**
			Lag 3	OR01	1.007	0.991	1.024	0.387
				OR10	1.165	1.052	1.291	**0.003**
		Lag 1	Lag 0	OR01	0.984	0.956	1.012	0.260
				OR10	1.148	1.038	1.269	**0.007**
			Lag 1	OR01	0.989	0.966	1.011	0.326
				OR10	1.173	1.061	1.296	**0.002**
			Lag 2	OR01	1.017	1.001	1.033	**0.038**
				OR10	1.179	1.066	1.303	**0.001**
			Lag 3	OR01	1.006	0.989	1.023	0.485
				OR10	1.157	1.047	1.280	**0.004**

	Lag 2	Lag 0	OR01	0.990	0.964	1.017	0.455
			OR10	1.049	0.948	1.161	0.354
		Lag 1	OR01	0.989	0.967	1.011	0.330
			OR10	1.063	0.960	1.176	0.240
		Lag 2	OR01	1.015	0.999	1.031	0.064
			OR10	1.057	0.954	1.170	0.288
		Lag 3	OR01	1.005	0.988	1.022	0.593
			OR10	1.048	0.947	1.160	0.367
	Lag 3	Lag 0	OR01	0.997	0.973	1.022	0.818
			OR10	1.020	0.922	1.129	0.699
		Lag 1	OR01	0.989	0.967	1.011	0.334
			OR10	1.019	0.921	1.127	0.720
		Lag 2	OR01	1.014	0.998	1.031	0.081
			OR10	1.009	0.912	1.117	0.858
		Lag 3	OR01	1.006	0.989	1.024	0.494
			OR10	1.012	0.914	1.119	0.824
	Respiratory	Lag 0	OR01	0.994	0.980	1.009	0.458
			OR10	0.904	0.818	0.998	**0.046**
		Lag 1	OR01	1.002	0.991	1.013	0.764
			OR10	0.899	0.814	0.993	**0.036**
		Lag 2	OR01	0.997	0.983	1.011	0.654
			OR10	0.900	0.814	0.994	**0.037**
		Lag 3	OR01	0.992	0.977	1.008	0.331
			OR10	0.889	0.805	0.981	**0.020**
		Lag 1	Lag 0	OR01	0.995	0.980	1.010	0.487
				OR10	0.994	0.904	1.094	0.909
			Lag 1	OR01	1.001	0.990	1.012	0.847
				OR10	0.980	0.890	1.078	0.677
			Lag 2	OR01	0.997	0.983	1.011	0.668
				OR10	0.987	0.897	1.086	0.791
			Lag 3	OR01	0.991	0.976	1.007	0.281
				OR10	0.965	0.877	1.063	0.471
		Lag 2	Lag 0	OR01	0.994	0.979	1.009	0.435
				OR10	0.981	0.891	1.080	0.699
			Lag 1	OR01	0.999	0.988	1.011	0.909
				OR10	0.966	0.878	1.063	0.478
			Lag 2	OR01	0.997	0.983	1.012	0.698
				OR10	0.982	0.892	1.081	0.711
			Lag 3	OR01	0.993	0.977	1.008	0.349
				OR10	0.968	0.878	1.066	0.506
		Lag 3	Lag 0	OR01	0.994	0.979	1.009	0.415
				OR10	1.064	0.970	1.168	0.187
			Lag 1	OR01	0.998	0.986	1.010	0.787
				OR10	1.055	0.962	1.157	0.259

			Lag 2	OR01	0.997	0.982	1.011	0.661
				OR10	1.065	0.971	1.169	0.180
			Lag 3	OR01	0.991	0.976	1.007	0.280
				OR10	1.048	0.954	1.150	0.329
Asian	All-natural	Lag 0	Lag 0	OR01	1.000	0.999	1.001	0.606
				OR10	1.029	1.019	1.038	**0.000**
			Lag 1	OR01	1.000	0.999	1.001	0.840
				OR10	1.028	1.019	1.038	**0.000**
			Lag 2	OR01	1.000	0.999	1.001	0.359
				OR10	1.032	1.022	1.042	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	0.111
				OR10	1.031	1.021	1.041	**0.000**
		Lag 1	Lag 0	OR01	1.000	0.999	1.001	0.910
				OR10	1.027	1.017	1.036	**0.000**
			Lag 1	OR01	1.000	0.999	1.001	0.635
				OR10	1.027	1.017	1.036	**0.000**
			Lag 2	OR01	0.999	0.998	1.000	0.206
				OR10	1.029	1.020	1.039	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	0.078
				OR10	1.029	1.019	1.038	**0.000**
		Lag 2	Lag 0	OR01	1.000	0.999	1.001	0.787
				OR10	1.017	1.008	1.027	**0.000**
			Lag 1	OR01	1.000	0.999	1.001	0.651
				OR10	1.018	1.009	1.027	**0.000**
			Lag 2	OR01	0.999	0.998	1.000	0.156
				OR10	1.019	1.010	1.029	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	0.104
				OR10	1.021	1.011	1.030	**0.000**
		Lag 3	Lag 0	OR01	1.000	0.999	1.001	0.679
				OR10	1.014	1.004	1.023	**0.004**
			Lag 1	OR01	1.000	0.999	1.001	0.934
				OR10	1.015	1.006	1.024	**0.001**
			Lag 2	OR01	0.999	0.998	1.000	0.149
				OR10	1.015	1.006	1.025	**0.001**
			Lag 3	OR01	0.999	0.998	1.000	0.088
				OR10	1.016	1.007	1.026	**0.001**
	Cardiovascular	Lag 0	Lag 0	OR01	1.002	0.981	1.024	0.861
				OR10	0.917	0.744	1.131	0.420
			Lag 1	OR01	0.998	0.966	1.032	0.929
				OR10	0.891	0.723	1.097	0.276
			Lag 2	OR01	0.976	0.946	1.007	0.130
				OR10	0.908	0.737	1.118	0.363
			Lag 3	OR01	0.975	0.943	1.009	0.152
				OR10	0.931	0.757	1.145	0.499

		Lag 1	Lag 0	OR01	0.999	0.976	1.022	0.919
				OR10	1.076	0.876	1.322	0.487
			Lag 1	OR01	0.991	0.954	1.028	0.621
				OR10	1.066	0.867	1.312	0.543
			Lag 2	OR01	0.969	0.933	1.006	0.101
				OR10	1.067	0.868	1.311	0.540
			Lag 3	OR01	0.971	0.936	1.008	0.127
				OR10	1.084	0.882	1.332	0.445
		Lag 2	Lag 0	OR01	0.998	0.976	1.022	0.895
				OR10	0.954	0.780	1.167	0.645
			Lag 1	OR01	0.997	0.963	1.031	0.844
				OR10	0.959	0.784	1.172	0.680
			Lag 2	OR01	0.971	0.937	1.006	0.108
				OR10	0.952	0.778	1.165	0.632
			Lag 3	OR01	0.971	0.935	1.008	0.124
				OR10	0.961	0.786	1.176	0.700
		Lag 3	Lag 0	OR01	0.999	0.976	1.022	0.908
				OR10	0.875	0.712	1.076	0.207
			Lag 1	OR01	0.990	0.956	1.026	0.585
				OR10	0.848	0.688	1.046	0.123
			Lag 2	OR01	0.973	0.938	1.008	0.129
				OR10	0.885	0.720	1.087	0.244
			Lag 3	OR01	0.972	0.937	1.009	0.134
				OR10	0.889	0.722	1.094	0.267
	Cerebrovascular	Lag 0	Lag 0	OR01	1.010	1.000	1.021	0.052
				OR10	0.940	0.810	1.091	0.414
			Lag 1	OR01	1.013	1.001	1.026	**0.040**
				OR10	0.956	0.824	1.110	0.556
			Lag 2	OR01	1.003	0.991	1.015	0.607
				OR10	0.953	0.821	1.105	0.521
			Lag 3	OR01	0.995	0.980	1.009	0.454
				OR10	0.941	0.812	1.091	0.422
		Lag 1	Lag 0	OR01	1.011	1.000	1.021	**0.045**
				OR10	1.004	0.867	1.162	0.955
			Lag 1	OR01	1.015	1.002	1.028	**0.027**
				OR10	1.029	0.888	1.192	0.707
			Lag 2	OR01	1.003	0.991	1.015	0.646
				OR10	0.998	0.861	1.156	0.974
			Lag 3	OR01	0.995	0.981	1.009	0.488
				OR10	1.005	0.868	1.164	0.942
		Lag 2	Lag 0	OR01	1.011	1.000	1.021	**0.045**
				OR10	1.113	0.967	1.281	0.135
			Lag 1	OR01	1.014	1.001	1.027	**0.038**
				OR10	1.114	0.968	1.282	0.132

		Lag 2	OR01	1.002	0.990	1.014	0.753
			OR10	1.091	0.947	1.257	0.228
		Lag 3	OR01	0.994	0.980	1.009	0.446
			OR10	1.099	0.955	1.265	0.188
	Lag 3	Lag 0	OR01	1.010	1.000	1.020	0.056
			OR10	1.085	0.942	1.249	0.259
		Lag 1	OR01	1.012	0.999	1.025	0.076
			OR10	1.081	0.938	1.245	0.283
		Lag 2	OR01	0.999	0.986	1.012	0.877
			OR10	1.050	0.911	1.210	0.503
		Lag 3	OR01	0.993	0.978	1.008	0.340
			OR10	1.069	0.927	1.232	0.360
Renal	Lag 0	Lag 0	OR01	0.942	0.870	1.019	0.136
			OR10	1.130	0.854	1.497	0.393
		Lag 1	OR01	0.998	0.948	1.052	0.953
			OR10	1.065	0.804	1.410	0.663
		Lag 2	OR01	0.999	0.964	1.035	0.960
			OR10	1.087	0.820	1.440	0.563
		Lag 3	OR01	1.015	0.980	1.052	0.402
			OR10	1.169	0.886	1.543	0.270
	Lag 1	Lag 0	OR01	0.932	0.856	1.015	0.104
			OR10	1.166	0.883	1.540	0.278
		Lag 1	OR01	1.002	0.952	1.054	0.952
			OR10	1.137	0.859	1.504	0.370
		Lag 2	OR01	1.003	0.970	1.038	0.863
			OR10	1.207	0.917	1.590	0.180
		Lag 3	OR01	1.011	0.975	1.049	0.543
			OR10	1.163	0.881	1.535	0.285
	Lag 2	Lag 0	OR01	0.937	0.865	1.016	0.115
			OR10	1.125	0.857	1.477	0.398
		Lag 1	OR01	0.999	0.949	1.052	0.974
			OR10	1.060	0.804	1.397	0.679
		Lag 2	OR01	1.002	0.968	1.037	0.898
			OR10	1.134	0.864	1.489	0.366
		Lag 3	OR01	1.016	0.979	1.053	0.403
			OR10	1.144	0.870	1.504	0.335
	Lag 3	Lag 0	OR01	0.927	0.848	1.014	0.097
			OR10	1.107	0.851	1.441	0.448
		Lag 1	OR01	0.998	0.948	1.051	0.950
			OR10	1.066	0.818	1.389	0.636
		Lag 2	OR01	1.005	0.970	1.040	0.797
			OR10	1.143	0.880	1.484	0.315
		Lag 3	OR01	1.017	0.981	1.054	0.365
			OR10	1.158	0.891	1.506	0.273

	Respiratory	Lag 0	Lag 0	OR01	1.003	0.982	1.025	0.751
				OR10	0.952	0.743	1.221	0.700
			Lag 1	OR01	0.998	0.978	1.018	0.841
				OR10	0.929	0.722	1.194	0.563
			Lag 2	OR01	0.996	0.975	1.019	0.741
				OR10	0.963	0.751	1.235	0.769
			Lag 3	OR01	0.985	0.958	1.014	0.302
				OR10	0.928	0.722	1.192	0.558
		Lag 1	Lag 0	OR01	1.003	0.981	1.025	0.814
				OR10	0.998	0.784	1.269	0.984
			Lag 1	OR01	0.996	0.975	1.017	0.720
				OR10	0.960	0.752	1.225	0.740
			Lag 2	OR01	0.997	0.975	1.019	0.788
				OR10	1.025	0.804	1.307	0.840
			Lag 3	OR01	0.985	0.957	1.013	0.290
				OR10	0.984	0.772	1.254	0.893
		Lag 2	Lag 0	OR01	1.002	0.980	1.025	0.844
				OR10	0.995	0.785	1.261	0.967
			Lag 1	OR01	0.997	0.977	1.018	0.781
				OR10	0.987	0.777	1.253	0.912
			Lag 2	OR01	0.998	0.977	1.020	0.885
				OR10	1.066	0.838	1.355	0.603
			Lag 3	OR01	0.985	0.957	1.014	0.298
				OR10	0.997	0.784	1.268	0.982
		Lag 3	Lag 0	OR01	1.003	0.982	1.025	0.762
				OR10	1.005	0.786	1.285	0.969
			Lag 1	OR01	0.997	0.976	1.018	0.771
				OR10	0.965	0.753	1.237	0.778
			Lag 2	OR01	0.995	0.973	1.018	0.689
				OR10	0.996	0.779	1.274	0.976
			Lag 3	OR01	0.984	0.956	1.013	0.290
				OR10	0.979	0.765	1.252	0.866
Black	All-natural	Lag 0	Lag 0	OR01	1.000	0.999	1.001	0.855
				OR10	1.026	1.017	1.036	**0.000**
			Lag 1	OR01	1.001	1.000	1.002	0.055
				OR10	1.027	1.018	1.037	**0.000**
			Lag 2	OR01	1.000	0.999	1.001	0.714
				OR10	1.026	1.016	1.035	**0.000**
			Lag 3	OR01	1.000	0.999	1.001	0.626
				OR10	1.025	1.016	1.035	**0.000**
		Lag 1	Lag 0	OR01	1.000	0.999	1.001	0.864
				OR10	1.030	1.020	1.039	**0.000**
			Lag 1	OR01	1.001	1.000	1.002	0.114
				OR10	1.030	1.021	1.040	**0.000**

			Lag 2	OR01	1.000	0.999	1.001	0.686
				OR10	1.031	1.022	1.041	**0.000**
			Lag 3	OR01	1.000	0.999	1.001	0.627
				OR10	1.030	1.021	1.040	**0.000**
		Lag 2	Lag 0	OR01	1.000	0.999	1.001	0.727
				OR10	1.023	1.014	1.033	**0.000**
			Lag 1	OR01	1.001	1.000	1.002	0.120
				OR10	1.025	1.016	1.035	**0.000**
			Lag 2	OR01	1.000	0.999	1.001	0.575
				OR10	1.027	1.018	1.036	**0.000**
			Lag 3	OR01	1.000	0.999	1.001	0.834
				OR10	1.027	1.018	1.037	**0.000**
		Lag 3	Lag 0	OR01	1.000	0.999	1.001	0.856
				OR10	1.015	1.006	1.024	**0.001**
			Lag 1	OR01	1.001	1.000	1.002	0.148
				OR10	1.016	1.007	1.025	**0.001**
			Lag 2	OR01	1.000	0.999	1.001	0.565
				OR10	1.018	1.009	1.027	**0.000**
			Lag 3	OR01	1.000	0.999	1.001	0.739
				OR10	1.018	1.008	1.027	**0.000**
	Cardiovascular	Lag 0	Lag 0	OR01	0.992	0.967	1.017	0.521
				OR10	1.147	0.956	1.376	0.141
			Lag 1	OR01	1.028	1.003	1.054	**0.029**
				OR10	1.191	0.993	1.428	0.059
			Lag 2	OR01	1.002	0.983	1.022	0.817
				OR10	1.158	0.966	1.389	0.113
			Lag 3	OR01	0.994	0.967	1.022	0.684
				OR10	1.222	1.020	1.462	**0.029**
		Lag 1	Lag 0	OR01	0.992	0.968	1.017	0.547
				OR10	1.084	0.903	1.301	0.389
			Lag 1	OR01	1.025	1.001	1.050	**0.045**
				OR10	1.098	0.914	1.318	0.320
			Lag 2	OR01	0.998	0.976	1.020	0.844
				OR10	1.048	0.869	1.263	0.626
			Lag 3	OR01	0.987	0.958	1.017	0.402
				OR10	1.095	0.911	1.316	0.334
		Lag 2	Lag 0	OR01	0.992	0.968	1.017	0.524
				OR10	1.027	0.853	1.237	0.777
			Lag 1	OR01	1.030	1.004	1.057	**0.026**
				OR10	1.069	0.888	1.287	0.480
			Lag 2	OR01	1.002	0.982	1.022	0.851
				OR10	1.042	0.865	1.257	0.664
			Lag 3	OR01	0.993	0.965	1.021	0.614
				OR10	1.081	0.897	1.304	0.412

	Lag 3	Lag 0	OR01	0.997	0.975	1.019	0.760
			OR10	1.150	0.960	1.377	0.130
		Lag 1	OR01	1.031	1.004	1.057	**0.022**
			OR10	1.163	0.973	1.391	0.098
		Lag 2	OR01	1.004	0.984	1.024	0.696
			OR10	1.149	0.960	1.376	0.129
		Lag 3	OR01	0.993	0.965	1.021	0.609
			OR10	1.168	0.975	1.398	0.092
Cerebrovascular	Lag 0	Lag 0	OR01	0.986	0.966	1.006	0.175
			OR10	1.042	0.884	1.228	0.623
		Lag 1	OR01	0.992	0.974	1.010	0.389
			OR10	1.037	0.878	1.224	0.669
		Lag 2	OR01	0.987	0.967	1.007	0.203
			OR10	1.028	0.871	1.213	0.743
		Lag 3	OR01	0.990	0.971	1.009	0.309
			OR10	0.994	0.842	1.174	0.943
	Lag 1	Lag 0	OR01	0.986	0.966	1.006	0.174
			OR10	1.137	0.966	1.338	0.122
		Lag 1	OR01	0.991	0.973	1.010	0.347
			OR10	1.121	0.951	1.320	0.174
		Lag 2	OR01	0.988	0.969	1.008	0.248
			OR10	1.138	0.966	1.342	0.122
		Lag 3	OR01	0.991	0.972	1.010	0.341
			OR10	1.095	0.929	1.292	0.278
	Lag 2	Lag 0	OR01	0.985	0.965	1.006	0.153
			OR10	1.030	0.880	1.207	0.709
		Lag 1	OR01	0.990	0.971	1.009	0.285
			OR10	1.024	0.875	1.200	0.764
		Lag 2	OR01	0.988	0.968	1.008	0.246
			OR10	1.042	0.890	1.220	0.609
		Lag 3	OR01	0.990	0.971	1.010	0.324
			OR10	1.022	0.872	1.197	0.789
	Lag 3	Lag 0	OR01	0.983	0.962	1.004	0.118
			OR10	1.089	0.928	1.279	0.295
		Lag 1	OR01	0.993	0.975	1.011	0.436
			OR10	1.136	0.970	1.331	0.114
		Lag 2	OR01	0.987	0.966	1.008	0.222
			OR10	1.134	0.967	1.328	0.121
		Lag 3	OR01	0.991	0.972	1.011	0.375
			OR10	1.124	0.958	1.319	0.152
Renal	Lag 0	Lag 0	OR01	1.030	0.982	1.079	0.223
			OR10	1.212	0.922	1.595	0.169
		Lag 1	OR01	0.997	0.947	1.050	0.916
			OR10	1.195	0.906	1.577	0.207

			Lag 2	OR01	1.044	0.993	1.098	0.089
				OR10	1.290	0.984	1.692	0.065
			Lag 3	OR01	1.015	0.963	1.071	0.574
				OR10	1.229	0.934	1.617	0.141
		Lag 1	Lag 0	OR01	1.025	0.978	1.075	0.296
				OR10	1.234	0.948	1.606	0.117
			Lag 1	OR01	1.009	0.964	1.056	0.708
				OR10	1.333	1.029	1.728	**0.030**
			Lag 2	OR01	1.048	0.996	1.102	0.073
				OR10	1.355	1.045	1.758	**0.022**
			Lag 3	OR01	1.020	0.968	1.075	0.464
				OR10	1.314	1.012	1.706	**0.041**
		Lag 2	Lag 0	OR01	1.040	0.993	1.089	0.100
				OR10	1.118	0.865	1.446	0.393
			Lag 1	OR01	1.010	0.965	1.056	0.674
				OR10	1.180	0.915	1.521	0.203
			Lag 2	OR01	1.037	0.990	1.087	0.124
				OR10	1.105	0.853	1.433	0.449
			Lag 3	OR01	1.018	0.965	1.073	0.519
				OR10	1.121	0.864	1.454	0.390
		Lag 3	Lag 0	OR01	1.037	0.990	1.086	0.124
				OR10	1.074	0.832	1.388	0.583
			Lag 1	OR01	1.009	0.965	1.056	0.687
				OR10	1.135	0.883	1.459	0.325
			Lag 2	OR01	1.043	0.993	1.094	0.092
				OR10	1.122	0.871	1.445	0.374
			Lag 3	OR01	1.017	0.965	1.072	0.531
				OR10	1.091	0.845	1.410	0.504
	Respiratory	Lag 0	Lag 0	OR01	0.977	0.937	1.018	0.260
				OR10	0.874	0.707	1.080	0.213
			Lag 1	OR01	0.995	0.970	1.021	0.717
				OR10	0.846	0.683	1.048	0.126
			Lag 2	OR01	1.005	0.978	1.033	0.735
				OR10	0.877	0.709	1.084	0.224
			Lag 3	OR01	1.005	0.975	1.035	0.766
				OR10	0.835	0.673	1.035	0.100
		Lag 1	Lag 0	OR01	0.979	0.940	1.019	0.291
				OR10	0.927	0.753	1.141	0.473
			Lag 1	OR01	0.995	0.970	1.022	0.731
				OR10	0.891	0.721	1.101	0.284
			Lag 2	OR01	1.007	0.981	1.035	0.588
				OR10	0.943	0.765	1.161	0.579
			Lag 3	OR01	1.006	0.976	1.036	0.711
				OR10	0.891	0.720	1.103	0.289

		Lag 2	Lag 0	OR01	0.976	0.937 1.017	0.241
				OR10	0.892	0.725 1.097	0.280
			Lag 1	OR01	0.997	0.972 1.022	0.791
				OR10	0.900	0.732 1.106	0.317
			Lag 2	OR01	1.004	0.976 1.033	0.774
				OR10	0.902	0.733 1.110	0.328
			Lag 3	OR01	1.007	0.977 1.037	0.648
				OR10	0.884	0.716 1.091	0.251
		Lag 3	Lag 0	OR01	0.981	0.944 1.019	0.317
				OR10	0.986	0.808 1.202	0.888
			Lag 1	OR01	1.000	0.978 1.023	0.987
				OR10	1.009	0.829 1.228	0.926
			Lag 2	OR01	1.006	0.979 1.034	0.652
				OR10	0.998	0.818 1.217	0.984
			Lag 3	OR01	1.008	0.979 1.038	0.591
				OR10	0.975	0.797 1.193	0.806
Female	All-natural	Lag 0	Lag 0	OR01	1.000	0.999 1.000	0.763
				OR10	1.020	1.016 1.024	**0.000**
			Lag 1	OR01	1.000	0.999 1.000	0.265
				OR10	1.020	1.016 1.024	**0.000**
			Lag 2	OR01	0.999	0.999 1.000	**0.000**
				OR10	1.021	1.018 1.025	**0.000**
			Lag 3	OR01	0.999	0.999 1.000	**0.000**
				OR10	1.020	1.016 1.024	**0.000**
		Lag 1	Lag 0	OR01	1.000	0.999 1.000	0.663
				OR10	1.021	1.017 1.024	**0.000**
			Lag 1	OR01	1.000	0.999 1.000	0.356
				OR10	1.021	1.018 1.025	**0.000**
			Lag 2	OR01	0.999	0.999 1.000	**0.000**
				OR10	1.022	1.019 1.026	**0.000**
			Lag 3	OR01	0.999	0.999 1.000	**0.000**
				OR10	1.021	1.018 1.025	**0.000**
		Lag 2	Lag 0	OR01	1.000	0.999 1.000	0.778
				OR10	1.017	1.013 1.021	**0.000**
			Lag 1	OR01	1.000	0.999 1.000	0.420
				OR10	1.018	1.014 1.022	**0.000**
			Lag 2	OR01	0.999	0.999 1.000	**0.002**
				OR10	1.019	1.016 1.023	**0.000**
			Lag 3	OR01	0.999	0.999 1.000	**0.000**
				OR10	1.018	1.015 1.022	**0.000**
		Lag 3	Lag 0	OR01	1.000	0.999 1.000	0.787
				OR10	1.014	1.011 1.018	**0.000**
			Lag 1	OR01	1.000	0.999 1.000	0.238
				OR10	1.015	1.011 1.018	**0.000**

		Lag 2	OR01	0.999	0.999	1.000	**0.001**
			OR10	1.016	1.013	1.020	**0.000**
		Lag 3	OR01	0.999	0.999	1.000	**0.000**
			OR10	1.015	1.012	1.019	**0.000**
Cardiovascular	Lag 0	Lag 0	OR01	0.999	0.985	1.013	0.857
			OR10	0.983	0.895	1.079	0.714
		Lag 1	OR01	0.996	0.979	1.013	0.641
			OR10	0.999	0.910	1.097	0.985
		Lag 2	OR01	0.995	0.980	1.011	0.551
			OR10	0.991	0.903	1.088	0.856
		Lag 3	OR01	0.983	0.966	1.000	0.050
			OR10	1.008	0.919	1.106	0.865
	Lag 1	Lag 0	OR01	0.998	0.984	1.012	0.785
			OR10	1.025	0.937	1.120	0.591
		Lag 1	OR01	0.996	0.979	1.013	0.646
			OR10	1.042	0.953	1.139	0.370
		Lag 2	OR01	0.995	0.979	1.011	0.520
			OR10	1.033	0.945	1.129	0.477
		Lag 3	OR01	0.979	0.961	0.997	**0.024**
			OR10	1.032	0.944	1.128	0.494
	Lag 2	Lag 0	OR01	0.996	0.982	1.011	0.603
			OR10	1.040	0.953	1.134	0.376
		Lag 1	OR01	0.999	0.982	1.016	0.934
			OR10	1.073	0.984	1.170	0.112
		Lag 2	OR01	0.996	0.981	1.012	0.648
			OR10	1.064	0.976	1.161	0.160
		Lag 3	OR01	0.982	0.964	1.000	**0.045**
			OR10	1.068	0.980	1.165	0.135
	Lag 3	Lag 0	OR01	0.997	0.983	1.011	0.670
			OR10	1.064	0.975	1.160	0.162
		Lag 1	OR01	0.998	0.981	1.015	0.787
			OR10	1.094	1.004	1.191	**0.041**
		Lag 2	OR01	0.996	0.981	1.012	0.622
			OR10	1.089	0.999	1.187	0.052
		Lag 3	OR01	0.982	0.965	1.000	0.050
			OR10	1.097	1.006	1.196	**0.036**
Cerebrovascular	Lag 0	Lag 0	OR01	1.003	0.995	1.012	0.413
			OR10	1.041	0.970	1.117	0.264
		Lag 1	OR01	1.001	0.992	1.010	0.841
			OR10	1.041	0.971	1.117	0.259
		Lag 2	OR01	0.997	0.988	1.007	0.558
			OR10	1.048	0.977	1.124	0.191
		Lag 3	OR01	0.992	0.981	1.002	0.110
			OR10	1.035	0.965	1.110	0.341

		Lag 1	Lag 0	OR01	1.003	0.995	1.011	0.450
				OR10	1.072	1.000	1.150	0.051
			Lag 1	OR01	1.000	0.992	1.009	0.926
				OR10	1.072	1.000	1.150	0.050
			Lag 2	OR01	0.996	0.987	1.006	0.437
				OR10	1.073	1.000	1.151	0.050
			Lag 3	OR01	0.992	0.982	1.002	0.118
				OR10	1.070	0.997	1.148	0.059
		Lag 2	Lag 0	OR01	1.003	0.995	1.011	0.516
				OR10	1.019	0.951	1.092	0.599
			Lag 1	OR01	1.000	0.992	1.009	0.938
				OR10	1.024	0.955	1.097	0.509
			Lag 2	OR01	0.997	0.988	1.007	0.554
				OR10	1.032	0.963	1.106	0.378
			Lag 3	OR01	0.991	0.981	1.001	0.086
				OR10	1.017	0.949	1.090	0.637
		Lag 3	Lag 0	OR01	1.003	0.994	1.011	0.533
				OR10	0.956	0.890	1.026	0.208
			Lag 1	OR01	1.001	0.992	1.010	0.848
				OR10	0.967	0.901	1.037	0.348
			Lag 2	OR01	0.997	0.988	1.007	0.590
				OR10	0.973	0.907	1.044	0.447
			Lag 3	OR01	0.991	0.981	1.001	0.088
				OR10	0.959	0.894	1.030	0.252
	Renal	Lag 0	Lag 0	OR01	1.007	0.986	1.029	0.520
				OR10	1.053	0.947	1.170	0.343
			Lag 1	OR01	0.986	0.961	1.011	0.260
				OR10	1.068	0.961	1.186	0.225
			Lag 2	OR01	0.999	0.982	1.017	0.948
				OR10	1.062	0.956	1.180	0.261
			Lag 3	OR01	0.990	0.969	1.012	0.366
				OR10	1.047	0.942	1.163	0.396
		Lag 1	Lag 0	OR01	1.005	0.983	1.028	0.642
				OR10	1.095	0.986	1.216	0.088
			Lag 1	OR01	0.985	0.959	1.010	0.236
				OR10	1.112	1.002	1.234	**0.046**
			Lag 2	OR01	1.000	0.982	1.018	0.981
				OR10	1.112	1.002	1.234	**0.046**
			Lag 3	OR01	0.991	0.971	1.012	0.414
				OR10	1.098	0.989	1.219	0.078
		Lag 2	Lag 0	OR01	1.009	0.988	1.030	0.411
				OR10	1.045	0.943	1.160	0.400
			Lag 1	OR01	0.983	0.958	1.009	0.207
				OR10	1.047	0.944	1.161	0.388

			Lag 2	OR01	0.998	0.980	1.017	0.861
				OR10	1.044	0.941	1.158	0.416
			Lag 3	OR01	0.988	0.966	1.010	0.296
				OR10	1.033	0.931	1.146	0.538
		Lag 3	Lag 0	OR01	1.010	0.989	1.031	0.365
				OR10	0.978	0.882	1.085	0.675
			Lag 1	OR01	0.986	0.962	1.011	0.258
				OR10	0.982	0.885	1.088	0.724
			Lag 2	OR01	0.999	0.981	1.018	0.936
				OR10	0.978	0.882	1.084	0.669
			Lag 3	OR01	0.992	0.970	1.013	0.450
				OR10	0.976	0.880	1.082	0.643
	Respiratory	Lag 0	Lag 0	OR01	0.968	0.943	0.995	**0.020**
				OR10	0.974	0.882	1.075	0.598
			Lag 1	OR01	1.000	0.986	1.015	0.950
				OR10	0.976	0.884	1.076	0.623
			Lag 2	OR01	1.012	0.998	1.027	0.102
				OR10	0.983	0.891	1.084	0.732
			Lag 3	OR01	1.000	0.984	1.016	0.988
				OR10	0.967	0.877	1.067	0.504
		Lag 1	Lag 0	OR01	0.965	0.939	0.992	**0.012**
				OR10	1.012	0.919	1.115	0.803
			Lag 1	OR01	0.999	0.985	1.014	0.917
				OR10	1.011	0.918	1.114	0.823
			Lag 2	OR01	1.012	0.997	1.027	0.118
				OR10	1.023	0.929	1.127	0.644
			Lag 3	OR01	0.999	0.984	1.015	0.922
				OR10	1.006	0.912	1.108	0.911
		Lag 2	Lag 0	OR01	0.960	0.933	0.988	**0.006**
				OR10	1.039	0.945	1.143	0.428
			Lag 1	OR01	0.996	0.981	1.011	0.611
				OR10	1.036	0.943	1.140	0.459
			Lag 2	OR01	1.011	0.996	1.026	0.140
				OR10	1.052	0.956	1.158	0.295
			Lag 3	OR01	0.999	0.983	1.015	0.915
				OR10	1.041	0.946	1.145	0.409
		Lag 3	Lag 0	OR01	0.969	0.944	0.995	**0.022**
				OR10	1.027	0.935	1.128	0.574
			Lag 1	OR01	1.000	0.985	1.014	0.955
				OR10	1.021	0.930	1.121	0.655
			Lag 2	OR01	1.012	0.996	1.027	0.135
				OR10	1.026	0.934	1.126	0.591
			Lag 3	OR01	0.999	0.983	1.015	0.856
				OR10	1.013	0.922	1.113	0.787

Hispanic	All-natural	Lag 0	Lag 0	OR01	1.000	1.000	1.001	0.235
				OR10	1.029	1.023	1.034	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.329
				OR10	1.030	1.024	1.035	**0.000**
			Lag 2	OR01	0.999	0.998	1.000	**0.012**
				OR10	1.030	1.025	1.036	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	**0.028**
				OR10	1.029	1.024	1.035	**0.000**
		Lag 1	Lag 0	OR01	1.001	1.000	1.001	0.205
				OR10	1.027	1.022	1.032	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.437
				OR10	1.028	1.023	1.034	**0.000**
			Lag 2	OR01	0.999	0.998	1.000	**0.019**
				OR10	1.029	1.024	1.034	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	**0.023**
				OR10	1.027	1.022	1.033	**0.000**
		Lag 2	Lag 0	OR01	1.001	1.000	1.001	0.139
				OR10	1.021	1.016	1.027	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.469
				OR10	1.022	1.017	1.028	**0.000**
			Lag 2	OR01	0.999	0.998	1.000	**0.045**
				OR10	1.024	1.019	1.029	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	**0.022**
				OR10	1.022	1.016	1.027	**0.000**
		Lag 3	Lag 0	OR01	1.001	1.000	1.001	0.146
				OR10	1.014	1.009	1.019	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.336
				OR10	1.014	1.009	1.020	**0.000**
			Lag 2	OR01	0.999	0.998	1.000	0.066
				OR10	1.017	1.011	1.022	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	**0.042**
				OR10	1.015	1.010	1.020	**0.000**
	Cardiovascular	Lag 0	Lag 0	OR01	1.006	0.987	1.024	0.545
				OR10	0.979	0.857	1.118	0.753
			Lag 1	OR01	1.016	0.996	1.036	0.112
				OR10	0.976	0.855	1.113	0.714
			Lag 2	OR01	1.006	0.981	1.032	0.626
				OR10	1.004	0.880	1.145	0.954
			Lag 3	OR01	1.006	0.987	1.025	0.571
				OR10	0.993	0.871	1.133	0.917
		Lag 1	Lag 0	OR01	1.006	0.988	1.024	0.534
				OR10	1.003	0.882	1.142	0.959
			Lag 1	OR01	1.016	0.996	1.036	0.109
				OR10	0.999	0.878	1.137	0.992

			Lag 2	OR01	1.006	0.980	1.032	0.652
				OR10	1.022	0.898	1.162	0.741
			Lag 3	OR01	1.006	0.987	1.025	0.536
				OR10	1.019	0.896	1.159	0.775
		Lag 2	Lag 0	OR01	1.005	0.987	1.024	0.564
				OR10	1.001	0.883	1.134	0.993
			Lag 1	OR01	1.015	0.996	1.035	0.129
				OR10	0.995	0.877	1.127	0.933
			Lag 2	OR01	1.006	0.980	1.033	0.652
				OR10	1.019	0.899	1.155	0.771
			Lag 3	OR01	1.003	0.984	1.023	0.760
				OR10	0.997	0.879	1.130	0.958
		Lag 3	Lag 0	OR01	1.005	0.987	1.024	0.600
				OR10	0.986	0.869	1.119	0.827
			Lag 1	OR01	1.016	0.997	1.036	0.104
				OR10	0.992	0.875	1.125	0.903
			Lag 2	OR01	1.008	0.983	1.035	0.523
				OR10	1.019	0.899	1.156	0.766
			Lag 3	OR01	1.003	0.983	1.023	0.776
				OR10	0.986	0.869	1.119	0.825
	Cerebrovascular	Lag 0	Lag 0	OR01	1.002	0.986	1.019	0.785
				OR10	1.031	0.929	1.144	0.569
			Lag 1	OR01	1.009	0.993	1.025	0.286
				OR10	1.027	0.926	1.140	0.612
			Lag 2	OR01	1.001	0.984	1.017	0.941
				OR10	1.015	0.914	1.126	0.785
			Lag 3	OR01	0.995	0.979	1.012	0.575
				OR10	1.010	0.910	1.121	0.854
		Lag 1	Lag 0	OR01	1.001	0.984	1.018	0.938
				OR10	1.022	0.921	1.133	0.685
			Lag 1	OR01	1.009	0.993	1.025	0.270
				OR10	1.033	0.932	1.146	0.534
			Lag 2	OR01	1.002	0.985	1.018	0.841
				OR10	1.027	0.926	1.138	0.618
			Lag 3	OR01	0.996	0.980	1.013	0.645
				OR10	1.018	0.919	1.128	0.729
		Lag 2	Lag 0	OR01	1.000	0.983	1.017	0.989
				OR10	0.977	0.881	1.084	0.666
			Lag 1	OR01	1.009	0.993	1.025	0.289
				OR10	0.989	0.892	1.096	0.826
			Lag 2	OR01	1.003	0.987	1.019	0.730
				OR10	0.996	0.898	1.104	0.934
			Lag 3	OR01	0.995	0.979	1.012	0.590
				OR10	0.976	0.880	1.083	0.647

	Lag 3	Lag 0	OR01	1.000	0.983	1.017	0.992
			OR10	0.989	0.894	1.095	0.834
		Lag 1	OR01	1.010	0.995	1.026	0.200
			OR10	1.012	0.914	1.119	0.821
		Lag 2	OR01	1.001	0.985	1.018	0.869
			OR10	0.995	0.900	1.101	0.926
		Lag 3	OR01	0.995	0.978	1.012	0.539
			OR10	0.984	0.888	1.089	0.749
Renal	Lag 0	Lag 0	OR01	0.906	0.853	0.964	**0.002**
			OR10	1.093	0.941	1.269	0.244
		Lag 1	OR01	0.978	0.939	1.019	0.284
			OR10	1.107	0.954	1.286	0.180
		Lag 2	OR01	1.000	0.974	1.026	0.999
			OR10	1.094	0.943	1.270	0.236
		Lag 3	OR01	0.978	0.942	1.014	0.223
			OR10	1.077	0.928	1.250	0.327
	Lag 1	Lag 0	OR01	0.927	0.877	0.981	**0.008**
			OR10	1.033	0.889	1.201	0.668
		Lag 1	OR01	0.977	0.938	1.018	0.265
			OR10	1.017	0.875	1.182	0.824
		Lag 2	OR01	1.002	0.977	1.028	0.895
			OR10	1.024	0.881	1.190	0.759
		Lag 3	OR01	0.980	0.945	1.015	0.258
			OR10	1.001	0.862	1.163	0.991
	Lag 2	Lag 0	OR01	0.918	0.867	0.972	**0.004**
			OR10	1.121	0.968	1.299	0.126
		Lag 1	OR01	0.977	0.938	1.018	0.277
			OR10	1.123	0.970	1.301	0.119
		Lag 2	OR01	1.000	0.975	1.027	0.981
			OR10	1.121	0.966	1.300	0.133
		Lag 3	OR01	0.976	0.940	1.014	0.218
			OR10	1.103	0.952	1.279	0.192
	Lag 3	Lag 0	OR01	0.917	0.865	0.973	**0.004**
			OR10	1.065	0.922	1.230	0.392
		Lag 1	OR01	0.974	0.935	1.016	0.223
			OR10	1.059	0.918	1.223	0.433
		Lag 2	OR01	0.993	0.964	1.022	0.630
			OR10	1.033	0.894	1.194	0.661
		Lag 3	OR01	0.976	0.939	1.014	0.206
			OR10	1.047	0.905	1.211	0.536
Respiratory	Lag 0	Lag 0	OR01	0.980	0.947	1.015	0.267
			OR10	1.144	0.987	1.327	0.074
		Lag 1	OR01	0.994	0.968	1.021	0.669
			OR10	1.150	0.993	1.331	0.063

			Lag 2	OR01	1.005	0.974	1.038	0.737
				OR10	1.139	0.983	1.319	0.082
			Lag 3	OR01	0.971	0.936	1.007	0.113
				OR10	1.155	0.998	1.336	0.053
		Lag 1	Lag 0	OR01	0.977	0.942	1.013	0.205
				OR10	1.081	0.937	1.248	0.287
			Lag 1	OR01	0.994	0.968	1.021	0.648
				OR10	1.097	0.951	1.266	0.205
			Lag 2	OR01	1.006	0.974	1.038	0.715
				OR10	1.091	0.945	1.260	0.233
			Lag 3	OR01	0.967	0.932	1.004	0.083
				OR10	1.093	0.947	1.262	0.222
		Lag 2	Lag 0	OR01	0.971	0.934	1.009	0.131
				OR10	1.037	0.898	1.198	0.617
			Lag 1	OR01	0.995	0.968	1.022	0.694
				OR10	1.068	0.926	1.232	0.367
			Lag 2	OR01	1.006	0.974	1.038	0.727
				OR10	1.059	0.917	1.223	0.431
			Lag 3	OR01	0.962	0.924	1.001	0.057
				OR10	1.053	0.912	1.216	0.479
		Lag 3	Lag 0	OR01	0.978	0.944	1.013	0.215
				OR10	0.912	0.790	1.051	0.204
			Lag 1	OR01	0.999	0.974	1.024	0.914
				OR10	0.945	0.821	1.089	0.437
			Lag 2	OR01	1.013	0.982	1.044	0.429
				OR10	0.949	0.824	1.094	0.472
			Lag 3	OR01	0.961	0.923	1.000	0.050
				OR10	0.910	0.789	1.049	0.193
Higher Education (< 50% high schoool education or less)	All-natural	Lag 0	Lag 0	OR01	1.000	0.999	1.000	0.544
				OR10	1.023	1.020	1.027	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.241
				OR10	1.024	1.020	1.027	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	**0.000**
				OR10	1.025	1.021	1.028	**0.000**
			Lag 3	OR01	0.999	0.999	0.999	**0.000**
				OR10	1.023	1.020	1.027	**0.000**
		Lag 1	Lag 0	OR01	1.000	0.999	1.000	0.406
				OR10	1.023	1.020	1.027	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.369
				OR10	1.024	1.021	1.028	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	**0.000**
				OR10	1.025	1.021	1.028	**0.000**
			Lag 3	OR01	0.999	0.999	0.999	**0.000**
				OR10	1.024	1.020	1.027	**0.000**

	Lag 2	Lag 0	OR01	1.000	0.999	1.000	0.535
			OR10	1.018	1.015	1.021	**0.000**
		Lag 1	OR01	1.000	0.999	1.000	0.370
			OR10	1.019	1.016	1.023	**0.000**
		Lag 2	OR01	0.999	0.999	1.000	**0.001**
			OR10	1.020	1.017	1.024	**0.000**
		Lag 3	OR01	0.999	0.999	0.999	**0.000**
			OR10	1.019	1.016	1.023	**0.000**
	Lag 3	Lag 0	OR01	1.000	0.999	1.000	0.533
			OR10	1.014	1.011	1.018	**0.000**
		Lag 1	OR01	1.000	0.999	1.000	0.257
			OR10	1.015	1.012	1.018	**0.000**
		Lag 2	OR01	0.999	0.999	1.000	**0.001**
			OR10	1.016	1.013	1.020	**0.000**
		Lag 3	OR01	0.999	0.999	0.999	**0.000**
			OR10	1.016	1.012	1.019	**0.000**
	Cardiovascular	Lag 0	OR01	1.000	0.990	1.009	0.920
			OR10	0.991	0.921	1.066	0.805
		Lag 1	OR01	1.004	0.995	1.013	0.417
			OR10	0.993	0.923	1.068	0.848
		Lag 2	OR01	0.999	0.990	1.008	0.839
			OR10	0.994	0.923	1.069	0.866
		Lag 3	OR01	0.998	0.989	1.008	0.695
			OR10	0.999	0.929	1.075	0.981
		Lag 1	Lag 0	OR01	0.999	0.990	1.009	0.858
				OR10	1.037	0.966	1.114	0.316
			Lag 1	OR01	1.004	0.995	1.013	0.396
				OR10	1.043	0.971	1.120	0.251
			Lag 2	OR01	0.998	0.989	1.007	0.710
				OR10	1.035	0.963	1.112	0.349
			Lag 3	OR01	0.998	0.989	1.007	0.680
				OR10	1.046	0.974	1.124	0.216
		Lag 2	Lag 0	OR01	0.999	0.990	1.008	0.835
				OR10	1.032	0.962	1.107	0.384
			Lag 1	OR01	1.005	0.996	1.014	0.314
				OR10	1.043	0.972	1.119	0.240
			Lag 2	OR01	0.999	0.990	1.008	0.838
				OR10	1.039	0.969	1.115	0.283
			Lag 3	OR01	0.998	0.989	1.008	0.702
				OR10	1.043	0.972	1.118	0.244
		Lag 3	Lag 0	OR01	0.999	0.990	1.009	0.845
				OR10	0.997	0.929	1.070	0.925
			Lag 1	OR01	1.004	0.995	1.013	0.382
				OR10	1.006	0.938	1.079	0.870

		Lag 2	OR01	0.999	0.990	1.008	0.849
			OR10	1.006	0.937	1.079	0.878
		Lag 3	OR01	0.997	0.988	1.007	0.598
			OR10	1.004	0.936	1.078	0.908
Cerebrovascular	Lag 0	Lag 0	OR01	1.003	0.997	1.010	0.322
			OR10	1.029	0.970	1.092	0.342
		Lag 1	OR01	1.002	0.995	1.009	0.579
			OR10	1.034	0.975	1.097	0.268
		Lag 2	OR01	0.997	0.989	1.004	0.378
			OR10	1.027	0.968	1.090	0.377
		Lag 3	OR01	0.994	0.986	1.002	0.152
			OR10	1.023	0.964	1.086	0.445
	Lag 1	Lag 0	OR01	1.003	0.996	1.010	0.361
			OR10	1.034	0.975	1.098	0.262
		Lag 1	OR01	1.001	0.994	1.009	0.700
			OR10	1.037	0.978	1.101	0.226
		Lag 2	OR01	0.997	0.990	1.004	0.433
			OR10	1.040	0.980	1.103	0.200
		Lag 3	OR01	0.995	0.987	1.003	0.211
			OR10	1.038	0.978	1.102	0.215
	Lag 2	Lag 0	OR01	1.003	0.996	1.010	0.353
			OR10	1.061	1.001	1.125	**0.046**
		Lag 1	OR01	1.001	0.994	1.008	0.782
			OR10	1.064	1.004	1.127	**0.037**
		Lag 2	OR01	0.997	0.990	1.005	0.453
			OR10	1.069	1.009	1.133	**0.025**
		Lag 3	OR01	0.995	0.987	1.003	0.188
			OR10	1.065	1.004	1.128	**0.035**
	Lag 3	Lag 0	OR01	1.003	0.996	1.010	0.357
			OR10	1.009	0.951	1.069	0.776
		Lag 1	OR01	1.001	0.994	1.009	0.683
			OR10	1.013	0.956	1.074	0.661
		Lag 2	OR01	0.997	0.989	1.004	0.372
			OR10	1.013	0.956	1.074	0.666
		Lag 3	OR01	0.994	0.986	1.002	0.134
			OR10	1.008	0.951	1.069	0.784
Renal	Lag 0	Lag 0	OR01	1.001	0.982	1.021	0.923
			OR10	1.111	1.010	1.223	**0.031**
		Lag 1	OR01	0.980	0.956	1.005	0.117
			OR10	1.119	1.017	1.232	**0.022**
		Lag 2	OR01	1.003	0.987	1.019	0.706
			OR10	1.117	1.015	1.229	**0.024**
		Lag 3	OR01	1.002	0.986	1.018	0.847
			OR10	1.113	1.011	1.224	**0.029**

		Lag 1	Lag 0	OR01	1.000	0.980	1.020	0.999
				OR10	1.123	1.023	1.234	**0.015**
			Lag 1	OR01	0.978	0.953	1.004	0.094
				OR10	1.130	1.028	1.241	**0.011**
			Lag 2	OR01	1.005	0.989	1.020	0.550
				OR10	1.145	1.043	1.258	**0.005**
			Lag 3	OR01	1.001	0.985	1.018	0.874
				OR10	1.124	1.024	1.235	**0.014**
		Lag 2	Lag 0	OR01	1.004	0.986	1.023	0.658
				OR10	1.078	0.982	1.184	0.113
			Lag 1	OR01	0.980	0.955	1.005	0.110
				OR10	1.075	0.979	1.181	0.129
			Lag 2	OR01	1.004	0.988	1.020	0.611
				OR10	1.084	0.987	1.190	0.093
			Lag 3	OR01	1.001	0.985	1.018	0.874
				OR10	1.074	0.978	1.180	0.136
		Lag 3	Lag 0	OR01	1.007	0.988	1.025	0.480
				OR10	1.060	0.966	1.163	0.218
			Lag 1	OR01	0.983	0.960	1.007	0.161
				OR10	1.055	0.961	1.158	0.258
			Lag 2	OR01	1.004	0.989	1.020	0.593
				OR10	1.055	0.962	1.157	0.258
			Lag 3	OR01	1.002	0.986	1.019	0.766
				OR10	1.051	0.958	1.154	0.290
	Respiratory	Lag 0	Lag 0	OR01	0.988	0.973	1.004	0.140
				OR10	0.978	0.895	1.069	0.628
			Lag 1	OR01	1.001	0.990	1.011	0.913
				OR10	0.976	0.894	1.067	0.595
			Lag 2	OR01	1.006	0.994	1.017	0.336
				OR10	0.989	0.905	1.080	0.803
			Lag 3	OR01	0.997	0.984	1.010	0.609
				OR10	0.963	0.881	1.052	0.405
		Lag 1	Lag 0	OR01	0.989	0.974	1.005	0.178
				OR10	1.017	0.932	1.110	0.701
			Lag 1	OR01	1.000	0.990	1.011	0.933
				OR10	1.008	0.923	1.099	0.865
			Lag 2	OR01	1.005	0.994	1.017	0.356
				OR10	1.018	0.933	1.110	0.689
			Lag 3	OR01	0.997	0.984	1.010	0.678
				OR10	0.996	0.913	1.088	0.934
		Lag 2	Lag 0	OR01	0.987	0.972	1.003	0.123
				OR10	1.034	0.948	1.128	0.448
			Lag 1	OR01	0.999	0.988	1.010	0.830
				OR10	1.027	0.942	1.120	0.545

			Lag 2	OR01	1.006	0.994	1.017	0.341
				OR10	1.047	0.960	1.141	0.304
			Lag 3	OR01	0.997	0.984	1.010	0.674
				OR10	1.027	0.942	1.121	0.546
		Lag 3	Lag 0	OR01	0.989	0.974	1.005	0.164
				OR10	1.063	0.977	1.157	0.157
			Lag 1	OR01	1.001	0.991	1.011	0.832
				OR10	1.062	0.976	1.156	0.160
			Lag 2	OR01	1.006	0.994	1.017	0.344
				OR10	1.069	0.982	1.163	0.122
			Lag 3	OR01	0.998	0.985	1.011	0.738
				OR10	1.056	0.970	1.150	0.205
Lower Education (> 50% high schoool education or less)	All-natural	Lag 0	Lag 0	OR01	1.001	1.000	1.001	0.135
				OR10	1.025	1.020	1.030	**0.000**
			Lag 1	OR01	1.000	0.999	1.001	0.816
				OR10	1.026	1.020	1.031	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	0.166
				OR10	1.026	1.021	1.031	**0.000**
			Lag 3	OR01	1.000	0.999	1.000	0.237
				OR10	1.026	1.021	1.031	**0.000**
		Lag 1	Lag 0	OR01	1.000	1.000	1.001	0.274
				OR10	1.022	1.017	1.027	**0.000**
			Lag 1	OR01	1.000	0.999	1.001	0.835
				OR10	1.024	1.019	1.029	**0.000**
			Lag 2	OR01	1.000	0.999	1.000	0.191
				OR10	1.024	1.019	1.029	**0.000**
			Lag 3	OR01	0.999	0.999	1.000	0.174
				OR10	1.024	1.019	1.029	**0.000**
		Lag 2	Lag 0	OR01	1.000	1.000	1.001	0.218
				OR10	1.019	1.014	1.024	**0.000**
			Lag 1	OR01	1.000	0.999	1.001	0.651
				OR10	1.020	1.016	1.025	**0.000**
			Lag 2	OR01	1.000	0.999	1.000	0.395
				OR10	1.022	1.017	1.027	**0.000**
			Lag 3	OR01	1.000	0.999	1.000	0.196
				OR10	1.020	1.015	1.025	**0.000**
		Lag 3	Lag 0	OR01	1.000	1.000	1.001	0.186
				OR10	1.012	1.007	1.017	**0.000**
			Lag 1	OR01	1.000	0.999	1.001	0.816
				OR10	1.012	1.008	1.017	**0.000**
			Lag 2	OR01	1.000	0.999	1.000	0.466
				OR10	1.015	1.010	1.020	**0.000**
			Lag 3	OR01	0.999	0.999	1.000	0.154
				OR10	1.013	1.008	1.018	**0.000**

Cardiovascular	Lag 0	Lag 0	OR01	1.011	0.991	1.032	0.271
			OR10	1.105	0.995	1.227	0.062
		Lag 1	OR01	1.014	0.994	1.035	0.169
			OR10	1.099	0.989	1.220	0.078
		Lag 2	OR01	1.003	0.982	1.025	0.761
			OR10	1.106	0.996	1.228	0.058
		Lag 3	OR01	1.001	0.982	1.021	0.886
			OR10	1.120	1.009	1.242	**0.033**
	Lag 1	Lag 0	OR01	1.011	0.991	1.031	0.302
			OR10	1.100	0.992	1.219	0.072
		Lag 1	OR01	1.014	0.994	1.035	0.172
			OR10	1.095	0.988	1.215	0.085
		Lag 2	OR01	1.002	0.981	1.024	0.821
			OR10	1.101	0.993	1.221	0.067
		Lag 3	OR01	0.999	0.979	1.019	0.910
			OR10	1.106	0.998	1.225	0.055
	Lag 2	Lag 0	OR01	1.007	0.987	1.028	0.475
			OR10	1.021	0.921	1.132	0.692
		Lag 1	OR01	1.017	0.997	1.038	0.091
			OR10	1.045	0.943	1.159	0.400
		Lag 2	OR01	1.006	0.985	1.027	0.581
			OR10	1.050	0.947	1.164	0.355
		Lag 3	OR01	1.001	0.981	1.020	0.951
			OR10	1.048	0.946	1.162	0.367
	Lag 3	Lag 0	OR01	1.009	0.989	1.029	0.399
			OR10	1.060	0.956	1.174	0.269
		Lag 1	OR01	1.017	0.996	1.038	0.113
			OR10	1.079	0.975	1.195	0.140
		Lag 2	OR01	1.010	0.989	1.031	0.365
			OR10	1.106	0.999	1.225	0.052
		Lag 3	OR01	1.000	0.981	1.020	0.992
			OR10	1.086	0.981	1.203	0.112
Cerebrovascular	Lag 0	Lag 0	OR01	1.004	0.991	1.017	0.541
			OR10	1.014	0.926	1.111	0.761
		Lag 1	OR01	0.998	0.985	1.011	0.753
			OR10	0.999	0.911	1.094	0.977
		Lag 2	OR01	1.003	0.991	1.016	0.597
			OR10	1.004	0.917	1.100	0.923
		Lag 3	OR01	0.999	0.986	1.013	0.909
			OR10	1.006	0.919	1.101	0.902
	Lag 1	Lag 0	OR01	1.003	0.990	1.016	0.611
			OR10	1.028	0.940	1.124	0.550
		Lag 1	OR01	0.998	0.986	1.011	0.811
			OR10	1.022	0.935	1.118	0.631

			Lag 2	OR01	1.003	0.990	1.016	0.641
				OR10	1.020	0.933	1.116	0.662
			Lag 3	OR01	0.998	0.985	1.012	0.819
				OR10	1.019	0.932	1.114	0.678
		Lag 2	Lag 0	OR01	1.004	0.991	1.017	0.540
				OR10	0.997	0.913	1.089	0.945
			Lag 1	OR01	0.998	0.985	1.011	0.785
				OR10	0.986	0.902	1.077	0.753
			Lag 2	OR01	1.004	0.991	1.017	0.548
				OR10	0.992	0.907	1.084	0.854
			Lag 3	OR01	0.998	0.984	1.012	0.742
				OR10	0.979	0.896	1.071	0.649
		Lag 3	Lag 0	OR01	1.002	0.989	1.015	0.735
				OR10	1.031	0.944	1.125	0.497
			Lag 1	OR01	0.997	0.984	1.010	0.643
				OR10	1.027	0.941	1.121	0.550
			Lag 2	OR01	1.002	0.989	1.015	0.778
				OR10	1.024	0.938	1.119	0.593
			Lag 3	OR01	0.998	0.984	1.012	0.796
				OR10	1.030	0.943	1.125	0.509
	Renal	Lag 0	Lag 0	OR01	0.961	0.919	1.005	0.081
				OR10	1.038	0.905	1.190	0.599
			Lag 1	OR01	1.006	0.984	1.029	0.607
				OR10	1.049	0.914	1.204	0.494
			Lag 2	OR01	1.015	0.992	1.039	0.199
				OR10	1.023	0.892	1.173	0.747
			Lag 3	OR01	0.987	0.954	1.021	0.455
				OR10	1.026	0.895	1.176	0.712
		Lag 1	Lag 0	OR01	0.958	0.915	1.002	0.062
				OR10	1.085	0.950	1.238	0.227
			Lag 1	OR01	1.007	0.985	1.030	0.544
				OR10	1.108	0.971	1.264	0.128
			Lag 2	OR01	1.017	0.994	1.040	0.157
				OR10	1.082	0.948	1.234	0.245
			Lag 3	OR01	0.984	0.949	1.019	0.366
				OR10	1.068	0.936	1.219	0.328
		Lag 2	Lag 0	OR01	0.965	0.926	1.007	0.103
				OR10	1.055	0.925	1.203	0.427
			Lag 1	OR01	1.006	0.983	1.029	0.609
				OR10	1.059	0.929	1.208	0.390
			Lag 2	OR01	1.015	0.992	1.038	0.208
				OR10	1.031	0.902	1.177	0.654
			Lag 3	OR01	0.976	0.938	1.014	0.214
				OR10	1.018	0.891	1.162	0.796

		Lag 3	Lag 0	OR01	0.967	0.929	1.008	0.112
				OR10	1.031	0.904	1.176	0.648
			Lag 1	OR01	1.004	0.981	1.027	0.754
				OR10	1.027	0.901	1.171	0.692
			Lag 2	OR01	1.014	0.991	1.038	0.227
				OR10	1.006	0.881	1.149	0.928
			Lag 3	OR01	0.980	0.944	1.018	0.305
				OR10	1.005	0.880	1.147	0.946
	Respiratory	Lag 0	Lag 0	OR01	1.008	0.990	1.026	0.366
				OR10	0.958	0.847	1.084	0.496
			Lag 1	OR01	1.003	0.986	1.021	0.720
				OR10	0.943	0.834	1.067	0.354
			Lag 2	OR01	1.002	0.979	1.027	0.845
				OR10	0.940	0.831	1.063	0.327
			Lag 3	OR01	1.009	0.992	1.028	0.299
				OR10	0.938	0.829	1.060	0.306
		Lag 1	Lag 0	OR01	1.008	0.990	1.026	0.403
				OR10	1.006	0.893	1.135	0.918
			Lag 1	OR01	1.002	0.985	1.021	0.789
				OR10	0.992	0.880	1.119	0.895
			Lag 2	OR01	1.005	0.981	1.029	0.684
				OR10	1.005	0.892	1.133	0.931
			Lag 3	OR01	1.009	0.991	1.027	0.322
				OR10	0.988	0.876	1.114	0.841
		Lag 2	Lag 0	OR01	1.004	0.985	1.023	0.690
				OR10	0.937	0.831	1.056	0.287
			Lag 1	OR01	1.003	0.985	1.022	0.717
				OR10	0.954	0.846	1.075	0.439
			Lag 2	OR01	1.004	0.980	1.028	0.766
				OR10	0.955	0.847	1.076	0.451
			Lag 3	OR01	1.011	0.993	1.029	0.220
				OR10	0.959	0.850	1.081	0.491
		Lag 3	Lag 0	OR01	1.008	0.990	1.026	0.399
				OR10	1.005	0.896	1.126	0.936
			Lag 1	OR01	0.999	0.977	1.020	0.902
				OR10	0.994	0.887	1.112	0.910
			Lag 2	OR01	1.006	0.983	1.030	0.600
				OR10	1.009	0.900	1.130	0.882
			Lag 3	OR01	1.010	0.993	1.028	0.259
				OR10	0.997	0.889	1.118	0.955
Majority Rural (> 50%)	All-natural	Lag 0	Lag 0	OR01	1.002	0.999	1.006	0.210
				OR10	1.007	0.990	1.023	0.441
			Lag 1	OR01	1.001	0.997	1.005	0.671
				OR10	1.012	0.995	1.029	0.154

			Lag 2	OR01	1.001	0.997	1.005	0.514
				OR10	1.010	0.994	1.027	0.236
			Lag 3	OR01	1.000	0.996	1.004	0.874
				OR10	1.008	0.992	1.025	0.328
		Lag 1	Lag 0	OR01	1.002	0.998	1.006	0.272
				OR10	1.008	0.991	1.024	0.353
			Lag 1	OR01	1.001	0.997	1.005	0.492
				OR10	1.013	0.997	1.030	0.110
			Lag 2	OR01	1.001	0.997	1.005	0.508
				OR10	1.013	0.996	1.029	0.135
			Lag 3	OR01	1.001	0.997	1.005	0.583
				OR10	1.013	0.997	1.030	0.115
		Lag 2	Lag 0	OR01	1.003	0.999	1.007	0.212
				OR10	0.996	0.980	1.012	0.613
			Lag 1	OR01	1.002	0.998	1.006	0.444
				OR10	1.000	0.984	1.017	0.963
			Lag 2	OR01	1.002	0.998	1.006	0.367
				OR10	1.000	0.984	1.017	0.997
			Lag 3	OR01	1.001	0.997	1.005	0.561
				OR10	1.001	0.985	1.017	0.906
		Lag 3	Lag 0	OR01	1.002	0.998	1.006	0.416
				OR10	1.003	0.987	1.020	0.683
			Lag 1	OR01	0.999	0.995	1.004	0.733
				OR10	1.004	0.988	1.021	0.601
			Lag 2	OR01	1.001	0.997	1.005	0.640
				OR10	1.006	0.990	1.022	0.471
			Lag 3	OR01	1.001	0.997	1.005	0.736
				OR10	1.006	0.990	1.023	0.435
	Cardiovascular	Lag 0	Lag 0	OR01	1.101	0.983	1.233	0.096
				OR10	1.056	0.756	1.477	0.748
			Lag 1	OR01	1.076	0.991	1.167	0.080
				OR10	1.148	0.820	1.605	0.422
			Lag 2	OR01	1.047	0.918	1.193	0.495
				OR10	1.113	0.796	1.555	0.532
			Lag 3	OR01	1.050	0.928	1.187	0.438
				OR10	1.082	0.776	1.508	0.644
		Lag 1	Lag 0	OR01	1.092	0.978	1.219	0.118
				OR10	0.834	0.593	1.174	0.298
			Lag 1	OR01	1.082	0.994	1.178	0.069
				OR10	0.880	0.624	1.241	0.465
			Lag 2	OR01	1.034	0.905	1.181	0.625
				OR10	0.836	0.593	1.177	0.304
			Lag 3	OR01	1.040	0.919	1.177	0.533
				OR10	0.848	0.605	1.190	0.340

		Lag 2	Lag 0	OR01	1.102	0.982	1.236	0.098
				OR10	0.730	0.516	1.034	0.076
			Lag 1	OR01	1.064	0.982	1.153	0.131
				OR10	0.697	0.487	0.996	**0.048**
			Lag 2	OR01	1.009	0.877	1.162	0.897
				OR10	0.677	0.472	0.973	**0.035**
			Lag 3	OR01	1.051	0.929	1.189	0.429
				OR10	0.761	0.537	1.077	0.123
		Lag 3	Lag 0	OR01	1.101	0.982	1.234	0.099
				OR10	0.919	0.667	1.265	0.605
			Lag 1	OR01	1.089	0.976	1.215	0.129
				OR10	0.887	0.643	1.223	0.464
			Lag 2	OR01	1.047	0.915	1.199	0.504
				OR10	0.936	0.679	1.290	0.685
			Lag 3	OR01	0.958	0.808	1.136	0.622
				OR10	0.857	0.618	1.190	0.357
	Cerebrovascular	Lag 0	Lag 0	OR01	0.958	0.841	1.091	0.518
				OR10	0.939	0.692	1.275	0.688
			Lag 1	OR01	0.950	0.847	1.066	0.380
				OR10	0.940	0.693	1.275	0.690
			Lag 2	OR01	0.984	0.918	1.055	0.654
				OR10	0.990	0.733	1.338	0.949
			Lag 3	OR01	1.082	0.959	1.219	0.201
				OR10	0.950	0.702	1.286	0.740
		Lag 1	Lag 0	OR01	0.953	0.829	1.095	0.498
				OR10	1.044	0.790	1.380	0.763
			Lag 1	OR01	0.935	0.825	1.059	0.288
				OR10	1.019	0.771	1.347	0.895
			Lag 2	OR01	0.989	0.928	1.054	0.740
				OR10	1.105	0.840	1.454	0.476
			Lag 3	OR01	1.106	0.984	1.241	0.090
				OR10	1.086	0.826	1.429	0.553
		Lag 2	Lag 0	OR01	0.977	0.860	1.109	0.716
				OR10	1.102	0.835	1.455	0.492
			Lag 1	OR01	0.968	0.865	1.082	0.566
				OR10	1.103	0.835	1.456	0.492
			Lag 2	OR01	0.982	0.911	1.059	0.643
				OR10	1.094	0.828	1.445	0.529
			Lag 3	OR01	1.108	0.986	1.244	0.084
				OR10	1.121	0.850	1.479	0.420
		Lag 3	Lag 0	OR01	0.953	0.829	1.095	0.495
				OR10	0.985	0.733	1.323	0.918
			Lag 1	OR01	0.938	0.829	1.061	0.307
				OR10	0.970	0.721	1.306	0.842

		Lag 2	OR01	0.967	0.878	1.066	0.501
			OR10	0.959	0.709	1.298	0.787
		Lag 3	OR01	1.091	0.971	1.226	0.142
			OR10	1.001	0.746	1.344	0.995
Renal	Lag 0	Lag 0	OR01	0.818	0.540	1.237	0.340
			OR10	0.971	0.601	1.569	0.904
		Lag 1	OR01	0.523	0.259	1.056	0.071
			OR10	0.937	0.575	1.527	0.795
		Lag 2	OR01	1.104	0.916	1.331	0.298
			OR10	0.909	0.558	1.482	0.702
		Lag 3	OR01	0.871	0.646	1.176	0.367
			OR10	0.967	0.599	1.560	0.890
	Lag 1	Lag 0	OR01	0.835	0.574	1.215	0.346
			OR10	1.404	0.898	2.196	0.137
		Lag 1	OR01	0.771	0.532	1.118	0.170
			OR10	1.519	0.968	2.384	0.069
		Lag 2	OR01	1.158	0.995	1.348	0.057
			OR10	1.715	1.085	2.711	**0.021**
		Lag 3	OR01	0.854	0.614	1.186	0.346
			OR10	1.428	0.912	2.235	0.119
	Lag 2	Lag 0	OR01	0.856	0.598	1.224	0.395
			OR10	1.418	0.933	2.155	0.102
		Lag 1	OR01	0.768	0.530	1.114	0.164
			OR10	1.513	0.995	2.303	0.053
		Lag 2	OR01	1.130	0.976	1.308	0.103
			OR10	1.421	0.934	2.160	0.100
		Lag 3	OR01	0.857	0.628	1.170	0.331
			OR10	1.436	0.944	2.186	0.091
	Lag 3	Lag 0	OR01	0.843	0.587	1.212	0.357
			OR10	1.308	0.846	2.023	0.227
		Lag 1	OR01	0.762	0.535	1.085	0.131
			OR10	1.372	0.888	2.119	0.154
		Lag 2	OR01	1.132	0.982	1.304	0.088
			OR10	1.346	0.869	2.083	0.183
		Lag 3	OR01	0.838	0.606	1.158	0.284
			OR10	1.313	0.845	2.039	0.226
Respiratory	Lag 0	Lag 0	OR01	0.941	0.751	1.179	0.597
			OR10	1.057	0.722	1.546	0.777
		Lag 1	OR01	1.092	0.946	1.260	0.229
			OR10	0.984	0.671	1.443	0.935
		Lag 2	OR01	1.124	0.983	1.285	0.087
			OR10	1.134	0.777	1.656	0.514
		Lag 3	OR01	0.979	0.881	1.089	0.702
			OR10	1.007	0.690	1.468	0.972

		Lag 1	Lag 0	OR01	0.931	0.743	1.167	0.536
				OR10	1.231	0.832	1.822	0.299
			Lag 1	OR01	1.112	0.964	1.282	0.144
				OR10	1.200	0.807	1.785	0.368
			Lag 2	OR01	1.112	0.985	1.255	0.087
				OR10	1.327	0.895	1.968	0.159
			Lag 3	OR01	0.989	0.903	1.083	0.809
				OR10	1.189	0.805	1.757	0.385
		Lag 2	Lag 0	OR01	0.950	0.768	1.176	0.640
				OR10	0.873	0.591	1.289	0.494
			Lag 1	OR01	1.112	0.962	1.285	0.150
				OR10	0.797	0.536	1.184	0.261
			Lag 2	OR01	1.113	0.984	1.259	0.089
				OR10	0.873	0.588	1.297	0.503
			Lag 3	OR01	0.988	0.901	1.083	0.789
				OR10	0.794	0.535	1.179	0.253
		Lag 3	Lag 0	OR01	0.961	0.780	1.183	0.706
				OR10	1.219	0.866	1.717	0.256
			Lag 1	OR01	1.087	0.926	1.275	0.307
				OR10	1.044	0.734	1.484	0.813
			Lag 2	OR01	1.102	0.983	1.234	0.095
				OR10	1.175	0.830	1.664	0.363
			Lag 3	OR01	0.993	0.912	1.081	0.866
				OR10	1.128	0.800	1.591	0.491
Majority Urban	All-natural	Lag 0	Lag 0	OR01	1.000	1.000	1.000	0.936
				OR10	1.024	1.021	1.027	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.318
				OR10	1.025	1.022	1.027	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	**0.000**
				OR10	1.025	1.023	1.028	**0.000**
			Lag 3	OR01	0.999	0.999	0.999	**0.000**
				OR10	1.024	1.022	1.027	**0.000**
		Lag 1	Lag 0	OR01	1.000	1.000	1.000	0.764
				OR10	1.023	1.020	1.026	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.428
				OR10	1.024	1.022	1.027	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	**0.000**
				OR10	1.025	1.022	1.028	**0.000**
			Lag 3	OR01	0.999	0.999	0.999	**0.000**
				OR10	1.024	1.021	1.027	**0.000**
		Lag 2	Lag 0	OR01	1.000	1.000	1.000	0.947
				OR10	1.019	1.016	1.022	**0.000**
			Lag 1	OR01	1.000	1.000	1.000	0.500
				OR10	1.020	1.017	1.023	**0.000**

		Lag 2	OR01	0.999	0.999	1.000	**0.000**
			OR10	1.021	1.018	1.024	**0.000**
		Lag 3	OR01	0.999	0.999	1.000	**0.000**
			OR10	1.020	1.017	1.023	**0.000**
	Lag 3	Lag 0	OR01	1.000	1.000	1.000	0.998
			OR10	1.014	1.011	1.017	**0.000**
		Lag 1	OR01	1.000	0.999	1.000	0.258
			OR10	1.015	1.012	1.017	**0.000**
		Lag 2	OR01	0.999	0.999	1.000	**0.001**
			OR10	1.016	1.013	1.019	**0.000**
		Lag 3	OR01	0.999	0.999	0.999	**0.000**
			OR10	1.015	1.012	1.018	**0.000**
	Cardiovascular	Lag 0	Lag 0	OR01	1.001	0.993	1.010	0.795
				OR10	1.026	0.965	1.091	0.407
			Lag 1	OR01	1.005	0.997	1.013	0.259
				OR10	1.026	0.965	1.090	0.409
			Lag 2	OR01	1.000	0.991	1.008	0.932
				OR10	1.028	0.967	1.092	0.383
			Lag 3	OR01	0.999	0.990	1.007	0.737
				OR10	1.036	0.975	1.101	0.252
		Lag 1	Lag 0	OR01	1.001	0.992	1.009	0.872
				OR10	1.066	1.004	1.131	**0.037**
			Lag 1	OR01	1.005	0.997	1.013	0.251
				OR10	1.069	1.007	1.134	**0.029**
			Lag 2	OR01	0.999	0.991	1.007	0.797
				OR10	1.064	1.003	1.130	**0.041**
			Lag 3	OR01	0.998	0.990	1.007	0.651
				OR10	1.073	1.011	1.139	**0.020**
		Lag 2	Lag 0	OR01	1.000	0.992	1.009	0.995
				OR10	1.043	0.983	1.106	0.164
			Lag 1	OR01	1.006	0.998	1.014	0.147
				OR10	1.058	0.997	1.121	0.061
			Lag 2	OR01	1.000	0.992	1.008	0.970
				OR10	1.057	0.996	1.121	0.066
			Lag 3	OR01	0.998	0.990	1.007	0.720
				OR10	1.058	0.998	1.122	0.059
		Lag 3	Lag 0	OR01	1.000	0.992	1.009	0.943
				OR10	1.023	0.964	1.085	0.458
			Lag 1	OR01	1.006	0.998	1.014	0.169
				OR10	1.037	0.978	1.100	0.226
			Lag 2	OR01	1.001	0.993	1.009	0.871
				OR10	1.040	0.981	1.103	0.190
			Lag 3	OR01	0.998	0.990	1.007	0.669
				OR10	1.037	0.978	1.100	0.225

Cerebrovascular	Lag 0	Lag 0	OR01	1.004	0.998	1.010	0.235
			OR10	1.025	0.975	1.078	0.330
		Lag 1	OR01	1.001	0.995	1.007	0.702
			OR10	1.026	0.975	1.079	0.325
		Lag 2	OR01	0.998	0.992	1.005	0.629
			OR10	1.022	0.971	1.074	0.408
		Lag 3	OR01	0.995	0.988	1.002	0.168
			OR10	1.019	0.969	1.072	0.453
	Lag 1	Lag 0	OR01	1.003	0.997	1.009	0.285
			OR10	1.030	0.980	1.083	0.242
		Lag 1	OR01	1.001	0.995	1.007	0.779
			OR10	1.032	0.981	1.085	0.226
		Lag 2	OR01	0.999	0.992	1.005	0.659
			OR10	1.032	0.981	1.085	0.224
		Lag 3	OR01	0.995	0.989	1.002	0.194
			OR10	1.030	0.980	1.084	0.243
	Lag 2	Lag 0	OR01	1.003	0.997	1.009	0.268
			OR10	1.037	0.987	1.090	0.145
		Lag 1	OR01	1.000	0.994	1.007	0.895
			OR10	1.036	0.986	1.088	0.162
		Lag 2	OR01	0.999	0.992	1.005	0.736
			OR10	1.042	0.991	1.094	0.107
		Lag 3	OR01	0.995	0.988	1.002	0.158
			OR10	1.035	0.985	1.087	0.175
	Lag 3	Lag 0	OR01	1.003	0.997	1.009	0.318
			OR10	1.015	0.966	1.066	0.553
		Lag 1	OR01	1.001	0.994	1.007	0.844
			OR10	1.018	0.969	1.069	0.485
		Lag 2	OR01	0.998	0.992	1.005	0.568
			OR10	1.018	0.969	1.069	0.480
		Lag 3	OR01	0.995	0.987	1.002	0.130
			OR10	1.015	0.966	1.066	0.567
Renal	Lag 0	Lag 0	OR01	0.993	0.975	1.011	0.438
			OR10	1.090	1.007	1.180	**0.033**
		Lag 1	OR01	0.993	0.977	1.009	0.393
			OR10	1.104	1.019	1.195	**0.015**
		Lag 2	OR01	1.006	0.994	1.019	0.336
			OR10	1.093	1.009	1.183	**0.028**
		Lag 3	OR01	0.999	0.984	1.014	0.882
			OR10	1.087	1.005	1.177	**0.038**
	Lag 1	Lag 0	OR01	0.992	0.973	1.010	0.370
			OR10	1.106	1.023	1.194	**0.011**
		Lag 1	OR01	0.992	0.976	1.009	0.357
			OR10	1.118	1.035	1.208	**0.005**

			Lag 2	OR01	1.007	0.995	1.020	0.264
				OR10	1.118	1.035	1.208	**0.005**
			Lag 3	OR01	0.998	0.984	1.013	0.802
				OR10	1.101	1.019	1.189	**0.015**
		Lag 2	Lag 0	OR01	0.997	0.979	1.014	0.695
				OR10	1.063	0.984	1.149	0.122
			Lag 1	OR01	0.992	0.976	1.009	0.357
				OR10	1.064	0.985	1.149	0.117
			Lag 2	OR01	1.006	0.994	1.019	0.327
				OR10	1.060	0.981	1.146	0.143
			Lag 3	OR01	0.997	0.982	1.012	0.684
				OR10	1.049	0.970	1.134	0.230
		Lag 3	Lag 0	OR01	0.999	0.982	1.016	0.893
				OR10	1.044	0.966	1.127	0.277
			Lag 1	OR01	0.993	0.977	1.009	0.391
				OR10	1.038	0.962	1.121	0.337
			Lag 2	OR01	1.006	0.993	1.020	0.334
				OR10	1.032	0.956	1.115	0.420
			Lag 3	OR01	0.999	0.984	1.014	0.860
				OR10	1.030	0.953	1.112	0.455
	Respiratory	Lag 0	Lag 0	OR01	0.996	0.984	1.008	0.489
				OR10	0.968	0.900	1.042	0.385
			Lag 1	OR01	0.999	0.990	1.009	0.841
				OR10	0.963	0.895	1.036	0.311
			Lag 2	OR01	1.002	0.992	1.013	0.655
				OR10	0.968	0.900	1.041	0.382
			Lag 3	OR01	1.001	0.991	1.012	0.848
				OR10	0.954	0.887	1.027	0.210
		Lag 1	Lag 0	OR01	0.996	0.985	1.008	0.537
				OR10	1.008	0.938	1.083	0.826
			Lag 1	OR01	0.999	0.989	1.008	0.773
				OR10	0.996	0.927	1.071	0.922
			Lag 2	OR01	1.003	0.992	1.014	0.609
				OR10	1.007	0.938	1.082	0.848
			Lag 3	OR01	1.001	0.991	1.012	0.821
				OR10	0.989	0.920	1.063	0.766
		Lag 2	Lag 0	OR01	0.993	0.981	1.006	0.297
				OR10	1.007	0.938	1.082	0.846
			Lag 1	OR01	0.997	0.988	1.007	0.607
				OR10	1.009	0.940	1.084	0.802
			Lag 2	OR01	1.003	0.992	1.014	0.631
				OR10	1.021	0.950	1.096	0.575
			Lag 3	OR01	1.002	0.991	1.012	0.724
				OR10	1.011	0.941	1.086	0.760

		Lag 3	Lag 0	OR01	0.996	0.984	1.008	0.499
				OR10	1.038	0.968	1.112	0.298
			Lag 1	OR01	1.000	0.991	1.010	0.954
				OR10	1.043	0.973	1.117	0.236
			Lag 2	OR01	1.003	0.992	1.014	0.556
				OR10	1.042	0.972	1.116	0.246
			Lag 3	OR01	1.002	0.991	1.012	0.722
				OR10	1.030	0.961	1.105	0.399
Male	All-natural	Lag 0	Lag 0	OR01	1.000	1.000	1.001	0.535
				OR10	1.029	1.025	1.033	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.849
				OR10	1.030	1.025	1.034	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	0.054
				OR10	1.030	1.026	1.034	**0.000**
			Lag 3	OR01	0.999	0.999	1.000	**0.003**
				OR10	1.029	1.025	1.034	**0.000**
		Lag 1	Lag 0	OR01	1.000	1.000	1.001	0.854
				OR10	1.026	1.021	1.030	**0.000**
			Lag 1	OR01	1.000	0.999	1.001	0.949
				OR10	1.028	1.023	1.032	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	0.051
				OR10	1.028	1.023	1.032	**0.000**
			Lag 3	OR01	0.999	0.999	1.000	**0.003**
				OR10	1.027	1.022	1.031	**0.000**
		Lag 2	Lag 0	OR01	1.000	1.000	1.001	0.717
				OR10	1.020	1.015	1.024	**0.000**
			Lag 1	OR01	1.000	0.999	1.001	0.991
				OR10	1.022	1.017	1.026	**0.000**
			Lag 2	OR01	1.000	0.999	1.000	0.089
				OR10	1.022	1.018	1.026	**0.000**
			Lag 3	OR01	0.999	0.999	1.000	**0.006**
				OR10	1.022	1.017	1.026	**0.000**
		Lag 3	Lag 0	OR01	1.000	1.000	1.001	0.687
				OR10	1.013	1.008	1.017	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.673
				OR10	1.014	1.010	1.018	**0.000**
			Lag 2	OR01	1.000	0.999	1.000	0.142
				OR10	1.015	1.011	1.020	**0.000**
			Lag 3	OR01	0.999	0.999	1.000	**0.005**
				OR10	1.014	1.010	1.019	**0.000**
	Cardiovascular	Lag 0	Lag 0	OR01	1.003	0.993	1.014	0.531
				OR10	1.058	0.979	1.144	0.155
			Lag 1	OR01	1.009	1.000	1.018	0.064
				OR10	1.049	0.970	1.135	0.227

			Lag 2	OR01	1.002	0.992	1.011	0.722
				OR10	1.056	0.977	1.143	0.171
			Lag 3	OR01	1.006	0.996	1.016	0.232
				OR10	1.060	0.980	1.146	0.144
		Lag 1	Lag 0	OR01	1.003	0.993	1.014	0.577
				OR10	1.083	1.001	1.170	**0.046**
			Lag 1	OR01	1.009	1.000	1.018	0.061
				OR10	1.076	0.995	1.163	0.066
			Lag 2	OR01	1.001	0.991	1.011	0.876
				OR10	1.073	0.992	1.160	0.080
			Lag 3	OR01	1.006	0.996	1.016	0.206
				OR10	1.090	1.008	1.179	**0.030**
		Lag 2	Lag 0	OR01	1.003	0.992	1.013	0.592
				OR10	1.025	0.948	1.108	0.535
			Lag 1	OR01	1.009	1.000	1.019	0.056
				OR10	1.023	0.946	1.106	0.566
			Lag 2	OR01	1.002	0.992	1.011	0.732
				OR10	1.028	0.950	1.111	0.495
			Lag 3	OR01	1.006	0.996	1.016	0.242
				OR10	1.030	0.953	1.113	0.463
		Lag 3	Lag 0	OR01	1.003	0.993	1.013	0.586
				OR10	0.985	0.910	1.066	0.706
			Lag 1	OR01	1.009	1.000	1.018	0.062
				OR10	0.982	0.908	1.062	0.656
			Lag 2	OR01	1.003	0.993	1.012	0.575
				OR10	0.994	0.920	1.075	0.886
			Lag 3	OR01	1.005	0.995	1.015	0.341
				OR10	0.982	0.908	1.062	0.655
	Cerebrovascular	Lag 0	Lag 0	OR01	1.004	0.995	1.013	0.417
				OR10	1.006	0.938	1.079	0.870
			Lag 1	OR01	1.001	0.992	1.010	0.799
				OR10	1.007	0.939	1.081	0.836
			Lag 2	OR01	0.999	0.990	1.008	0.859
				OR10	0.992	0.925	1.065	0.831
			Lag 3	OR01	0.999	0.990	1.008	0.801
				OR10	1.001	0.933	1.073	0.988
		Lag 1	Lag 0	OR01	1.003	0.994	1.012	0.480
				OR10	0.992	0.926	1.064	0.832
			Lag 1	OR01	1.001	0.992	1.010	0.843
				OR10	0.995	0.928	1.067	0.884
			Lag 2	OR01	1.000	0.992	1.009	0.931
				OR10	0.997	0.929	1.069	0.922
			Lag 3	OR01	0.999	0.990	1.009	0.885
				OR10	0.996	0.929	1.068	0.908

		Lag 2	Lag 0	OR01	1.004	0.995	1.013	0.367
				OR10	1.060	0.990	1.135	0.092
			Lag 1	OR01	1.000	0.991	1.009	0.956
				OR10	1.051	0.982	1.126	0.150
			Lag 2	OR01	1.000	0.991	1.009	0.973
				OR10	1.055	0.985	1.129	0.128
			Lag 3	OR01	0.999	0.990	1.009	0.894
				OR10	1.055	0.986	1.130	0.121
		Lag 3	Lag 0	OR01	1.003	0.995	1.012	0.457
				OR10	1.070	1.001	1.144	**0.048**
			Lag 1	OR01	1.000	0.991	1.009	0.980
				OR10	1.066	0.996	1.140	0.064
			Lag 2	OR01	0.998	0.989	1.007	0.700
				OR10	1.062	0.993	1.136	0.081
			Lag 3	OR01	0.999	0.989	1.008	0.760
				OR10	1.067	0.998	1.142	0.058
	Renal	Lag 0	Lag 0	OR01	0.969	0.938	1.001	0.054
				OR10	1.131	1.007	1.271	**0.038**
			Lag 1	OR01	0.998	0.976	1.021	0.857
				OR10	1.139	1.013	1.281	**0.029**
			Lag 2	OR01	1.017	0.997	1.038	0.091
				OR10	1.119	0.995	1.257	0.061
			Lag 3	OR01	1.008	0.987	1.030	0.449
				OR10	1.134	1.009	1.274	**0.034**
		Lag 1	Lag 0	OR01	0.969	0.938	1.000	0.053
				OR10	1.132	1.013	1.266	**0.029**
			Lag 1	OR01	0.998	0.976	1.021	0.879
				OR10	1.144	1.023	1.279	**0.019**
			Lag 2	OR01	1.021	1.001	1.041	**0.042**
				OR10	1.146	1.025	1.281	**0.017**
			Lag 3	OR01	1.006	0.984	1.028	0.611
				OR10	1.122	1.003	1.255	**0.044**
		Lag 2	Lag 0	OR01	0.975	0.946	1.005	0.105
				OR10	1.103	0.986	1.235	0.086
			Lag 1	OR01	0.999	0.978	1.022	0.948
				OR10	1.107	0.989	1.238	0.077
			Lag 2	OR01	1.020	1.000	1.041	0.050
				OR10	1.101	0.983	1.233	0.096
			Lag 3	OR01	1.006	0.984	1.028	0.594
				OR10	1.091	0.974	1.221	0.134
		Lag 3	Lag 0	OR01	0.981	0.953	1.009	0.182
				OR10	1.146	1.025	1.282	**0.017**
			Lag 1	OR01	0.998	0.977	1.021	0.887
				OR10	1.129	1.009	1.262	**0.034**

			Lag 2	OR01	1.019	0.999	1.040	0.064
				OR10	1.118	0.999	1.251	0.052
			Lag 3	OR01	1.006	0.984	1.028	0.604
				OR10	1.114	0.996	1.247	0.060
	Respiratory	Lag 0	Lag 0	OR01	1.005	0.992	1.018	0.444
				OR10	0.964	0.868	1.072	0.499
			Lag 1	OR01	1.002	0.990	1.013	0.782
				OR10	0.952	0.856	1.058	0.361
			Lag 2	OR01	0.998	0.983	1.013	0.809
				OR10	0.961	0.865	1.068	0.463
			Lag 3	OR01	1.001	0.987	1.016	0.844
				OR10	0.940	0.846	1.045	0.254
		Lag 1	Lag 0	OR01	1.006	0.994	1.019	0.329
				OR10	1.017	0.917	1.127	0.752
			Lag 1	OR01	1.002	0.991	1.013	0.737
				OR10	0.993	0.896	1.101	0.896
			Lag 2	OR01	0.999	0.984	1.014	0.924
				OR10	1.007	0.909	1.116	0.889
			Lag 3	OR01	1.002	0.989	1.016	0.730
				OR10	0.983	0.887	1.090	0.749
		Lag 2	Lag 0	OR01	1.004	0.991	1.017	0.554
				OR10	0.954	0.860	1.059	0.380
			Lag 1	OR01	1.002	0.991	1.013	0.708
				OR10	0.962	0.867	1.068	0.470
			Lag 2	OR01	1.000	0.985	1.015	0.951
				OR10	0.972	0.876	1.078	0.588
			Lag 3	OR01	1.004	0.990	1.017	0.615
				OR10	0.961	0.866	1.067	0.454
		Lag 3	Lag 0	OR01	1.005	0.992	1.018	0.434
				OR10	1.055	0.955	1.164	0.292
			Lag 1	OR01	1.001	0.989	1.013	0.840
				OR10	1.057	0.959	1.166	0.263
			Lag 2	OR01	1.000	0.986	1.015	0.949
				OR10	1.069	0.968	1.179	0.186
			Lag 3	OR01	1.004	0.991	1.018	0.544
				OR10	1.057	0.957	1.167	0.275
Other Races Grouped	All-natural	Lag 0	Lag 0	OR01	1.002	1.000	1.004	**0.022**
				OR10	1.017	1.002	1.031	**0.021**
			Lag 1	OR01	1.001	0.999	1.002	0.457
				OR10	1.017	1.003	1.031	**0.020**
			Lag 2	OR01	1.000	0.998	1.002	0.932
				OR10	1.016	1.002	1.031	**0.025**
			Lag 3	OR01	0.999	0.997	1.000	0.140
				OR10	1.017	1.003	1.031	**0.019**

		Lag 1	Lag 0	OR01	1.002	1.000 1.004	**0.029**
				OR10	1.000	0.986 1.015	0.957
			Lag 1	OR01	1.001	0.999 1.003	0.308
				OR10	1.003	0.989 1.017	0.649
			Lag 2	OR01	1.000	0.998 1.002	0.987
				OR10	1.001	0.987 1.015	0.944
			Lag 3	OR01	0.999	0.997 1.001	0.160
				OR10	1.002	0.988 1.016	0.790
		Lag 2	Lag 0	OR01	1.002	1.000 1.004	**0.019**
				OR10	1.016	1.002 1.030	**0.029**
			Lag 1	OR01	1.001	0.999 1.003	0.221
				OR10	1.019	1.005 1.033	**0.009**
			Lag 2	OR01	1.000	0.998 1.002	0.875
				OR10	1.016	1.002 1.030	**0.025**
			Lag 3	OR01	0.999	0.997 1.001	0.204
				OR10	1.017	1.003 1.032	**0.015**
		Lag 3	Lag 0	OR01	1.002	1.001 1.004	**0.010**
				OR10	1.014	1.000 1.028	**0.044**
			Lag 1	OR01	1.001	0.999 1.003	0.410
				OR10	1.013	0.999 1.027	0.063
			Lag 2	OR01	1.000	0.998 1.002	0.876
				OR10	1.013	0.999 1.027	0.062
			Lag 3	OR01	0.999	0.997 1.001	0.299
				OR10	1.016	1.002 1.030	**0.024**
	Cardiovascular	Lag 0	Lag 0	OR01	0.997	0.949 1.047	0.900
				OR10	1.026	0.763 1.379	0.867
			Lag 1	OR01	0.933	0.836 1.041	0.215
				OR10	0.985	0.731 1.328	0.922
			Lag 2	OR01	1.019	0.967 1.073	0.482
				OR10	0.976	0.722 1.320	0.877
			Lag 3	OR01	1.036	0.979 1.098	0.221
				OR10	1.024	0.761 1.378	0.877
		Lag 1	Lag 0	OR01	0.992	0.946 1.041	0.746
				OR10	0.923	0.682 1.249	0.605
			Lag 1	OR01	0.927	0.826 1.040	0.199
				OR10	0.925	0.685 1.249	0.609
			Lag 2	OR01	1.021	0.969 1.076	0.433
				OR10	0.944	0.700 1.274	0.706
			Lag 3	OR01	1.041	0.981 1.104	0.189
				OR10	0.975	0.725 1.311	0.867
		Lag 2	Lag 0	OR01	0.994	0.948 1.041	0.783
				OR10	0.859	0.636 1.161	0.324
			Lag 1	OR01	0.988	0.944 1.035	0.620
				OR10	0.949	0.707 1.274	0.727

		Lag 2	OR01	1.025	0.973	1.080	0.343
			OR10	0.919	0.684	1.234	0.573
		Lag 3	OR01	1.031	0.976	1.088	0.275
			OR10	0.855	0.633	1.156	0.309
	Lag 3	Lag 0	OR01	0.999	0.955	1.045	0.971
			OR10	0.915	0.685	1.222	0.546
		Lag 1	OR01	0.984	0.938	1.033	0.523
			OR10	0.948	0.713	1.260	0.715
		Lag 2	OR01	1.028	0.976	1.083	0.297
			OR10	0.966	0.728	1.282	0.810
		Lag 3	OR01	1.038	0.980	1.099	0.204
			OR10	0.938	0.705	1.248	0.659
Cerebrovascular	Lag 0	Lag 0	OR01	0.996	0.964	1.028	0.790
			OR10	0.856	0.658	1.113	0.245
		Lag 1	OR01	0.980	0.940	1.022	0.354
			OR10	0.898	0.694	1.162	0.413
		Lag 2	OR01	0.972	0.927	1.020	0.249
			OR10	0.893	0.691	1.154	0.387
		Lag 3	OR01	0.939	0.867	1.016	0.119
			OR10	0.887	0.685	1.147	0.360
	Lag 1	Lag 0	OR01	0.997	0.966	1.029	0.837
			OR10	0.785	0.608	1.013	0.063
		Lag 1	OR01	0.985	0.946	1.025	0.452
			OR10	0.827	0.643	1.063	0.138
		Lag 2	OR01	0.976	0.934	1.020	0.285
			OR10	0.828	0.644	1.065	0.142
		Lag 3	OR01	0.949	0.880	1.024	0.174
			OR10	0.819	0.636	1.053	0.120
	Lag 2	Lag 0	OR01	0.997	0.966	1.029	0.865
			OR10	0.911	0.714	1.161	0.450
		Lag 1	OR01	0.981	0.941	1.023	0.376
			OR10	0.933	0.733	1.188	0.575
		Lag 2	OR01	0.975	0.932	1.021	0.283
			OR10	0.939	0.736	1.198	0.614
		Lag 3	OR01	0.942	0.870	1.020	0.141
			OR10	0.925	0.725	1.180	0.531
	Lag 3	Lag 0	OR01	1.001	0.971	1.031	0.948
			OR10	0.987	0.775	1.257	0.916
		Lag 1	OR01	0.983	0.945	1.024	0.409
			OR10	0.985	0.774	1.253	0.903
		Lag 2	OR01	0.974	0.929	1.021	0.270
			OR10	0.978	0.765	1.251	0.859
		Lag 3	OR01	0.940	0.868	1.018	0.129
			OR10	0.962	0.753	1.229	0.755

Renal	Lag 0	Lag 0	OR01	1.077	0.917	1.266	0.365
			OR10	1.004	0.649	1.553	0.986
		Lag 1	OR01	0.799	0.603	1.059	0.119
			OR10	1.014	0.655	1.571	0.949
		Lag 2	OR01	0.981	0.894	1.076	0.689
			OR10	0.944	0.608	1.466	0.798
		Lag 3	OR01	0.934	0.796	1.096	0.402
			OR10	1.029	0.671	1.578	0.894
	Lag 1	Lag 0	OR01	1.048	0.924	1.189	0.464
			OR10	0.981	0.638	1.511	0.932
		Lag 1	OR01	0.759	0.554	1.041	0.087
			OR10	0.986	0.640	1.519	0.949
		Lag 2	OR01	0.963	0.835	1.110	0.603
			OR10	0.878	0.566	1.361	0.561
		Lag 3	OR01	0.933	0.794	1.096	0.398
			OR10	1.011	0.665	1.538	0.959
	Lag 2	Lag 0	OR01	1.060	0.944	1.189	0.324
			OR10	1.341	0.906	1.986	0.142
		Lag 1	OR01	0.813	0.628	1.053	0.117
			OR10	1.330	0.896	1.973	0.157
		Lag 2	OR01	0.985	0.904	1.074	0.730
			OR10	1.261	0.845	1.881	0.256
		Lag 3	OR01	0.940	0.807	1.095	0.430
			OR10	1.375	0.932	2.029	0.109
	Lag 3	Lag 0	OR01	1.060	0.945	1.188	0.324
			OR10	1.211	0.804	1.824	0.360
		Lag 1	OR01	0.866	0.699	1.073	0.188
			OR10	1.253	0.832	1.887	0.281
		Lag 2	OR01	0.974	0.871	1.090	0.649
			OR10	1.063	0.695	1.625	0.779
		Lag 3	OR01	0.931	0.790	1.097	0.393
			OR10	1.230	0.819	1.848	0.319
Respiratory	Lag 0	Lag 0	OR01	1.023	0.919	1.140	0.675
			OR10	0.903	0.636	1.280	0.565
		Lag 1	OR01	0.996	0.944	1.050	0.879
			OR10	0.864	0.608	1.228	0.416
		Lag 2	OR01	1.017	0.898	1.153	0.790
			OR10	0.903	0.638	1.279	0.565
		Lag 3	OR01	0.983	0.921	1.050	0.617
			OR10	0.933	0.660	1.320	0.695
	Lag 1	Lag 0	OR01	1.033	0.926	1.152	0.562
			OR10	0.939	0.653	1.350	0.733
		Lag 1	OR01	1.001	0.954	1.050	0.973
			OR10	0.953	0.664	1.368	0.796

			Lag 2	OR01	1.007	0.891	1.138	0.910
				OR10	0.916	0.638	1.316	0.636
			Lag 3	OR01	0.979	0.909	1.055	0.578
				OR10	0.924	0.645	1.325	0.668
		Lag 2	Lag 0	OR01	1.010	0.902	1.131	0.860
				OR10	1.147	0.799	1.647	0.458
			Lag 1	OR01	1.000	0.952	1.051	0.991
				OR10	1.211	0.847	1.730	0.294
			Lag 2	OR01	1.012	0.898	1.141	0.842
				OR10	1.211	0.850	1.726	0.289
			Lag 3	OR01	0.974	0.892	1.062	0.547
				OR10	1.172	0.820	1.676	0.384
		Lag 3	Lag 0	OR01	1.010	0.901	1.133	0.860
				OR10	1.145	0.811	1.618	0.442
			Lag 1	OR01	0.989	0.927	1.055	0.739
				OR10	1.119	0.793	1.581	0.522
			Lag 2	OR01	0.998	0.879	1.134	0.979
				OR10	1.158	0.822	1.632	0.401
			Lag 3	OR01	0.983	0.918	1.053	0.620
				OR10	1.203	0.854	1.694	0.291
English, preferred language	All-natural	Lag 0	Lag 0	OR01	1.000	1.000	1.000	0.803
				OR10	1.023	1.020	1.026	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.163
				OR10	1.023	1.020	1.026	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	**0.000**
				OR10	1.024	1.021	1.027	**0.000**
			Lag 3	OR01	0.999	0.999	0.999	**0.000**
				OR10	1.023	1.020	1.026	**0.000**
		Lag 1	Lag 0	OR01	1.000	0.999	1.000	0.537
				OR10	1.022	1.019	1.025	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.275
				OR10	1.024	1.021	1.027	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	**0.000**
				OR10	1.024	1.021	1.027	**0.000**
			Lag 3	OR01	0.999	0.999	0.999	**0.000**
				OR10	1.023	1.020	1.026	**0.000**
		Lag 2	Lag 0	OR01	1.000	1.000	1.000	0.628
				OR10	1.017	1.014	1.020	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.304
				OR10	1.019	1.016	1.022	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	**0.001**
				OR10	1.020	1.017	1.023	**0.000**
			Lag 3	OR01	0.999	0.999	1.000	**0.000**
				OR10	1.019	1.016	1.022	**0.000**

	Lag 3	Lag 0	OR01	1.000	1.000	1.000	0.748
			OR10	1.013	1.010	1.016	**0.000**
		Lag 1	OR01	1.000	0.999	1.000	0.083
			OR10	1.014	1.011	1.017	**0.000**
		Lag 2	OR01	0.999	0.999	1.000	**0.001**
			OR10	1.016	1.013	1.019	**0.000**
		Lag 3	OR01	0.999	0.999	0.999	**0.000**
			OR10	1.014	1.011	1.017	**0.000**
Cardiovascular	Lag 0	Lag 0	OR01	1.000	0.991	1.009	0.947
			OR10	1.037	0.972	1.106	0.276
		Lag 1	OR01	1.003	0.994	1.013	0.458
			OR10	1.039	0.974	1.109	0.242
		Lag 2	OR01	1.001	0.992	1.010	0.805
			OR10	1.039	0.974	1.109	0.245
		Lag 3	OR01	0.999	0.989	1.008	0.811
			OR10	1.049	0.983	1.119	0.150
	Lag 1	Lag 0	OR01	1.000	0.991	1.009	0.964
			OR10	1.053	0.988	1.122	0.114
		Lag 1	OR01	1.004	0.995	1.013	0.419
			OR10	1.058	0.993	1.128	0.083
		Lag 2	OR01	1.001	0.992	1.010	0.898
			OR10	1.052	0.987	1.122	0.120
		Lag 3	OR01	0.998	0.988	1.008	0.678
			OR10	1.059	0.993	1.128	0.080
	Lag 2	Lag 0	OR01	1.000	0.990	1.009	0.917
			OR10	1.057	0.993	1.125	0.083
		Lag 1	OR01	1.005	0.996	1.014	0.310
			OR10	1.073	1.008	1.142	**0.028**
		Lag 2	OR01	1.002	0.993	1.011	0.690
			OR10	1.073	1.007	1.142	**0.029**
		Lag 3	OR01	0.999	0.989	1.008	0.797
			OR10	1.073	1.008	1.143	**0.026**
	Lag 3	Lag 0	OR01	1.000	0.991	1.009	0.994
			OR10	1.038	0.975	1.106	0.243
		Lag 1	OR01	1.004	0.995	1.013	0.353
			OR10	1.052	0.988	1.120	0.114
		Lag 2	OR01	1.002	0.994	1.012	0.586
			OR10	1.057	0.992	1.125	0.085
		Lag 3	OR01	0.998	0.988	1.008	0.719
			OR10	1.052	0.988	1.120	0.115
Cerebrovascular	Lag 0	Lag 0	OR01	1.004	0.997	1.011	0.276
			OR10	1.031	0.976	1.089	0.276
		Lag 1	OR01	0.999	0.991	1.006	0.685
			OR10	1.027	0.972	1.084	0.346

			Lag 2	OR01	0.997	0.990 1.004	0.426
				OR10	1.027	0.972 1.085	0.341
			Lag 3	OR01	0.995	0.987 1.003	0.232
				OR10	1.028	0.973 1.085	0.325
		Lag 1	Lag 0	OR01	1.003	0.996 1.010	0.365
				OR10	1.039	0.984 1.097	0.163
			Lag 1	OR01	0.998	0.991 1.005	0.601
				OR10	1.038	0.983 1.096	0.175
			Lag 2	OR01	0.997	0.990 1.004	0.409
				OR10	1.040	0.985 1.098	0.154
			Lag 3	OR01	0.995	0.987 1.003	0.251
				OR10	1.044	0.989 1.102	0.121
		Lag 2	Lag 0	OR01	1.003	0.997 1.010	0.320
				OR10	1.043	0.989 1.100	0.123
			Lag 1	OR01	0.997	0.990 1.005	0.502
				OR10	1.038	0.984 1.095	0.169
			Lag 2	OR01	0.997	0.990 1.004	0.409
				OR10	1.043	0.989 1.101	0.122
			Lag 3	OR01	0.995	0.987 1.003	0.213
				OR10	1.043	0.988 1.100	0.125
		Lag 3	Lag 0	OR01	1.003	0.997 1.010	0.334
				OR10	1.024	0.971 1.081	0.383
			Lag 1	OR01	0.998	0.991 1.005	0.566
				OR10	1.022	0.968 1.078	0.434
			Lag 2	OR01	0.997	0.990 1.004	0.445
				OR10	1.027	0.974 1.084	0.324
			Lag 3	OR01	0.995	0.986 1.003	0.201
				OR10	1.025	0.972 1.082	0.366
	Renal	Lag 0	Lag 0	OR01	0.996	0.979 1.014	0.686
				OR10	1.110	1.019 1.209	**0.017**
			Lag 1	OR01	0.995	0.979 1.012	0.581
				OR10	1.119	1.027 1.220	**0.010**
			Lag 2	OR01	1.008	0.993 1.023	0.286
				OR10	1.108	1.017 1.207	**0.019**
			Lag 3	OR01	0.998	0.982 1.014	0.811
				OR10	1.106	1.015 1.205	**0.022**
		Lag 1	Lag 0	OR01	0.994	0.976 1.013	0.545
				OR10	1.132	1.041 1.230	**0.004**
			Lag 1	OR01	0.996	0.980 1.013	0.670
				OR10	1.151	1.059 1.251	**0.001**
			Lag 2	OR01	1.010	0.996 1.025	0.172
				OR10	1.149	1.057 1.250	**0.001**
			Lag 3	OR01	0.997	0.981 1.014	0.762
				OR10	1.130	1.039 1.228	**0.004**

		Lag 2	Lag 0	OR01	1.000	0.983	1.017	0.990
				OR10	1.084	0.997	1.179	0.058
			Lag 1	OR01	0.996	0.980	1.013	0.672
				OR10	1.087	1.000	1.182	0.051
			Lag 2	OR01	1.008	0.994	1.023	0.273
				OR10	1.077	0.990	1.171	0.085
			Lag 3	OR01	0.995	0.978	1.012	0.551
				OR10	1.065	0.979	1.158	0.145
		Lag 3	Lag 0	OR01	1.002	0.986	1.019	0.772
				OR10	1.054	0.970	1.146	0.216
			Lag 1	OR01	0.996	0.980	1.013	0.644
				OR10	1.046	0.962	1.137	0.293
			Lag 2	OR01	1.010	0.995	1.025	0.209
				OR10	1.042	0.959	1.133	0.331
			Lag 3	OR01	0.996	0.980	1.013	0.683
				OR10	1.034	0.951	1.124	0.435
	Respiratory	Lag 0	Lag 0	OR01	0.994	0.980	1.007	0.361
				OR10	0.929	0.858	1.006	0.069
			Lag 1	OR01	1.003	0.994	1.013	0.479
				OR10	0.920	0.850	0.996	**0.039**
			Lag 2	OR01	1.007	0.996	1.019	0.201
				OR10	0.932	0.861	1.008	0.079
			Lag 3	OR01	1.004	0.993	1.015	0.528
				OR10	0.907	0.837	0.982	**0.016**
		Lag 1	Lag 0	OR01	0.995	0.982	1.008	0.469
				OR10	0.995	0.921	1.075	0.903
			Lag 1	OR01	1.004	0.994	1.013	0.459
				OR10	0.979	0.906	1.058	0.593
			Lag 2	OR01	1.008	0.996	1.019	0.188
				OR10	0.990	0.916	1.069	0.792
			Lag 3	OR01	1.005	0.994	1.016	0.423
				OR10	0.969	0.897	1.048	0.433
		Lag 2	Lag 0	OR01	0.991	0.977	1.006	0.233
				OR10	0.998	0.925	1.077	0.957
			Lag 1	OR01	1.002	0.993	1.012	0.652
				OR10	0.996	0.923	1.075	0.917
			Lag 2	OR01	1.007	0.996	1.019	0.218
				OR10	1.009	0.935	1.089	0.822
			Lag 3	OR01	1.005	0.994	1.016	0.343
				OR10	1.001	0.927	1.080	0.985
		Lag 3	Lag 0	OR01	0.994	0.981	1.008	0.385
				OR10	1.063	0.987	1.144	0.105
			Lag 1	OR01	1.003	0.993	1.012	0.610
				OR10	1.056	0.982	1.136	0.140

			Lag 2	OR01	1.008	0.997	1.020	0.161
				OR10	1.067	0.992	1.148	0.083
			Lag 3	OR01	1.006	0.995	1.017	0.326
				OR10	1.056	0.981	1.137	0.150
Other, preferred language	All-natural	Lag 0	Lag 0	OR01	1.001	1.000	1.002	0.173
				OR10	1.031	1.018	1.045	**0.000**
			Lag 1	OR01	1.000	0.999	1.002	0.618
				OR10	1.029	1.016	1.043	**0.000**
			Lag 2	OR01	1.000	0.999	1.002	0.600
				OR10	1.032	1.018	1.046	**0.000**
			Lag 3	OR01	1.000	0.998	1.001	0.738
				OR10	1.033	1.019	1.047	**0.000**
		Lag 1	Lag 0	OR01	1.001	0.999	1.002	0.262
				OR10	1.026	1.013	1.040	**0.000**
			Lag 1	OR01	1.000	0.999	1.001	0.858
				OR10	1.023	1.010	1.037	**0.001**
			Lag 2	OR01	1.000	0.999	1.001	0.856
				OR10	1.026	1.013	1.040	**0.000**
			Lag 3	OR01	1.000	0.998	1.001	0.755
				OR10	1.028	1.015	1.042	**0.000**
		Lag 2	Lag 0	OR01	1.001	1.000	1.002	0.198
				OR10	1.028	1.015	1.041	**0.000**
			Lag 1	OR01	1.000	0.999	1.002	0.661
				OR10	1.028	1.015	1.042	**0.000**
			Lag 2	OR01	1.000	0.999	1.001	0.932
				OR10	1.028	1.014	1.041	**0.000**
			Lag 3	OR01	1.000	0.998	1.001	0.834
				OR10	1.031	1.018	1.045	**0.000**
		Lag 3	Lag 0	OR01	1.001	1.000	1.002	0.148
				OR10	1.017	1.003	1.030	**0.013**
			Lag 1	OR01	1.001	0.999	1.002	0.319
				OR10	1.018	1.005	1.032	**0.006**
			Lag 2	OR01	1.000	0.999	1.002	0.705
				OR10	1.018	1.005	1.031	**0.008**
			Lag 3	OR01	1.000	0.999	1.001	0.905
				OR10	1.020	1.007	1.033	**0.003**
	Cardiovascular	Lag 0	Lag 0	OR01	1.002	0.969	1.035	0.925
				OR10	1.051	0.821	1.345	0.694
			Lag 1	OR01	0.988	0.950	1.027	0.538
				OR10	1.011	0.787	1.298	0.932
			Lag 2	OR01	0.973	0.930	1.017	0.228
				OR10	1.034	0.807	1.325	0.791
			Lag 3	OR01	0.974	0.932	1.018	0.243
				OR10	1.047	0.818	1.339	0.716

		Lag 1	Lag 0	OR01	0.995	0.959	1.031	0.772
				OR10	1.141	0.888	1.465	0.302
			Lag 1	OR01	0.983	0.940	1.027	0.440
				OR10	1.135	0.882	1.461	0.324
			Lag 2	OR01	0.961	0.902	1.023	0.208
				OR10	1.132	0.881	1.454	0.332
			Lag 3	OR01	0.970	0.923	1.019	0.222
				OR10	1.149	0.895	1.475	0.277
		Lag 2	Lag 0	OR01	0.992	0.956	1.029	0.667
				OR10	0.885	0.685	1.142	0.347
			Lag 1	OR01	0.985	0.943	1.029	0.498
				OR10	0.901	0.698	1.163	0.423
			Lag 2	OR01	0.962	0.906	1.022	0.206
				OR10	0.888	0.687	1.147	0.363
			Lag 3	OR01	0.971	0.925	1.019	0.231
				OR10	0.906	0.703	1.169	0.450
		Lag 3	Lag 0	OR01	0.993	0.957	1.030	0.709
				OR10	1.007	0.788	1.286	0.956
			Lag 1	OR01	0.981	0.935	1.028	0.423
				OR10	1.015	0.795	1.296	0.905
			Lag 2	OR01	0.962	0.904	1.024	0.221
				OR10	1.013	0.793	1.294	0.919
			Lag 3	OR01	0.972	0.926	1.020	0.243
				OR10	1.034	0.809	1.321	0.792
	Cerebrovascular	Lag 0	Lag 0	OR01	0.999	0.984	1.015	0.949
				OR10	0.876	0.717	1.071	0.196
			Lag 1	OR01	1.012	0.993	1.030	0.223
				OR10	0.920	0.754	1.122	0.409
			Lag 2	OR01	0.993	0.972	1.015	0.531
				OR10	0.895	0.733	1.093	0.277
			Lag 3	OR01	0.988	0.967	1.009	0.263
				OR10	0.898	0.736	1.097	0.292
		Lag 1	Lag 0	OR01	1.002	0.987	1.017	0.797
				OR10	1.097	0.907	1.326	0.341
			Lag 1	OR01	1.012	0.994	1.031	0.194
				OR10	1.114	0.920	1.349	0.268
			Lag 2	OR01	0.995	0.974	1.016	0.635
				OR10	1.100	0.909	1.331	0.327
			Lag 3	OR01	0.990	0.970	1.010	0.321
				OR10	1.107	0.916	1.338	0.294
		Lag 2	Lag 0	OR01	1.002	0.986	1.017	0.838
				OR10	1.137	0.944	1.369	0.177
			Lag 1	OR01	1.013	0.994	1.032	0.191
				OR10	1.154	0.958	1.390	0.132

		Lag 2	OR01	0.997	0.976	1.017	0.752
			OR10	1.170	0.970	1.411	0.101
		Lag 3	OR01	0.989	0.968	1.010	0.300
			OR10	1.134	0.942	1.367	0.185
	Lag 3	Lag 0	OR01	1.000	0.985	1.016	0.986
			OR10	1.001	0.829	1.209	0.991
		Lag 1	OR01	1.011	0.992	1.030	0.252
			OR10	1.019	0.844	1.230	0.845
		Lag 2	OR01	0.987	0.962	1.012	0.303
			OR10	0.990	0.820	1.195	0.915
		Lag 3	OR01	0.984	0.960	1.008	0.181
			OR10	0.986	0.815	1.192	0.881
Renal	Lag 0	Lag 0	OR01	0.997	0.893	1.114	0.960
			OR10	1.062	0.737	1.528	0.748
		Lag 1	OR01	0.971	0.853	1.104	0.650
			OR10	1.107	0.773	1.585	0.579
		Lag 2	OR01	0.995	0.938	1.056	0.880
			OR10	1.067	0.741	1.537	0.727
		Lag 3	OR01	1.093	0.975	1.225	0.127
			OR10	1.116	0.781	1.595	0.545
	Lag 1	Lag 0	OR01	1.006	0.902	1.122	0.917
			OR10	1.159	0.815	1.649	0.412
		Lag 1	OR01	0.958	0.835	1.099	0.542
			OR10	1.146	0.808	1.627	0.444
		Lag 2	OR01	1.001	0.948	1.056	0.978
			OR10	1.192	0.842	1.686	0.322
		Lag 3	OR01	1.070	0.951	1.205	0.260
			OR10	1.133	0.800	1.605	0.480
	Lag 2	Lag 0	OR01	0.989	0.890	1.100	0.844
			OR10	1.104	0.796	1.533	0.552
		Lag 1	OR01	0.947	0.827	1.085	0.432
			OR10	1.118	0.808	1.548	0.501
		Lag 2	OR01	1.001	0.948	1.056	0.983
			OR10	1.178	0.852	1.628	0.322
		Lag 3	OR01	1.136	0.995	1.296	0.058
			OR10	1.176	0.850	1.627	0.328
	Lag 3	Lag 0	OR01	0.967	0.863	1.084	0.566
			OR10	1.226	0.891	1.688	0.210
		Lag 1	OR01	0.968	0.852	1.100	0.616
			OR10	1.324	0.969	1.810	0.078
		Lag 2	OR01	0.996	0.938	1.057	0.898
			OR10	1.295	0.946	1.772	0.106
		Lag 3	OR01	1.150	1.012	1.307	**0.032**
			OR10	1.382	1.009	1.893	**0.044**

	Respiratory	Lag 0	Lag 0	OR01	1.023	0.992	1.055	0.149
				OR10	1.191	0.895	1.587	0.231
			Lag 1	OR01	1.005	0.982	1.029	0.682
				OR10	1.180	0.885	1.574	0.259
			Lag 2	OR01	0.996	0.966	1.026	0.783
				OR10	1.155	0.866	1.540	0.327
			Lag 3	OR01	1.006	0.973	1.040	0.745
				OR10	1.157	0.867	1.545	0.322
		Lag 1	Lag 0	OR01	1.021	0.990	1.052	0.190
				OR10	1.143	0.856	1.525	0.366
			Lag 1	OR01	1.001	0.976	1.026	0.942
				OR10	1.093	0.819	1.458	0.546
			Lag 2	OR01	0.998	0.968	1.028	0.875
				OR10	1.176	0.884	1.564	0.266
			Lag 3	OR01	1.003	0.970	1.037	0.871
				OR10	1.097	0.822	1.463	0.531
		Lag 2	Lag 0	OR01	1.021	0.990	1.052	0.192
				OR10	0.955	0.701	1.300	0.768
			Lag 1	OR01	1.001	0.977	1.026	0.922
				OR10	0.912	0.668	1.243	0.559
			Lag 2	OR01	0.997	0.968	1.027	0.836
				OR10	0.977	0.717	1.330	0.881
			Lag 3	OR01	1.001	0.968	1.036	0.945
				OR10	0.885	0.645	1.214	0.450
		Lag 3	Lag 0	OR01	1.020	0.990	1.052	0.198
				OR10	1.052	0.783	1.415	0.736
			Lag 1	OR01	1.004	0.981	1.028	0.716
				OR10	1.116	0.833	1.496	0.462
			Lag 2	OR01	0.994	0.964	1.025	0.705
				OR10	1.050	0.783	1.409	0.744
			Lag 3	OR01	0.999	0.965	1.034	0.972
				OR10	0.967	0.713	1.310	0.828
Spanish, preferred language	All-natural	Lag 0	Lag 0	OR01	1.000	0.999	1.001	0.858
				OR10	1.030	1.021	1.039	**0.000**
			Lag 1	OR01	1.000	0.999	1.002	0.516
				OR10	1.030	1.021	1.039	**0.000**
			Lag 2	OR01	0.999	0.998	1.000	0.103
				OR10	1.030	1.021	1.039	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	0.218
				OR10	1.031	1.022	1.040	**0.000**
		Lag 1	Lag 0	OR01	1.000	0.999	1.001	0.836
				OR10	1.028	1.019	1.037	**0.000**
			Lag 1	OR01	1.000	0.999	1.002	0.440
				OR10	1.028	1.020	1.037	**0.000**

			Lag 2	OR01	0.999	0.998	1.000	0.125
				OR10	1.029	1.020	1.038	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	0.160
				OR10	1.028	1.019	1.036	**0.000**
		Lag 2	Lag 0	OR01	1.000	0.999	1.002	0.652
				OR10	1.025	1.017	1.034	**0.000**
			Lag 1	OR01	1.000	0.999	1.002	0.456
				OR10	1.025	1.016	1.033	**0.000**
			Lag 2	OR01	0.999	0.998	1.000	0.170
				OR10	1.026	1.017	1.035	**0.000**
			Lag 3	OR01	0.999	0.998	1.000	0.157
				OR10	1.024	1.016	1.033	**0.000**
		Lag 3	Lag 0	OR01	1.000	0.999	1.001	0.922
				OR10	1.014	1.006	1.023	**0.001**
			Lag 1	OR01	1.000	0.999	1.002	0.569
				OR10	1.016	1.007	1.024	**0.000**
			Lag 2	OR01	0.999	0.998	1.000	0.197
				OR10	1.018	1.009	1.026	**0.000**
			Lag 3	OR01	0.999	0.998	1.001	0.295
				OR10	1.017	1.009	1.026	**0.000**
	Cardiovascular	Lag 0	Lag 0	OR01	1.021	0.988	1.056	0.216
				OR10	0.930	0.760	1.138	0.479
			Lag 1	OR01	1.035	1.007	1.064	**0.016**
				OR10	0.917	0.750	1.122	0.402
			Lag 2	OR01	1.029	0.991	1.069	0.130
				OR10	0.935	0.765	1.143	0.512
			Lag 3	OR01	1.020	0.993	1.047	0.149
				OR10	0.929	0.759	1.137	0.475
		Lag 1	Lag 0	OR01	1.022	0.988	1.057	0.204
				OR10	1.055	0.873	1.276	0.581
			Lag 1	OR01	1.035	1.007	1.065	**0.015**
				OR10	1.039	0.860	1.256	0.693
			Lag 2	OR01	1.027	0.989	1.067	0.169
				OR10	1.047	0.867	1.263	0.634
			Lag 3	OR01	1.022	0.995	1.050	0.107
				OR10	1.072	0.887	1.295	0.473
		Lag 2	Lag 0	OR01	1.023	0.989	1.057	0.188
				OR10	0.909	0.750	1.102	0.332
			Lag 1	OR01	1.036	1.007	1.065	**0.015**
				OR10	0.897	0.740	1.086	0.266
			Lag 2	OR01	1.030	0.991	1.070	0.129
				OR10	0.902	0.745	1.092	0.289
			Lag 3	OR01	1.019	0.992	1.047	0.160
				OR10	0.896	0.738	1.087	0.265

	Lag 3	Lag 0	OR01	1.021	0.987	1.055	0.229
			OR10	0.868	0.715	1.055	0.155
		Lag 1	OR01	1.035	1.007	1.065	**0.015**
			OR10	0.868	0.716	1.052	0.149
		Lag 2	OR01	1.032	0.993	1.073	0.105
			OR10	0.881	0.727	1.069	0.199
		Lag 3	OR01	1.017	0.990	1.044	0.216
			OR10	0.851	0.700	1.034	0.104
Cerebrovascular	Lag 0	Lag 0	OR01	1.011	0.986	1.036	0.396
			OR10	1.069	0.919	1.243	0.390
		Lag 1	OR01	1.011	0.990	1.032	0.314
			OR10	1.074	0.923	1.249	0.357
		Lag 2	OR01	1.020	0.996	1.045	0.105
			OR10	1.048	0.901	1.219	0.543
		Lag 3	OR01	1.005	0.986	1.024	0.620
			OR10	1.025	0.881	1.192	0.749
	Lag 1	Lag 0	OR01	1.007	0.982	1.033	0.573
			OR10	0.924	0.792	1.079	0.318
		Lag 1	OR01	1.010	0.989	1.031	0.353
			OR10	0.942	0.808	1.100	0.451
		Lag 2	OR01	1.022	0.998	1.047	0.072
			OR10	0.942	0.807	1.099	0.447
		Lag 3	OR01	1.005	0.986	1.025	0.590
			OR10	0.907	0.777	1.059	0.217
	Lag 2	Lag 0	OR01	1.008	0.983	1.033	0.551
			OR10	0.948	0.813	1.104	0.490
		Lag 1	OR01	1.011	0.990	1.033	0.313
			OR10	0.967	0.831	1.126	0.670
		Lag 2	OR01	1.024	1.000	1.049	0.053
			OR10	0.972	0.835	1.132	0.720
		Lag 3	OR01	1.005	0.986	1.025	0.583
			OR10	0.930	0.798	1.085	0.357
	Lag 3	Lag 0	OR01	1.005	0.981	1.031	0.673
			OR10	0.945	0.813	1.097	0.457
		Lag 1	OR01	1.011	0.990	1.032	0.325
			OR10	0.981	0.846	1.137	0.798
		Lag 2	OR01	1.022	0.996	1.048	0.101
			OR10	0.968	0.836	1.122	0.668
		Lag 3	OR01	1.006	0.987	1.026	0.514
			OR10	0.953	0.821	1.107	0.532
Renal	Lag 0	Lag 0	OR01	0.872	0.774	0.983	**0.025**
			OR10	0.968	0.771	1.216	0.781
		Lag 1	OR01	0.945	0.868	1.029	0.191
			OR10	0.985	0.785	1.236	0.895

			Lag 2	OR01	1.005	0.976	1.034	0.744
				OR10	0.959	0.764	1.204	0.719
			Lag 3	OR01	0.992	0.953	1.032	0.676
				OR10	0.946	0.754	1.186	0.630
		Lag 1	Lag 0	OR01	0.883	0.786	0.992	**0.036**
				OR10	1.009	0.807	1.260	0.940
			Lag 1	OR01	0.908	0.825	1.000	**0.049**
				OR10	0.966	0.773	1.207	0.762
			Lag 2	OR01	1.004	0.974	1.034	0.815
				OR10	0.964	0.771	1.206	0.748
			Lag 3	OR01	0.992	0.953	1.032	0.683
				OR10	0.971	0.778	1.213	0.796
		Lag 2	Lag 0	OR01	0.878	0.784	0.983	**0.024**
				OR10	0.990	0.793	1.235	0.927
			Lag 1	OR01	0.917	0.836	1.005	0.065
				OR10	0.967	0.775	1.208	0.769
			Lag 2	OR01	1.006	0.977	1.035	0.689
				OR10	0.991	0.794	1.238	0.939
			Lag 3	OR01	0.994	0.956	1.034	0.775
				OR10	0.983	0.787	1.228	0.879
		Lag 3	Lag 0	OR01	0.886	0.792	0.991	**0.034**
				OR10	0.957	0.769	1.191	0.694
			Lag 1	OR01	0.932	0.855	1.017	0.114
				OR10	0.943	0.758	1.172	0.595
			Lag 2	OR01	1.002	0.972	1.033	0.879
				OR10	0.926	0.744	1.153	0.493
			Lag 3	OR01	0.995	0.957	1.035	0.806
				OR10	0.949	0.761	1.184	0.642
	Respiratory	Lag 0	Lag 0	OR01	0.958	0.903	1.017	0.161
				OR10	1.237	0.994	1.539	0.056
			Lag 1	OR01	0.928	0.867	0.993	**0.030**
				OR10	1.260	1.014	1.565	**0.037**
			Lag 2	OR01	0.988	0.936	1.043	0.665
				OR10	1.244	1.002	1.546	**0.048**
			Lag 3	OR01	0.914	0.844	0.990	**0.028**
				OR10	1.279	1.031	1.587	**0.025**
		Lag 1	Lag 0	OR01	0.947	0.888	1.011	0.103
				OR10	1.115	0.898	1.385	0.323
			Lag 1	OR01	0.929	0.868	0.995	**0.035**
				OR10	1.168	0.942	1.450	0.158
			Lag 2	OR01	0.986	0.933	1.041	0.606
				OR10	1.130	0.910	1.404	0.269
			Lag 3	OR01	0.906	0.835	0.983	**0.018**
				OR10	1.153	0.929	1.432	0.196

		Lag 2	Lag 0	OR01	0.945	0.883	1.011	0.099
				OR10	1.050	0.840	1.313	0.669
			Lag 1	OR01	0.928	0.865	0.996	**0.039**
				OR10	1.095	0.877	1.368	0.423
			Lag 2	OR01	0.992	0.941	1.046	0.761
				OR10	1.085	0.867	1.357	0.477
			Lag 3	OR01	0.909	0.839	0.985	**0.020**
				OR10	1.084	0.865	1.357	0.484
		Lag 3	Lag 0	OR01	0.964	0.913	1.019	0.194
				OR10	0.859	0.687	1.074	0.182
			Lag 1	OR01	0.936	0.877	1.000	0.051
				OR10	0.890	0.714	1.110	0.301
			Lag 2	OR01	0.994	0.944	1.047	0.823
				OR10	0.883	0.707	1.101	0.268
			Lag 3	OR01	0.919	0.851	0.991	**0.028**
				OR10	0.886	0.711	1.105	0.283
Lesser poverty (< 25% households living under poverty)	All-natural	Lag 0	Lag 0	OR01	1.000	1.000	1.000	0.966
				OR10	1.023	1.020	1.026	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.401
				OR10	1.023	1.020	1.027	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	**0.000**
				OR10	1.025	1.021	1.028	**0.000**
			Lag 3	OR01	0.999	0.998	0.999	**0.000**
				OR10	1.023	1.020	1.026	**0.000**
		Lag 1	Lag 0	OR01	1.000	1.000	1.000	0.733
				OR10	1.024	1.021	1.027	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.532
				OR10	1.025	1.022	1.028	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	**0.000**
				OR10	1.025	1.022	1.028	**0.000**
			Lag 3	OR01	0.999	0.998	0.999	**0.000**
				OR10	1.024	1.021	1.027	**0.000**
		Lag 2	Lag 0	OR01	1.000	1.000	1.000	0.875
				OR10	1.018	1.015	1.021	**0.000**
			Lag 1	OR01	1.000	1.000	1.000	0.632
				OR10	1.019	1.016	1.022	**0.000**
			Lag 2	OR01	0.999	0.999	1.000	**0.000**
				OR10	1.020	1.017	1.023	**0.000**
			Lag 3	OR01	0.999	0.999	0.999	**0.000**
				OR10	1.019	1.016	1.023	**0.000**
		Lag 3	Lag 0	OR01	1.000	1.000	1.000	0.890
				OR10	1.013	1.010	1.017	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.322
				OR10	1.014	1.011	1.017	**0.000**

			Lag 2	OR01	0.999	0.999	1.000	**0.000**
				OR10	1.016	1.013	1.019	**0.000**
			Lag 3	OR01	0.999	0.999	0.999	**0.000**
				OR10	1.015	1.012	1.018	**0.000**
	Cardiovascular	Lag 0	Lag 0	OR01	1.003	0.993	1.012	0.577
				OR10	1.045	0.979	1.116	0.184
			Lag 1	OR01	1.003	0.994	1.012	0.519
				OR10	1.042	0.976	1.112	0.221
			Lag 2	OR01	0.998	0.988	1.007	0.608
				OR10	1.046	0.979	1.117	0.181
			Lag 3	OR01	0.998	0.989	1.007	0.633
				OR10	1.051	0.985	1.122	0.135
		Lag 1	Lag 0	OR01	1.002	0.993	1.011	0.684
				OR10	1.075	1.008	1.146	**0.028**
			Lag 1	OR01	1.003	0.994	1.012	0.473
				OR10	1.078	1.010	1.149	**0.023**
			Lag 2	OR01	0.997	0.987	1.006	0.493
				OR10	1.073	1.006	1.145	**0.032**
			Lag 3	OR01	0.998	0.988	1.007	0.603
				OR10	1.083	1.016	1.155	**0.015**
		Lag 2	Lag 0	OR01	1.001	0.992	1.010	0.812
				OR10	1.049	0.984	1.117	0.143
			Lag 1	OR01	1.004	0.996	1.013	0.326
				OR10	1.063	0.998	1.133	0.058
			Lag 2	OR01	0.998	0.989	1.007	0.678
				OR10	1.063	0.997	1.133	0.061
			Lag 3	OR01	0.998	0.989	1.007	0.685
				OR10	1.065	1.000	1.135	0.052
		Lag 3	Lag 0	OR01	1.001	0.992	1.010	0.795
				OR10	1.030	0.966	1.098	0.365
			Lag 1	OR01	1.004	0.995	1.013	0.426
				OR10	1.042	0.978	1.111	0.204
			Lag 2	OR01	0.998	0.989	1.008	0.727
				OR10	1.047	0.982	1.116	0.160
			Lag 3	OR01	0.997	0.988	1.007	0.596
				OR10	1.045	0.980	1.114	0.182
	Cerebrovascular	Lag 0	Lag 0	OR01	1.004	0.998	1.011	0.205
				OR10	1.005	0.951	1.062	0.855
			Lag 1	OR01	1.001	0.995	1.008	0.677
				OR10	1.006	0.953	1.063	0.827
			Lag 2	OR01	0.998	0.992	1.005	0.659
				OR10	1.004	0.951	1.061	0.877
			Lag 3	OR01	0.994	0.987	1.002	0.138
				OR10	1.001	0.948	1.058	0.965

		Lag 1	Lag 0	OR01	1.004	0.997	1.010	0.253
				OR10	1.018	0.965	1.075	0.509
			Lag 1	OR01	1.001	0.995	1.008	0.708
				OR10	1.022	0.968	1.079	0.431
			Lag 2	OR01	0.999	0.992	1.006	0.699
				OR10	1.024	0.970	1.081	0.399
			Lag 3	OR01	0.995	0.988	1.003	0.200
				OR10	1.026	0.971	1.083	0.361
		Lag 2	Lag 0	OR01	1.004	0.998	1.011	0.200
				OR10	1.051	0.996	1.108	0.070
			Lag 1	OR01	1.001	0.994	1.008	0.757
				OR10	1.051	0.996	1.108	0.069
			Lag 2	OR01	0.999	0.992	1.006	0.731
				OR10	1.055	1.000	1.113	0.052
			Lag 3	OR01	0.994	0.987	1.002	0.136
				OR10	1.048	0.994	1.106	0.082
		Lag 3	Lag 0	OR01	1.004	0.997	1.010	0.241
				OR10	1.020	0.967	1.076	0.476
			Lag 1	OR01	1.001	0.995	1.008	0.701
				OR10	1.024	0.971	1.080	0.379
			Lag 2	OR01	0.998	0.991	1.005	0.528
				OR10	1.022	0.969	1.078	0.427
			Lag 3	OR01	0.993	0.986	1.001	0.095
				OR10	1.018	0.965	1.074	0.515
	Renal	Lag 0	Lag 0	OR01	0.986	0.965	1.008	0.202
				OR10	1.087	0.996	1.186	0.062
			Lag 1	OR01	0.990	0.972	1.008	0.286
				OR10	1.091	0.999	1.191	0.052
			Lag 2	OR01	1.007	0.993	1.021	0.351
				OR10	1.086	0.996	1.186	0.063
			Lag 3	OR01	1.000	0.984	1.017	0.966
				OR10	1.079	0.989	1.178	0.087
		Lag 1	Lag 0	OR01	0.983	0.961	1.005	0.133
				OR10	1.113	1.023	1.211	**0.013**
			Lag 1	OR01	0.989	0.971	1.008	0.260
				OR10	1.121	1.029	1.220	**0.009**
			Lag 2	OR01	1.008	0.994	1.022	0.246
				OR10	1.132	1.040	1.232	**0.004**
			Lag 3	OR01	1.000	0.983	1.016	0.956
				OR10	1.107	1.017	1.205	**0.019**
		Lag 2	Lag 0	OR01	0.987	0.966	1.008	0.227
				OR10	1.087	0.999	1.183	0.052
			Lag 1	OR01	0.988	0.970	1.007	0.229
				OR10	1.085	0.996	1.180	0.060

			Lag 2	OR01	1.007	0.993	1.021	0.341
				OR10	1.089	1.000	1.185	**0.049**
			Lag 3	OR01	0.999	0.982	1.016	0.930
				OR10	1.079	0.991	1.175	0.078
		Lag 3	Lag 0	OR01	0.988	0.968	1.009	0.272
				OR10	1.038	0.953	1.129	0.392
			Lag 1	OR01	0.990	0.972	1.008	0.286
				OR10	1.036	0.952	1.128	0.407
			Lag 2	OR01	1.006	0.992	1.020	0.435
				OR10	1.029	0.946	1.120	0.502
			Lag 3	OR01	1.001	0.984	1.018	0.901
				OR10	1.033	0.949	1.125	0.449
	Respiratory	Lag 0	Lag 0	OR01	0.993	0.979	1.007	0.309
				OR10	0.958	0.884	1.039	0.298
			Lag 1	OR01	1.003	0.994	1.012	0.534
				OR10	0.956	0.882	1.036	0.270
			Lag 2	OR01	1.005	0.994	1.017	0.372
				OR10	0.963	0.889	1.044	0.363
			Lag 3	OR01	1.002	0.990	1.014	0.728
				OR10	0.946	0.873	1.025	0.176
		Lag 1	Lag 0	OR01	0.993	0.979	1.007	0.301
				OR10	1.001	0.925	1.083	0.985
			Lag 1	OR01	1.003	0.994	1.012	0.516
				OR10	1.000	0.924	1.082	0.996
			Lag 2	OR01	1.005	0.994	1.017	0.371
				OR10	1.006	0.930	1.088	0.885
			Lag 3	OR01	1.003	0.991	1.015	0.642
				OR10	0.992	0.916	1.073	0.837
		Lag 2	Lag 0	OR01	0.990	0.976	1.005	0.194
				OR10	0.998	0.922	1.080	0.959
			Lag 1	OR01	1.002	0.992	1.011	0.736
				OR10	0.999	0.923	1.080	0.971
			Lag 2	OR01	1.005	0.994	1.017	0.374
				OR10	1.013	0.936	1.096	0.748
			Lag 3	OR01	1.003	0.991	1.015	0.596
				OR10	1.003	0.927	1.085	0.938
		Lag 3	Lag 0	OR01	0.993	0.979	1.007	0.326
				OR10	1.027	0.951	1.110	0.489
			Lag 1	OR01	1.002	0.992	1.012	0.683
				OR10	1.026	0.951	1.107	0.514
			Lag 2	OR01	1.005	0.994	1.017	0.355
				OR10	1.032	0.956	1.114	0.420
			Lag 3	OR01	1.003	0.991	1.016	0.588
				OR10	1.023	0.947	1.105	0.561

Higher poverty (> 25% households living under poverty)	All-natural	Lag 0	Lag 0	OR01	1.000	0.999	1.001	0.618
				OR10	1.026	1.019	1.033	**0.000**
			Lag 1	OR01	1.000	0.999	1.001	0.634
				OR10	1.027	1.021	1.034	**0.000**
			Lag 2	OR01	1.000	0.999	1.001	0.765
				OR10	1.027	1.020	1.033	**0.000**
			Lag 3	OR01	1.000	0.999	1.001	0.912
				OR10	1.027	1.021	1.034	**0.000**
		Lag 1	Lag 0	OR01	1.000	0.999	1.001	0.822
				OR10	1.019	1.013	1.026	**0.000**
			Lag 1	OR01	1.000	0.999	1.001	0.698
				OR10	1.022	1.015	1.028	**0.000**
			Lag 2	OR01	1.000	0.999	1.001	0.973
				OR10	1.022	1.016	1.029	**0.000**
			Lag 3	OR01	1.000	0.999	1.001	0.741
				OR10	1.021	1.014	1.027	**0.000**
		Lag 2	Lag 0	OR01	1.000	0.999	1.001	0.705
				OR10	1.020	1.013	1.026	**0.000**
			Lag 1	OR01	1.000	0.999	1.001	0.676
				OR10	1.021	1.015	1.028	**0.000**
			Lag 2	OR01	1.000	0.999	1.001	0.811
				OR10	1.023	1.017	1.030	**0.000**
			Lag 3	OR01	1.000	0.999	1.001	0.634
				OR10	1.021	1.014	1.027	**0.000**
		Lag 3	Lag 0	OR01	1.000	0.999	1.001	0.670
				OR10	1.014	1.008	1.021	**0.000**
			Lag 1	OR01	1.000	0.999	1.001	0.537
				OR10	1.015	1.009	1.022	**0.000**
			Lag 2	OR01	1.000	0.999	1.001	0.785
				OR10	1.017	1.011	1.024	**0.000**
			Lag 3	OR01	1.000	0.999	1.001	0.692
				OR10	1.015	1.009	1.022	**0.000**
	Cardiovascular	Lag 0	Lag 0	OR01	0.997	0.975	1.019	0.761
				OR10	0.936	0.807	1.086	0.386
			Lag 1	OR01	1.025	1.002	1.049	**0.036**
				OR10	0.958	0.826	1.111	0.571
			Lag 2	OR01	1.012	0.992	1.032	0.252
				OR10	0.951	0.820	1.102	0.500
			Lag 3	OR01	1.004	0.983	1.026	0.680
				OR10	0.971	0.839	1.124	0.693
		Lag 1	Lag 0	OR01	0.997	0.976	1.019	0.812
				OR10	0.975	0.845	1.125	0.729
			Lag 1	OR01	1.024	1.000	1.048	**0.047**
				OR10	0.979	0.848	1.130	0.775

			Lag 2	OR01	1.011	0.991	1.032	0.278
				OR10	0.973	0.842	1.124	0.711
			Lag 3	OR01	1.002	0.981	1.024	0.855
				OR10	0.984	0.853	1.135	0.828
		Lag 2	Lag 0	OR01	0.997	0.976	1.019	0.805
				OR10	0.947	0.823	1.090	0.450
			Lag 1	OR01	1.025	1.001	1.049	**0.044**
				OR10	0.960	0.835	1.104	0.567
			Lag 2	OR01	1.012	0.991	1.032	0.259
				OR10	0.955	0.829	1.099	0.517
			Lag 3	OR01	1.002	0.980	1.024	0.873
				OR10	0.957	0.832	1.102	0.544
		Lag 3	Lag 0	OR01	0.999	0.978	1.020	0.899
				OR10	0.967	0.843	1.108	0.627
			Lag 1	OR01	1.027	1.002	1.052	**0.031**
				OR10	0.978	0.854	1.120	0.746
			Lag 2	OR01	1.014	0.994	1.035	0.166
				OR10	0.983	0.858	1.127	0.806
			Lag 3	OR01	1.001	0.979	1.023	0.919
				OR10	0.969	0.845	1.110	0.648
	Cerebrovascular	Lag 0	Lag 0	OR01	0.999	0.984	1.016	0.950
				OR10	1.117	0.993	1.256	0.067
			Lag 1	OR01	0.998	0.980	1.016	0.831
				OR10	1.118	0.993	1.259	0.065
			Lag 2	OR01	0.997	0.981	1.014	0.725
				OR10	1.099	0.976	1.236	0.118
			Lag 3	OR01	1.003	0.983	1.023	0.789
				OR10	1.099	0.977	1.237	0.115
		Lag 1	Lag 0	OR01	1.000	0.984	1.016	0.953
				OR10	1.096	0.974	1.234	0.127
			Lag 1	OR01	0.996	0.978	1.015	0.682
				OR10	1.082	0.961	1.219	0.194
			Lag 2	OR01	0.997	0.981	1.014	0.749
				OR10	1.082	0.960	1.219	0.198
			Lag 3	OR01	1.000	0.980	1.021	0.997
				OR10	1.064	0.945	1.199	0.303
		Lag 2	Lag 0	OR01	0.998	0.982	1.014	0.815
				OR10	0.985	0.876	1.107	0.798
			Lag 1	OR01	0.995	0.976	1.014	0.597
				OR10	0.976	0.867	1.099	0.691
			Lag 2	OR01	0.998	0.982	1.015	0.851
				OR10	0.990	0.879	1.115	0.870
			Lag 3	OR01	1.003	0.983	1.024	0.759
				OR10	0.983	0.872	1.108	0.779

	Lag 3	Lag 0	OR01	0.998	0.981	1.014	0.766
			OR10	0.989	0.879	1.112	0.852
		Lag 1	OR01	0.994	0.974	1.013	0.517
			OR10	0.981	0.872	1.104	0.753
		Lag 2	OR01	0.998	0.982	1.015	0.853
			OR10	0.997	0.886	1.122	0.966
		Lag 3	OR01	1.005	0.985	1.025	0.626
			OR10	1.001	0.889	1.128	0.981
Renal	Lag 0	Lag 0	OR01	1.008	0.978	1.039	0.597
			OR10	1.100	0.922	1.312	0.292
		Lag 1	OR01	1.003	0.959	1.050	0.892
			OR10	1.136	0.952	1.356	0.158
		Lag 2	OR01	1.007	0.975	1.041	0.654
			OR10	1.092	0.914	1.305	0.331
		Lag 3	OR01	0.992	0.959	1.026	0.634
			OR10	1.110	0.930	1.323	0.248
	Lag 1	Lag 0	OR01	1.009	0.979	1.040	0.547
			OR10	1.112	0.934	1.323	0.234
		Lag 1	OR01	1.005	0.962	1.050	0.825
			OR10	1.152	0.968	1.370	0.111
		Lag 2	OR01	1.009	0.978	1.042	0.564
			OR10	1.112	0.933	1.325	0.235
		Lag 3	OR01	0.991	0.958	1.026	0.613
			OR10	1.117	0.939	1.330	0.212
	Lag 2	Lag 0	OR01	1.016	0.986	1.048	0.299
			OR10	1.012	0.850	1.204	0.897
		Lag 1	OR01	1.011	0.968	1.055	0.636
			OR10	1.030	0.866	1.225	0.738
		Lag 2	OR01	1.011	0.979	1.044	0.516
			OR10	0.993	0.833	1.185	0.940
		Lag 3	OR01	0.985	0.946	1.024	0.445
			OR10	0.975	0.817	1.164	0.781
	Lag 3	Lag 0	OR01	1.020	0.989	1.052	0.206
			OR10	1.107	0.933	1.312	0.244
		Lag 1	OR01	1.004	0.962	1.047	0.860
			OR10	1.083	0.914	1.283	0.356
		Lag 2	OR01	1.017	0.985	1.049	0.301
			OR10	1.087	0.916	1.290	0.341
		Lag 3	OR01	0.987	0.950	1.025	0.499
			OR10	1.048	0.882	1.245	0.594
Respiratory	Lag 0	Lag 0	OR01	1.004	0.983	1.026	0.710
			OR10	1.019	0.870	1.194	0.813
		Lag 1	OR01	0.987	0.957	1.018	0.407
			OR10	0.999	0.851	1.172	0.985

			Lag 2	OR01	1.004	0.978	1.031	0.758
				OR10	1.010	0.862	1.183	0.902
			Lag 3	OR01	0.997	0.976	1.018	0.766
				OR10	0.996	0.849	1.168	0.961
		Lag 1	Lag 0	OR01	1.006	0.985	1.027	0.576
				OR10	1.068	0.913	1.249	0.413
			Lag 1	OR01	0.981	0.948	1.016	0.282
				OR10	1.013	0.865	1.186	0.873
			Lag 2	OR01	1.006	0.980	1.033	0.650
				OR10	1.052	0.900	1.230	0.525
			Lag 3	OR01	0.996	0.975	1.017	0.704
				OR10	1.011	0.863	1.185	0.891
		Lag 2	Lag 0	OR01	1.002	0.980	1.024	0.878
				OR10	1.002	0.858	1.172	0.977
			Lag 1	OR01	0.984	0.950	1.019	0.359
				OR10	1.005	0.860	1.173	0.954
			Lag 2	OR01	1.005	0.979	1.032	0.705
				OR10	1.015	0.869	1.186	0.848
			Lag 3	OR01	0.997	0.977	1.018	0.790
				OR10	0.999	0.854	1.169	0.990
		Lag 3	Lag 0	OR01	1.004	0.982	1.025	0.734
				OR10	1.090	0.942	1.261	0.246
			Lag 1	OR01	0.989	0.959	1.020	0.488
				OR10	1.087	0.940	1.257	0.261
			Lag 2	OR01	1.007	0.981	1.034	0.598
				OR10	1.097	0.948	1.268	0.214
			Lag 3	OR01	0.997	0.977	1.018	0.805
				OR10	1.074	0.927	1.244	0.342
White	All-natural	Lag 0	Lag 0	OR01	1.000	0.999	1.000	0.075
				OR10	1.020	1.016	1.024	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.073
				OR10	1.021	1.017	1.025	**0.000**
			Lag 2	OR01	0.999	0.998	0.999	**0.000**
				OR10	1.022	1.018	1.026	**0.000**
			Lag 3	OR01	0.999	0.998	0.999	**0.000**
				OR10	1.020	1.016	1.024	**0.000**
		Lag 1	Lag 0	OR01	0.999	0.999	1.000	0.051
				OR10	1.021	1.017	1.025	**0.000**
			Lag 1	OR01	1.000	0.999	1.000	0.195
				OR10	1.022	1.018	1.026	**0.000**
			Lag 2	OR01	0.999	0.998	0.999	**0.000**
				OR10	1.022	1.018	1.026	**0.000**
			Lag 3	OR01	0.999	0.998	0.999	**0.000**
				OR10	1.021	1.017	1.025	**0.000**

		Lag 2	Lag 0	OR01	1.000	0.999 1.000	0.078
				OR10	1.016	1.012 1.020	**0.000**
			Lag 1	OR01	1.000	0.999 1.000	0.224
				OR10	1.018	1.014 1.022	**0.000**
			Lag 2	OR01	0.999	0.999 1.000	**0.001**
				OR10	1.019	1.015 1.023	**0.000**
			Lag 3	OR01	0.999	0.998 1.000	**0.000**
				OR10	1.018	1.014 1.022	**0.000**
		Lag 3	Lag 0	OR01	0.999	0.999 1.000	0.059
				OR10	1.013	1.010 1.017	**0.000**
			Lag 1	OR01	0.999	0.999 1.000	0.056
				OR10	1.014	1.010 1.018	**0.000**
			Lag 2	OR01	0.999	0.999 1.000	**0.001**
				OR10	1.016	1.012 1.020	**0.000**
			Lag 3	OR01	0.999	0.998 0.999	**0.000**
				OR10	1.015	1.011 1.018	**0.000**
	Cardiovascular	Lag 0	Lag 0	OR01	1.003	0.991 1.015	0.640
				OR10	1.049	0.968 1.137	0.241
			Lag 1	OR01	1.001	0.990 1.012	0.833
				OR10	1.050	0.969 1.138	0.233
			Lag 2	OR01	1.004	0.992 1.015	0.532
				OR10	1.041	0.961 1.129	0.323
			Lag 3	OR01	1.000	0.989 1.011	0.966
				OR10	1.049	0.969 1.137	0.239
		Lag 1	Lag 0	OR01	1.003	0.991 1.015	0.623
				OR10	1.084	1.002 1.172	**0.044**
			Lag 1	OR01	1.002	0.992 1.013	0.649
				OR10	1.097	1.014 1.186	**0.022**
			Lag 2	OR01	1.004	0.993 1.015	0.484
				OR10	1.080	0.999 1.169	0.054
			Lag 3	OR01	1.000	0.989 1.011	0.979
				OR10	1.083	1.001 1.171	**0.046**
		Lag 2	Lag 0	OR01	1.002	0.990 1.014	0.758
				OR10	1.071	0.991 1.157	0.084
			Lag 1	OR01	1.002	0.991 1.013	0.716
				OR10	1.083	1.002 1.170	**0.043**
			Lag 2	OR01	1.005	0.993 1.016	0.423
				OR10	1.081	1.000 1.168	**0.049**
			Lag 3	OR01	1.001	0.990 1.012	0.844
				OR10	1.085	1.005 1.173	**0.037**
		Lag 3	Lag 0	OR01	1.001	0.989 1.014	0.865
				OR10	1.037	0.959 1.121	0.364
			Lag 1	OR01	1.002	0.991 1.013	0.786
				OR10	1.054	0.976 1.139	0.182

		Lag 2	OR01	1.004	0.993	1.015	0.461
			OR10	1.052	0.973	1.137	0.199
		Lag 3	OR01	1.000	0.989	1.011	0.961
			OR10	1.052	0.974	1.137	0.198
	Cerebrovascular	Lag 0	OR01	1.005	0.995	1.016	0.297
			OR10	1.039	0.969	1.113	0.283
		Lag 1	OR01	0.997	0.987	1.007	0.494
			OR10	1.035	0.966	1.109	0.324
		Lag 2	OR01	1.000	0.991	1.010	0.926
			OR10	1.036	0.967	1.110	0.317
		Lag 3	OR01	1.000	0.990	1.010	0.988
			OR10	1.042	0.973	1.117	0.237
		Lag 1	Lag 0	OR01	1.005	0.995	1.015	0.364
				OR10	1.046	0.976	1.120	0.204
			Lag 1	OR01	0.995	0.984	1.005	0.328
				OR10	1.040	0.971	1.113	0.269
			Lag 2	OR01	1.000	0.990	1.010	0.986
				OR10	1.046	0.976	1.120	0.204
			Lag 3	OR01	1.000	0.990	1.010	0.982
				OR10	1.053	0.983	1.129	0.140
		Lag 2	Lag 0	OR01	1.006	0.996	1.016	0.258
				OR10	1.067	0.997	1.141	0.062
			Lag 1	OR01	0.996	0.985	1.006	0.400
				OR10	1.058	0.989	1.133	0.102
			Lag 2	OR01	1.001	0.991	1.011	0.864
				OR10	1.068	0.997	1.143	0.060
			Lag 3	OR01	1.000	0.989	1.010	0.961
				OR10	1.068	0.998	1.143	0.059
		Lag 3	Lag 0	OR01	1.005	0.995	1.015	0.302
				OR10	0.997	0.931	1.068	0.937
			Lag 1	OR01	0.995	0.985	1.006	0.382
				OR10	0.991	0.925	1.061	0.792
			Lag 2	OR01	1.001	0.992	1.011	0.771
				OR10	1.004	0.938	1.075	0.909
			Lag 3	OR01	1.000	0.989	1.010	0.960
				OR10	1.002	0.936	1.073	0.961
	Renal	Lag 0	Lag 0	OR01	1.009	0.988	1.030	0.420
				OR10	1.073	0.963	1.195	0.200
			Lag 1	OR01	0.999	0.977	1.021	0.930
				OR10	1.095	0.982	1.220	0.102
			Lag 2	OR01	1.010	0.991	1.029	0.321
				OR10	1.068	0.959	1.190	0.232
			Lag 3	OR01	1.003	0.984	1.023	0.757
				OR10	1.067	0.958	1.188	0.241

		Lag 1	Lag 0	OR01	1.005	0.984	1.027	0.621
				OR10	1.136	1.024	1.260	**0.016**
			Lag 1	OR01	0.997	0.974	1.020	0.786
				OR10	1.155	1.041	1.281	**0.007**
			Lag 2	OR01	1.011	0.992	1.030	0.243
				OR10	1.150	1.036	1.275	**0.008**
			Lag 3	OR01	1.002	0.982	1.021	0.877
				OR10	1.126	1.014	1.250	**0.026**
		Lag 2	Lag 0	OR01	1.009	0.989	1.030	0.371
				OR10	1.019	0.917	1.132	0.726
			Lag 1	OR01	0.996	0.973	1.020	0.749
				OR10	1.024	0.921	1.138	0.664
			Lag 2	OR01	1.011	0.992	1.030	0.276
				OR10	1.018	0.916	1.131	0.742
			Lag 3	OR01	0.999	0.979	1.019	0.908
				OR10	0.998	0.897	1.109	0.968
		Lag 3	Lag 0	OR01	1.013	0.993	1.033	0.206
				OR10	1.018	0.916	1.132	0.743
			Lag 1	OR01	0.998	0.976	1.020	0.833
				OR10	1.011	0.909	1.124	0.842
			Lag 2	OR01	1.013	0.994	1.032	0.180
				OR10	1.009	0.907	1.122	0.867
			Lag 3	OR01	1.002	0.982	1.023	0.833
				OR10	0.994	0.894	1.105	0.911
	Respiratory	Lag 0	Lag 0	OR01	0.999	0.983	1.015	0.886
				OR10	0.934	0.845	1.032	0.181
			Lag 1	OR01	1.006	0.993	1.019	0.351
				OR10	0.930	0.841	1.028	0.154
			Lag 2	OR01	1.009	0.995	1.024	0.209
				OR10	0.933	0.844	1.031	0.173
			Lag 3	OR01	1.012	0.998	1.026	0.084
				OR10	0.907	0.820	1.003	0.058
		Lag 1	Lag 0	OR01	1.000	0.985	1.016	0.980
				OR10	1.017	0.922	1.123	0.730
			Lag 1	OR01	1.006	0.993	1.019	0.358
				OR10	1.002	0.908	1.106	0.966
			Lag 2	OR01	1.009	0.994	1.024	0.229
				OR10	1.003	0.910	1.107	0.949
			Lag 3	OR01	1.013	1.000	1.027	0.058
				OR10	0.983	0.891	1.085	0.738
		Lag 2	Lag 0	OR01	0.997	0.981	1.014	0.746
				OR10	0.999	0.906	1.102	0.988
			Lag 1	OR01	1.003	0.990	1.017	0.627
				OR10	0.990	0.898	1.092	0.845

			Lag 2	OR01	1.009	0.994	1.024	0.236
				OR10	1.003	0.910	1.107	0.948
			Lag 3	OR01	1.015	1.001	1.029	**0.036**
				OR10	0.998	0.905	1.102	0.976
		Lag 3	Lag 0	OR01	0.999	0.984	1.015	0.945
				OR10	1.120	1.021	1.230	**0.017**
			Lag 1	OR01	1.004	0.990	1.017	0.619
				OR10	1.110	1.012	1.217	**0.027**
			Lag 2	OR01	1.009	0.995	1.024	0.216
				OR10	1.115	1.017	1.224	**0.021**
			Lag 3	OR01	1.015	1.001	1.029	**0.038**
				OR10	1.110	1.011	1.218	**0.028**

Table S.8 Percent change in effects of wildfire smoke modified by prior extreme heat exposure relative to non-modified effects. Significant differences were tested with upper and lower limits (UL and LL, respectively) for 95% confidence intervals (CIs) and p-values (bolded indicates significant $p < 0.05$). Wildfire smoke exposure is tested on lag 0-3, separately. Separate models were run for six different effect modifier periods: 1-2, 2-3, 1-4, 4-8, 8-12, and 1-12 weeks.

EM Period	OOI	Lag	Pct. Change	CI LL	CI UL	P-value
1-2 weeks	All-natural	Lag 0	0.046%	-0.030%	0.121%	0.118
		Lag 1	0.083%	0.013%	0.153%	**0.010**
		Lag 2	0.152%	0.082%	0.222%	**0.000**
		Lag 3	0.300%	0.229%	0.371%	**0.000**
	Cardiovascular	Lag 0	-1.188%	-2.880%	0.503%	0.916
		Lag 1	0.559%	-1.031%	2.148%	0.245
		Lag 2	0.251%	-1.352%	1.853%	0.380
		Lag 3	-0.321%	-1.981%	1.339%	0.648
	Cerebrovascular	Lag 0	0.191%	-1.091%	1.473%	0.385
		Lag 1	-0.158%	-1.371%	1.055%	0.601
		Lag 2	-0.909%	-2.165%	0.347%	0.922
		Lag 3	0.189%	-1.126%	1.505%	0.389
	Renal	Lag 0	0.946%	-2.315%	4.207%	0.285
		Lag 1	0.929%	-2.180%	4.039%	0.279
		Lag 2	-2.828%	-5.599%	-0.057%	0.977
		Lag 3	-4.749%	-8.411%	-1.087%	0.994
	Respiratory	Lag 0	1.531%	-0.802%	3.865%	0.099
		Lag 1	0.933%	-0.865%	2.732%	0.155
		Lag 2	-0.549%	-2.575%	1.477%	0.702
		Lag 3	-0.069%	-2.052%	1.914%	0.527
2-3 weeks	All-natural	Lag 0	0.056%	-0.013%	0.125%	0.056
		Lag 1	0.119%	0.049%	0.190%	**0.000**
		Lag 2	0.121%	0.042%	0.199%	**0.001**
		Lag 3	-0.029%	-0.111%	0.054%	0.751
	Cardiovascular	Lag 0	-0.344%	-1.939%	1.252%	0.664
		Lag 1	1.418%	-0.204%	3.040%	**0.043**
		Lag 2	-0.218%	-2.059%	1.623%	0.592
		Lag 3	1.245%	-0.609%	3.099%	0.094
	Cerebrovascular	Lag 0	-0.566%	-1.716%	0.584%	0.833
		Lag 1	-0.874%	-2.082%	0.334%	0.922
		Lag 2	-0.237%	-1.555%	1.081%	0.638
		Lag 3	-0.005%	-1.467%	1.457%	0.503
	Renal	Lag 0	-2.078%	-5.628%	1.472%	0.874
		Lag 1	-0.773%	-4.137%	2.591%	0.674
		Lag 2	-1.305%	-4.067%	1.457%	0.823
		Lag 3	0.415%	-2.545%	3.375%	0.392

	Respiratory	Lag 0	1.617%	-0.572%	3.805%	0.074
		Lag 1	1.110%	-0.698%	2.919%	0.114
		Lag 2	0.617%	-1.540%	2.774%	0.287
		Lag 3	0.661%	-1.570%	2.893%	0.281
1-4 weeks	All-natural	Lag 0	0.113%	0.019%	0.207%	**0.010**
		Lag 1	0.067%	-0.028%	0.162%	0.082
		Lag 2	0.062%	-0.033%	0.157%	0.102
		Lag 3	0.019%	-0.077%	0.116%	0.347
	Cardiovascular	Lag 0	0.628%	-1.346%	2.602%	0.266
		Lag 1	2.219%	0.023%	4.416%	**0.024**
		Lag 2	0.402%	-1.752%	2.555%	0.357
		Lag 3	0.254%	-1.923%	2.431%	0.409
	Cerebrovascular	Lag 0	0.620%	-0.972%	2.212%	0.223
		Lag 1	-0.072%	-1.651%	1.508%	0.535
		Lag 2	-0.090%	-1.768%	1.588%	0.542
		Lag 3	1.128%	-0.549%	2.804%	0.094
	Renal	Lag 0	2.892%	-0.984%	6.768%	0.072
		Lag 1	-0.736%	-4.532%	3.060%	0.648
		Lag 2	-1.475%	-4.771%	1.820%	0.810
		Lag 3	0.514%	-2.873%	3.901%	0.383
	Respiratory	Lag 0	0.895%	-1.799%	3.590%	0.257
		Lag 1	2.029%	-0.303%	4.362%	**0.044**
		Lag 2	0.541%	-1.913%	2.995%	0.333
		Lag 3	3.201%	0.593%	5.809%	**0.008**
4-8 weeks	All-natural	Lag 0	-0.017%	-0.115%	0.080%	0.637
		Lag 1	0.001%	-0.097%	0.098%	0.494
		Lag 2	0.088%	-0.010%	0.186%	**0.039**
		Lag 3	0.252%	0.153%	0.350%	**0.000**
	Cardiovascular	Lag 0	0.718%	-1.384%	2.819%	0.252
		Lag 1	-1.113%	-3.160%	0.933%	0.857
		Lag 2	-0.076%	-2.244%	2.092%	0.527
		Lag 3	-2.381%	-4.625%	-0.138%	0.981
	Cerebrovascular	Lag 0	-0.199%	-1.878%	1.479%	0.592
		Lag 1	-0.257%	-1.856%	1.342%	0.624
		Lag 2	1.793%	0.153%	3.434%	**0.016**
		Lag 3	-0.471%	-2.226%	1.283%	0.701
	Renal	Lag 0	-0.627%	-4.223%	2.970%	0.634
		Lag 1	-2.393%	-6.116%	1.331%	0.896
		Lag 2	-0.808%	-4.167%	2.551%	0.681
		Lag 3	0.776%	-2.516%	4.068%	0.322
	Respiratory	Lag 0	-2.674%	-5.669%	0.322%	0.960
		Lag 1	-0.500%	-2.706%	1.707%	0.671
		Lag 2	-2.312%	-5.052%	0.429%	0.951
		Lag 3	1.906%	-0.819%	4.632%	0.085

8-12 weeks	All-natural	Lag 0	0.122%	0.025%	0.219%	**0.007**
		Lag 1	-0.017%	-0.114%	0.079%	0.637
		Lag 2	-0.006%	-0.102%	0.090%	0.548
		Lag 3	0.179%	0.084%	0.275%	**0.000**
	Cardiovascular	Lag 0	-0.041%	-2.139%	2.058%	0.515
		Lag 1	-2.271%	-4.325%	-0.216%	0.985
		Lag 2	0.367%	-1.773%	2.506%	0.368
		Lag 3	-3.082%	-5.273%	-0.891%	0.997
	Cerebrovascular	Lag 0	-0.274%	-1.942%	1.395%	0.626
		Lag 1	-0.807%	-2.406%	0.791%	0.839
		Lag 2	0.771%	-0.820%	2.361%	0.171
		Lag 3	-0.302%	-1.993%	1.388%	0.637
	Renal	Lag 0	-1.113%	-4.655%	2.430%	0.731
		Lag 1	-1.856%	-5.480%	1.767%	0.842
		Lag 2	1.122%	-2.141%	4.384%	0.250
		Lag 3	-2.361%	-5.642%	0.919%	0.921
	Respiratory	Lag 0	-1.805%	-4.793%	1.183%	0.882
		Lag 1	0.152%	-2.058%	2.362%	0.447
		Lag 2	-2.249%	-4.947%	0.449%	0.949
		Lag 3	1.164%	-1.434%	3.762%	0.190
1-12 weeks	All-natural	Lag 0	0.157%	0.004%	0.310%	**0.022**
		Lag 1	0.256%	0.106%	0.405%	**0.000**
		Lag 2	0.203%	0.054%	0.352%	**0.004**
		Lag 3	0.292%	0.143%	0.441%	**0.000**
	Cardiovascular	Lag 0	2.166%	-0.716%	5.047%	0.070
		Lag 1	2.116%	-1.511%	5.743%	0.126
		Lag 2	0.374%	-2.838%	3.586%	0.410
		Lag 3	0.004%	-3.132%	3.140%	0.499
	Cerebrovascular	Lag 0	1.842%	-0.651%	4.334%	0.074
		Lag 1	-0.711%	-3.163%	1.741%	0.715
		Lag 2	1.874%	-0.771%	4.519%	0.082
		Lag 3	0.178%	-2.028%	2.384%	0.437
	Renal	Lag 0	7.188%	-0.331%	14.706%	**0.030**
		Lag 1	-0.128%	-5.860%	5.604%	0.517
		Lag 2	5.846%	0.549%	11.143%	**0.015**
		Lag 3	7.079%	0.818%	13.339%	**0.013**
	Respiratory	Lag 0	2.048%	-1.681%	5.777%	0.141
		Lag 1	7.324%	2.609%	12.039%	**0.001**
		Lag 2	1.908%	-1.577%	5.394%	0.142
		Lag 3	8.058%	3.308%	12.808%	**0.000**

Table S.9 Odds ratio with upper and lower limits (UL and LL, respectively) for 95% confidence intervals (CIs) and p-values (bolded indicates significant p < 0.05) for the effects of wildfire smoke exposure modified by prior extreme heat exposure on all-natural, cardiovascular, cerebrovascular, renal, and respiratory morbidity, 2011-2019, May to November. Wildfire smoke exposure is tested on lag 0-3, separately. Separate models were also run for six different effect modifier periods: 1-2, 2-3, 1-4, 4-8, 8-12, and 1-12 weeks.

			No Effect Modifier				Extreme Heat Modified			
EM Period	**OOI**	**Lag**	**OR**	**CI LL**	**CI UL**	**p-value**	**OR**	**CI LL**	**CI UL**	**p-value**
1-2 weeks	All-natural	Lag 0	1.000	0.999	1.001	0.9520	1.000	1.000	1.001	0.2681
		Lag 1	0.999	0.999	1.000	**0.0390**	1.000	1.000	1.001	0.4842
		Lag 2	0.998	0.998	0.999	**0.0000**	1.000	0.999	1.000	0.8936
		Lag 3	0.998	0.997	0.998	**0.0000**	1.001	1.000	1.001	**0.0024**
	Cardiovascular	Lag 0	1.010	0.998	1.023	0.1094	0.997	0.986	1.008	0.6011
		Lag 1	1.004	0.992	1.017	0.5077	1.008	0.998	1.018	0.1421
		Lag 2	1.000	0.987	1.012	0.9426	1.000	0.990	1.011	0.9449
		Lag 3	0.999	0.988	1.009	0.7933	0.997	0.985	1.010	0.6880
	Cerebrovascular	Lag 0	1.005	0.994	1.016	0.3767	1.003	0.996	1.010	0.4004
		Lag 1	1.003	0.994	1.012	0.5254	1.000	0.992	1.007	0.9565
		Lag 2	1.002	0.994	1.010	0.6064	0.994	0.985	1.004	0.2428
		Lag 3	0.995	0.986	1.004	0.2421	0.998	0.988	1.007	0.6425
	Renal	Lag 0	0.992	0.968	1.017	0.5231	0.998	0.977	1.020	0.8963
		Lag 1	0.988	0.965	1.012	0.3282	0.994	0.974	1.014	0.5470
		Lag 2	1.018	1.001	1.035	**0.0358**	0.994	0.973	1.016	0.6321
		Lag 3	1.009	0.992	1.026	0.2858	0.977	0.945	1.010	0.1721
	Respiratory	Lag 0	0.990	0.971	1.009	0.2803	1.000	0.986	1.013	0.9562
		Lag 1	0.999	0.984	1.014	0.8657	1.003	0.993	1.014	0.5171
		Lag 2	1.006	0.993	1.020	0.3386	1.003	0.988	1.019	0.7084
		Lag 3	1.002	0.990	1.015	0.7472	1.004	0.989	1.019	0.6196
2-3 weeks	All-natural	Lag 0	1.000	0.999	1.000	0.6133	1.000	1.000	1.001	0.1026
		Lag 1	0.999	0.999	1.000	**0.0060**	1.000	1.000	1.001	0.2009
		Lag 2	0.999	0.998	0.999	**0.0000**	1.000	0.999	1.000	**0.0255**
		Lag 3	1.000	0.999	1.000	0.2442	0.999	0.999	0.999	**0.0000**
	Cardiovascular	Lag 0	1.005	0.993	1.016	0.4383	1.000	0.990	1.011	0.9426
		Lag 1	0.999	0.986	1.013	0.9282	1.010	1.000	1.019	**0.0411**
		Lag 2	1.006	0.991	1.022	0.4416	0.998	0.988	1.008	0.7152
		Lag 3	0.994	0.978	1.010	0.4306	1.000	0.990	1.010	0.9921
	Cerebrovascular	Lag 0	1.006	0.998	1.014	0.1223	1.001	0.993	1.009	0.8549
		Lag 1	1.006	0.998	1.015	0.1564	0.997	0.989	1.005	0.4880
		Lag 2	1.002	0.992	1.013	0.6867	0.997	0.989	1.005	0.4227
		Lag 3	0.999	0.987	1.011	0.8154	0.995	0.987	1.003	0.2170
	Renal	Lag 0	0.999	0.980	1.018	0.9011	0.988	0.959	1.018	0.4498
		Lag 1	0.997	0.972	1.022	0.8200	0.987	0.965	1.010	0.2610
		Lag 2	1.021	0.999	1.044	0.0613	1.002	0.986	1.018	0.8486
		Lag 3	1.001	0.977	1.024	0.9605	0.999	0.981	1.017	0.9284

	Respiratory	Lag 0	0.989	0.972	1.006	0.1933	1.002	0.988	1.016	0.7946
		Lag 1	0.998	0.983	1.013	0.7840	1.004	0.994	1.014	0.4497
		Lag 2	1.005	0.987	1.022	0.6098	1.006	0.993	1.018	0.3874
		Lag 3	1.003	0.984	1.022	0.7531	1.003	0.991	1.015	0.6289
1-4 weeks	All-natural	Lag 0	1.000	0.999	1.000	0.3593	1.000	1.000	1.001	0.1962
		Lag 1	1.000	0.999	1.001	0.4971	1.000	1.000	1.000	0.6153
		Lag 2	0.999	0.998	1.000	**0.0387**	0.999	0.999	1.000	**0.0002**
		Lag 3	0.999	0.998	1.000	0.1425	0.999	0.999	0.999	**0.0000**
	Cardiovascular	Lag 0	1.004	0.986	1.021	0.6828	1.002	0.993	1.011	0.7085
		Lag 1	0.997	0.977	1.017	0.7766	1.008	0.999	1.016	0.0740
		Lag 2	1.005	0.986	1.025	0.5911	0.999	0.990	1.008	0.8269
		Lag 3	1.004	0.985	1.024	0.6758	0.997	0.987	1.006	0.4967
	Cerebrovascular	Lag 0	1.005	0.991	1.020	0.5004	1.003	0.997	1.010	0.3335
		Lag 1	1.008	0.993	1.022	0.2970	1.000	0.993	1.006	0.9020
		Lag 2	1.006	0.991	1.021	0.4375	0.997	0.990	1.004	0.4099
		Lag 3	0.993	0.978	1.008	0.3540	0.997	0.989	1.004	0.4009
	Renal	Lag 0	0.985	0.952	1.020	0.3939	0.999	0.980	1.017	0.9007
		Lag 1	1.005	0.974	1.038	0.7478	0.986	0.966	1.007	0.1898
		Lag 2	1.032	1.003	1.062	**0.0326**	1.002	0.988	1.017	0.7703
		Lag 3	1.006	0.977	1.036	0.7026	0.998	0.982	1.015	0.8207
	Respiratory	Lag 0	0.997	0.974	1.020	0.7874	0.996	0.983	1.009	0.5397
		Lag 1	0.995	0.974	1.017	0.6443	1.003	0.994	1.013	0.4859
		Lag 2	1.008	0.987	1.030	0.4489	1.004	0.992	1.016	0.5056
		Lag 3	0.987	0.964	1.011	0.2813	1.007	0.996	1.018	0.2346
4-8 weeks	All-natural	Lag 0	1.000	1.000	1.000	0.6965	1.000	1.000	1.001	0.3766
		Lag 1	1.000	0.999	1.000	0.2330	1.000	0.999	1.001	0.5501
		Lag 2	0.999	0.999	0.999	**0.0000**	1.000	0.999	1.001	0.4537
		Lag 3	0.999	0.998	0.999	**0.0000**	1.002	1.001	1.003	**0.0004**
	Cardiovascular	Lag 0	0.999	0.990	1.009	0.8558	1.016	0.997	1.035	0.1011
		Lag 1	1.006	0.998	1.015	0.1520	1.005	0.987	1.023	0.6199
		Lag 2	0.998	0.989	1.007	0.7254	1.008	0.989	1.028	0.4263
		Lag 3	1.000	0.991	1.009	0.9832	0.988	0.967	1.008	0.2460
	Cerebrovascular	Lag 0	1.003	0.996	1.009	0.4470	1.009	0.994	1.025	0.2324
		Lag 1	1.000	0.993	1.007	0.9789	1.005	0.991	1.020	0.4955
		Lag 2	0.994	0.986	1.001	0.1047	1.019	1.004	1.034	**0.0107**
		Lag 3	0.995	0.988	1.003	0.2214	0.999	0.983	1.015	0.8926
	Renal	Lag 0	0.995	0.975	1.015	0.5950	0.998	0.968	1.028	0.8950
		Lag 1	0.993	0.976	1.011	0.4526	0.984	0.952	1.018	0.3575
		Lag 2	1.006	0.993	1.020	0.3734	1.015	0.984	1.046	0.3533
		Lag 3	0.995	0.978	1.012	0.5727	1.013	0.986	1.042	0.3582
	Respiratory	Lag 0	0.998	0.986	1.010	0.7586	0.986	0.959	1.014	0.3248
		Lag 1	1.001	0.991	1.011	0.8406	1.006	0.986	1.026	0.5651
		Lag 2	1.007	0.995	1.018	0.2455	0.997	0.972	1.022	0.8300
		Lag 3	0.997	0.986	1.009	0.6517	1.029	1.005	1.054	**0.0191**

8-12 weeks	All-natural	Lag 0	1.000	0.999	1.000	0.4651	1.002	1.001	1.002	**0.0005**
		Lag 1	1.000	0.999	1.000	0.2965	1.000	0.999	1.001	0.8040
		Lag 2	0.999	0.999	1.000	**0.0000**	1.000	0.999	1.000	0.3112
		Lag 3	0.999	0.998	0.999	**0.0000**	1.001	1.000	1.002	**0.0309**
	Cardiovascular	Lag 0	1.001	0.991	1.010	0.9136	1.010	0.991	1.029	0.3214
		Lag 1	1.008	1.000	1.017	0.0550	0.996	0.977	1.014	0.6528
		Lag 2	0.998	0.988	1.007	0.6104	1.011	0.992	1.031	0.2552
		Lag 3	1.002	0.993	1.010	0.7404	0.982	0.962	1.002	0.0744
	Cerebrovascular	Lag 0	1.003	0.996	1.009	0.4284	1.009	0.993	1.024	0.2697
		Lag 1	1.001	0.994	1.008	0.7581	1.001	0.986	1.015	0.9315
		Lag 2	0.996	0.988	1.003	0.2427	1.010	0.996	1.024	0.1593
		Lag 3	0.995	0.987	1.003	0.2083	0.999	0.984	1.015	0.9454
	Renal	Lag 0	0.996	0.976	1.016	0.7074	0.994	0.965	1.024	0.7064
		Lag 1	0.993	0.975	1.011	0.4201	0.987	0.956	1.019	0.4303
		Lag 2	1.003	0.988	1.017	0.7020	1.028	1.000	1.058	0.0527
		Lag 3	1.002	0.987	1.019	0.7640	0.991	0.963	1.020	0.5600
	Respiratory	Lag 0	0.997	0.984	1.009	0.6014	0.993	0.966	1.020	0.6148
		Lag 1	1.000	0.990	1.010	0.9666	1.011	0.991	1.031	0.2759
		Lag 2	1.007	0.995	1.018	0.2436	0.997	0.973	1.022	0.8361
		Lag 3	0.998	0.987	1.010	0.7903	1.021	0.998	1.045	0.0692
1-12 weeks	All-natural	Lag 0	1.000	0.998	1.001	0.7481	1.000	1.000	1.001	0.2622
		Lag 1	0.999	0.997	1.000	**0.0457**	1.000	1.000	1.000	0.9586
		Lag 2	0.998	0.997	1.000	**0.0238**	0.999	0.999	1.000	**0.0003**
		Lag 3	0.997	0.996	0.999	**0.0004**	0.999	0.999	1.000	**0.0001**
	Cardiovascular	Lag 0	1.000	0.972	1.027	0.9754	1.003	0.994	1.011	0.5607
		Lag 1	1.011	0.977	1.047	0.5264	1.006	0.998	1.014	0.1537
		Lag 2	1.017	0.987	1.049	0.2725	0.999	0.990	1.007	0.8086
		Lag 3	1.017	0.988	1.048	0.2555	0.997	0.988	1.005	0.4541
	Cerebrovascular	Lag 0	1.003	0.979	1.027	0.8204	1.003	0.997	1.010	0.2723
		Lag 1	1.023	1.000	1.047	**0.0499**	0.999	0.993	1.006	0.8433
		Lag 2	0.999	0.973	1.024	0.9088	0.998	0.992	1.005	0.6395
		Lag 3	1.006	0.986	1.027	0.5491	0.995	0.988	1.002	0.1492
	Renal	Lag 0	0.978	0.907	1.054	0.5599	0.996	0.979	1.013	0.6691
		Lag 1	1.024	0.971	1.080	0.3755	0.988	0.970	1.005	0.1721
		Lag 2	0.987	0.937	1.040	0.6350	1.009	0.996	1.022	0.1839
		Lag 3	0.975	0.916	1.038	0.4236	1.001	0.987	1.016	0.8883
	Respiratory	Lag 0	0.998	0.963	1.034	0.9019	0.996	0.984	1.008	0.5143
		Lag 1	0.967	0.922	1.014	0.1681	1.003	0.995	1.012	0.4383
		Lag 2	1.008	0.975	1.041	0.6546	1.005	0.994	1.016	0.3887
		Lag 3	0.960	0.915	1.008	0.0988	1.006	0.996	1.017	0.2645

Table S.10 Stratified results for odds ratio with upper and lower limits (UL and LL, respectively) for 95% confidence intervals (CIs) and p-values (bolded indicates significant p < 0.05) for the effects of wildfire smoke exposure modified by prior extreme heat exposure on all-natural, cardiovascular, cerebrovascular, renal, and respiratory morbidity, 2011-2019, May to November. Subgroups of individual and community level factors were tested in stratified models. Wildfire smoke exposure is tested on lag 0-3, separately. Separate models were also run for three different effect modifier periods: 1-2, 2-3, and 1-4 weeks.

				No Effect Modifier				Extreme Heat Modified			
Subgroup	**EM Period**	**OOI**	**Lag**	**OR**	**CI LL**	**CI UL**	**p-value**	**OR**	**CI LL**	**CI UL**	**p-value**
Age 18-49 year	1-2 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.458	1.00	1.00	1.00	0.391
			Lag 1	1.00	1.00	1.00	0.893	1.00	1.00	1.00	0.121
			Lag 2	1.00	1.00	1.00	**0.000**	1.00	1.00	1.00	0.985
			Lag 3	1.00	1.00	1.00	**0.000**	1.00	1.00	1.00	0.086
		Cardio-vascular	Lag 0	1.02	0.99	1.05	0.266	1.00	0.98	1.03	0.884
			Lag 1	1.01	0.96	1.06	0.805	1.02	0.99	1.05	0.245
			Lag 2	0.99	0.95	1.03	0.654	1.02	0.98	1.05	0.404
			Lag 3	0.95	0.89	1.00	0.072	1.01	0.98	1.05	0.367
		Cerebro-vascular	Lag 0	0.99	0.95	1.03	0.571	0.98	0.95	1.02	0.348
			Lag 1	0.99	0.96	1.02	0.404	0.96	0.90	1.03	0.239
			Lag 2	1.00	0.98	1.03	0.927	0.98	0.95	1.02	0.443
			Lag 3	0.97	0.93	1.01	0.181	0.99	0.94	1.04	0.625
		Renal	Lag 0	0.96	0.90	1.03	0.236	1.01	0.98	1.04	0.656
			Lag 1	0.97	0.92	1.03	0.370	1.04	0.98	1.10	0.206
			Lag 2	0.96	0.90	1.02	0.232	1.03	0.99	1.08	0.180
			Lag 3	0.98	0.93	1.03	0.394	0.98	0.91	1.06	0.572
		Respiratory	Lag 0	0.99	0.93	1.04	0.579	0.98	0.94	1.03	0.508
			Lag 1	0.98	0.93	1.03	0.356	0.99	0.96	1.03	0.649
			Lag 2	0.99	0.96	1.03	0.755	1.01	0.96	1.05	0.813
			Lag 3	1.00	0.97	1.03	0.908	1.00	0.96	1.03	0.879
	2-3 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.612	1.00	1.00	1.00	**0.040**
			Lag 1	1.00	1.00	1.00	0.908	1.00	1.00	1.00	0.149
			Lag 2	1.00	1.00	1.00	**0.008**	1.00	1.00	1.00	0.108
			Lag 3	1.00	1.00	1.00	0.822	1.00	1.00	1.00	**0.003**
		Cardio-vascular	Lag 0	0.99	0.95	1.04	0.806	1.01	0.99	1.04	0.285
			Lag 1	0.99	0.95	1.03	0.581	1.03	1.00	1.07	0.092
			Lag 2	0.98	0.93	1.03	0.425	1.01	0.98	1.05	0.393
			Lag 3	0.94	0.88	1.00	**0.035**	1.01	0.98	1.04	0.555
		Cerebro-vascular	Lag 0	1.00	0.97	1.02	0.785	0.81	0.67	0.98	**0.033**
			Lag 1	0.98	0.95	1.01	0.286	0.98	0.94	1.02	0.302
			Lag 2	1.01	0.98	1.04	0.699	0.99	0.96	1.02	0.405
			Lag 3	0.99	0.95	1.04	0.684	0.95	0.88	1.02	0.188
		Renal	Lag 0	1.00	0.97	1.03	0.914	0.95	0.85	1.08	0.452
			Lag 1	0.99	0.93	1.05	0.715	1.02	0.99	1.06	0.250
			Lag 2	0.99	0.94	1.04	0.693	1.01	0.97	1.05	0.661

			Lag 3	0.98	0.92	1.04	0.474	0.98	0.92	1.04	0.472
		Respiratory	Lag 0	0.98	0.93	1.02	0.287	1.00	0.95	1.05	0.994
			Lag 1	0.97	0.93	1.02	0.288	0.99	0.96	1.03	0.737
			Lag 2	1.01	0.96	1.05	0.806	0.99	0.96	1.03	0.799
			Lag 3	0.99	0.95	1.03	0.712	1.00	0.97	1.03	0.936
	1-4 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.567	1.00	1.00	1.00	0.342
			Lag 1	1.00	1.00	1.00	0.506	1.00	1.00	1.00	0.378
			Lag 2	1.00	1.00	1.00	0.327	1.00	1.00	1.00	**0.007**
			Lag 3	1.00	1.00	1.00	0.880	1.00	1.00	1.00	**0.001**
		Cardio-vascular	Lag 0	0.99	0.94	1.05	0.695	1.01	0.99	1.03	0.305
			Lag 1	0.96	0.89	1.03	0.208	1.02	1.00	1.05	0.088
			Lag 2	0.95	0.88	1.03	0.196	1.01	0.98	1.04	0.397
			Lag 3	0.93	0.86	1.00	0.058	1.00	0.98	1.03	0.865
		Cerebro-vascular	Lag 0	1.00	0.96	1.05	0.827	0.97	0.94	1.01	0.178
			Lag 1	0.98	0.94	1.02	0.340	0.98	0.95	1.01	0.270
			Lag 2	1.02	0.97	1.07	0.439	0.99	0.97	1.01	0.438
			Lag 3	0.98	0.92	1.04	0.534	0.97	0.93	1.02	0.224
		Renal	Lag 0	0.98	0.90	1.06	0.579	1.00	0.97	1.03	0.944
			Lag 1	0.98	0.91	1.05	0.600	1.02	0.99	1.05	0.252
			Lag 2	0.98	0.91	1.06	0.625	1.01	0.97	1.05	0.717
			Lag 3	0.95	0.87	1.04	0.274	0.99	0.94	1.03	0.525
		Respiratory	Lag 0	1.01	0.96	1.07	0.710	0.97	0.92	1.02	0.230
			Lag 1	0.98	0.93	1.04	0.550	0.99	0.95	1.02	0.488
			Lag 2	1.01	0.96	1.07	0.580	0.99	0.95	1.03	0.677
			Lag 3	0.97	0.91	1.03	0.277	1.01	0.98	1.03	0.608
Age 50-64 year	1-2 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.528	1.00	1.00	1.00	0.840
			Lag 1	1.00	1.00	1.00	0.505	1.00	1.00	1.00	0.394
			Lag 2	1.00	1.00	1.00	**0.001**	1.00	1.00	1.00	0.678
			Lag 3	1.00	1.00	1.00	**0.000**	1.00	1.00	1.00	0.236
		Cardio-vascular	Lag 0	0.99	0.97	1.02	0.697	0.99	0.97	1.02	0.599
			Lag 1	1.00	0.97	1.02	0.783	1.00	0.98	1.02	0.738
			Lag 2	1.00	0.98	1.02	0.986	1.00	0.98	1.02	0.921
			Lag 3	1.00	0.98	1.01	0.637	1.00	0.97	1.02	0.779
		Cerebro-vascular	Lag 0	1.01	0.99	1.03	0.377	1.01	1.00	1.02	0.196
			Lag 1	1.01	1.00	1.03	0.145	1.00	0.99	1.02	0.629
			Lag 2	1.00	0.99	1.02	0.579	0.98	0.96	1.01	0.182
			Lag 3	1.00	0.98	1.01	0.777	0.99	0.96	1.01	0.375
		Renal	Lag 0	1.00	0.95	1.05	0.931	0.98	0.93	1.04	0.574
			Lag 1	0.95	0.90	1.01	0.084	0.99	0.94	1.05	0.834
			Lag 2	1.00	0.96	1.05	0.819	0.97	0.90	1.04	0.352
			Lag 3	1.01	0.97	1.06	0.665	0.92	0.82	1.03	0.129
		Respiratory	Lag 0	0.99	0.96	1.03	0.706	1.01	0.99	1.04	0.316
			Lag 1	1.01	0.98	1.04	0.380	1.01	0.99	1.03	0.499
			Lag 2	1.02	1.00	1.05	**0.038**	1.03	1.00	1.07	0.082

			Lag 3	1.02	1.00	1.04	0.056	1.02	0.99	1.05	0.167
	2-3 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.518	1.00	1.00	1.00	0.891
			Lag 1	1.00	1.00	1.00	**0.026**	1.00	1.00	1.00	0.682
			Lag 2	1.00	1.00	1.00	**0.015**	1.00	1.00	1.00	0.427
			Lag 3	1.00	1.00	1.00	0.279	1.00	1.00	1.00	**0.024**
		Cardio-vascular	Lag 0	0.99	0.97	1.01	0.411	1.00	0.98	1.02	0.875
			Lag 1	0.99	0.97	1.01	0.392	1.00	0.98	1.02	0.868
			Lag 2	1.01	0.99	1.04	0.312	0.99	0.97	1.01	0.532
			Lag 3	0.99	0.97	1.02	0.615	1.00	0.98	1.02	0.817
		Cerebro-vascular	Lag 0	1.01	1.00	1.03	0.113	1.01	0.99	1.02	0.462
			Lag 1	1.02	1.00	1.04	**0.028**	1.00	0.99	1.02	0.970
			Lag 2	0.99	0.97	1.01	0.372	1.00	0.99	1.02	0.962
			Lag 3	1.00	0.97	1.02	0.663	0.99	0.98	1.01	0.548
		Renal	Lag 0	1.01	0.96	1.05	0.786	0.97	0.92	1.03	0.386
			Lag 1	0.99	0.94	1.04	0.729	0.93	0.84	1.02	0.124
			Lag 2	1.02	0.97	1.07	0.459	0.95	0.87	1.04	0.275
			Lag 3	1.00	0.95	1.05	0.961	0.97	0.90	1.04	0.367
		Respiratory	Lag 0	0.98	0.94	1.02	0.292	1.02	0.99	1.05	0.160
			Lag 1	0.99	0.95	1.02	0.484	1.02	1.00	1.04	0.097
			Lag 2	1.01	0.98	1.04	0.442	1.05	1.01	1.08	**0.011**
			Lag 3	1.02	0.99	1.06	0.161	1.02	1.00	1.04	0.080
	1-4 weeks	All-natural	Lag 0	1.00	1.00	1.00	**0.022**	1.00	1.00	1.00	0.648
			Lag 1	1.00	1.00	1.00	0.667	1.00	1.00	1.00	0.340
			Lag 2	1.00	1.00	1.00	0.062	1.00	1.00	1.00	0.157
			Lag 3	1.00	1.00	1.00	0.072	1.00	1.00	1.00	**0.040**
		Cardio-vascular	Lag 0	1.00	0.97	1.03	0.932	0.99	0.97	1.01	0.438
			Lag 1	1.01	0.97	1.04	0.656	0.99	0.98	1.01	0.512
			Lag 2	1.02	0.98	1.05	0.326	1.00	0.98	1.01	0.623
			Lag 3	1.01	0.97	1.04	0.705	0.99	0.98	1.01	0.451
		Cerebro-vascular	Lag 0	1.00	0.98	1.03	0.752	1.01	1.00	1.02	0.122
			Lag 1	1.02	0.99	1.05	0.163	1.00	0.99	1.02	0.467
			Lag 2	0.99	0.97	1.02	0.620	1.00	0.98	1.01	0.789
			Lag 3	1.00	0.97	1.02	0.727	0.99	0.98	1.01	0.520
		Renal	Lag 0	1.02	0.96	1.08	0.555	0.98	0.94	1.03	0.384
			Lag 1	1.00	0.94	1.06	0.916	0.95	0.90	1.01	0.112
			Lag 2	1.04	0.98	1.11	0.181	0.97	0.92	1.02	0.229
			Lag 3	1.04	0.98	1.10	0.234	0.95	0.89	1.02	0.130
		Respiratory	Lag 0	0.98	0.93	1.03	0.388	1.01	0.99	1.04	0.268
			Lag 1	1.01	0.96	1.05	0.832	1.01	0.99	1.03	0.317
			Lag 2	1.01	0.98	1.05	0.446	1.04	1.01	1.07	**0.010**
			Lag 3	1.00	0.96	1.05	0.864	1.03	1.00	1.05	**0.020**
Age ≥ 65 year	1-2 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.790	1.00	1.00	1.00	0.272
			Lag 1	1.00	1.00	1.00	**0.012**	1.00	1.00	1.00	0.695
			Lag 2	1.00	1.00	1.00	**0.002**	1.00	1.00	1.00	0.614

			Lag 3	1.00	1.00	1.00	**0.000**	1.00	1.00	1.00	**0.024**
		Cardio-vascular	Lag 0	1.01	1.00	1.03	0.084	1.00	0.98	1.01	0.723
			Lag 1	1.01	0.99	1.02	0.347	1.01	1.00	1.02	0.106
			Lag 2	1.00	0.99	1.02	0.889	1.00	0.99	1.01	0.919
			Lag 3	1.00	0.99	1.02	0.462	0.99	0.97	1.01	0.459
		Cerebro-vascular	Lag 0	1.01	0.99	1.02	0.464	1.00	0.99	1.01	0.515
			Lag 1	1.00	0.99	1.01	0.818	1.00	0.99	1.01	0.963
			Lag 2	1.00	0.99	1.01	0.813	1.00	0.99	1.01	0.719
			Lag 3	1.00	0.98	1.01	0.399	1.00	0.99	1.01	0.969
		Renal	Lag 0	1.00	0.97	1.03	0.861	0.99	0.96	1.03	0.768
			Lag 1	1.01	0.98	1.04	0.612	0.96	0.90	1.02	0.143
			Lag 2	1.03	1.01	1.06	**0.004**	0.99	0.95	1.02	0.468
			Lag 3	1.02	1.00	1.04	0.115	0.99	0.96	1.02	0.548
		Respiratory	Lag 0	0.99	0.96	1.01	0.374	1.00	0.98	1.01	0.702
			Lag 1	1.00	0.98	1.02	0.748	1.00	0.99	1.02	0.541
			Lag 2	1.00	0.98	1.02	0.886	0.99	0.98	1.02	0.630
			Lag 3	0.99	0.97	1.01	0.370	1.00	0.98	1.02	0.919
	2-3 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.882	1.00	1.00	1.00	0.426
			Lag 1	1.00	1.00	1.00	**0.009**	1.00	1.00	1.00	0.716
			Lag 2	1.00	1.00	1.00	**0.018**	1.00	1.00	1.00	0.161
			Lag 3	1.00	1.00	1.00	0.440	1.00	1.00	1.00	**0.008**
		Cardio-vascular	Lag 0	1.01	1.00	1.03	0.123	1.00	0.98	1.01	0.743
			Lag 1	1.01	0.99	1.02	0.448	1.01	1.00	1.02	0.087
			Lag 2	1.01	0.99	1.03	0.551	1.00	0.99	1.01	0.762
			Lag 3	1.00	0.98	1.02	0.813	1.00	0.99	1.01	0.956
		Cerebro-vascular	Lag 0	1.01	1.00	1.02	0.286	1.00	0.99	1.01	0.750
			Lag 1	1.01	0.99	1.02	0.359	1.00	0.99	1.01	0.628
			Lag 2	1.01	0.99	1.02	0.330	1.00	0.99	1.01	0.515
			Lag 3	1.00	0.99	1.02	0.877	1.00	0.99	1.01	0.478
		Renal	Lag 0	0.99	0.96	1.02	0.643	1.00	0.96	1.04	0.966
			Lag 1	1.00	0.97	1.04	0.937	0.98	0.94	1.02	0.235
			Lag 2	1.04	1.01	1.07	**0.020**	1.01	0.99	1.03	0.409
			Lag 3	1.01	0.98	1.04	0.690	1.01	0.99	1.03	0.479
		Respiratory	Lag 0	0.99	0.97	1.02	0.599	0.99	0.97	1.01	0.522
			Lag 1	1.01	0.99	1.02	0.571	1.00	0.99	1.01	0.992
			Lag 2	1.00	0.97	1.02	0.921	1.00	0.98	1.01	0.664
			Lag 3	0.99	0.97	1.02	0.680	0.99	0.98	1.01	0.542
	1-4 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.876	1.00	1.00	1.00	0.441
			Lag 1	1.00	1.00	1.00	0.182	1.00	1.00	1.00	0.420
			Lag 2	1.00	1.00	1.00	0.378	1.00	1.00	1.00	**0.018**
			Lag 3	1.00	1.00	1.00	0.304	1.00	1.00	1.00	**0.008**
		Cardio-vascular	Lag 0	1.01	0.99	1.03	0.527	1.00	0.99	1.02	0.590
			Lag 1	1.00	0.97	1.02	0.859	1.01	1.00	1.02	**0.042**
			Lag 2	1.01	0.98	1.03	0.604	1.00	0.99	1.01	0.816

			Lag 3	1.01	0.99	1.04	0.277	1.00	0.99	1.01	0.680
		Cerebro-vascular	Lag 0	1.01	0.99	1.02	0.581	1.00	1.00	1.01	0.444
			Lag 1	1.01	0.99	1.03	0.353	1.00	0.99	1.01	0.836
			Lag 2	1.01	0.99	1.03	0.280	1.00	0.99	1.01	0.594
			Lag 3	0.99	0.97	1.01	0.460	1.00	0.99	1.01	0.792
		Renal	Lag 0	0.97	0.93	1.02	0.226	1.01	0.98	1.03	0.726
			Lag 1	1.02	0.98	1.07	0.377	0.98	0.94	1.01	0.148
			Lag 2	1.04	1.01	1.08	**0.024**	1.01	0.99	1.03	0.280
			Lag 3	1.01	0.97	1.04	0.757	1.01	0.99	1.03	0.442
		Respiratory	Lag 0	1.00	0.97	1.03	0.921	0.99	0.97	1.01	0.353
			Lag 1	0.99	0.97	1.02	0.686	1.00	0.99	1.02	0.586
			Lag 2	1.00	0.97	1.04	0.944	1.00	0.98	1.01	0.628
			Lag 3	0.98	0.95	1.02	0.371	1.00	0.98	1.01	0.692
Asian	1-2 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.441	1.00	1.00	1.00	0.500
			Lag 1	1.00	1.00	1.00	0.912	1.00	1.00	1.00	0.759
			Lag 2	1.00	1.00	1.00	**0.016**	1.00	1.00	1.00	0.678
			Lag 3	1.00	1.00	1.00	**0.006**	1.00	1.00	1.00	0.816
		Cardio-vascular	Lag 0	0.99	0.96	1.03	0.719	1.01	0.98	1.03	0.717
			Lag 1	0.99	0.95	1.03	0.689	1.01	0.96	1.06	0.627
			Lag 2	0.97	0.93	1.02	0.203	0.98	0.94	1.02	0.319
			Lag 3	0.98	0.94	1.02	0.431	0.95	0.87	1.03	0.209
		Cerebro-vascular	Lag 0	1.02	1.00	1.05	0.096	1.01	1.00	1.02	0.216
			Lag 1	1.02	0.99	1.04	0.173	1.01	1.00	1.02	0.200
			Lag 2	1.00	0.98	1.02	0.971	1.00	0.99	1.02	0.673
			Lag 3	0.98	0.96	1.01	0.126	1.00	0.99	1.02	0.840
		Renal	Lag 0	0.87	0.77	0.99	**0.031**	0.98	0.92	1.05	0.540
			Lag 1	1.02	0.96	1.08	0.594	0.99	0.90	1.08	0.756
			Lag 2	1.01	0.97	1.04	0.709	0.98	0.91	1.05	0.567
			Lag 3	1.02	0.98	1.06	0.342	0.89	0.67	1.18	0.421
		Respiratory	Lag 0	0.98	0.92	1.05	0.618	1.01	0.98	1.03	0.642
			Lag 1	1.01	0.97	1.05	0.641	1.00	0.97	1.02	0.706
			Lag 2	1.00	0.97	1.03	0.910	0.99	0.96	1.02	0.602
			Lag 3	0.99	0.95	1.02	0.461	0.98	0.94	1.03	0.448
	2-3 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.804	1.00	1.00	1.00	0.293
			Lag 1	1.00	1.00	1.00	0.762	1.00	1.00	1.00	0.614
			Lag 2	1.00	1.00	1.00	0.412	1.00	1.00	1.00	0.443
			Lag 3	1.00	1.00	1.00	0.961	1.00	1.00	1.00	0.088
		Cardio-vascular	Lag 0	1.02	0.97	1.06	0.485	1.00	0.97	1.02	0.748
			Lag 1	1.02	0.97	1.06	0.485	0.98	0.93	1.04	0.526
			Lag 2	0.98	0.93	1.03	0.389	0.97	0.93	1.02	0.205
			Lag 3	0.92	0.84	1.00	**0.044**	0.99	0.95	1.02	0.361
		Cerebro-vascular	Lag 0	1.01	0.99	1.03	0.193	1.01	1.00	1.02	0.132
			Lag 1	1.02	1.00	1.04	0.066	1.01	0.99	1.02	0.278
			Lag 2	1.01	0.99	1.03	0.429	1.00	0.99	1.01	0.971

			Lag 3	0.97	0.94	1.01	0.161	1.00	0.98	1.01	0.747
		Renal	Lag 0	0.94	0.87	1.02	0.165	0.84	0.60	1.16	0.291
			Lag 1	1.00	0.92	1.09	0.978	1.01	0.95	1.07	0.784
			Lag 2	1.02	0.97	1.08	0.456	0.99	0.94	1.04	0.693
			Lag 3	1.03	0.94	1.12	0.552	1.01	0.97	1.05	0.687
		Respiratory	Lag 0	1.01	0.97	1.04	0.759	1.00	0.97	1.03	0.950
			Lag 1	1.01	0.97	1.04	0.764	1.00	0.97	1.02	0.717
			Lag 2	1.01	0.97	1.05	0.574	0.99	0.96	1.02	0.419
			Lag 3	1.04	0.99	1.09	0.146	0.95	0.90	1.01	0.121
	1-4 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.555	1.00	1.00	1.00	0.447
			Lag 1	1.00	1.00	1.00	0.499	1.00	1.00	1.00	0.985
			Lag 2	1.00	1.00	1.00	0.822	1.00	1.00	1.00	0.192
			Lag 3	1.00	1.00	1.00	0.838	1.00	1.00	1.00	0.083
		Cardio-vascular	Lag 0	1.02	0.97	1.07	0.536	1.00	0.97	1.02	0.846
			Lag 1	1.00	0.94	1.05	0.897	1.00	0.96	1.04	0.971
			Lag 2	0.97	0.90	1.04	0.371	0.98	0.94	1.01	0.173
			Lag 3	0.88	0.78	0.99	**0.038**	0.98	0.95	1.01	0.277
		Cerebro-vascular	Lag 0	0.99	0.94	1.03	0.539	1.01	1.00	1.02	**0.039**
			Lag 1	1.01	0.97	1.05	0.714	1.01	1.00	1.03	0.081
			Lag 2	0.99	0.95	1.03	0.492	1.00	0.99	1.02	0.554
			Lag 3	0.92	0.87	0.98	**0.008**	1.00	0.99	1.01	0.939
		Renal	Lag 0	0.92	0.81	1.04	0.161	0.95	0.86	1.04	0.292
			Lag 1	1.02	0.90	1.16	0.722	1.00	0.95	1.06	0.890
			Lag 2	1.12	1.00	1.25	**0.049**	0.99	0.95	1.03	0.592
			Lag 3	1.08	0.97	1.19	0.171	1.00	0.96	1.04	0.880
		Respiratory	Lag 0	1.02	0.94	1.10	0.645	1.00	0.98	1.02	0.922
			Lag 1	1.01	0.95	1.07	0.717	1.00	0.97	1.02	0.760
			Lag 2	1.04	0.99	1.10	0.123	0.98	0.96	1.01	0.281
			Lag 3	1.04	0.98	1.10	0.197	0.97	0.93	1.01	0.130
Black	1-2 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.447	1.00	1.00	1.00	0.601
			Lag 1	1.00	1.00	1.00	0.843	1.00	1.00	1.00	**0.043**
			Lag 2	1.00	1.00	1.00	0.590	1.00	1.00	1.00	0.367
			Lag 3	1.00	1.00	1.00	0.071	1.00	1.00	1.00	0.270
		Cardio-vascular	Lag 0	1.00	0.96	1.04	0.961	1.00	0.97	1.02	0.741
			Lag 1	1.05	1.00	1.09	0.051	1.02	0.99	1.05	0.142
			Lag 2	1.01	0.96	1.05	0.793	1.00	0.98	1.02	0.808
			Lag 3	0.98	0.94	1.02	0.392	1.00	0.96	1.03	0.808
		Cerebro-vascular	Lag 0	0.98	0.94	1.01	0.186	0.99	0.97	1.01	0.393
			Lag 1	0.99	0.97	1.02	0.703	0.99	0.97	1.01	0.460
			Lag 2	1.00	0.98	1.02	0.906	0.96	0.91	1.02	0.183
			Lag 3	1.00	0.98	1.02	0.812	0.99	0.95	1.02	0.389
		Renal	Lag 0	1.06	1.00	1.13	**0.049**	1.01	0.94	1.09	0.792
			Lag 1	1.03	0.97	1.10	0.337	0.97	0.85	1.10	0.631
			Lag 2	1.07	1.00	1.14	0.058	0.97	0.85	1.12	0.717

		Lag 3	1.03	0.98	1.09	0.212	0.88	0.72	1.09	0.243
	Respiratory	Lag 0	0.99	0.94	1.04	0.671	0.97	0.92	1.04	0.399
		Lag 1	0.97	0.92	1.03	0.375	1.00	0.98	1.03	0.739
		Lag 2	1.00	0.96	1.05	0.816	1.01	0.97	1.04	0.674
		Lag 3	1.01	0.97	1.04	0.767	1.03	0.98	1.07	0.304
2-3 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.903	1.00	1.00	1.00	0.897
		Lag 1	1.00	1.00	1.00	0.678	1.00	1.00	1.00	0.063
		Lag 2	1.00	1.00	1.00	0.852	1.00	1.00	1.00	0.756
		Lag 3	1.00	1.00	1.00	0.672	1.00	1.00	1.00	0.788
	Cardio-vascular	Lag 0	1.01	0.98	1.04	0.647	0.98	0.95	1.03	0.465
		Lag 1	1.02	0.97	1.06	0.441	1.03	1.00	1.06	0.058
		Lag 2	1.02	0.97	1.07	0.484	1.00	0.98	1.02	0.981
		Lag 3	0.97	0.92	1.02	0.221	1.00	0.97	1.03	0.921
	Cerebro-vascular	Lag 0	1.00	0.98	1.02	0.841	0.92	0.81	1.04	0.172
		Lag 1	1.00	0.98	1.03	0.710	0.98	0.94	1.01	0.225
		Lag 2	1.00	0.97	1.03	0.790	0.97	0.94	1.01	0.156
		Lag 3	1.02	0.98	1.05	0.301	0.98	0.95	1.01	0.187
	Renal	Lag 0	1.02	0.97	1.08	0.475	1.16	0.98	1.38	0.082
		Lag 1	1.05	0.98	1.12	0.190	0.91	0.73	1.13	0.388
		Lag 2	1.04	0.96	1.13	0.362	1.04	0.98	1.10	0.164
		Lag 3	1.00	0.92	1.09	0.912	1.03	0.97	1.10	0.353
	Respiratory	Lag 0	0.99	0.96	1.03	0.741	0.90	0.77	1.06	0.214
		Lag 1	0.98	0.92	1.03	0.368	1.00	0.98	1.03	0.683
		Lag 2	1.00	0.96	1.04	0.996	1.01	0.98	1.05	0.505
		Lag 3	1.00	0.96	1.04	0.831	1.04	0.98	1.09	0.177
1-4 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.401	1.00	1.00	1.00	0.718
		Lag 1	1.00	1.00	1.00	0.291	1.00	1.00	1.00	0.165
		Lag 2	1.00	1.00	1.00	0.537	1.00	1.00	1.00	0.930
		Lag 3	1.00	1.00	1.00	0.824	1.00	1.00	1.00	0.537
	Cardio-vascular	Lag 0	0.98	0.92	1.04	0.440	1.00	0.98	1.02	0.908
		Lag 1	1.02	0.96	1.09	0.458	1.03	1.00	1.05	0.052
		Lag 2	0.98	0.92	1.05	0.580	1.01	0.99	1.03	0.630
		Lag 3	0.99	0.93	1.05	0.717	0.99	0.96	1.02	0.483
	Cerebro-vascular	Lag 0	0.98	0.94	1.03	0.480	0.99	0.97	1.01	0.235
		Lag 1	1.00	0.96	1.04	0.971	0.99	0.97	1.01	0.390
		Lag 2	1.03	0.99	1.07	0.160	0.97	0.94	1.00	0.077
		Lag 3	1.02	0.98	1.07	0.292	0.99	0.96	1.01	0.232
	Renal	Lag 0	1.02	0.94	1.10	0.621	1.06	0.99	1.13	0.094
		Lag 1	1.03	0.96	1.11	0.451	0.99	0.93	1.06	0.854
		Lag 2	1.02	0.92	1.12	0.699	1.05	0.99	1.11	0.109
		Lag 3	1.05	0.95	1.15	0.339	1.01	0.95	1.08	0.733
	Respiratory	Lag 0	1.00	0.96	1.05	0.938	0.96	0.90	1.03	0.230
		Lag 1	0.98	0.92	1.04	0.455	1.00	0.98	1.03	0.803
		Lag 2	1.01	0.96	1.05	0.823	1.01	0.98	1.04	0.667

			Lag 3	0.98	0.93	1.03	0.441	1.04	0.99	1.10	0.083
Higher Education ZCTA	1-2 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.369	1.00	1.00	1.00	0.607
			Lag 1	1.00	1.00	1.00	**0.002**	1.00	1.00	1.00	0.244
			Lag 2	1.00	1.00	1.00	**0.000**	1.00	1.00	1.00	0.910
			Lag 3	1.00	1.00	1.00	**0.000**	1.00	1.00	1.00	**0.014**
		Cardio-vascular	Lag 0	1.01	0.99	1.02	0.212	0.99	0.98	1.01	0.415
			Lag 1	1.00	0.99	1.02	0.755	1.01	0.99	1.02	0.363
			Lag 2	1.00	0.99	1.01	0.939	1.00	0.99	1.01	0.877
			Lag 3	1.00	0.99	1.01	0.908	0.99	0.98	1.01	0.420
		Cerebro-vascular	Lag 0	1.01	0.99	1.02	0.242	1.00	0.99	1.01	0.547
			Lag 1	1.01	1.00	1.02	0.266	1.00	0.99	1.01	0.893
			Lag 2	1.00	0.99	1.01	0.999	0.99	0.98	1.00	0.258
			Lag 3	0.99	0.98	1.01	0.321	1.00	0.98	1.01	0.421
		Renal	Lag 0	1.01	0.99	1.04	0.315	1.00	0.97	1.02	0.876
			Lag 1	0.99	0.96	1.02	0.329	0.98	0.94	1.02	0.276
			Lag 2	1.02	1.00	1.04	0.087	0.98	0.95	1.02	0.309
			Lag 3	1.01	0.99	1.03	0.152	0.98	0.95	1.02	0.283
		Respiratory	Lag 0	0.98	0.96	1.01	0.181	0.99	0.98	1.01	0.526
			Lag 1	1.00	0.98	1.02	0.627	1.00	0.99	1.01	0.554
			Lag 2	1.01	0.99	1.02	0.278	1.00	0.99	1.02	0.831
			Lag 3	1.00	0.98	1.01	0.605	1.00	0.99	1.02	0.686
	2-3 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.497	1.00	1.00	1.00	0.613
			Lag 1	1.00	1.00	1.00	**0.007**	1.00	1.00	1.00	0.403
			Lag 2	1.00	1.00	1.00	**0.001**	1.00	1.00	1.00	**0.006**
			Lag 3	1.00	1.00	1.00	0.817	1.00	1.00	1.00	**0.000**
		Cardio-vascular	Lag 0	1.01	0.99	1.02	0.445	1.00	0.98	1.01	0.618
			Lag 1	0.99	0.98	1.01	0.354	1.01	1.00	1.02	0.077
			Lag 2	1.01	0.99	1.03	0.257	1.00	0.99	1.01	0.496
			Lag 3	0.99	0.97	1.01	0.441	1.00	0.99	1.01	0.978
		Cerebro-vascular	Lag 0	1.01	1.00	1.02	0.222	1.00	0.99	1.01	0.683
			Lag 1	1.01	1.00	1.02	0.257	1.00	0.99	1.01	0.819
			Lag 2	1.00	0.99	1.01	0.890	1.00	0.99	1.00	0.295
			Lag 3	1.00	0.98	1.01	0.726	0.99	0.98	1.00	0.206
		Renal	Lag 0	1.01	0.99	1.03	0.231	0.99	0.95	1.02	0.433
			Lag 1	0.99	0.96	1.02	0.572	0.97	0.93	1.01	0.168
			Lag 2	1.02	0.99	1.05	0.137	1.00	0.98	1.02	0.708
			Lag 3	1.00	0.97	1.03	0.898	1.00	0.98	1.02	0.787
		Respiratory	Lag 0	0.99	0.97	1.01	0.190	0.99	0.97	1.01	0.539
			Lag 1	1.00	0.98	1.02	0.973	1.00	0.99	1.01	0.694
			Lag 2	1.01	0.99	1.03	0.210	1.00	0.99	1.02	0.681
			Lag 3	1.00	0.97	1.02	0.909	1.00	0.99	1.01	0.991
	1-4 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.852	1.00	1.00	1.00	0.997
			Lag 1	1.00	1.00	1.00	0.268	1.00	1.00	1.00	0.581
			Lag 2	1.00	1.00	1.00	0.139	1.00	1.00	1.00	**0.000**

			Lag 3	1.00	1.00	1.00	0.489	1.00	1.00	1.00	**0.000**
		Cardio-vascular	Lag 0	1.01	0.99	1.03	0.250	1.00	0.99	1.01	0.615
			Lag 1	0.99	0.97	1.02	0.603	1.01	1.00	1.01	0.241
			Lag 2	1.01	0.99	1.04	0.306	1.00	0.99	1.01	0.571
			Lag 3	1.01	0.98	1.03	0.575	1.00	0.99	1.01	0.472
		Cerebro-vascular	Lag 0	1.01	0.99	1.02	0.486	1.00	1.00	1.01	0.374
			Lag 1	1.01	0.99	1.03	0.203	1.00	0.99	1.01	0.984
			Lag 2	1.00	0.99	1.02	0.601	1.00	0.99	1.00	0.286
			Lag 3	1.00	0.98	1.01	0.661	0.99	0.99	1.00	0.242
		Renal	Lag 0	1.02	0.98	1.06	0.410	1.00	0.98	1.02	0.881
			Lag 1	0.99	0.95	1.03	0.560	0.98	0.95	1.01	0.179
			Lag 2	1.03	1.00	1.07	0.084	1.00	0.98	1.02	0.772
			Lag 3	1.00	0.96	1.04	0.974	1.00	0.99	1.02	0.707
		Respiratory	Lag 0	0.99	0.97	1.02	0.654	0.99	0.97	1.01	0.207
			Lag 1	0.99	0.96	1.02	0.512	1.00	0.99	1.01	0.610
			Lag 2	1.02	0.99	1.05	0.170	1.00	0.99	1.02	0.713
			Lag 3	0.98	0.95	1.01	0.207	1.00	0.99	1.02	0.627
Lower Education ZCTA	1-2 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.01	0.99	1.04	0.288	1.01	0.98	1.04	0.467
			Lag 1	1.01	0.99	1.03	0.444	1.03	1.00	1.07	0.057
			Lag 2	1.00	0.97	1.03	0.998	1.01	0.98	1.04	0.508
			Lag 3	0.99	0.97	1.01	0.445	1.03	0.99	1.07	0.150
		Cerebro-vascular	Lag 0	1.00	0.98	1.02	0.882	1.01	0.99	1.02	0.509
			Lag 1	1.00	0.98	1.01	0.622	1.00	0.99	1.02	0.883
			Lag 2	1.01	0.99	1.03	0.280	1.00	0.98	1.02	0.731
			Lag 3	0.99	0.98	1.01	0.530	1.01	0.99	1.03	0.504
		Renal	Lag 0	0.92	0.87	0.98	**0.006**	1.00	0.96	1.04	0.958
			Lag 1	0.99	0.95	1.03	0.715	1.01	0.98	1.03	0.571
			Lag 2	1.02	0.99	1.05	0.204	1.02	0.98	1.05	0.390
			Lag 3	1.00	0.96	1.03	0.792	0.97	0.90	1.04	0.362
		Respiratory	Lag 0	1.00	0.97	1.04	0.844	1.01	0.99	1.03	0.435
			Lag 1	1.00	0.98	1.03	0.733	1.00	0.98	1.03	0.858
			Lag 2	1.00	0.97	1.03	0.983	1.01	0.97	1.05	0.628
			Lag 3	1.01	0.99	1.03	0.205	1.00	0.97	1.04	0.827
	2-3 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.00	0.98	1.03	0.740	1.05	1.01	1.09	**0.024**
			Lag 1	1.02	0.99	1.04	0.204	1.02	0.99	1.05	0.285
			Lag 2	1.00	0.97	1.02	0.734	1.01	0.99	1.04	0.328

			Lag 3	1.00	0.97	1.03	0.813	1.00	0.98	1.03	0.911
		Cerebro-vascular	Lag 0	1.01	0.99	1.02	0.313	1.00	0.98	1.02	0.694
			Lag 1	1.01	0.99	1.02	0.396	0.99	0.97	1.01	0.314
			Lag 2	1.01	0.99	1.03	0.565	1.00	0.99	1.02	0.799
			Lag 3	1.00	0.98	1.02	0.903	1.00	0.98	1.02	0.808
		Renal	Lag 0	0.95	0.90	1.00	**0.037**	1.00	0.94	1.06	0.891
			Lag 1	1.01	0.97	1.05	0.696	1.00	0.97	1.03	0.974
			Lag 2	1.02	0.99	1.06	0.236	1.01	0.99	1.04	0.309
			Lag 3	1.00	0.96	1.04	0.946	0.97	0.90	1.04	0.374
		Respiratory	Lag 0	0.99	0.97	1.02	0.683	1.02	0.99	1.04	0.188
			Lag 1	1.00	0.97	1.02	0.703	1.02	0.99	1.04	0.250
			Lag 2	0.99	0.95	1.02	0.382	1.02	0.99	1.06	0.157
			Lag 3	1.01	0.98	1.04	0.509	1.01	0.99	1.03	0.340
	1-4 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	0.98	0.95	1.02	0.295	1.03	1.00	1.05	**0.018**
			Lag 1	1.00	0.97	1.04	0.781	1.02	1.00	1.05	0.075
			Lag 2	0.99	0.95	1.03	0.583	1.01	0.99	1.04	0.385
			Lag 3	1.00	0.96	1.04	0.924	1.00	0.98	1.02	0.983
		Cerebro-vascular	Lag 0	1.00	0.97	1.03	0.885	1.00	0.99	1.02	0.695
			Lag 1	1.00	0.97	1.03	0.984	1.00	0.98	1.01	0.823
			Lag 2	1.01	0.98	1.04	0.532	1.00	0.99	1.02	0.800
			Lag 3	0.99	0.96	1.01	0.320	1.00	0.99	1.02	0.675
		Renal	Lag 0	0.90	0.83	0.97	**0.007**	0.99	0.95	1.03	0.611
			Lag 1	1.04	0.98	1.09	0.185	0.99	0.97	1.02	0.715
			Lag 2	1.03	0.98	1.08	0.210	1.01	0.99	1.04	0.317
			Lag 3	1.02	0.97	1.06	0.501	0.96	0.91	1.02	0.164
		Respiratory	Lag 0	1.01	0.96	1.05	0.804	1.01	0.99	1.03	0.488
			Lag 1	1.00	0.97	1.03	0.952	1.01	0.98	1.03	0.576
			Lag 2	0.99	0.95	1.03	0.554	1.01	0.98	1.04	0.412
			Lag 3	1.00	0.96	1.03	0.882	1.02	0.99	1.04	0.147
Female	1-2 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.523	1.00	1.00	1.00	0.594
			Lag 1	1.00	1.00	1.00	0.201	1.00	1.00	1.00	0.910
			Lag 2	1.00	1.00	1.00	**0.000**	1.00	1.00	1.00	0.444
			Lag 3	1.00	1.00	1.00	**0.000**	1.00	1.00	1.00	0.059
		Cardio-vascular	Lag 0	1.01	0.99	1.03	0.231	0.99	0.97	1.01	0.333
			Lag 1	1.00	0.97	1.02	0.729	0.99	0.97	1.02	0.647
			Lag 2	1.00	0.98	1.02	0.960	0.99	0.97	1.01	0.434
			Lag 3	0.99	0.97	1.01	0.331	0.95	0.91	0.99	**0.023**
		Cerebro-vascular	Lag 0	1.00	0.98	1.02	0.957	1.00	1.00	1.01	0.295
			Lag 1	1.00	0.99	1.02	0.734	1.00	0.99	1.01	0.889
			Lag 2	1.00	0.99	1.01	0.888	0.99	0.98	1.01	0.442

		Lag 3	0.99	0.98	1.00	0.100	1.00	0.98	1.01	0.812
	Renal	Lag 0	1.02	0.99	1.06	0.172	1.00	0.97	1.03	0.914
		Lag 1	1.00	0.97	1.03	0.885	0.96	0.91	1.02	0.179
		Lag 2	1.02	0.99	1.04	0.175	0.98	0.94	1.02	0.260
		Lag 3	1.01	0.98	1.03	0.620	0.96	0.91	1.01	0.152
	Respiratory	Lag 0	0.97	0.94	1.00	0.075	0.96	0.91	1.01	0.100
		Lag 1	0.99	0.97	1.01	0.555	1.00	0.99	1.02	0.619
		Lag 2	1.01	0.99	1.03	0.257	1.01	0.99	1.04	0.307
		Lag 3	1.00	0.98	1.02	0.877	1.00	0.98	1.03	0.776
2-3 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.407	1.00	1.00	1.00	0.416
		Lag 1	1.00	1.00	1.00	0.105	1.00	1.00	1.00	0.860
		Lag 2	1.00	1.00	1.00	**0.000**	1.00	1.00	1.00	**0.020**
		Lag 3	1.00	1.00	1.00	0.670	1.00	1.00	1.00	**0.000**
	Cardio-vascular	Lag 0	1.01	0.99	1.03	0.328	0.99	0.97	1.01	0.392
		Lag 1	0.99	0.96	1.01	0.286	1.00	0.98	1.02	0.809
		Lag 2	1.01	0.98	1.03	0.598	0.99	0.96	1.01	0.278
		Lag 3	0.99	0.97	1.01	0.394	0.97	0.94	1.00	**0.047**
	Cerebro-vascular	Lag 0	1.01	1.00	1.02	0.135	1.00	0.99	1.01	0.879
		Lag 1	1.01	1.00	1.02	0.116	0.99	0.98	1.01	0.407
		Lag 2	1.00	0.98	1.01	0.720	1.00	0.99	1.01	0.567
		Lag 3	1.00	0.98	1.01	0.675	0.99	0.98	1.00	0.152
	Renal	Lag 0	1.02	0.99	1.04	0.150	0.99	0.95	1.03	0.576
		Lag 1	1.00	0.97	1.04	0.802	0.95	0.89	1.01	0.114
		Lag 2	1.01	0.97	1.04	0.713	1.00	0.97	1.02	0.758
		Lag 3	1.00	0.97	1.03	0.887	0.98	0.95	1.02	0.339
	Respiratory	Lag 0	0.97	0.94	1.00	0.070	0.96	0.91	1.01	0.109
		Lag 1	0.98	0.95	1.00	0.107	1.01	1.00	1.03	0.188
		Lag 2	1.02	0.99	1.04	0.231	1.01	0.99	1.03	0.308
		Lag 3	0.98	0.95	1.01	0.175	1.01	0.99	1.03	0.230
1-4 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.413	1.00	1.00	1.00	0.698
		Lag 1	1.00	1.00	1.00	0.385	1.00	1.00	1.00	0.166
		Lag 2	1.00	1.00	1.00	0.060	1.00	1.00	1.00	**0.000**
		Lag 3	1.00	1.00	1.00	0.434	1.00	1.00	1.00	**0.000**
	Cardio-vascular	Lag 0	1.01	0.99	1.04	0.234	0.99	0.98	1.01	0.497
		Lag 1	0.98	0.95	1.01	0.256	1.00	0.98	1.02	0.998
		Lag 2	1.00	0.98	1.03	0.870	0.99	0.97	1.01	0.472
		Lag 3	1.01	0.98	1.04	0.463	0.96	0.94	0.99	**0.006**
	Cerebro-vascular	Lag 0	1.00	0.98	1.02	0.895	1.00	1.00	1.01	0.295
		Lag 1	1.01	0.99	1.03	0.591	1.00	0.99	1.01	0.935
		Lag 2	1.00	0.98	1.02	0.987	1.00	0.99	1.01	0.480
		Lag 3	0.99	0.96	1.01	0.234	0.99	0.98	1.01	0.306
	Renal	Lag 0	1.04	0.99	1.09	0.084	1.00	0.98	1.03	0.874
		Lag 1	1.03	0.99	1.07	0.205	0.96	0.92	1.00	**0.043**
		Lag 2	1.01	0.97	1.05	0.689	1.00	0.98	1.02	0.815

			Lag 3	1.01	0.97	1.05	0.655	0.99	0.96	1.01	0.321
		Respiratory	Lag 0	0.98	0.95	1.02	0.410	0.96	0.92	0.99	**0.020**
			Lag 1	0.97	0.93	1.00	0.086	1.01	0.99	1.02	0.423
			Lag 2	1.01	0.98	1.04	0.441	1.01	0.99	1.03	0.213
			Lag 3	0.96	0.92	1.00	**0.036**	1.01	0.99	1.03	0.178
Hispanic	1-2 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.516	1.00	1.00	1.00	0.066
			Lag 1	1.00	1.00	1.00	0.217	1.00	1.00	1.00	0.929
			Lag 2	1.00	1.00	1.00	**0.004**	1.00	1.00	1.00	0.526
			Lag 3	1.00	1.00	1.00	**0.000**	1.00	1.00	1.00	0.214
		Cardio-vascular	Lag 0	1.01	0.98	1.04	0.607	1.00	0.98	1.03	0.686
			Lag 1	1.00	0.97	1.03	0.982	1.03	1.00	1.06	**0.035**
			Lag 2	0.98	0.95	1.02	0.378	1.02	0.99	1.06	0.208
			Lag 3	0.98	0.95	1.01	0.182	1.03	1.00	1.06	**0.036**
		Cerebro-vascular	Lag 0	1.01	0.99	1.03	0.371	0.99	0.97	1.02	0.528
			Lag 1	1.01	0.99	1.03	0.208	1.00	0.97	1.03	0.931
			Lag 2	1.01	0.99	1.02	0.588	0.99	0.96	1.02	0.589
			Lag 3	1.00	0.98	1.02	0.798	0.99	0.96	1.03	0.740
		Renal	Lag 0	0.94	0.89	1.00	**0.043**	0.82	0.70	0.97	**0.017**
			Lag 1	0.99	0.95	1.04	0.703	0.93	0.83	1.03	0.164
			Lag 2	1.01	0.98	1.04	0.664	0.99	0.94	1.04	0.603
			Lag 3	0.99	0.95	1.03	0.641	0.96	0.89	1.04	0.291
		Respiratory	Lag 0	0.99	0.95	1.03	0.606	0.97	0.92	1.03	0.351
			Lag 1	0.97	0.93	1.02	0.248	1.00	0.98	1.03	0.829
			Lag 2	1.01	0.97	1.05	0.742	1.01	0.96	1.06	0.803
			Lag 3	0.98	0.94	1.02	0.241	0.94	0.86	1.02	0.156
	2-3 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.827	1.00	1.00	1.00	**0.022**
			Lag 1	1.00	1.00	1.00	0.054	1.00	1.00	1.00	0.594
			Lag 2	1.00	1.00	1.00	**0.004**	1.00	1.00	1.00	0.283
			Lag 3	1.00	1.00	1.00	0.581	1.00	1.00	1.00	**0.036**
		Cardio-vascular	Lag 0	1.00	0.97	1.03	0.989	1.01	0.99	1.03	0.398
			Lag 1	0.99	0.96	1.03	0.718	1.03	1.00	1.06	**0.023**
			Lag 2	0.99	0.96	1.03	0.722	1.01	0.98	1.05	0.479
			Lag 3	0.98	0.95	1.01	0.246	1.02	0.99	1.04	0.138
		Cerebro-vascular	Lag 0	1.00	0.98	1.02	0.971	1.00	0.98	1.03	0.868
			Lag 1	1.01	0.99	1.03	0.242	1.00	0.98	1.02	0.861
			Lag 2	0.99	0.97	1.02	0.599	1.01	0.99	1.03	0.558
			Lag 3	0.99	0.96	1.02	0.419	1.00	0.98	1.02	0.898
		Renal	Lag 0	0.93	0.88	0.98	**0.014**	0.89	0.78	1.02	0.091
			Lag 1	0.99	0.95	1.04	0.755	0.93	0.82	1.04	0.200
			Lag 2	1.00	0.96	1.04	0.967	1.00	0.97	1.04	0.941
			Lag 3	0.98	0.93	1.03	0.400	0.99	0.94	1.03	0.569
		Respiratory	Lag 0	0.99	0.95	1.02	0.453	0.98	0.92	1.04	0.432
			Lag 1	0.97	0.93	1.01	0.168	1.01	0.98	1.03	0.608
			Lag 2	1.02	0.97	1.06	0.453	0.99	0.94	1.05	0.826

			Lag 3	0.95	0.91	1.00	0.059	0.99	0.94	1.03	0.531
	1-4 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.799	1.00	1.00	1.00	**0.033**
			Lag 1	1.00	1.00	1.00	0.056	1.00	1.00	1.00	0.912
			Lag 2	1.00	1.00	1.00	**0.045**	1.00	1.00	1.00	0.061
			Lag 3	1.00	1.00	1.00	0.475	1.00	1.00	1.00	**0.047**
		Cardio-vascular	Lag 0	0.98	0.94	1.02	0.251	1.02	0.99	1.04	0.147
			Lag 1	0.96	0.92	1.01	0.083	1.04	1.01	1.06	**0.006**
			Lag 2	0.97	0.93	1.02	0.238	1.02	0.99	1.05	0.259
			Lag 3	0.95	0.90	0.99	**0.028**	1.02	1.00	1.04	0.071
		Cerebro-vascular	Lag 0	1.01	0.97	1.04	0.743	1.00	0.98	1.02	0.926
			Lag 1	1.02	0.99	1.05	0.301	1.00	0.99	1.02	0.690
			Lag 2	0.98	0.94	1.01	0.211	1.01	0.99	1.03	0.425
			Lag 3	0.97	0.94	1.00	0.076	1.01	0.99	1.02	0.492
		Renal	Lag 0	0.95	0.89	1.02	0.157	0.89	0.82	0.97	**0.008**
			Lag 1	1.02	0.96	1.08	0.563	0.93	0.87	1.00	0.061
			Lag 2	0.98	0.93	1.03	0.460	1.01	0.98	1.03	0.650
			Lag 3	0.98	0.93	1.04	0.516	0.98	0.94	1.02	0.442
		Respiratory	Lag 0	1.00	0.95	1.05	0.960	0.97	0.92	1.02	0.220
			Lag 1	0.97	0.92	1.02	0.263	1.00	0.97	1.03	0.949
			Lag 2	1.01	0.96	1.06	0.669	1.00	0.96	1.05	0.880
			Lag 3	0.96	0.91	1.01	0.148	0.98	0.93	1.02	0.267
Male	1-2 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.532	1.00	1.00	1.00	0.297
			Lag 1	1.00	1.00	1.00	0.095	1.00	1.00	1.00	0.235
			Lag 2	1.00	1.00	1.00	**0.000**	1.00	1.00	1.00	0.534
			Lag 3	1.00	1.00	1.00	**0.000**	1.00	1.00	1.00	**0.014**
		Cardio-vascular	Lag 0	1.00	1.00	1.00	0.870	1.00	1.00	1.00	0.130
			Lag 1	1.00	1.00	1.00	**0.022**	1.00	1.00	1.00	0.090
			Lag 2	1.00	1.00	1.00	**0.019**	1.00	1.00	1.00	0.452
			Lag 3	1.00	1.00	1.00	0.206	1.00	1.00	1.00	**0.021**
		Cerebro-vascular	Lag 0	1.00	1.00	1.00	0.653	1.00	1.00	1.00	0.140
			Lag 1	1.00	1.00	1.00	**0.048**	1.00	1.00	1.00	0.460
			Lag 2	1.00	1.00	1.00	0.319	1.00	1.00	1.00	0.078
			Lag 3	1.00	1.00	1.00	0.186	1.00	1.00	1.00	**0.013**
		Renal	Lag 0	1.01	0.99	1.03	0.288	1.00	0.99	1.01	0.962
			Lag 1	1.01	0.99	1.02	0.310	1.01	1.00	1.02	**0.048**
			Lag 2	1.00	0.98	1.01	0.891	1.00	0.99	1.02	0.547
			Lag 3	1.00	0.99	1.02	0.648	1.01	1.00	1.02	0.185
		Respiratory	Lag 0	1.01	0.99	1.02	0.244	1.00	0.99	1.01	0.953
			Lag 1	1.00	0.99	1.02	0.580	1.00	0.99	1.01	0.818
			Lag 2	1.00	0.99	1.02	0.414	0.99	0.98	1.01	0.378
			Lag 3	1.00	0.99	1.01	0.909	1.00	0.98	1.01	0.693
	2-3 weeks	All-natural	Lag 0	0.95	0.91	0.99	**0.024**	0.99	0.96	1.03	0.779
			Lag 1	0.98	0.94	1.01	0.235	1.01	0.98	1.03	0.498
			Lag 2	1.02	1.00	1.04	0.090	1.02	0.98	1.06	0.258

			Lag 3	1.01	0.99	1.04	0.304	0.99	0.95	1.04	0.800
		Cardio-vascular	Lag 0	1.00	0.98	1.03	0.819	1.01	0.99	1.02	0.346
			Lag 1	1.00	0.98	1.03	0.681	1.00	0.99	1.02	0.661
			Lag 2	1.00	0.98	1.02	0.867	1.00	0.98	1.02	0.856
			Lag 3	1.00	0.99	1.02	0.567	1.00	0.98	1.03	0.683
		Cerebro-vascular	Lag 0	1.00	0.99	1.02	0.867	1.00	0.99	1.02	0.478
			Lag 1	1.01	0.99	1.02	0.472	1.01	1.00	1.02	**0.027**
			Lag 2	1.01	0.98	1.03	0.574	1.00	0.99	1.01	0.828
			Lag 3	1.00	0.98	1.02	0.775	1.01	1.00	1.02	0.117
		Renal	Lag 0	1.00	0.99	1.02	0.531	1.00	0.99	1.01	0.660
			Lag 1	1.00	0.99	1.02	0.680	1.00	0.99	1.01	0.896
			Lag 2	1.01	0.99	1.02	0.365	1.00	0.99	1.01	0.586
			Lag 3	1.00	0.98	1.02	0.943	1.00	0.99	1.01	0.781
		Respiratory	Lag 0	0.97	0.93	1.00	0.063	0.99	0.95	1.03	0.655
			Lag 1	0.99	0.95	1.03	0.558	1.00	0.98	1.03	0.910
			Lag 2	1.04	1.01	1.07	**0.018**	1.01	0.99	1.04	0.407
			Lag 3	1.00	0.96	1.04	0.918	1.01	0.99	1.04	0.333
	1-4 weeks	All-natural	Lag 0	1.00	0.98	1.02	0.780	1.01	1.00	1.03	0.137
			Lag 1	1.01	0.99	1.03	0.229	1.00	0.99	1.01	0.926
			Lag 2	0.99	0.97	1.02	0.651	1.00	0.99	1.02	0.836
			Lag 3	1.03	1.00	1.06	**0.045**	1.00	0.98	1.01	0.717
		Cardio-vascular	Lag 0	0.99	0.96	1.02	0.501	1.01	0.99	1.02	0.331
			Lag 1	1.01	0.98	1.03	0.571	1.01	1.00	1.02	**0.040**
			Lag 2	1.01	0.98	1.04	0.536	1.00	0.99	1.01	0.868
			Lag 3	1.00	0.97	1.03	0.913	1.01	1.00	1.02	0.195
		Cerebro-vascular	Lag 0	1.01	0.99	1.03	0.264	1.00	0.99	1.01	0.784
			Lag 1	1.01	0.99	1.03	0.347	1.00	0.99	1.01	0.786
			Lag 2	1.01	0.99	1.03	0.266	1.00	0.99	1.01	0.655
			Lag 3	1.00	0.98	1.02	0.899	1.00	0.99	1.01	0.877
		Renal	Lag 0	0.91	0.86	0.97	**0.005**	0.99	0.97	1.02	0.709
			Lag 1	0.98	0.93	1.03	0.366	1.00	0.98	1.03	0.861
			Lag 2	1.06	1.01	1.10	**0.010**	1.01	0.99	1.03	0.418
			Lag 3	1.00	0.95	1.05	0.956	1.01	0.99	1.03	0.427
		Respiratory	Lag 0	1.00	0.98	1.03	0.746	1.01	0.99	1.02	0.410
			Lag 1	1.01	0.99	1.03	0.425	1.00	0.99	1.01	0.822
			Lag 2	1.00	0.97	1.04	0.769	1.00	0.98	1.02	0.842
			Lag 3	1.01	0.98	1.04	0.470	1.00	0.99	1.02	0.699
Lesser poverty ZCTA	1-2 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.01	1.00	1.02	0.150	1.00	0.99	1.01	0.778
			Lag 1	1.00	0.99	1.02	0.863	1.01	0.99	1.02	0.353
			Lag 2	1.00	0.98	1.01	0.792	1.00	0.99	1.01	0.654

			Lag 3	1.00	0.98	1.01	0.605	1.00	0.98	1.01	0.722
		Cerebro-vascular	Lag 0	1.00	0.99	1.02	0.422	1.00	1.00	1.01	0.242
			Lag 1	1.00	0.99	1.01	0.547	1.00	0.99	1.01	0.837
			Lag 2	1.00	0.99	1.01	0.603	0.99	0.98	1.00	0.317
			Lag 3	0.99	0.98	1.00	0.199	1.00	0.99	1.01	0.544
		Renal	Lag 0	0.99	0.97	1.02	0.644	0.98	0.95	1.01	0.216
			Lag 1	0.98	0.96	1.01	0.265	0.99	0.97	1.01	0.537
			Lag 2	1.02	1.00	1.04	**0.047**	0.99	0.96	1.02	0.398
			Lag 3	1.01	0.99	1.03	0.358	0.98	0.94	1.02	0.273
		Respiratory	Lag 0	0.99	0.97	1.01	0.416	0.99	0.98	1.01	0.561
			Lag 1	1.00	0.99	1.02	0.638	1.00	0.99	1.01	0.550
			Lag 2	1.01	0.99	1.02	0.413	1.00	0.99	1.02	0.667
			Lag 3	1.00	0.99	1.02	0.625	1.01	0.99	1.02	0.562
	2-3 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.01	0.99	1.02	0.314	1.00	0.99	1.01	0.985
			Lag 1	1.00	0.98	1.01	0.555	1.01	1.00	1.02	0.142
			Lag 2	1.01	0.99	1.02	0.570	1.00	0.98	1.01	0.428
			Lag 3	0.99	0.97	1.00	0.121	1.00	0.99	1.01	0.802
		Cerebro-vascular	Lag 0	1.01	1.00	1.02	0.081	1.00	0.99	1.01	0.721
			Lag 1	1.01	1.00	1.02	0.129	1.00	0.99	1.01	0.694
			Lag 2	1.00	0.99	1.01	0.735	1.00	0.99	1.01	0.538
			Lag 3	1.00	0.98	1.01	0.744	0.99	0.99	1.00	0.179
		Renal	Lag 0	0.99	0.96	1.01	0.386	0.99	0.95	1.02	0.367
			Lag 1	0.99	0.96	1.02	0.684	0.99	0.96	1.01	0.285
			Lag 2	1.01	0.99	1.04	0.363	1.00	0.99	1.02	0.587
			Lag 3	1.00	0.97	1.03	0.988	1.00	0.98	1.02	0.861
		Respiratory	Lag 0	0.99	0.97	1.01	0.351	1.00	0.98	1.01	0.673
			Lag 1	1.00	0.99	1.02	0.621	1.00	0.99	1.01	0.520
			Lag 2	1.01	0.99	1.03	0.420	1.00	0.99	1.02	0.548
			Lag 3	1.01	0.98	1.03	0.601	1.00	0.99	1.02	0.571
	1-4 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.01	0.99	1.03	0.553	1.00	0.99	1.01	0.720
			Lag 1	1.00	0.98	1.03	0.899	1.00	0.99	1.01	0.411
			Lag 2	1.01	0.98	1.03	0.600	1.00	0.99	1.01	0.456
			Lag 3	0.99	0.97	1.02	0.641	1.00	0.99	1.01	0.653
		Cerebro-vascular	Lag 0	1.01	0.99	1.02	0.547	1.00	1.00	1.01	0.214
			Lag 1	1.00	0.99	1.02	0.640	1.00	0.99	1.01	0.743
			Lag 2	1.01	0.99	1.02	0.546	1.00	0.99	1.01	0.533

			Lag 3	0.99	0.97	1.01	0.343	1.00	0.99	1.00	0.300
		Renal	Lag 0	0.99	0.95	1.03	0.480	0.99	0.96	1.01	0.321
			Lag 1	1.00	0.96	1.04	0.883	0.99	0.97	1.01	0.257
			Lag 2	1.03	1.00	1.07	0.062	1.00	0.99	1.02	0.868
			Lag 3	1.00	0.97	1.04	0.919	1.00	0.98	1.02	0.890
		Respiratory	Lag 0	1.00	0.97	1.03	0.990	0.99	0.98	1.01	0.299
			Lag 1	1.00	0.98	1.03	0.725	1.00	0.99	1.01	0.501
			Lag 2	1.01	0.99	1.04	0.374	1.00	0.99	1.02	0.586
			Lag 3	0.99	0.96	1.02	0.433	1.01	0.99	1.02	0.243
Higher poverty ZCTA	1-2 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.01	0.98	1.04	0.474	0.98	0.94	1.03	0.494
			Lag 1	1.02	0.99	1.05	0.229	1.04	1.00	1.08	0.065
			Lag 2	1.01	0.98	1.04	0.663	1.02	0.99	1.04	0.168
			Lag 3	1.00	0.98	1.03	0.660	0.99	0.94	1.05	0.818
		Cerebro-vascular	Lag 0	1.00	0.98	1.03	0.712	0.99	0.97	1.02	0.492
			Lag 1	1.00	0.98	1.02	0.860	0.98	0.93	1.03	0.363
			Lag 2	1.00	0.98	1.02	0.912	0.99	0.96	1.02	0.526
			Lag 3	1.00	0.98	1.02	0.976	1.02	0.97	1.08	0.462
		Renal	Lag 0	0.98	0.93	1.04	0.576	1.03	0.99	1.08	0.197
			Lag 1	1.00	0.95	1.05	1.000	1.00	0.92	1.09	0.992
			Lag 2	1.02	0.97	1.07	0.531	1.01	0.97	1.05	0.553
			Lag 3	1.01	0.97	1.06	0.551	0.97	0.90	1.04	0.431
		Respiratory	Lag 0	0.98	0.94	1.03	0.420	1.01	0.99	1.04	0.364
			Lag 1	0.96	0.92	1.01	0.108	1.00	0.98	1.03	0.775
			Lag 2	1.01	0.98	1.04	0.607	1.00	0.96	1.04	0.961
			Lag 3	1.00	0.98	1.02	0.880	1.00	0.97	1.03	1.000
	2-3 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.00	0.97	1.02	0.746	1.00	0.98	1.03	0.741
			Lag 1	1.01	0.99	1.04	0.354	1.05	1.00	1.10	**0.037**
			Lag 2	1.01	0.98	1.04	0.578	1.02	0.99	1.05	0.215
			Lag 3	1.02	0.99	1.05	0.203	0.99	0.96	1.02	0.512
		Cerebro-vascular	Lag 0	1.00	0.98	1.02	0.965	0.99	0.97	1.02	0.659
			Lag 1	1.00	0.98	1.02	0.865	0.96	0.91	1.02	0.188
			Lag 2	1.00	0.98	1.03	0.821	0.99	0.97	1.02	0.527
			Lag 3	1.00	0.98	1.03	0.909	1.00	0.97	1.04	0.769
		Renal	Lag 0	1.01	0.98	1.05	0.336	1.02	0.92	1.12	0.751
			Lag 1	1.01	0.96	1.05	0.819	0.98	0.89	1.08	0.704
			Lag 2	1.04	1.00	1.09	**0.038**	0.92	0.81	1.05	0.237

			Lag 3	1.00	0.96	1.05	0.943	0.99	0.93	1.04	0.631
		Respiratory	Lag 0	0.98	0.94	1.02	0.233	1.02	0.99	1.04	0.224
			Lag 1	0.96	0.92	1.01	0.086	1.01	0.98	1.03	0.597
			Lag 2	0.99	0.96	1.03	0.727	1.02	0.98	1.06	0.358
			Lag 3	1.00	0.97	1.03	0.866	1.00	0.97	1.03	0.992
	1-4 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.00	0.96	1.03	0.867	1.00	0.98	1.03	0.911
			Lag 1	0.99	0.95	1.03	0.489	1.05	1.02	1.09	**0.002**
			Lag 2	1.00	0.97	1.04	0.827	1.02	0.99	1.04	0.166
			Lag 3	1.03	0.99	1.07	0.097	0.99	0.96	1.02	0.471
		Cerebro-vascular	Lag 0	1.00	0.97	1.04	0.764	1.00	0.98	1.01	0.643
			Lag 1	1.02	0.99	1.04	0.244	0.97	0.94	1.01	0.128
			Lag 2	1.01	0.98	1.04	0.618	0.99	0.97	1.01	0.517
			Lag 3	1.00	0.97	1.03	0.806	1.01	0.98	1.04	0.541
		Renal	Lag 0	0.98	0.91	1.06	0.653	1.02	0.99	1.06	0.228
			Lag 1	1.02	0.97	1.08	0.434	0.97	0.91	1.04	0.408
			Lag 2	1.03	0.97	1.10	0.276	1.01	0.97	1.04	0.742
			Lag 3	1.02	0.96	1.07	0.560	0.98	0.93	1.03	0.471
		Respiratory	Lag 0	0.99	0.94	1.04	0.629	1.01	0.98	1.03	0.532
			Lag 1	0.96	0.91	1.01	0.106	1.00	0.98	1.03	0.862
			Lag 2	1.00	0.96	1.04	0.988	1.01	0.97	1.04	0.666
			Lag 3	0.98	0.95	1.02	0.451	1.00	0.98	1.03	0.733
White	1-2 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.300	1.00	1.00	1.00	0.289
			Lag 1	1.00	1.00	1.00	0.059	1.00	1.00	1.00	0.456
			Lag 2	1.00	1.00	1.00	**0.000**	1.00	1.00	1.00	0.253
			Lag 3	1.00	1.00	1.00	**0.000**	1.00	1.00	1.00	**0.012**
		Cardio-vascular	Lag 0	1.02	1.00	1.03	0.068	0.99	0.97	1.01	0.379
			Lag 1	1.00	0.98	1.02	0.933	1.00	0.99	1.02	0.845
			Lag 2	1.00	0.99	1.02	0.599	1.00	0.99	1.02	0.583
			Lag 3	1.00	0.99	1.02	0.600	0.99	0.97	1.01	0.486
		Cerebro-vascular	Lag 0	1.00	0.99	1.02	0.828	1.01	1.00	1.02	0.161
			Lag 1	1.00	0.98	1.01	0.860	1.00	0.98	1.01	0.653
			Lag 2	1.01	0.99	1.02	0.419	1.00	0.98	1.01	0.609
			Lag 3	1.00	0.99	1.01	0.971	1.00	0.99	1.01	0.988
		Renal	Lag 0	1.00	0.97	1.04	0.813	1.01	0.99	1.04	0.318
			Lag 1	0.97	0.94	1.01	0.132	1.01	0.98	1.03	0.532
			Lag 2	1.03	1.00	1.06	0.090	1.00	0.97	1.03	0.956
			Lag 3	1.01	0.99	1.04	0.298	0.99	0.96	1.03	0.700
		Respiratory	Lag 0	0.99	0.96	1.01	0.367	1.00	0.99	1.02	0.649
			Lag 1	1.00	0.99	1.02	0.802	1.01	0.99	1.03	0.221
			Lag 2	1.01	0.99	1.03	0.238	1.01	0.98	1.03	0.572

		Lag 3	1.01	1.00	1.03	0.154	1.02	1.00	1.04	**0.041**
2-3 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.287	1.00	1.00	1.00	0.302
		Lag 1	1.00	1.00	1.00	**0.021**	1.00	1.00	1.00	0.799
		Lag 2	1.00	1.00	1.00	**0.000**	1.00	1.00	1.00	**0.016**
		Lag 3	1.00	1.00	1.00	0.477	1.00	1.00	1.00	**0.000**
	Cardio-vascular	Lag 0	1.00	0.99	1.02	0.742	1.00	0.99	1.02	0.661
		Lag 1	1.00	0.98	1.01	0.596	1.00	0.99	1.02	0.496
		Lag 2	1.02	0.99	1.04	0.158	1.00	0.99	1.01	0.904
		Lag 3	1.00	0.98	1.03	0.705	1.00	0.99	1.01	0.844
	Cerebro-vascular	Lag 0	1.01	1.00	1.02	0.149	1.00	0.99	1.02	0.876
		Lag 1	1.00	0.99	1.02	0.832	0.99	0.98	1.01	0.434
		Lag 2	1.01	0.99	1.02	0.441	1.00	0.99	1.01	0.816
		Lag 3	1.01	0.99	1.02	0.561	1.00	0.98	1.01	0.655
	Renal	Lag 0	1.02	0.99	1.04	0.162	0.99	0.96	1.03	0.716
		Lag 1	0.99	0.96	1.03	0.642	1.00	0.97	1.02	0.823
		Lag 2	1.03	1.00	1.07	0.056	1.00	0.98	1.03	0.918
		Lag 3	1.01	0.98	1.04	0.449	1.00	0.98	1.02	0.967
	Respiratory	Lag 0	0.98	0.95	1.00	0.096	1.01	0.99	1.03	0.225
		Lag 1	1.00	0.99	1.02	0.648	1.01	0.99	1.02	0.316
		Lag 2	1.00	0.97	1.03	0.878	1.01	1.00	1.03	0.095
		Lag 3	1.02	0.99	1.05	0.192	1.01	1.00	1.03	0.060
1-4 weeks	All-natural	Lag 0	1.00	1.00	1.00	0.373	1.00	1.00	1.00	0.234
		Lag 1	1.00	1.00	1.00	0.970	1.00	1.00	1.00	0.058
		Lag 2	1.00	1.00	1.00	0.086	1.00	1.00	1.00	**0.000**
		Lag 3	1.00	1.00	1.00	0.194	1.00	1.00	1.00	**0.000**
	Cardio-vascular	Lag 0	1.01	0.99	1.04	0.277	1.00	0.99	1.01	0.963
		Lag 1	1.01	0.98	1.04	0.559	1.00	0.99	1.01	0.995
		Lag 2	1.02	1.00	1.05	0.067	1.00	0.99	1.01	0.982
		Lag 3	1.03	1.00	1.05	**0.039**	0.99	0.98	1.01	0.359
	Cerebro-vascular	Lag 0	1.01	0.99	1.03	0.270	1.00	0.99	1.02	0.479
		Lag 1	1.01	0.99	1.03	0.411	0.99	0.98	1.01	0.363
		Lag 2	1.02	1.00	1.04	0.095	1.00	0.99	1.01	0.606
		Lag 3	1.01	0.99	1.03	0.363	1.00	0.98	1.01	0.594
	Renal	Lag 0	1.01	0.96	1.06	0.827	1.01	0.99	1.03	0.363
		Lag 1	0.99	0.95	1.05	0.820	1.00	0.97	1.02	0.726
		Lag 2	1.07	1.02	1.12	**0.002**	1.00	0.97	1.02	0.840
		Lag 3	1.01	0.96	1.05	0.733	1.00	0.98	1.02	0.765
	Respiratory	Lag 0	0.98	0.94	1.02	0.313	1.00	0.99	1.02	0.753
		Lag 1	1.00	0.98	1.03	0.870	1.01	0.99	1.02	0.286
		Lag 2	1.00	0.96	1.03	0.950	1.01	1.00	1.03	0.148
		Lag 3	0.99	0.95	1.03	0.600	1.02	1.00	1.03	**0.009**

Table S.11 Odds ratio with upper and lower limits (UL and LL, respectively) for 95% confidence intervals (CIs) and p-values (bolded indicates significant p < 0.05) for the effects of extreme heat exposure modified by prior wildfire smoke exposure on all-natural, cardiovascular, cerebrovascular, renal, and respiratory morbidity, 2011-2019, May to November. Wildfire smoke exposure is tested on lag 0-3, separately. Separate models were also run for six different effect modifier periods: 1-2, 2-3, 1-4, 4-8, 8-12, and 1-12 weeks.

			No Effect Modifier				Wildfire Smoke Modified			
EM Period	**OOI**	**Lag**	**OR**	**CI LL**	**CI UL**	**p-value**	**OR**	**CI LL**	**CI UL**	**p-value**
1-2 weeks	All-natural	Lag 0	1.021	1.018	1.024	**0.0000**	1.040	1.033	1.047	**0.0000**
		Lag 1	1.024	1.021	1.027	**0.0000**	1.022	1.016	1.029	**0.0000**
		Lag 2	1.023	1.019	1.026	**0.0000**	1.004	0.997	1.010	0.2521
		Lag 3	1.020	1.017	1.023	**0.0000**	0.992	0.986	0.998	**0.0139**
	Cardiovascular	Lag 0	1.044	0.979	1.114	0.1853	0.962	0.829	1.118	0.6282
		Lag 1	1.081	1.015	1.152	**0.0148**	0.973	0.840	1.127	0.7245
		Lag 2	1.053	0.989	1.121	0.1037	0.989	0.857	1.141	0.8885
		Lag 3	1.025	0.963	1.092	0.4374	1.056	0.921	1.211	0.4408
	Cerebrovascular	Lag 0	1.006	0.953	1.061	0.8396	1.110	0.988	1.247	0.0786
		Lag 1	1.031	0.977	1.088	0.2635	1.046	0.933	1.174	0.4480
		Lag 2	1.041	0.988	1.098	0.1342	1.038	0.929	1.160	0.5219
		Lag 3	1.038	0.985	1.094	0.1662	0.942	0.839	1.057	0.3145
	Renal	Lag 0	1.097	1.009	1.193	**0.0304**	1.075	0.882	1.311	0.4808
		Lag 1	1.108	1.020	1.203	**0.0146**	1.196	0.991	1.443	0.0614
		Lag 2	1.081	0.996	1.173	0.0632	1.021	0.841	1.239	0.8466
		Lag 3	1.049	0.967	1.137	0.2519	0.996	0.819	1.211	0.9681
	Respiratory	Lag 0	0.937	0.867	1.013	0.1031	1.166	0.986	1.378	0.0730
		Lag 1	1.012	0.938	1.091	0.7648	1.019	0.859	1.209	0.8388
		Lag 2	1.004	0.930	1.083	0.9220	1.063	0.900	1.255	0.4844
		Lag 3	1.056	0.981	1.136	0.1457	0.975	0.829	1.148	0.7746
2-3 weeks	All-natural	Lag 0	1.019	1.016	1.022	**0.0000**	1.065	1.057	1.073	**0.0000**
		Lag 1	1.022	1.019	1.025	**0.0000**	1.038	1.030	1.046	**0.0000**
		Lag 2	1.022	1.019	1.025	**0.0000**	1.001	0.994	1.009	0.7456
		Lag 3	1.019	1.016	1.022	**0.0000**	0.991	0.984	0.999	**0.0231**
	Cardiovascular	Lag 0	1.030	0.967	1.097	0.3601	1.042	0.883	1.230	0.6375
		Lag 1	1.066	1.002	1.134	**0.0421**	1.050	0.888	1.241	0.5791
		Lag 2	1.051	0.989	1.117	0.1117	0.993	0.843	1.169	0.9355
		Lag 3	1.028	0.967	1.093	0.3773	1.056	0.903	1.236	0.5027
	Cerebrovascular	Lag 0	1.031	0.978	1.086	0.2589	0.983	0.856	1.130	0.8229
		Lag 1	1.030	0.977	1.085	0.2705	1.076	0.940	1.232	0.2917
		Lag 2	1.032	0.981	1.087	0.2255	1.111	0.976	1.265	0.1125
		Lag 3	1.026	0.974	1.080	0.3355	0.999	0.876	1.139	0.9851
	Renal	Lag 0	1.078	0.993	1.170	0.0722	1.201	0.959	1.505	0.1110
		Lag 1	1.115	1.030	1.207	**0.0073**	1.151	0.915	1.448	0.2318
		Lag 2	1.047	0.966	1.133	0.2643	1.266	1.013	1.582	**0.0376**
		Lag 3	1.029	0.951	1.113	0.4826	1.122	0.887	1.419	0.3429

	Respiratory	Lag 0	0.972	0.902	1.048	0.4657	0.980	0.796	1.207	0.8624
		Lag 1	1.013	0.941	1.091	0.7254	1.018	0.827	1.253	0.8784
		Lag 2	1.012	0.940	1.089	0.7526	1.038	0.845	1.274	0.7379
		Lag 3	1.061	0.989	1.139	0.1000	0.908	0.739	1.114	0.3603
1-4 weeks	All-natural	Lag 0	1.016	1.013	1.019	**0.0000**	1.044	1.038	1.049	**0.0000**
		Lag 1	1.021	1.018	1.024	**0.0000**	1.031	1.026	1.036	**0.0000**
		Lag 2	1.022	1.019	1.026	**0.0000**	1.013	1.009	1.018	**0.0000**
		Lag 3	1.018	1.015	1.022	**0.0000**	1.008	1.003	1.013	**0.0011**
	Cardiovascular	Lag 0	1.032	0.962	1.108	0.3774	1.030	0.925	1.147	0.6024
		Lag 1	1.090	1.018	1.167	**0.0137**	1.005	0.902	1.120	0.9347
		Lag 2	1.072	1.002	1.147	**0.0443**	0.979	0.881	1.089	0.7129
		Lag 3	1.045	0.976	1.119	0.2086	1.005	0.907	1.115	0.9278
	Cerebrovascular	Lag 0	1.023	0.964	1.084	0.4563	1.025	0.938	1.120	0.5941
		Lag 1	1.022	0.964	1.083	0.4740	1.063	0.974	1.160	0.1700
		Lag 2	1.030	0.972	1.091	0.3135	1.067	0.979	1.162	0.1413
		Lag 3	1.037	0.979	1.098	0.2117	0.983	0.901	1.073	0.7149
	Renal	Lag 0	1.067	0.973	1.170	0.1698	1.160	1.008	1.335	**0.0375**
		Lag 1	1.114	1.019	1.217	**0.0178**	1.141	0.993	1.313	0.0632
		Lag 2	1.050	0.961	1.148	0.2800	1.128	0.980	1.298	0.0937
		Lag 3	1.041	0.954	1.136	0.3711	1.043	0.903	1.204	0.5812
	Respiratory	Lag 0	0.933	0.857	1.015	0.1079	1.071	0.944	1.215	0.2936
		Lag 1	1.005	0.926	1.091	0.9043	1.031	0.908	1.171	0.6463
		Lag 2	0.992	0.914	1.077	0.8519	1.066	0.940	1.209	0.3240
		Lag 3	1.054	0.973	1.141	0.1973	1.013	0.896	1.146	0.8472
4-8 weeks	All-natural	Lag 0	1.024	1.021	1.028	**0.0000**	1.024	1.020	1.029	**0.0000**
		Lag 1	1.027	1.023	1.030	**0.0000**	1.018	1.013	1.023	**0.0000**
		Lag 2	1.022	1.019	1.025	**0.0000**	1.013	1.009	1.018	**0.0000**
		Lag 3	1.017	1.014	1.021	**0.0000**	1.009	1.004	1.014	**0.0003**
	Cardiovascular	Lag 0	1.025	0.954	1.102	0.4963	1.045	0.943	1.158	0.4109
		Lag 1	1.092	1.019	1.171	**0.0126**	1.004	0.903	1.115	0.9516
		Lag 2	1.058	0.987	1.133	0.1099	1.012	0.913	1.122	0.8334
		Lag 3	1.015	0.947	1.088	0.6805	1.067	0.964	1.181	0.2099
	Cerebrovascular	Lag 0	1.021	0.961	1.084	0.5058	1.028	0.946	1.118	0.5203
		Lag 1	1.012	0.953	1.074	0.7051	1.079	0.993	1.172	0.0721
		Lag 2	0.997	0.940	1.057	0.9139	1.137	1.047	1.236	**0.0024**
		Lag 3	0.996	0.939	1.056	0.8896	1.074	0.987	1.168	0.0993
	Renal	Lag 0	1.112	1.015	1.218	**0.0233**	1.050	0.911	1.211	0.5101
		Lag 1	1.124	1.028	1.229	**0.0102**	1.114	0.970	1.279	0.1278
		Lag 2	1.045	0.955	1.143	0.3368	1.138	0.990	1.308	0.0683
		Lag 3	1.014	0.928	1.108	0.7631	1.114	0.968	1.281	0.1313
	Respiratory	Lag 0	0.998	0.916	1.088	0.9621	0.923	0.816	1.044	0.2058
		Lag 1	0.999	0.918	1.087	0.9798	1.043	0.923	1.178	0.5143
		Lag 2	1.003	0.923	1.090	0.9432	1.037	0.916	1.175	0.5735
		Lag 3	1.037	0.957	1.123	0.3767	1.053	0.932	1.189	0.4158

8-12 weeks	All-natural	Lag 0	1.029	1.026	1.032	**0.0000**	1.011	1.006	1.017	**0.0001**
		Lag 1	1.031	1.028	1.034	**0.0000**	1.004	0.998	1.009	0.1815
		Lag 2	1.024	1.021	1.028	**0.0000**	1.005	0.999	1.010	0.0845
		Lag 3	1.019	1.016	1.022	**0.0000**	1.003	0.998	1.008	0.2677
	Cardiovascular	Lag 0	1.032	0.963	1.105	0.3737	1.027	0.916	1.152	0.6632
		Lag 1	1.076	1.006	1.150	**0.0328**	1.027	0.915	1.152	0.6631
		Lag 2	1.029	0.963	1.100	0.3956	1.079	0.966	1.205	0.1797
		Lag 3	1.032	0.966	1.104	0.3483	1.025	0.918	1.145	0.6760
	Cerebrovascular	Lag 0	1.021	0.964	1.081	0.4787	1.029	0.936	1.131	0.5677
		Lag 1	1.042	0.985	1.103	0.1549	1.011	0.921	1.110	0.8256
		Lag 2	1.028	0.971	1.087	0.3415	1.076	0.982	1.180	0.1170
		Lag 3	1.023	0.968	1.082	0.4203	1.010	0.920	1.109	0.8426
	Renal	Lag 0	1.076	0.984	1.176	0.1071	1.147	0.984	1.337	0.0783
		Lag 1	1.135	1.041	1.237	**0.0040**	1.080	0.928	1.258	0.3259
		Lag 2	1.081	0.992	1.179	0.0767	1.041	0.895	1.211	0.6164
		Lag 3	1.048	0.962	1.143	0.2843	1.019	0.877	1.183	0.8172
	Respiratory	Lag 0	0.976	0.899	1.060	0.5677	0.963	0.840	1.105	0.6065
		Lag 1	0.984	0.907	1.067	0.6953	1.098	0.961	1.254	0.1719
		Lag 2	0.965	0.890	1.047	0.3920	1.163	1.018	1.328	**0.0259**
		Lag 3	0.983	0.909	1.063	0.6685	1.224	1.077	1.391	**0.0020**
1-12 weeks	All-natural	Lag 0	1.023	1.019	1.027	**0.0000**	1.025	1.021	1.029	**0.0000**
		Lag 1	1.028	1.024	1.032	**0.0000**	1.021	1.017	1.024	**0.0000**
		Lag 2	1.024	1.020	1.028	**0.0000**	1.015	1.012	1.019	**0.0000**
		Lag 3	1.018	1.014	1.022	**0.0000**	1.012	1.008	1.016	**0.0000**
	Cardiovascular	Lag 0	1.038	0.953	1.132	0.3913	1.025	0.945	1.111	0.5645
		Lag 1	1.090	1.003	1.185	**0.0412**	1.040	0.959	1.126	0.3485
		Lag 2	1.061	0.976	1.153	0.1634	1.027	0.950	1.111	0.5104
		Lag 3	1.033	0.950	1.124	0.4434	1.029	0.953	1.112	0.4744
	Cerebrovascular	Lag 0	1.024	0.953	1.101	0.5174	1.022	0.957	1.093	0.5229
		Lag 1	0.975	0.907	1.048	0.4958	1.086	1.017	1.159	**0.0135**
		Lag 2	0.967	0.900	1.038	0.3487	1.109	1.040	1.183	**0.0018**
		Lag 3	0.986	0.919	1.058	0.6961	1.051	0.984	1.121	0.1380
	Renal	Lag 0	1.064	0.951	1.190	0.2782	1.120	1.007	1.245	**0.0359**
		Lag 1	1.146	1.029	1.276	**0.0133**	1.098	0.989	1.219	0.0800
		Lag 2	1.051	0.943	1.170	0.3712	1.090	0.982	1.209	0.1059
		Lag 3	1.038	0.934	1.154	0.4886	1.042	0.938	1.157	0.4566
	Respiratory	Lag 0	0.974	0.878	1.081	0.6191	0.971	0.882	1.068	0.5545
		Lag 1	0.955	0.862	1.059	0.3838	1.063	0.968	1.167	0.2004
		Lag 2	0.924	0.834	1.023	0.1263	1.097	0.999	1.205	0.0510
		Lag 3	0.975	0.884	1.075	0.6066	1.102	1.006	1.207	**0.0359**

Table S.12 Stratified results for odds ratio with upper and lower limits (UL and LL, respectively) for 95% confidence intervals (CIs) and p-values (bolded indicates significant p < 0.05) for the effects of extreme heat exposure modified by prior wildfire smoke exposure on all-natural, cardiovascular, cerebrovascular, renal, and respiratory morbidity, 2011-2019, May to November. Subgroups of individual and community level factors were tested in stratified models. Extreme heat exposure is tested on lag 0-3, separately. Separate models were also run for three different effect modifier periods: 1-2, 2-3, and 1-4 weeks.

				No Effect Modifier				Extreme Heat Modified			
Subgroup	**EM Period**	**OOI**	**Lag**	**OR**	**CI LL**	**CI UL**	**p-value**	**OR**	**CI LL**	**CI UL**	**p-value**
Age 18-49 year	1-2 weeks	All-natural	Lag 0	1.02	1.01	1.02	**0.000**	1.04	1.03	1.05	**0.000**
			Lag 1	1.02	1.02	1.03	**0.000**	1.02	1.01	1.04	**0.000**
			Lag 2	1.02	1.01	1.02	**0.000**	1.01	0.99	1.02	0.309
			Lag 3	1.02	1.02	1.03	**0.000**	1.00	0.99	1.01	0.411
		Cardio-vascular	Lag 0	1.04	0.86	1.26	0.687	0.68	0.42	1.10	0.113
			Lag 1	1.19	0.98	1.43	0.072	1.03	0.69	1.53	0.903
			Lag 2	1.18	0.98	1.42	0.074	1.12	0.76	1.63	0.586
			Lag 3	1.14	0.95	1.37	0.165	1.12	0.77	1.63	0.554
		Cerebro-vascular	Lag 0	1.09	0.92	1.30	0.328	0.97	0.66	1.44	0.907
			Lag 1	1.08	0.91	1.28	0.385	1.04	0.72	1.50	0.847
			Lag 2	1.17	0.99	1.38	0.066	1.18	0.82	1.69	0.388
			Lag 3	1.11	0.94	1.31	0.236	0.93	0.63	1.36	0.710
		Renal	Lag 0	0.90	0.73	1.10	0.308	1.05	0.67	1.64	0.833
			Lag 1	0.96	0.79	1.16	0.678	0.76	0.47	1.23	0.273
			Lag 2	1.17	0.98	1.41	0.083	0.83	0.53	1.30	0.420
			Lag 3	1.08	0.90	1.29	0.417	0.89	0.57	1.39	0.626
		Respiratory	Lag 0	0.98	0.81	1.19	0.857	1.34	0.87	2.08	0.186
			Lag 1	0.99	0.82	1.20	0.938	1.32	0.89	1.95	0.175
			Lag 2	0.97	0.81	1.17	0.774	1.34	0.91	1.97	0.143
			Lag 3	1.02	0.85	1.22	0.846	0.87	0.59	1.28	0.484
	2-3 weeks	All-natural	Lag 0	1.02	1.01	1.02	**0.000**	1.07	1.05	1.08	**0.000**
			Lag 1	1.02	1.02	1.03	**0.000**	1.04	1.02	1.05	**0.000**
			Lag 2	1.02	1.01	1.02	**0.000**	1.00	0.99	1.02	0.510
			Lag 3	1.02	1.01	1.02	**0.000**	1.00	0.99	1.02	0.652
		Cardio-vascular	Lag 0	1.00	0.83	1.21	0.988	0.82	0.49	1.36	0.442
			Lag 1	1.20	1.00	1.43	0.050	0.90	0.55	1.49	0.701
			Lag 2	1.23	1.03	1.47	**0.019**	0.79	0.48	1.32	0.376
			Lag 3	1.20	1.01	1.44	**0.039**	0.78	0.49	1.25	0.312
		Cerebro-vascular	Lag 0	1.08	0.91	1.27	0.405	1.03	0.67	1.57	0.910
			Lag 1	1.05	0.89	1.24	0.562	1.20	0.79	1.83	0.397
			Lag 2	1.15	0.98	1.35	0.086	1.28	0.84	1.95	0.252
			Lag 3	1.13	0.96	1.33	0.133	0.69	0.42	1.14	0.150
		Renal	Lag 0	0.90	0.74	1.09	0.277	1.13	0.67	1.91	0.653
			Lag 1	0.91	0.76	1.11	0.356	1.02	0.61	1.72	0.937
			Lag 2	1.11	0.93	1.33	0.243	1.11	0.67	1.86	0.690

			Lag 3	1.02	0.86	1.22	0.786	1.29	0.77	2.17	0.347
		Respiratory	Lag 0	1.02	0.84	1.22	0.870	1.18	0.73	1.92	0.512
			Lag 1	1.05	0.87	1.26	0.639	1.08	0.67	1.75	0.756
			Lag 2	1.04	0.87	1.24	0.696	1.03	0.64	1.64	0.921
			Lag 3	1.06	0.89	1.26	0.534	0.66	0.41	1.08	0.095
	1-4 weeks	All-natural	Lag 0	1.01	1.01	1.02	**0.000**	1.05	1.04	1.05	**0.000**
			Lag 1	1.02	1.01	1.03	**0.000**	1.03	1.02	1.04	**0.000**
			Lag 2	1.02	1.01	1.02	**0.000**	1.02	1.01	1.02	**0.000**
			Lag 3	1.02	1.01	1.02	**0.000**	1.01	1.00	1.02	**0.009**
		Cardio-vascular	Lag 0	1.04	0.84	1.29	0.698	0.83	0.60	1.16	0.281
			Lag 1	1.19	0.97	1.46	0.093	1.09	0.81	1.47	0.587
			Lag 2	1.25	1.02	1.52	**0.028**	1.02	0.75	1.37	0.918
			Lag 3	1.19	0.98	1.46	0.086	1.04	0.78	1.38	0.804
		Cerebro-vascular	Lag 0	1.12	0.92	1.35	0.253	0.97	0.72	1.29	0.825
			Lag 1	1.06	0.87	1.28	0.577	1.10	0.84	1.44	0.488
			Lag 2	1.13	0.94	1.36	0.179	1.25	0.96	1.63	0.103
			Lag 3	1.15	0.96	1.38	0.129	0.91	0.68	1.22	0.535
		Renal	Lag 0	0.91	0.73	1.14	0.430	0.94	0.69	1.30	0.740
			Lag 1	0.97	0.79	1.20	0.802	0.83	0.60	1.15	0.273
			Lag 2	1.17	0.96	1.43	0.115	0.98	0.71	1.34	0.908
			Lag 3	1.10	0.91	1.33	0.339	0.92	0.66	1.28	0.634
		Respiratory	Lag 0	0.94	0.76	1.17	0.593	1.23	0.92	1.66	0.165
			Lag 1	0.98	0.79	1.21	0.846	1.19	0.88	1.59	0.260
			Lag 2	0.94	0.77	1.16	0.587	1.23	0.92	1.63	0.166
			Lag 3	1.02	0.84	1.24	0.837	0.92	0.69	1.23	0.577
Age 50-64 year	1-2 weeks	All-natural	Lag 0	1.02	1.01	1.03	**0.000**	1.03	1.02	1.04	**0.000**
			Lag 1	1.02	1.02	1.03	**0.000**	1.01	1.00	1.03	0.069
			Lag 2	1.03	1.02	1.03	**0.000**	0.99	0.98	1.00	0.155
			Lag 3	1.02	1.02	1.03	**0.000**	0.99	0.97	1.00	**0.028**
		Cardio-vascular	Lag 0	1.01	0.89	1.15	0.844	0.78	0.59	1.05	0.102
			Lag 1	1.08	0.95	1.22	0.225	0.86	0.64	1.15	0.300
			Lag 2	1.06	0.94	1.19	0.333	0.83	0.63	1.11	0.211
			Lag 3	1.00	0.89	1.13	0.993	0.89	0.68	1.16	0.396
		Cerebro-vascular	Lag 0	0.94	0.84	1.05	0.259	1.00	0.79	1.27	0.993
			Lag 1	1.07	0.96	1.18	0.225	0.90	0.72	1.14	0.394
			Lag 2	1.04	0.94	1.16	0.452	1.09	0.89	1.34	0.410
			Lag 3	1.02	0.92	1.14	0.672	1.13	0.92	1.39	0.254
		Renal	Lag 0	1.09	0.92	1.28	0.336	0.98	0.64	1.51	0.946
			Lag 1	1.13	0.96	1.34	0.144	1.47	1.01	2.13	**0.042**
			Lag 2	1.08	0.91	1.28	0.357	0.97	0.65	1.44	0.883
			Lag 3	1.09	0.92	1.29	0.323	1.15	0.78	1.69	0.498
		Respiratory	Lag 0	1.05	0.92	1.21	0.470	1.21	0.90	1.62	0.204
			Lag 1	1.04	0.90	1.19	0.610	1.07	0.80	1.45	0.650
			Lag 2	1.03	0.90	1.19	0.640	1.23	0.92	1.64	0.166

			Lag 3	1.04	0.90	1.19	0.603	1.00	0.75	1.34	0.992
	2-3 weeks	All-natural	Lag 0	1.02	1.01	1.02	**0.000**	1.07	1.05	1.09	**0.000**
			Lag 1	1.02	1.01	1.03	**0.000**	1.03	1.01	1.04	**0.001**
			Lag 2	1.02	1.02	1.03	**0.000**	0.99	0.97	1.00	0.180
			Lag 3	1.02	1.02	1.03	**0.000**	0.98	0.97	1.00	**0.013**
		Cardio-vascular	Lag 0	0.99	0.88	1.12	0.869	0.85	0.61	1.19	0.349
			Lag 1	1.06	0.94	1.19	0.358	0.92	0.67	1.28	0.648
			Lag 2	1.03	0.92	1.16	0.595	0.95	0.69	1.30	0.759
			Lag 3	1.00	0.89	1.13	0.940	0.84	0.61	1.14	0.269
		Cerebro-vascular	Lag 0	0.94	0.84	1.04	0.215	1.05	0.80	1.37	0.757
			Lag 1	1.02	0.93	1.14	0.636	1.10	0.85	1.44	0.475
			Lag 2	1.02	0.92	1.13	0.731	1.28	1.00	1.64	0.051
			Lag 3	1.02	0.93	1.13	0.639	1.15	0.90	1.47	0.255
		Renal	Lag 0	1.06	0.90	1.26	0.471	1.12	0.72	1.75	0.626
			Lag 1	1.20	1.02	1.41	**0.031**	1.04	0.64	1.69	0.873
			Lag 2	1.04	0.88	1.23	0.622	1.20	0.75	1.92	0.452
			Lag 3	1.12	0.95	1.31	0.186	0.87	0.52	1.47	0.625
		Respiratory	Lag 0	1.09	0.95	1.24	0.228	1.02	0.69	1.50	0.935
			Lag 1	1.04	0.91	1.19	0.540	1.03	0.70	1.51	0.889
			Lag 2	1.05	0.92	1.20	0.446	1.16	0.79	1.71	0.450
			Lag 3	1.03	0.91	1.18	0.612	0.96	0.64	1.42	0.833
	1-4 weeks	All-natural	Lag 0	1.01	1.01	1.02	**0.000**	1.04	1.03	1.05	**0.000**
			Lag 1	1.02	1.01	1.03	**0.000**	1.02	1.01	1.03	**0.000**
			Lag 2	1.03	1.02	1.03	**0.000**	1.01	1.00	1.02	0.163
			Lag 3	1.02	1.01	1.03	**0.000**	1.01	1.00	1.02	0.210
		Cardio-vascular	Lag 0	1.01	0.88	1.16	0.904	0.89	0.73	1.10	0.299
			Lag 1	1.09	0.95	1.25	0.200	0.93	0.75	1.15	0.527
			Lag 2	1.10	0.96	1.25	0.161	0.86	0.70	1.06	0.163
			Lag 3	1.04	0.91	1.19	0.559	0.86	0.70	1.06	0.158
		Cerebro-vascular	Lag 0	0.93	0.83	1.05	0.241	0.99	0.83	1.18	0.924
			Lag 1	1.03	0.92	1.15	0.625	1.05	0.89	1.24	0.587
			Lag 2	1.02	0.91	1.14	0.784	1.13	0.96	1.32	0.147
			Lag 3	1.01	0.90	1.13	0.895	1.12	0.95	1.32	0.172
		Renal	Lag 0	1.08	0.90	1.30	0.402	1.04	0.77	1.41	0.790
			Lag 1	1.16	0.97	1.39	0.115	1.25	0.94	1.67	0.125
			Lag 2	1.09	0.91	1.30	0.366	1.00	0.74	1.35	0.994
			Lag 3	1.11	0.93	1.33	0.255	1.06	0.79	1.43	0.706
		Respiratory	Lag 0	1.05	0.90	1.22	0.552	1.16	0.93	1.45	0.195
			Lag 1	1.04	0.90	1.21	0.586	1.05	0.83	1.32	0.692
			Lag 2	1.02	0.88	1.19	0.789	1.18	0.95	1.48	0.141
			Lag 3	1.02	0.88	1.18	0.787	1.06	0.85	1.31	0.639
Age ≥ 65 year	1-2 weeks	All-natural	Lag 0	1.02	1.02	1.03	**0.000**	1.04	1.03	1.05	**0.000**
			Lag 1	1.03	1.02	1.03	**0.000**	1.03	1.02	1.04	**0.000**
			Lag 2	1.02	1.02	1.03	**0.000**	1.01	1.00	1.02	**0.049**

			Lag 3	1.02	1.01	1.02	**0.000**	0.99	0.98	1.00	0.168
		Cardio-vascular	Lag 0	1.06	0.98	1.15	0.167	1.12	0.93	1.36	0.223
			Lag 1	1.06	0.98	1.15	0.123	1.02	0.84	1.23	0.883
			Lag 2	1.03	0.95	1.11	0.497	1.04	0.86	1.25	0.709
			Lag 3	1.02	0.94	1.10	0.692	1.13	0.94	1.35	0.185
		Cerebro-vascular	Lag 0	1.02	0.95	1.09	0.546	1.17	1.02	1.35	**0.027**
			Lag 1	1.01	0.94	1.08	0.775	1.11	0.96	1.28	0.142
			Lag 2	1.02	0.96	1.09	0.496	1.00	0.86	1.15	0.962
			Lag 3	1.03	0.97	1.10	0.313	0.87	0.75	1.01	0.059
		Renal	Lag 0	1.17	1.05	1.31	**0.005**	1.12	0.87	1.45	0.395
			Lag 1	1.15	1.03	1.28	**0.011**	1.26	0.98	1.61	0.068
			Lag 2	1.05	0.94	1.17	0.395	1.12	0.87	1.45	0.376
			Lag 3	1.02	0.92	1.14	0.685	0.97	0.75	1.27	0.860
		Respiratory	Lag 0	0.87	0.78	0.96	**0.008**	1.09	0.87	1.38	0.467
			Lag 1	1.00	0.91	1.11	0.945	0.90	0.70	1.15	0.402
			Lag 2	1.00	0.90	1.11	0.955	0.89	0.70	1.14	0.360
			Lag 3	1.08	0.98	1.19	0.136	1.00	0.79	1.25	0.983
	2-3 weeks	All-natural	Lag 0	1.02	1.02	1.03	**0.000**	1.06	1.05	1.07	**0.000**
			Lag 1	1.02	1.02	1.03	**0.000**	1.04	1.03	1.06	**0.000**
			Lag 2	1.02	1.02	1.03	**0.000**	1.01	0.99	1.02	0.350
			Lag 3	1.02	1.01	1.02	**0.000**	0.99	0.98	1.00	**0.039**
		Cardio-vascular	Lag 0	1.05	0.97	1.14	0.201	1.19	0.97	1.46	0.103
			Lag 1	1.05	0.97	1.13	0.252	1.14	0.93	1.41	0.216
			Lag 2	1.03	0.95	1.11	0.498	1.05	0.86	1.29	0.635
			Lag 3	1.01	0.93	1.09	0.855	1.24	1.02	1.51	**0.031**
		Cerebro-vascular	Lag 0	1.06	1.00	1.13	0.060	0.95	0.80	1.13	0.596
			Lag 1	1.03	0.96	1.10	0.402	1.05	0.88	1.24	0.610
			Lag 2	1.02	0.96	1.09	0.538	1.03	0.87	1.21	0.778
			Lag 3	1.01	0.95	1.08	0.744	0.98	0.83	1.15	0.811
		Renal	Lag 0	1.15	1.03	1.28	**0.011**	1.28	0.94	1.73	0.115
			Lag 1	1.16	1.04	1.28	**0.007**	1.25	0.93	1.70	0.144
			Lag 2	1.03	0.92	1.14	0.633	1.35	1.01	1.81	**0.043**
			Lag 3	1.00	0.90	1.11	0.952	1.18	0.87	1.60	0.304
		Respiratory	Lag 0	0.90	0.81	1.00	**0.048**	0.90	0.68	1.20	0.490
			Lag 1	0.99	0.89	1.09	0.823	0.99	0.74	1.32	0.933
			Lag 2	0.98	0.89	1.09	0.729	0.98	0.73	1.30	0.877
			Lag 3	1.08	0.98	1.19	0.128	0.99	0.75	1.30	0.943
	1-4 weeks	All-natural	Lag 0	1.02	1.01	1.03	**0.000**	1.04	1.04	1.05	**0.000**
			Lag 1	1.02	1.02	1.03	**0.000**	1.03	1.03	1.04	**0.000**
			Lag 2	1.02	1.02	1.03	**0.000**	1.02	1.01	1.02	**0.000**
			Lag 3	1.02	1.01	1.02	**0.000**	1.01	1.00	1.01	0.086
		Cardio-vascular	Lag 0	1.04	0.95	1.14	0.378	1.14	1.00	1.31	0.056
			Lag 1	1.07	0.98	1.17	0.113	1.02	0.89	1.17	0.777
			Lag 2	1.03	0.95	1.13	0.480	1.03	0.90	1.18	0.699

			Lag 3	1.02	0.94	1.12	0.622	1.07	0.94	1.22	0.333
		Cerebro-vascular	Lag 0	1.05	0.97	1.12	0.220	1.05	0.94	1.17	0.403
			Lag 1	1.01	0.94	1.09	0.713	1.06	0.95	1.19	0.282
			Lag 2	1.02	0.95	1.10	0.571	1.01	0.91	1.13	0.810
			Lag 3	1.03	0.96	1.11	0.369	0.94	0.84	1.05	0.257
		Renal	Lag 0	1.11	0.98	1.25	0.088	1.30	1.08	1.57	**0.005**
			Lag 1	1.14	1.02	1.29	**0.024**	1.23	1.02	1.48	**0.028**
			Lag 2	1.00	0.88	1.12	0.941	1.24	1.03	1.50	**0.020**
			Lag 3	0.99	0.88	1.12	0.918	1.08	0.89	1.31	0.431
		Respiratory	Lag 0	0.87	0.78	0.98	**0.021**	0.97	0.81	1.16	0.750
			Lag 1	0.99	0.89	1.11	0.893	0.97	0.81	1.16	0.764
			Lag 2	0.99	0.89	1.11	0.871	0.95	0.79	1.14	0.582
			Lag 3	1.08	0.97	1.20	0.154	1.02	0.86	1.22	0.809
Asian	1-2 weeks	All-natural	Lag 0	1.03	1.02	1.04	**0.000**	1.04	1.02	1.06	**0.001**
			Lag 1	1.03	1.02	1.04	**0.000**	1.02	1.00	1.05	**0.025**
			Lag 2	1.02	1.01	1.03	**0.000**	1.01	0.99	1.03	0.579
			Lag 3	1.02	1.01	1.03	**0.000**	1.00	0.98	1.02	0.917
		Cardio-vascular	Lag 0	0.89	0.71	1.12	0.318	0.91	0.55	1.51	0.729
			Lag 1	1.11	0.89	1.39	0.360	1.01	0.61	1.65	0.984
			Lag 2	0.97	0.78	1.20	0.763	0.95	0.57	1.57	0.857
			Lag 3	0.86	0.68	1.08	0.184	1.01	0.64	1.61	0.955
		Cerebro-vascular	Lag 0	0.96	0.82	1.13	0.617	0.81	0.58	1.13	0.222
			Lag 1	0.97	0.83	1.14	0.746	1.06	0.76	1.46	0.752
			Lag 2	1.11	0.95	1.30	0.175	1.04	0.75	1.44	0.817
			Lag 3	1.08	0.93	1.26	0.321	1.08	0.77	1.50	0.664
		Renal	Lag 0	0.99	0.74	1.34	0.964	1.98	0.97	4.02	0.059
			Lag 1	1.12	0.83	1.50	0.465	1.47	0.73	2.99	0.287
			Lag 2	1.03	0.76	1.38	0.869	1.68	0.89	3.17	0.113
			Lag 3	1.11	0.84	1.46	0.470	1.13	0.57	2.26	0.738
		Respiratory	Lag 0	0.86	0.66	1.14	0.294	1.26	0.73	2.17	0.410
			Lag 1	1.02	0.79	1.33	0.858	0.88	0.48	1.60	0.690
			Lag 2	0.96	0.74	1.24	0.735	1.32	0.74	2.34	0.347
			Lag 3	1.00	0.76	1.30	0.978	0.95	0.52	1.74	0.878
	2-3 weeks	All-natural	Lag 0	1.02	1.01	1.03	**0.000**	1.08	1.05	1.10	**0.000**
			Lag 1	1.03	1.02	1.04	**0.000**	1.05	1.03	1.08	**0.000**
			Lag 2	1.02	1.01	1.03	**0.000**	1.01	0.99	1.04	0.249
			Lag 3	1.02	1.01	1.03	**0.000**	1.00	0.98	1.02	0.969
		Cardio-vascular	Lag 0	0.86	0.68	1.07	0.180	1.14	0.68	1.92	0.632
			Lag 1	1.09	0.88	1.36	0.420	1.10	0.61	1.99	0.773
			Lag 2	0.98	0.79	1.21	0.852	0.91	0.54	1.53	0.733
			Lag 3	0.82	0.66	1.03	0.092	1.34	0.83	2.19	0.237
		Cerebro-vascular	Lag 0	0.93	0.80	1.09	0.384	0.93	0.62	1.38	0.724
			Lag 1	0.96	0.82	1.13	0.643	1.18	0.82	1.71	0.384
			Lag 2	1.08	0.93	1.25	0.334	1.23	0.87	1.74	0.233

			Lag 3	1.09	0.94	1.27	0.260	1.04	0.72	1.50	0.861
		Renal	Lag 0	1.00	0.74	1.35	0.998	2.05	0.98	4.31	0.056
			Lag 1	1.09	0.81	1.46	0.555	1.73	0.84	3.58	0.138
			Lag 2	1.01	0.76	1.36	0.933	1.91	0.96	3.77	0.063
			Lag 3	1.00	0.76	1.33	0.980	2.16	1.11	4.22	**0.023**
		Respiratory	Lag 0	0.97	0.75	1.25	0.804	0.65	0.29	1.47	0.306
			Lag 1	1.04	0.81	1.33	0.752	0.66	0.27	1.59	0.355
			Lag 2	1.00	0.78	1.29	0.976	1.06	0.52	2.19	0.879
			Lag 3	0.97	0.74	1.26	0.802	1.16	0.61	2.21	0.668
	1-4 weeks	All-natural	Lag 0	1.02	1.01	1.04	**0.000**	1.05	1.03	1.06	**0.000**
			Lag 1	1.03	1.02	1.04	**0.000**	1.03	1.01	1.05	**0.000**
			Lag 2	1.03	1.02	1.04	**0.000**	1.01	0.99	1.02	0.408
			Lag 3	1.02	1.01	1.03	**0.002**	1.01	1.00	1.03	0.085
		Cardio-vascular	Lag 0	0.85	0.66	1.11	0.231	0.96	0.68	1.35	0.828
			Lag 1	1.09	0.86	1.39	0.462	1.07	0.74	1.56	0.721
			Lag 2	0.98	0.78	1.24	0.888	0.93	0.65	1.34	0.718
			Lag 3	0.80	0.62	1.04	0.091	1.07	0.76	1.49	0.722
		Cerebro-vascular	Lag 0	0.98	0.83	1.17	0.856	0.82	0.63	1.07	0.149
			Lag 1	0.95	0.79	1.13	0.544	1.09	0.85	1.40	0.497
			Lag 2	1.09	0.93	1.29	0.291	1.11	0.87	1.42	0.394
			Lag 3	1.09	0.92	1.29	0.305	1.06	0.83	1.37	0.647
		Renal	Lag 0	0.83	0.59	1.18	0.307	1.94	1.23	3.07	**0.005**
			Lag 1	1.03	0.74	1.44	0.862	1.52	0.95	2.42	0.079
			Lag 2	0.94	0.68	1.31	0.727	1.58	1.00	2.51	**0.050**
			Lag 3	1.06	0.79	1.44	0.685	1.24	0.77	2.00	0.380
		Respiratory	Lag 0	0.93	0.69	1.24	0.602	0.93	0.59	1.47	0.771
			Lag 1	1.03	0.78	1.35	0.855	0.92	0.58	1.47	0.752
			Lag 2	0.93	0.70	1.23	0.603	1.24	0.81	1.91	0.334
			Lag 3	0.95	0.71	1.27	0.731	1.08	0.70	1.67	0.735
Black	1-2 weeks	All-natural	Lag 0	1.03	1.02	1.04	**0.000**	1.02	1.00	1.04	**0.035**
			Lag 1	1.03	1.02	1.04	**0.000**	1.02	1.00	1.04	**0.023**
			Lag 2	1.03	1.02	1.04	**0.000**	1.01	0.99	1.04	0.145
			Lag 3	1.02	1.01	1.03	**0.000**	1.01	0.99	1.03	0.464
		Cardio-vascular	Lag 0	1.17	0.96	1.43	0.117	1.15	0.78	1.72	0.487
			Lag 1	1.13	0.93	1.38	0.221	0.97	0.63	1.50	0.895
			Lag 2	1.08	0.88	1.33	0.446	0.93	0.61	1.42	0.762
			Lag 3	1.15	0.95	1.40	0.159	1.08	0.72	1.61	0.727
		Cerebro-vascular	Lag 0	0.99	0.82	1.18	0.891	1.29	0.91	1.83	0.151
			Lag 1	1.14	0.95	1.37	0.145	1.10	0.78	1.55	0.581
			Lag 2	1.06	0.89	1.26	0.544	1.00	0.71	1.40	0.982
			Lag 3	1.14	0.95	1.36	0.162	1.14	0.82	1.58	0.446
		Renal	Lag 0	1.27	0.95	1.71	0.110	1.32	0.71	2.46	0.382
			Lag 1	1.33	1.00	1.76	0.050	1.37	0.76	2.46	0.298
			Lag 2	1.14	0.86	1.50	0.358	1.18	0.63	2.24	0.619

		Lag 3	1.14	0.87	1.50	0.337	1.00	0.52	1.95	0.990
	Respiratory	Lag 0	0.77	0.61	0.98	**0.037**	1.44	0.96	2.16	0.081
		Lag 1	0.82	0.65	1.04	0.105	1.49	0.98	2.26	0.060
		Lag 2	0.81	0.64	1.02	0.072	1.44	0.96	2.15	0.075
		Lag 3	0.89	0.71	1.11	0.313	1.54	1.03	2.30	**0.037**
2-3 weeks	All-natural	Lag 0	1.02	1.01	1.03	**0.000**	1.05	1.02	1.08	**0.000**
		Lag 1	1.03	1.02	1.04	**0.000**	1.06	1.04	1.09	**0.000**
		Lag 2	1.02	1.02	1.03	**0.000**	1.03	1.01	1.06	**0.016**
		Lag 3	1.02	1.01	1.03	**0.000**	1.00	0.98	1.03	0.728
	Cardio-vascular	Lag 0	1.14	0.94	1.39	0.185	1.31	0.85	2.02	0.225
		Lag 1	1.07	0.88	1.29	0.515	1.34	0.82	2.18	0.243
		Lag 2	1.07	0.88	1.31	0.470	0.89	0.52	1.53	0.694
		Lag 3	1.19	0.99	1.43	0.071	0.74	0.39	1.39	0.359
	Cerebro-vascular	Lag 0	1.02	0.85	1.21	0.845	1.20	0.80	1.79	0.396
		Lag 1	1.12	0.94	1.33	0.217	1.23	0.82	1.84	0.313
		Lag 2	1.03	0.87	1.21	0.770	1.14	0.75	1.72	0.546
		Lag 3	1.17	0.98	1.38	0.075	0.96	0.63	1.48	0.873
	Renal	Lag 0	1.09	0.81	1.46	0.571	3.09	1.60	5.97	**0.001**
		Lag 1	1.28	0.97	1.67	0.080	1.73	0.83	3.60	0.143
		Lag 2	1.11	0.85	1.45	0.454	1.44	0.68	3.05	0.344
		Lag 3	1.12	0.87	1.46	0.380	1.04	0.44	2.47	0.931
	Respiratory	Lag 0	0.96	0.77	1.19	0.681	0.56	0.29	1.06	0.075
		Lag 1	0.98	0.79	1.22	0.857	0.65	0.35	1.21	0.178
		Lag 2	0.93	0.75	1.15	0.486	0.80	0.44	1.47	0.486
		Lag 3	1.01	0.82	1.24	0.923	0.76	0.38	1.51	0.437
1-4 weeks	All-natural	Lag 0	1.02	1.01	1.04	**0.000**	1.03	1.01	1.04	**0.001**
		Lag 1	1.02	1.01	1.04	**0.000**	1.04	1.03	1.06	**0.000**
		Lag 2	1.02	1.01	1.04	**0.000**	1.03	1.01	1.04	**0.000**
		Lag 3	1.02	1.01	1.03	**0.002**	1.02	1.00	1.03	**0.047**
	Cardio-vascular	Lag 0	1.12	0.89	1.40	0.346	1.26	0.95	1.67	0.114
		Lag 1	1.10	0.88	1.38	0.386	1.10	0.81	1.48	0.546
		Lag 2	1.18	0.94	1.46	0.148	0.84	0.60	1.17	0.303
		Lag 3	1.26	1.02	1.56	**0.031**	0.93	0.67	1.28	0.659
	Cerebro-vascular	Lag 0	1.03	0.84	1.26	0.787	1.07	0.82	1.40	0.620
		Lag 1	1.09	0.89	1.33	0.396	1.21	0.93	1.57	0.149
		Lag 2	1.05	0.86	1.27	0.642	1.03	0.79	1.34	0.828
		Lag 3	1.14	0.94	1.39	0.190	1.13	0.87	1.46	0.373
	Renal	Lag 0	1.06	0.75	1.48	0.751	1.81	1.18	2.78	**0.007**
		Lag 1	1.27	0.93	1.73	0.134	1.46	0.94	2.29	0.095
		Lag 2	1.00	0.74	1.37	0.980	1.51	0.98	2.32	0.063
		Lag 3	1.00	0.74	1.35	0.992	1.44	0.93	2.24	0.105
	Respiratory	Lag 0	0.78	0.59	1.02	0.065	1.12	0.81	1.54	0.499
		Lag 1	0.82	0.63	1.06	0.135	1.17	0.85	1.60	0.340
		Lag 2	0.81	0.62	1.05	0.106	1.16	0.84	1.59	0.379

			Lag 3	0.89	0.70	1.14	0.356	1.23	0.90	1.68	0.194
Higher Education ZCTA	1-2 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.00	0.92	1.08	0.991	0.97	0.81	1.16	0.765
			Lag 1	1.05	0.97	1.13	0.210	1.01	0.85	1.20	0.928
			Lag 2	1.04	0.96	1.12	0.364	1.06	0.90	1.25	0.513
			Lag 3	0.99	0.91	1.07	0.721	1.10	0.93	1.29	0.267
		Cerebro-vascular	Lag 0	1.00	0.94	1.07	0.895	1.17	1.02	1.34	**0.027**
			Lag 1	1.02	0.96	1.09	0.472	1.11	0.97	1.27	0.134
			Lag 2	1.06	0.99	1.13	0.081	1.10	0.97	1.26	0.137
			Lag 3	1.02	0.96	1.09	0.489	0.98	0.86	1.12	0.799
		Renal	Lag 0	1.10	1.00	1.22	0.058	1.22	0.97	1.55	0.089
			Lag 1	1.11	1.00	1.23	**0.042**	1.26	1.01	1.58	**0.039**
			Lag 2	1.09	0.99	1.21	0.082	1.01	0.80	1.28	0.944
			Lag 3	1.07	0.97	1.18	0.166	0.94	0.74	1.19	0.600
		Respiratory	Lag 0	0.94	0.86	1.04	0.238	1.22	0.99	1.49	0.060
			Lag 1	1.01	0.92	1.11	0.883	1.07	0.87	1.32	0.517
			Lag 2	1.03	0.94	1.13	0.553	1.13	0.92	1.38	0.256
			Lag 3	1.10	1.00	1.20	**0.047**	0.94	0.77	1.16	0.583
	2-3 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.01	0.94	1.09	0.796	0.90	0.74	1.11	0.339
			Lag 1	1.06	0.98	1.14	0.163	0.98	0.80	1.19	0.826
			Lag 2	1.06	0.99	1.14	0.118	0.92	0.75	1.12	0.402
			Lag 3	1.00	0.93	1.08	0.976	1.05	0.87	1.27	0.630
		Cerebro-vascular	Lag 0	1.05	0.98	1.11	0.161	0.95	0.81	1.13	0.599
			Lag 1	1.05	0.99	1.12	0.114	0.98	0.83	1.15	0.781
			Lag 2	1.06	1.00	1.13	0.067	1.13	0.97	1.32	0.113
			Lag 3	1.01	0.95	1.08	0.682	1.04	0.89	1.21	0.639
		Renal	Lag 0	1.09	0.99	1.20	0.096	1.39	1.06	1.82	**0.016**
			Lag 1	1.12	1.02	1.24	**0.019**	1.20	0.91	1.57	0.200
			Lag 2	1.05	0.95	1.16	0.341	1.33	1.02	1.75	**0.037**
			Lag 3	1.04	0.94	1.14	0.444	1.14	0.85	1.52	0.379
		Respiratory	Lag 0	0.98	0.89	1.07	0.649	1.06	0.82	1.36	0.686
			Lag 1	0.99	0.91	1.09	0.902	1.23	0.96	1.58	0.096
			Lag 2	1.03	0.94	1.13	0.497	1.17	0.91	1.49	0.220
			Lag 3	1.09	1.00	1.19	0.061	0.94	0.74	1.21	0.662
	1-4 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-

			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.01	0.92	1.10	0.860	0.97	0.85	1.10	0.641
			Lag 1	1.06	0.98	1.15	0.162	1.01	0.88	1.14	0.938
			Lag 2	1.06	0.98	1.15	0.152	0.99	0.88	1.13	0.936
			Lag 3	1.01	0.93	1.10	0.811	1.00	0.89	1.13	0.984
		Cerebro-vascular	Lag 0	1.03	0.96	1.11	0.408	1.04	0.93	1.15	0.500
			Lag 1	1.02	0.95	1.10	0.502	1.07	0.97	1.19	0.173
			Lag 2	1.04	0.97	1.12	0.246	1.13	1.02	1.24	**0.021**
			Lag 3	1.01	0.94	1.08	0.758	1.03	0.93	1.14	0.636
		Renal	Lag 0	1.05	0.94	1.18	0.398	1.30	1.10	1.54	**0.002**
			Lag 1	1.11	0.99	1.24	0.063	1.19	1.01	1.41	**0.037**
			Lag 2	1.05	0.94	1.17	0.378	1.16	0.97	1.37	0.096
			Lag 3	1.06	0.95	1.18	0.311	1.03	0.87	1.23	0.723
		Respiratory	Lag 0	0.93	0.84	1.04	0.204	1.12	0.96	1.30	0.167
			Lag 1	0.98	0.89	1.09	0.729	1.11	0.95	1.29	0.196
			Lag 2	0.99	0.90	1.10	0.917	1.17	1.00	1.36	**0.044**
			Lag 3	1.09	0.99	1.20	0.095	1.02	0.88	1.19	0.778
Lower Education ZCTA	1-2 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.14	1.02	1.28	**0.019**	0.95	0.72	1.24	0.712
			Lag 1	1.15	1.03	1.28	**0.013**	0.90	0.68	1.17	0.428
			Lag 2	1.08	0.97	1.21	0.153	0.84	0.64	1.10	0.209
			Lag 3	1.11	0.99	1.24	0.069	0.96	0.74	1.24	0.753
		Cerebro-vascular	Lag 0	1.01	0.92	1.11	0.839	0.97	0.78	1.22	0.822
			Lag 1	1.05	0.95	1.15	0.324	0.90	0.72	1.12	0.347
			Lag 2	1.01	0.92	1.11	0.822	0.89	0.72	1.10	0.277
			Lag 3	1.08	0.98	1.18	0.125	0.85	0.69	1.06	0.152
		Renal	Lag 0	1.09	0.94	1.26	0.266	0.75	0.51	1.11	0.151
			Lag 1	1.10	0.95	1.26	0.200	1.01	0.71	1.45	0.946
			Lag 2	1.05	0.91	1.21	0.498	1.02	0.73	1.44	0.900
			Lag 3	1.01	0.87	1.16	0.942	1.12	0.80	1.57	0.521
		Respiratory	Lag 0	0.92	0.81	1.05	0.227	1.07	0.80	1.44	0.649
			Lag 1	1.01	0.89	1.15	0.830	0.92	0.69	1.24	0.618
			Lag 2	0.96	0.84	1.09	0.486	0.95	0.71	1.28	0.754
			Lag 3	0.99	0.87	1.12	0.844	1.05	0.80	1.38	0.736
	2-3 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.07	0.96	1.20	0.214	1.40	1.05	1.85	**0.020**
			Lag 1	1.09	0.98	1.21	0.120	1.25	0.92	1.69	0.148
			Lag 2	1.02	0.92	1.14	0.703	1.21	0.90	1.62	0.207

			Lag 3	1.08	0.97	1.20	0.163	1.08	0.81	1.43	0.620
		Cerebro-vascular	Lag 0	1.00	0.91	1.10	0.966	1.05	0.82	1.35	0.710
			Lag 1	0.98	0.90	1.08	0.733	1.35	1.06	1.71	**0.015**
			Lag 2	0.98	0.89	1.08	0.672	1.06	0.82	1.36	0.668
			Lag 3	1.06	0.96	1.16	0.242	0.89	0.68	1.16	0.404
		Renal	Lag 0	1.06	0.92	1.22	0.427	0.81	0.53	1.25	0.357
			Lag 1	1.09	0.95	1.25	0.207	0.98	0.64	1.52	0.945
			Lag 2	1.04	0.90	1.19	0.619	1.11	0.74	1.65	0.624
			Lag 3	1.01	0.88	1.16	0.893	1.09	0.73	1.63	0.689
		Respiratory	Lag 0	0.96	0.84	1.09	0.512	0.85	0.59	1.22	0.381
			Lag 1	1.04	0.92	1.18	0.494	0.67	0.45	1.00	**0.048**
			Lag 2	0.97	0.86	1.10	0.664	0.81	0.55	1.18	0.276
			Lag 3	1.02	0.90	1.14	0.785	0.84	0.58	1.22	0.367
	1-4 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.09	0.96	1.23	0.184	1.17	0.97	1.41	0.101
			Lag 1	1.15	1.02	1.29	**0.022**	1.01	0.82	1.23	0.960
			Lag 2	1.08	0.96	1.22	0.174	0.94	0.77	1.14	0.526
			Lag 3	1.11	0.99	1.26	0.072	1.00	0.83	1.21	0.972
		Cerebro-vascular	Lag 0	1.01	0.91	1.12	0.892	0.99	0.84	1.17	0.953
			Lag 1	1.02	0.92	1.13	0.750	1.04	0.88	1.22	0.685
			Lag 2	1.01	0.91	1.12	0.844	0.93	0.79	1.10	0.413
			Lag 3	1.10	0.99	1.21	0.070	0.88	0.75	1.05	0.149
		Renal	Lag 0	1.11	0.95	1.30	0.197	0.86	0.66	1.12	0.260
			Lag 1	1.12	0.96	1.30	0.143	1.00	0.77	1.29	0.987
			Lag 2	1.05	0.90	1.22	0.545	1.05	0.82	1.34	0.728
			Lag 3	1.01	0.87	1.18	0.855	1.06	0.82	1.36	0.687
		Respiratory	Lag 0	0.93	0.80	1.07	0.300	0.99	0.79	1.23	0.919
			Lag 1	1.04	0.91	1.20	0.552	0.89	0.71	1.12	0.334
			Lag 2	0.98	0.86	1.13	0.810	0.88	0.70	1.11	0.272
			Lag 3	1.00	0.87	1.14	0.951	1.00	0.81	1.24	0.988
Female	1-2 weeks	All-natural	Lag 0	1.02	1.01	1.02	**0.000**	1.04	1.03	1.05	**0.000**
			Lag 1	1.02	1.02	1.02	**0.000**	1.02	1.01	1.03	**0.000**
			Lag 2	1.02	1.02	1.02	**0.000**	1.01	1.00	1.01	0.191
			Lag 3	1.02	1.02	1.02	**0.000**	0.99	0.98	1.00	0.083
		Cardio-vascular	Lag 0	0.99	0.89	1.09	0.809	1.03	0.83	1.28	0.798
			Lag 1	1.05	0.95	1.15	0.354	0.99	0.80	1.23	0.944
			Lag 2	1.05	0.96	1.16	0.271	1.09	0.89	1.34	0.398
			Lag 3	1.04	0.95	1.15	0.373	1.30	1.07	1.58	**0.009**
		Cerebro-vascular	Lag 0	1.02	0.95	1.11	0.527	1.14	0.97	1.34	0.124
			Lag 1	1.05	0.98	1.14	0.178	1.19	1.02	1.40	**0.030**
			Lag 2	1.01	0.94	1.09	0.703	1.09	0.93	1.29	0.271

		Lag 3	0.97	0.89	1.04	0.374	0.99	0.84	1.17	0.933
	Renal	Lag 0	1.07	0.96	1.20	0.221	1.01	0.77	1.31	0.958
		Lag 1	1.10	0.99	1.23	0.089	1.13	0.88	1.46	0.334
		Lag 2	1.06	0.95	1.18	0.331	1.01	0.78	1.31	0.952
		Lag 3	0.99	0.89	1.11	0.926	0.88	0.67	1.16	0.382
	Respiratory	Lag 0	0.95	0.86	1.06	0.386	1.06	0.84	1.34	0.615
		Lag 1	1.01	0.91	1.12	0.810	1.03	0.81	1.31	0.791
		Lag 2	1.03	0.93	1.14	0.539	1.14	0.91	1.43	0.256
		Lag 3	1.03	0.93	1.14	0.515	0.97	0.78	1.22	0.833
2-3 weeks	All-natural	Lag 0	1.02	1.01	1.02	**0.000**	1.06	1.05	1.07	**0.000**
		Lag 1	1.02	1.02	1.02	**0.000**	1.03	1.02	1.04	**0.000**
		Lag 2	1.02	1.02	1.02	**0.000**	1.00	0.99	1.01	0.921
		Lag 3	1.02	1.01	1.02	**0.000**	1.00	0.99	1.01	0.520
	Cardio-vascular	Lag 0	1.00	0.91	1.11	0.942	0.94	0.72	1.23	0.688
		Lag 1	1.04	0.95	1.14	0.403	1.02	0.79	1.32	0.875
		Lag 2	1.06	0.97	1.16	0.187	1.06	0.83	1.35	0.682
		Lag 3	1.07	0.97	1.17	0.174	1.25	0.99	1.58	0.056
	Cerebro-vascular	Lag 0	1.07	0.99	1.15	0.082	0.91	0.75	1.11	0.357
		Lag 1	1.07	0.99	1.15	0.093	1.19	0.99	1.44	0.065
		Lag 2	1.01	0.94	1.08	0.846	1.21	1.00	1.46	**0.045**
		Lag 3	0.96	0.90	1.04	0.343	1.03	0.85	1.24	0.787
	Renal	Lag 0	1.07	0.96	1.20	0.210	0.96	0.69	1.31	0.791
		Lag 1	1.11	0.99	1.23	0.071	1.09	0.80	1.49	0.597
		Lag 2	1.04	0.94	1.16	0.453	1.06	0.78	1.46	0.712
		Lag 3	0.98	0.88	1.09	0.760	0.87	0.62	1.23	0.451
	Respiratory	Lag 0	1.00	0.90	1.11	0.983	0.76	0.56	1.03	0.078
		Lag 1	1.03	0.93	1.14	0.554	0.91	0.68	1.21	0.512
		Lag 2	1.06	0.96	1.17	0.220	0.94	0.71	1.26	0.712
		Lag 3	1.04	0.94	1.14	0.489	0.94	0.71	1.23	0.664
1-4 weeks	All-natural	Lag 0	1.01	1.01	1.02	**0.000**	1.04	1.03	1.05	**0.000**
		Lag 1	1.02	1.01	1.02	**0.000**	1.03	1.02	1.03	**0.000**
		Lag 2	1.02	1.02	1.02	**0.000**	1.01	1.01	1.02	**0.000**
		Lag 3	1.02	1.01	1.02	**0.000**	1.01	1.00	1.02	**0.003**
	Cardio-vascular	Lag 0	1.01	0.91	1.13	0.815	0.96	0.81	1.13	0.617
		Lag 1	1.08	0.98	1.20	0.126	0.94	0.80	1.10	0.441
		Lag 2	1.09	0.98	1.20	0.114	1.01	0.86	1.18	0.910
		Lag 3	1.09	0.98	1.20	0.109	1.09	0.94	1.27	0.262
	Cerebro-vascular	Lag 0	1.05	0.96	1.14	0.278	1.04	0.92	1.18	0.560
		Lag 1	1.04	0.96	1.13	0.348	1.17	1.03	1.32	**0.013**
		Lag 2	1.00	0.92	1.09	0.971	1.10	0.97	1.24	0.143
		Lag 3	0.98	0.90	1.06	0.574	0.96	0.84	1.09	0.496
	Renal	Lag 0	1.02	0.90	1.16	0.730	1.16	0.96	1.39	0.121
		Lag 1	1.10	0.97	1.24	0.136	1.13	0.94	1.36	0.198
		Lag 2	1.02	0.90	1.15	0.806	1.14	0.94	1.37	0.182

			Lag 3	0.97	0.86	1.09	0.621	1.00	0.82	1.21	0.993
		Respiratory	Lag 0	0.99	0.89	1.11	0.899	0.92	0.77	1.10	0.376
			Lag 1	1.02	0.91	1.14	0.705	1.00	0.83	1.19	0.973
			Lag 2	1.05	0.94	1.17	0.415	1.05	0.88	1.25	0.580
			Lag 3	1.03	0.92	1.14	0.652	1.01	0.85	1.20	0.893
Hispanic	1-2 weeks	All-natural	Lag 0	1.03	1.02	1.03	**0.000**	1.05	1.03	1.06	**0.000**
			Lag 1	1.03	1.02	1.03	**0.000**	1.03	1.02	1.04	**0.000**
			Lag 2	1.03	1.02	1.03	**0.000**	1.01	0.99	1.02	0.256
			Lag 3	1.02	1.01	1.02	**0.000**	1.00	0.98	1.01	0.507
		Cardio-vascular	Lag 0	1.03	0.89	1.18	0.721	0.79	0.57	1.11	0.176
			Lag 1	1.00	0.87	1.15	0.961	1.02	0.75	1.39	0.897
			Lag 2	0.97	0.85	1.11	0.678	1.18	0.88	1.57	0.264
			Lag 3	0.95	0.82	1.09	0.436	1.22	0.93	1.61	0.144
		Cerebro-vascular	Lag 0	1.01	0.91	1.13	0.798	1.03	0.80	1.33	0.830
			Lag 1	1.05	0.94	1.17	0.412	0.90	0.70	1.16	0.408
			Lag 2	1.00	0.89	1.11	0.953	0.92	0.72	1.18	0.526
			Lag 3	1.02	0.91	1.14	0.758	0.89	0.70	1.13	0.358
		Renal	Lag 0	1.12	0.96	1.31	0.157	0.97	0.66	1.43	0.898
			Lag 1	0.98	0.84	1.16	0.845	1.17	0.81	1.69	0.401
			Lag 2	1.18	1.01	1.38	**0.042**	0.84	0.57	1.24	0.395
			Lag 3	1.05	0.90	1.23	0.512	1.12	0.78	1.60	0.559
		Respiratory	Lag 0	1.19	1.02	1.39	**0.028**	0.92	0.62	1.35	0.669
			Lag 1	1.08	0.92	1.26	0.355	1.19	0.84	1.68	0.331
			Lag 2	1.05	0.90	1.23	0.550	1.13	0.81	1.58	0.473
			Lag 3	0.95	0.81	1.10	0.491	0.83	0.59	1.17	0.290
	2-3 weeks	All-natural	Lag 0	1.02	1.02	1.03	**0.000**	1.07	1.05	1.08	**0.000**
			Lag 1	1.03	1.02	1.03	**0.000**	1.04	1.02	1.06	**0.000**
			Lag 2	1.03	1.02	1.03	**0.000**	1.00	0.98	1.01	0.652
			Lag 3	1.02	1.01	1.02	**0.000**	0.99	0.98	1.01	0.488
		Cardio-vascular	Lag 0	0.99	0.86	1.13	0.849	0.96	0.66	1.41	0.853
			Lag 1	0.99	0.87	1.13	0.893	1.14	0.78	1.66	0.503
			Lag 2	0.99	0.87	1.13	0.845	1.15	0.81	1.64	0.433
			Lag 3	1.01	0.88	1.15	0.930	0.94	0.67	1.31	0.729
		Cerebro-vascular	Lag 0	1.05	0.94	1.17	0.419	0.83	0.61	1.13	0.242
			Lag 1	1.05	0.94	1.17	0.366	0.82	0.60	1.12	0.207
			Lag 2	1.01	0.90	1.12	0.918	0.83	0.62	1.13	0.240
			Lag 3	1.02	0.91	1.13	0.763	0.84	0.63	1.14	0.269
		Renal	Lag 0	1.11	0.96	1.30	0.167	0.91	0.56	1.48	0.715
			Lag 1	1.02	0.88	1.19	0.768	0.85	0.51	1.42	0.557
			Lag 2	1.12	0.97	1.31	0.133	1.01	0.62	1.63	0.976
			Lag 3	1.04	0.90	1.21	0.567	1.17	0.74	1.83	0.513
		Respiratory	Lag 0	1.14	0.98	1.33	0.100	1.23	0.80	1.88	0.346
			Lag 1	1.05	0.90	1.22	0.555	1.59	1.06	2.38	**0.024**
			Lag 2	1.06	0.91	1.23	0.474	1.16	0.76	1.76	0.499

			Lag 3	0.99	0.85	1.14	0.863	0.51	0.30	0.85	**0.010**
	1-4 weeks	All-natural	Lag 0	1.02	1.02	1.03	**0.000**	1.05	1.04	1.06	**0.000**
			Lag 1	1.02	1.02	1.03	**0.000**	1.04	1.03	1.04	**0.000**
			Lag 2	1.03	1.02	1.03	**0.000**	1.01	1.01	1.02	**0.002**
			Lag 3	1.02	1.01	1.02	**0.000**	1.01	1.00	1.02	**0.034**
		Cardio-vascular	Lag 0	1.05	0.90	1.23	0.522	0.84	0.66	1.07	0.168
			Lag 1	1.03	0.89	1.20	0.703	0.95	0.75	1.21	0.704
			Lag 2	0.99	0.85	1.15	0.875	1.05	0.84	1.31	0.686
			Lag 3	1.01	0.86	1.17	0.936	0.98	0.79	1.21	0.859
		Cerebro-vascular	Lag 0	1.03	0.91	1.16	0.658	0.99	0.82	1.19	0.938
			Lag 1	1.06	0.94	1.19	0.381	0.95	0.79	1.14	0.565
			Lag 2	1.00	0.89	1.13	0.951	0.94	0.78	1.13	0.494
			Lag 3	1.05	0.93	1.18	0.401	0.87	0.72	1.05	0.139
		Renal	Lag 0	1.17	0.98	1.39	0.080	0.94	0.71	1.25	0.704
			Lag 1	1.04	0.87	1.23	0.685	0.95	0.72	1.27	0.752
			Lag 2	1.18	0.99	1.39	0.060	0.98	0.74	1.30	0.909
			Lag 3	1.03	0.87	1.22	0.742	1.16	0.89	1.52	0.271
		Respiratory	Lag 0	1.19	1.00	1.41	0.052	1.05	0.81	1.37	0.718
			Lag 1	1.04	0.88	1.23	0.643	1.23	0.95	1.58	0.113
			Lag 2	1.05	0.89	1.24	0.568	1.09	0.85	1.41	0.507
			Lag 3	0.97	0.82	1.14	0.702	0.83	0.64	1.08	0.164
Male	1-2 weeks	All-natural	Lag 0	1.03	1.02	1.03	**0.000**	1.04	1.03	1.06	**0.000**
			Lag 1	1.03	1.02	1.03	**0.000**	1.02	1.01	1.03	**0.000**
			Lag 2	1.03	1.02	1.03	**0.000**	1.00	0.99	1.01	0.809
			Lag 3	1.02	1.01	1.02	**0.000**	0.99	0.98	1.00	0.080
		Cardio-vascular	Lag 0	1.02	1.02	1.03	**0.000**	1.07	1.06	1.09	**0.000**
			Lag 1	1.03	1.02	1.03	**0.000**	1.04	1.03	1.06	**0.000**
			Lag 2	1.02	1.02	1.03	**0.000**	1.00	0.99	1.01	0.706
			Lag 3	1.02	1.02	1.02	**0.000**	0.98	0.97	1.00	**0.007**
		Cerebro-vascular	Lag 0	1.02	1.02	1.03	**0.000**	1.05	1.04	1.06	**0.000**
			Lag 1	1.02	1.02	1.03	**0.000**	1.03	1.03	1.04	**0.000**
			Lag 2	1.02	1.02	1.03	**0.000**	1.01	1.01	1.02	**0.000**
			Lag 3	1.02	1.01	1.02	**0.000**	1.01	1.00	1.01	0.106
		Renal	Lag 0	1.09	1.00	1.18	0.053	0.91	0.74	1.11	0.356
			Lag 1	1.11	1.02	1.20	**0.015**	0.95	0.78	1.17	0.656
			Lag 2	1.05	0.97	1.14	0.232	0.90	0.74	1.10	0.314
			Lag 3	1.01	0.93	1.10	0.813	0.88	0.73	1.07	0.193
		Respiratory	Lag 0	0.99	0.91	1.07	0.733	1.08	0.92	1.28	0.356
			Lag 1	1.01	0.94	1.09	0.800	0.92	0.78	1.08	0.310
			Lag 2	1.07	0.99	1.15	0.082	0.99	0.85	1.16	0.904
			Lag 3	1.11	1.03	1.20	**0.005**	0.90	0.77	1.06	0.200
	2-3 weeks	All-natural	Lag 0	1.13	0.99	1.28	0.060	1.17	0.87	1.58	0.307
			Lag 1	1.11	0.99	1.26	0.079	1.28	0.97	1.69	0.086
			Lag 2	1.11	0.98	1.25	0.091	1.04	0.77	1.39	0.828

			Lag 3	1.12	0.99	1.26	0.069	1.14	0.86	1.51	0.372
		Cardio-vascular	Lag 0	0.92	0.82	1.03	0.145	1.29	1.01	1.64	**0.038**
			Lag 1	1.01	0.90	1.13	0.853	1.00	0.79	1.28	0.974
			Lag 2	0.97	0.87	1.09	0.606	0.98	0.76	1.25	0.871
			Lag 3	1.08	0.97	1.20	0.152	0.98	0.77	1.24	0.852
		Cerebro-vascular	Lag 0	1.05	0.97	1.14	0.253	1.11	0.90	1.37	0.330
			Lag 1	1.09	1.00	1.18	**0.048**	1.07	0.86	1.34	0.551
			Lag 2	1.04	0.96	1.13	0.339	0.95	0.76	1.18	0.639
			Lag 3	1.00	0.92	1.09	0.976	0.93	0.75	1.14	0.482
		Renal	Lag 0	1.00	0.92	1.07	0.897	1.06	0.87	1.29	0.569
			Lag 1	1.00	0.93	1.07	0.927	0.97	0.80	1.18	0.781
			Lag 2	1.06	0.98	1.14	0.129	1.03	0.86	1.23	0.781
			Lag 3	1.09	1.01	1.17	**0.022**	0.97	0.81	1.17	0.776
		Respiratory	Lag 0	1.08	0.96	1.23	0.196	1.56	1.13	2.15	**0.007**
			Lag 1	1.13	1.00	1.26	**0.046**	1.24	0.88	1.74	0.224
			Lag 2	1.05	0.93	1.18	0.405	1.52	1.11	2.09	**0.009**
			Lag 3	1.09	0.97	1.22	0.158	1.45	1.04	2.01	**0.026**
	1-4 weeks	All-natural	Lag 0	0.94	0.84	1.05	0.274	1.27	0.95	1.70	0.100
			Lag 1	0.99	0.89	1.11	0.906	1.16	0.86	1.57	0.325
			Lag 2	0.95	0.86	1.06	0.394	1.15	0.86	1.54	0.365
			Lag 3	1.09	0.98	1.21	0.096	0.87	0.64	1.19	0.389
		Cardio-vascular	Lag 0	1.05	0.95	1.15	0.340	1.09	0.94	1.25	0.242
			Lag 1	1.09	1.00	1.20	0.053	1.06	0.92	1.23	0.410
			Lag 2	1.06	0.97	1.16	0.198	0.95	0.83	1.10	0.538
			Lag 3	1.01	0.92	1.11	0.801	0.94	0.82	1.08	0.396
		Cerebro-vascular	Lag 0	1.00	0.92	1.09	0.981	1.01	0.89	1.15	0.870
			Lag 1	1.00	0.92	1.09	0.929	0.97	0.86	1.10	0.629
			Lag 2	1.06	0.98	1.15	0.163	1.04	0.92	1.17	0.536
			Lag 3	1.10	1.01	1.19	**0.020**	1.01	0.89	1.14	0.906
		Renal	Lag 0	1.12	0.98	1.28	0.096	1.17	0.94	1.45	0.165
			Lag 1	1.13	0.99	1.29	0.061	1.16	0.94	1.43	0.179
			Lag 2	1.09	0.96	1.25	0.182	1.12	0.90	1.38	0.315
			Lag 3	1.13	1.00	1.29	0.058	1.10	0.89	1.36	0.395
		Respiratory	Lag 0	0.87	0.76	0.98	**0.026**	1.26	1.05	1.50	**0.012**
			Lag 1	0.98	0.87	1.11	0.800	1.07	0.89	1.27	0.498
			Lag 2	0.93	0.82	1.05	0.238	1.08	0.90	1.29	0.414
			Lag 3	1.09	0.97	1.22	0.161	1.01	0.85	1.21	0.900
Lesser poverty ZCTA	1-2 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.06	0.99	1.14	0.107	0.97	0.82	1.15	0.762
			Lag 1	1.10	1.02	1.17	**0.009**	0.99	0.84	1.17	0.913
			Lag 2	1.07	1.00	1.14	0.063	1.02	0.87	1.19	0.855

			Lag 3	1.03	0.96	1.11	0.354	1.08	0.93	1.26	0.311
		Cerebro-vascular	Lag 0	0.99	0.93	1.05	0.640	1.12	0.98	1.27	0.085
			Lag 1	1.02	0.96	1.08	0.606	1.07	0.94	1.21	0.322
			Lag 2	1.05	0.99	1.11	0.132	1.09	0.96	1.23	0.176
			Lag 3	1.04	0.98	1.11	0.154	0.95	0.84	1.08	0.473
		Renal	Lag 0	1.09	1.00	1.20	0.060	1.05	0.84	1.31	0.691
			Lag 1	1.12	1.03	1.23	**0.011**	1.08	0.87	1.35	0.476
			Lag 2	1.10	1.00	1.20	**0.039**	1.02	0.82	1.26	0.900
			Lag 3	1.04	0.95	1.14	0.380	0.99	0.79	1.23	0.910
		Respiratory	Lag 0	0.92	0.84	1.01	0.067	1.20	0.99	1.45	0.062
			Lag 1	1.00	0.92	1.08	0.936	1.05	0.87	1.28	0.614
			Lag 2	1.00	0.92	1.09	0.947	1.06	0.88	1.29	0.531
			Lag 3	1.06	0.97	1.15	0.192	0.91	0.75	1.10	0.321
	2-3 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.05	0.98	1.13	0.152	1.01	0.84	1.21	0.933
			Lag 1	1.08	1.01	1.16	**0.022**	1.06	0.88	1.28	0.525
			Lag 2	1.07	1.00	1.14	**0.047**	0.99	0.82	1.18	0.896
			Lag 3	1.03	0.96	1.10	0.447	1.15	0.97	1.37	0.102
		Cerebro-vascular	Lag 0	1.02	0.96	1.08	0.537	0.95	0.81	1.11	0.539
			Lag 1	1.03	0.97	1.09	0.335	1.02	0.87	1.18	0.854
			Lag 2	1.04	0.99	1.10	0.149	1.15	1.00	1.33	0.057
			Lag 3	1.02	0.97	1.08	0.396	1.06	0.92	1.22	0.467
		Renal	Lag 0	1.07	0.98	1.18	0.122	1.17	0.90	1.50	0.241
			Lag 1	1.11	1.02	1.21	**0.020**	1.16	0.90	1.50	0.261
			Lag 2	1.06	0.97	1.16	0.218	1.33	1.04	1.71	**0.024**
			Lag 3	1.01	0.93	1.10	0.810	1.22	0.94	1.59	0.134
		Respiratory	Lag 0	0.96	0.88	1.04	0.288	1.04	0.82	1.31	0.773
			Lag 1	1.00	0.92	1.08	0.937	1.09	0.87	1.38	0.447
			Lag 2	1.00	0.93	1.09	0.918	1.11	0.88	1.40	0.384
			Lag 3	1.05	0.97	1.14	0.234	0.91	0.72	1.15	0.426
	1-4 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	1.05	0.97	1.13	0.256	1.05	0.93	1.18	0.444
			Lag 1	1.10	1.02	1.19	**0.009**	1.02	0.91	1.15	0.729
			Lag 2	1.09	1.01	1.17	**0.023**	0.99	0.88	1.11	0.884
			Lag 3	1.05	0.97	1.13	0.232	1.04	0.92	1.16	0.547
		Cerebro-vascular	Lag 0	1.01	0.95	1.08	0.804	1.01	0.91	1.11	0.872
			Lag 1	1.01	0.95	1.08	0.757	1.06	0.96	1.17	0.232
			Lag 2	1.03	0.97	1.10	0.361	1.11	1.01	1.22	**0.027**

			Lag 3	1.03	0.97	1.10	0.354	1.02	0.93	1.12	0.675
		Renal	Lag 0	1.06	0.95	1.17	0.290	1.16	0.99	1.36	0.063
			Lag 1	1.12	1.02	1.24	**0.024**	1.11	0.95	1.30	0.183
			Lag 2	1.06	0.96	1.17	0.249	1.16	0.99	1.36	0.063
			Lag 3	1.02	0.93	1.13	0.649	1.06	0.91	1.25	0.463
		Respiratory	Lag 0	0.93	0.84	1.02	0.120	1.05	0.91	1.22	0.502
			Lag 1	0.99	0.90	1.09	0.830	1.04	0.90	1.20	0.578
			Lag 2	0.98	0.89	1.07	0.632	1.10	0.96	1.27	0.183
			Lag 3	1.04	0.95	1.14	0.348	1.00	0.87	1.15	0.955
Higher poverty ZCTA	1-2 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	0.97	0.83	1.14	0.728	0.92	0.66	1.29	0.652
			Lag 1	1.01	0.87	1.18	0.884	0.91	0.65	1.26	0.569
			Lag 2	0.98	0.85	1.15	0.839	0.88	0.63	1.23	0.476
			Lag 3	0.98	0.85	1.14	0.839	0.96	0.71	1.30	0.786
		Cerebro-vascular	Lag 0	1.11	0.97	1.26	0.123	1.07	0.82	1.40	0.649
			Lag 1	1.11	0.98	1.26	0.114	0.96	0.73	1.26	0.768
			Lag 2	1.02	0.90	1.16	0.753	0.83	0.63	1.09	0.191
			Lag 3	1.01	0.89	1.15	0.830	0.89	0.67	1.17	0.410
		Renal	Lag 0	1.11	0.92	1.35	0.266	1.18	0.77	1.80	0.450
			Lag 1	1.04	0.86	1.26	0.712	1.64	1.13	2.39	**0.010**
			Lag 2	1.00	0.83	1.21	0.980	1.04	0.69	1.58	0.860
			Lag 3	1.08	0.90	1.30	0.414	1.03	0.68	1.57	0.893
		Respiratory	Lag 0	1.00	0.84	1.19	0.970	1.06	0.74	1.52	0.775
			Lag 1	1.07	0.91	1.27	0.401	0.91	0.62	1.32	0.617
			Lag 2	1.00	0.84	1.19	0.982	1.06	0.76	1.48	0.764
			Lag 3	1.05	0.90	1.24	0.512	1.21	0.88	1.67	0.240
	2-3 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	0.93	0.79	1.09	0.352	1.19	0.82	1.72	0.355
			Lag 1	0.99	0.85	1.15	0.919	0.99	0.67	1.47	0.966
			Lag 2	0.96	0.83	1.11	0.575	1.02	0.70	1.48	0.937
			Lag 3	1.03	0.89	1.18	0.701	0.68	0.45	1.03	0.068
		Cerebro-vascular	Lag 0	1.09	0.96	1.24	0.165	1.13	0.83	1.54	0.455
			Lag 1	1.04	0.91	1.17	0.583	1.37	1.01	1.85	**0.041**
			Lag 2	0.98	0.87	1.12	0.806	0.95	0.70	1.30	0.775
			Lag 3	1.03	0.91	1.16	0.646	0.74	0.52	1.04	0.082
		Renal	Lag 0	1.09	0.91	1.32	0.338	1.35	0.83	2.19	0.230
			Lag 1	1.13	0.95	1.36	0.173	1.12	0.68	1.84	0.681
			Lag 2	1.00	0.84	1.20	0.979	1.04	0.64	1.71	0.873

			Lag 3	1.10	0.93	1.32	0.272	0.82	0.48	1.39	0.463
		Respiratory	Lag 0	1.04	0.88	1.23	0.623	0.81	0.52	1.28	0.378
			Lag 1	1.08	0.92	1.27	0.350	0.74	0.45	1.22	0.235
			Lag 2	1.04	0.88	1.22	0.655	0.83	0.53	1.29	0.406
			Lag 3	1.10	0.95	1.28	0.204	0.90	0.58	1.40	0.656
	1-4 weeks	All-natural	Lag 0	-	-	-	-	-	-	-	-
			Lag 1	-	-	-	-	-	-	-	-
			Lag 2	-	-	-	-	-	-	-	-
			Lag 3	-	-	-	-	-	-	-	-
		Cardio-vascular	Lag 0	0.97	0.81	1.15	0.721	0.95	0.74	1.22	0.709
			Lag 1	1.02	0.86	1.21	0.812	0.93	0.72	1.20	0.588
			Lag 2	0.98	0.83	1.16	0.830	0.93	0.73	1.19	0.579
			Lag 3	1.03	0.88	1.21	0.733	0.88	0.70	1.12	0.314
		Cerebro-vascular	Lag 0	1.10	0.95	1.26	0.197	1.10	0.90	1.35	0.362
			Lag 1	1.08	0.94	1.24	0.294	1.07	0.88	1.32	0.501
			Lag 2	1.03	0.90	1.18	0.689	0.88	0.71	1.08	0.231
			Lag 3	1.07	0.93	1.23	0.331	0.82	0.66	1.01	0.066
		Renal	Lag 0	1.11	0.90	1.37	0.321	1.16	0.85	1.58	0.352
			Lag 1	1.09	0.88	1.34	0.432	1.25	0.93	1.68	0.147
			Lag 2	1.01	0.82	1.24	0.917	1.01	0.74	1.38	0.965
			Lag 3	1.12	0.92	1.36	0.267	0.97	0.70	1.33	0.842
		Respiratory	Lag 0	0.95	0.78	1.16	0.634	1.13	0.87	1.46	0.352
			Lag 1	1.07	0.89	1.29	0.476	0.99	0.75	1.31	0.958
			Lag 2	1.04	0.87	1.26	0.640	0.95	0.73	1.25	0.725
			Lag 3	1.09	0.92	1.29	0.318	1.07	0.83	1.39	0.597
White	1-2 weeks	All-natural	Lag 0	1.02	1.01	1.02	**0.000**	1.04	1.03	1.05	**0.000**
			Lag 1	1.02	1.02	1.03	**0.000**	1.02	1.01	1.03	**0.000**
			Lag 2	1.02	1.02	1.02	**0.000**	1.00	0.99	1.01	0.807
			Lag 3	1.02	1.02	1.02	**0.000**	0.99	0.98	1.00	**0.003**
		Cardio-vascular	Lag 0	1.05	0.97	1.15	0.232	1.03	0.84	1.27	0.789
			Lag 1	1.11	1.02	1.20	**0.016**	0.96	0.78	1.17	0.672
			Lag 2	1.10	1.01	1.20	**0.022**	0.96	0.78	1.17	0.686
			Lag 3	1.06	0.97	1.15	0.179	1.02	0.84	1.24	0.845
		Cerebro-vascular	Lag 0	1.02	0.95	1.10	0.625	1.16	0.99	1.38	0.071
			Lag 1	1.04	0.97	1.12	0.303	1.11	0.95	1.31	0.191
			Lag 2	1.05	0.98	1.13	0.186	1.14	0.98	1.33	0.092
			Lag 3	1.02	0.95	1.10	0.552	0.91	0.77	1.07	0.252
		Renal	Lag 0	1.08	0.96	1.22	0.176	1.04	0.79	1.36	0.807
			Lag 1	1.14	1.02	1.28	**0.018**	1.15	0.88	1.49	0.303
			Lag 2	1.02	0.91	1.14	0.745	1.02	0.78	1.33	0.894
			Lag 3	1.01	0.90	1.13	0.863	0.94	0.71	1.24	0.665
		Respiratory	Lag 0	0.89	0.80	0.99	**0.035**	1.19	0.94	1.51	0.147
			Lag 1	1.03	0.92	1.14	0.627	0.90	0.70	1.16	0.427
			Lag 2	1.03	0.93	1.14	0.594	0.89	0.70	1.15	0.383

		Lag 3	1.16	1.05	1.28	**0.004**	0.93	0.73	1.18	0.545
2-3 weeks	All-natural	Lag 0	1.02	1.01	1.02	**0.000**	1.06	1.05	1.08	**0.000**
		Lag 1	1.02	1.02	1.02	**0.000**	1.03	1.02	1.04	**0.000**
		Lag 2	1.02	1.02	1.02	**0.000**	1.00	0.99	1.01	0.632
		Lag 3	1.02	1.02	1.02	**0.000**	0.99	0.98	1.00	**0.012**
	Cardio-vascular	Lag 0	1.05	0.96	1.14	0.263	1.06	0.84	1.33	0.623
		Lag 1	1.10	1.01	1.19	**0.027**	0.99	0.79	1.24	0.957
		Lag 2	1.09	1.00	1.18	**0.040**	1.01	0.81	1.26	0.925
		Lag 3	1.04	0.96	1.13	0.306	1.12	0.91	1.38	0.300
	Cerebro-vascular	Lag 0	1.06	0.98	1.14	0.134	0.95	0.77	1.16	0.602
		Lag 1	1.05	0.97	1.12	0.227	1.12	0.92	1.36	0.248
		Lag 2	1.04	0.97	1.12	0.233	1.25	1.04	1.49	**0.016**
		Lag 3	1.00	0.93	1.07	0.927	1.05	0.88	1.26	0.604
	Renal	Lag 0	1.08	0.97	1.21	0.170	1.02	0.74	1.40	0.922
		Lag 1	1.16	1.04	1.29	**0.009**	1.05	0.77	1.44	0.761
		Lag 2	1.00	0.89	1.11	0.967	1.20	0.88	1.63	0.253
		Lag 3	1.01	0.90	1.12	0.918	0.93	0.66	1.30	0.673
	Respiratory	Lag 0	0.92	0.83	1.02	0.122	1.05	0.79	1.40	0.754
		Lag 1	1.01	0.91	1.12	0.869	0.99	0.74	1.33	0.973
		Lag 2	1.01	0.92	1.12	0.792	0.96	0.72	1.29	0.797
		Lag 3	1.13	1.03	1.25	**0.011**	1.00	0.76	1.32	0.991
1-4 weeks	All-natural	Lag 0	1.01	1.01	1.02	**0.000**	1.05	1.04	1.05	**0.000**
		Lag 1	1.02	1.01	1.02	**0.000**	1.03	1.02	1.04	**0.000**
		Lag 2	1.02	1.01	1.02	**0.000**	1.01	1.00	1.02	**0.001**
		Lag 3	1.02	1.01	1.02	**0.000**	1.00	1.00	1.01	0.219
	Cardio-vascular	Lag 0	1.03	0.94	1.13	0.532	1.11	0.95	1.28	0.186
		Lag 1	1.12	1.02	1.23	**0.013**	0.99	0.85	1.15	0.926
		Lag 2	1.11	1.02	1.22	**0.020**	1.00	0.86	1.15	0.987
		Lag 3	1.06	0.97	1.16	0.202	1.04	0.90	1.20	0.634
	Cerebro-vascular	Lag 0	1.04	0.96	1.13	0.355	1.05	0.92	1.19	0.467
		Lag 1	1.03	0.95	1.12	0.445	1.11	0.98	1.25	0.114
		Lag 2	1.03	0.95	1.11	0.540	1.17	1.04	1.32	**0.009**
		Lag 3	1.01	0.93	1.09	0.877	0.99	0.88	1.12	0.911
	Renal	Lag 0	1.07	0.94	1.21	0.297	1.09	0.90	1.33	0.393
		Lag 1	1.16	1.03	1.31	**0.015**	1.11	0.91	1.35	0.294
		Lag 2	1.01	0.89	1.14	0.895	1.05	0.86	1.29	0.619
		Lag 3	1.04	0.92	1.18	0.496	0.89	0.72	1.10	0.273
	Respiratory	Lag 0	0.87	0.77	0.98	**0.022**	1.10	0.92	1.32	0.278
		Lag 1	1.03	0.92	1.15	0.669	0.96	0.80	1.15	0.656
		Lag 2	1.02	0.91	1.14	0.776	0.98	0.82	1.18	0.833
		Lag 3	1.16	1.04	1.29	**0.008**	1.02	0.85	1.21	0.874

Table S.13 Percent change in effects of extreme heat modified by prior wildfire smoke exposure relative to non-modified effects. Significant differences were tested with upper and lower limits (UL and LL, respectively) for 95% confidence intervals (CIs) and p-values (bolded indicates significant $p < 0.05$). Wildfire smoke exposure is tested on lag 0-3, separately. Separate models were run for six different effect modifier periods: 1-2, 2-3, 1-4, 4-8, 8-12, and 1-12 weeks.

EM Period	OOI	Lag	Pct. Change	CI LL	CI UL	P-value
1-2 weeks	All-natural	Lag 0	1.88%	1.13%	2.63%	**0.000**
		Lag 1	-0.16%	-0.89%	0.57%	0.666
		Lag 2	-1.87%	-2.58%	-1.16%	1.000
		Lag 3	-2.77%	-3.46%	-2.07%	1.000
	Cardiovascular	Lag 0	-8.20%	-24.12%	7.73%	0.843
		Lag 1	-10.88%	-26.75%	4.99%	0.910
		Lag 2	-6.41%	-22.08%	9.25%	0.789
		Lag 3	3.11%	-12.77%	19.00%	0.351
	Cerebrovascular	Lag 0	10.43%	-3.60%	24.47%	0.073
		Lag 1	1.54%	-11.74%	14.81%	0.410
		Lag 2	-0.34%	-13.18%	12.51%	0.521
		Lag 3	-9.60%	-21.78%	2.59%	0.939
	Renal	Lag 0	-2.15%	-25.48%	21.18%	0.572
		Lag 1	8.80%	-15.53%	33.13%	0.239
		Lag 2	-5.98%	-27.77%	15.80%	0.705
		Lag 3	-5.29%	-26.64%	16.06%	0.686
	Respiratory	Lag 0	22.83%	1.87%	43.78%	**0.016**
		Lag 1	0.76%	-18.38%	19.89%	0.469
		Lag 2	5.88%	-13.46%	25.22%	0.276
		Lag 3	-8.08%	-25.81%	9.65%	0.814
2-3 weeks	All-natural	Lag 0	4.58%	3.71%	5.44%	**0.000**
		Lag 1	1.53%	0.68%	2.38%	**0.000**
		Lag 2	-2.10%	-2.92%	-1.29%	1.000
		Lag 3	-2.74%	-3.54%	-1.95%	1.000
	Cardiovascular	Lag 0	1.23%	-17.31%	19.77%	0.448
		Lag 1	-1.60%	-20.42%	17.22%	0.566
		Lag 2	-5.80%	-23.32%	11.71%	0.742
		Lag 3	2.83%	-14.94%	20.61%	0.377
	Cerebrovascular	Lag 0	-4.74%	-19.45%	9.98%	0.736
		Lag 1	4.64%	-10.91%	20.20%	0.279
		Lag 2	7.85%	-7.58%	23.28%	0.159
		Lag 3	-2.70%	-16.88%	11.48%	0.646
	Renal	Lag 0	12.29%	-16.41%	40.99%	0.201
		Lag 1	3.63%	-24.48%	31.74%	0.400
		Lag 2	21.94%	-7.68%	51.57%	0.073
		Lag 3	9.32%	-18.50%	37.14%	0.256
	Respiratory	Lag 0	0.80%	-20.99%	22.59%	0.471

		Lag 1	0.44%	-22.13%	23.00%	0.485
		Lag 2	2.58%	-20.15%	25.30%	0.412
		Lag 3	-15.36%	-35.58%	4.85%	0.932
1-4 weeks	All-natural	Lag 0	2.76%	2.15%	3.37%	**0.000**
		Lag 1	0.96%	0.36%	1.56%	**0.001**
		Lag 2	-0.88%	-1.47%	-0.28%	0.998
		Lag 3	-1.02%	-1.61%	-0.43%	1.000
	Cardiovascular	Lag 0	-0.23%	-13.48%	13.02%	0.514
		Lag 1	-8.47%	-21.69%	4.74%	0.896
		Lag 2	-9.24%	-21.93%	3.45%	0.923
		Lag 3	-3.97%	-16.60%	8.66%	0.731
	Cerebrovascular	Lag 0	0.26%	-10.62%	11.15%	0.481
		Lag 1	4.15%	-6.88%	15.18%	0.231
		Lag 2	3.65%	-7.27%	14.57%	0.256
		Lag 3	-5.41%	-15.89%	5.06%	0.844
	Renal	Lag 0	9.35%	-9.71%	28.41%	0.168
		Lag 1	2.80%	-16.03%	21.62%	0.386
		Lag 2	7.75%	-10.68%	26.18%	0.205
		Lag 3	0.20%	-17.40%	17.79%	0.491
	Respiratory	Lag 0	13.79%	-1.91%	29.49%	**0.043**
		Lag 1	2.63%	-12.90%	18.16%	0.370
		Lag 2	7.38%	-8.35%	23.12%	0.179
		Lag 3	-4.06%	-19.10%	10.99%	0.701
4-8 weeks	All-natural	Lag 0	-0.01%	-0.61%	0.58%	0.518
		Lag 1	-0.88%	-1.47%	-0.29%	0.998
		Lag 2	-0.87%	-1.45%	-0.28%	0.998
		Lag 3	-0.86%	-1.44%	-0.27%	0.998
	Cardiovascular	Lag 0	1.96%	-11.11%	15.03%	0.384
		Lag 1	-8.87%	-21.87%	4.13%	0.909
		Lag 2	-4.59%	-17.31%	8.14%	0.760
		Lag 3	5.24%	-7.66%	18.15%	0.213
	Cerebrovascular	Lag 0	0.78%	-9.80%	11.36%	0.442
		Lag 1	6.74%	-4.09%	17.57%	0.111
		Lag 2	14.07%	2.96%	25.19%	**0.007**
		Lag 3	7.77%	-3.01%	18.55%	0.079
	Renal	Lag 0	-6.14%	-24.30%	12.02%	0.746
		Lag 1	-1.04%	-19.50%	17.43%	0.544
		Lag 2	9.30%	-9.12%	27.72%	0.161
		Lag 3	9.99%	-8.03%	28.01%	0.139
	Respiratory	Lag 0	-7.47%	-21.76%	6.82%	0.847
		Lag 1	4.37%	-10.93%	19.66%	0.288
		Lag 2	3.44%	-11.94%	18.83%	0.330
		Lag 3	1.60%	-13.70%	16.90%	0.419
8-12 weeks	All-natural	Lag 0	-1.77%	-2.40%	-1.13%	1.000

		Lag 1	-2.74%	-3.37%	-2.12%	1.000
		Lag 2	-1.97%	-2.59%	-1.35%	1.000
		Lag 3	-1.58%	-2.20%	-0.97%	1.000
	Cardiovascular	Lag 0	-0.48%	-14.25%	13.29%	0.527
		Lag 1	-4.86%	-18.72%	9.00%	0.754
		Lag 2	4.94%	-8.85%	18.73%	0.241
		Lag 3	-0.76%	-14.04%	12.52%	0.545
	Cerebrovascular	Lag 0	0.79%	-10.55%	12.13%	0.446
		Lag 1	-3.08%	-14.26%	8.09%	0.706
		Lag 2	4.88%	-6.61%	16.37%	0.203
		Lag 3	-1.31%	-12.34%	9.72%	0.592
	Renal	Lag 0	7.11%	-12.95%	27.16%	0.244
		Lag 1	-5.50%	-24.69%	13.70%	0.713
		Lag 2	-4.06%	-22.45%	14.33%	0.667
		Lag 3	-2.93%	-20.72%	14.85%	0.627
	Respiratory	Lag 0	-1.28%	-16.76%	14.20%	0.564
		Lag 1	11.37%	-5.35%	28.08%	0.091
		Lag 2	19.77%	2.39%	37.14%	**0.013**
		Lag 3	24.12%	6.61%	41.63%	**0.003**
1-12 weeks	All-natural	Lag 0	0.19%	-0.37%	0.75%	0.256
		Lag 1	-0.70%	-1.26%	-0.14%	0.993
		Lag 2	-0.85%	-1.40%	-0.30%	0.999
		Lag 3	-0.58%	-1.13%	-0.04%	0.982
	Cardiovascular	Lag 0	-1.38%	-13.58%	10.81%	0.588
		Lag 1	-5.07%	-17.40%	7.25%	0.790
		Lag 2	-3.35%	-15.29%	8.59%	0.709
		Lag 3	-0.41%	-12.23%	11.41%	0.527
	Cerebrovascular	Lag 0	-0.17%	-10.20%	9.87%	0.513
		Lag 1	11.05%	1.04%	21.07%	**0.015**
		Lag 2	14.23%	4.30%	24.16%	**0.002**
		Lag 3	6.45%	-3.31%	16.22%	0.098
	Renal	Lag 0	5.63%	-11.22%	22.48%	0.256
		Lag 1	-4.79%	-21.66%	12.09%	0.711
		Lag 2	3.92%	-12.16%	20.01%	0.316
		Lag 3	0.35%	-15.22%	15.91%	0.483
	Respiratory	Lag 0	-0.32%	-14.09%	13.45%	0.518
		Lag 1	10.77%	-3.21%	24.75%	0.066
		Lag 2	17.37%	3.43%	31.31%	**0.007**
		Lag 3	12.75%	-1.12%	26.61%	**0.036**