

# Supplementary Material

## Characterizing Neighborhood Vulnerabilities in Mild Cognitive Impairment using the Environmental Justice Index

**Supplementary Table 1. Environmental Justice Index: Environmental Burden Indicators**

Environmental Burden Module		
<b>Air Pollution</b>	Ozone	Mean annual # of days with ozone concentration over NAAQS
	PM2.5	Mean annual % of days with avg PM2.5 concentrations over NAAQS
	Diesel Particulate Matter	Concentration of diesel particulate matter ( $\mu\text{g}/\text{m}^3$ )
	Air Toxics Cancer Risk	Lifetime risk of cancer from toxic air inhalation
<b>Potentially Hazardous &amp; Toxic Sites</b>	National Priority List Sites	Proportion of area within 1 mile of EPA NPL sites
	Toxic Release Inventory (TRI) Sites	Proportion of area within 1 mile of TRI sites
	Treatment, Storage, and Disposal Sites (TSDS)	Proportion of area within 1 mile of EPA TSDS
	Risk Management Plan (RMP) Sites	Proportion of area within 1 mile of EPA RMP sites
	Coal Mines	Proportion of area within 1 mile of coal mine
	Lead Mines	Proportion of area within 1 mile of active lead mine
<b>Built Environment</b>	Lack of Recreational Parks	Proportion of area without park, rec area, or public forest within 1 mile
	Houses Built Pre-1980	Proportion of housing built before 1980
	Lack of Walkability	Score from National Walkability Index
<b>Transportation Infrastructure</b>	High-volume Roads	Proportion of area within 1 mile of a high-volume road
	Railways	Proportion of area within 1 mile of a railway
	Airports	Proportion of area within 1 mile of an airport
<b>Water Pollution</b>	Impaired Surface Water	% of “impaired” watershed area

Adapted from Centers for Disease Control and Prevention and Agency for Toxic Substances Disease Registry, *Environmental Justice Index (EJI) Indicators*. 2022.

**Supplementary Table 2. Environmental Justice Index: Social Vulnerability Indicators**

<b>Social Vulnerability Module (SVR)</b>		
<b>Racial/Ethnic Minority Status</b>	Minority Status	% of pop. that is an ethnic minority
<b>Socioeconomic Status</b>	Poverty	% of pop. with income < 200% of federal poverty line
	No High School Diploma	% of adults 25+ without high school diploma
	Unemployment	% of individuals 16+ who are undeployed
	Housing Tenure	% of housing that is occupied by renter
	Housing Burdened Lower-Income Households	% of households with annual income < \$75,000 and more than 30% of monthly income used for housing
	Lack of Health Insurance	% of civilians and non-institutionalized pop. without health insurance
	Lack of Broadband Access	% of households with no internet subscription
<b>Household Characteristics</b>	Age 65 and Older	% of pop. that is 65 or older
	Age 17 and Younger	% of pop. that is 17 or younger
	Civilian with a Disability	% of civilian and noninstitutionalized pop. with a disability
	Speaks English “Less than Well”	% of pop. over 5 years that speaks English “less than well”
<b>Housing Type</b>	Group Quarters	% of individuals living in group establishments
	Mobile Homes	% of housing unites designated to be mobile homes

Adapted from Centers for Disease Control and Prevention and Agency for Toxic Substances Disease Registry, *Environmental Justice Index (EJI) Indicators*. 2022.

**Supplementary Table 3. Area Deprivation Index Components**

<b>Education</b>	% of pop. 25+ with less than 9 years of education
	% of pop. 25+ with at least high school diploma
	% of pop. 16+ in white-collar occupations
<b>Income/Employment</b>	Median family income
	Income Disparity
	% families below federal poverty level
	% of pop. < 150% of federal poverty level
	% 16+ civilian labor force that is unemployed
<b>Housing</b>	Median home value
	Median gross rent
	Median monthly mortgage
	% housing units occupied by owner
	% occupied housing units without complete plumbing
<b>Household Characteristics</b>	% households with single parent and children less than 18
	% households without motor vehicle
	% households without telephone
	% household with more than 1 person per room

Adapted from Maroko, A.R., et al., *Integrating Social Determinants of Health With Treatment and Prevention: A New Tool to Assess Local Area Deprivation*. *Prev Chronic Dis*, 2016. **13**: p. E128.