

GuLF STUDY Geospatial Linkages

Index/Dataset	Measure(s) of Interest	Event Linked	Author of Index	Source/URL
AMBIENT HAZARDOUS POLLUTANTS				
National Air Toxics Assessment (NATA)	Hazardous air pollutant emissions and modeled ambient concentrations	enrollment, home visit, FUP1, clinical exam, FUP2	U.S. EPA	https://www.epa.gov/national-air-toxics-assessment
SEDAC	PM2.5	home visit, clinical exam	NASA SEDAC	https://beta.sedac.ciesin.columbia.edu/data
SEDAC	Nitrogen dioxide	home visit, clinical exam	NASA SEDAC	https://beta.sedac.ciesin.columbia.edu/data
WEATHER				
Daily Surface Weather Data (Daily)(Daymet)	Duration of daylight, precipitation, shortwave radiation, snow water equivalent, max/min temperature, water vapor pressure	enrollment, home visit, clinical exam	NASA	https://daac.ornl.gov/cgi-bin/dsviewer.pl?ds_id=2129
Parameter-Elevation Regressions on Independent Slopes Model (PRISM)	Precipitation and temperature (including humidity); solar radiation	home visit	Oregon State University	https://prism.oregonstate.edu/
NATURAL AND BUILT ENVIRONMENT				
Environmental Quality Index (EQI)	Data in five domains: air, water, land, built, and sociodemographic environments	enrollment	U.S. EPA	https://www.epa.gov/healthresearch/environmental-quality-index-eqi
Normalized Difference Vegetation Index (NDVI) and Enhanced Vegetation Index (EVI)	Greenspace as derived from satellite-collected reflectance measures:	home visit	NASA	https://modis.gsfc.nasa.gov/data/dataproduct/mod13.php
Rural-Urban Commuting Area Codes (RUCA)		home visit	USDA	https://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes/
NATURAL DISASTERS				
National Risk Index (NRI)	Risk of natural disaster events - specific event types and overall risk measured	enrollment, home visit, clinical exam	FEMA	https://hazards.fema.gov/nri/
SOCIAL				
Area Deprivation Index (ADI)	Neighborhood disadvantage	enrollment, home visit, FUP1, clinical exam, FUP2	University of Wisconsin	https://www.neighborhoodatlas.medicine.wisc.edu/
Home Owners' Loan Corporation (HOLC)	Historic Redlining	enrollment, home visit	US National Archives	https://dsl.richmond.edu/panorama/redlining
Resilience from National Risk Index dataset	Resilience to natural disasters	enrollment, home visit, clinical exam	FEMA/Casey Zuzak	https://hazards.fema.gov/nri/
Social Vulnerability Index (SVI)	Social vulnerability to disasters	enrollment, home visit	CDC ATSDR	https://www.atsdr.cdc.gov/place-health/php/svi
Social Vulnerability Index (SoVI) - Tract level	Social vulnerability to disasters	home visit	Chris Emrich	https://coast.noaa.gov/digitalcoast/data/sovi.html

As of December 10, 2025