Opioid Environment Policy Scan

A project by the Healthy Regions & Policies Lab at University of Chicago (JCOIN MAARC)

Data Documentation

ABOUT OEPS

The Opioid Environment Policy Scan (OEPS) is a free, open-source data warehouse providing access to data at multiple spatial scales to help characterize the multi-dimensional risk environment impacting opioid use in justice populations across the United States.

The OEPS was developed for the Justice Community Opioid Innovation Network (JCOIN) by the Healthy Regions and Policies Lab at the University of Chicago. In addition to our GitHub, data is also available to the JCOIN Network through the JCOIN Data Commons.

We developed the OEPS as an open-source resource for sharing publicly-available data at the Census tract, zip code, county, and state levels. Geographic boundary shapefiles are provided for merging datasets for further exploration, spatial analysis, or visualization. All datasets are accompanied by metadata docs with further details. Learn more about our methods and approaches, including the risk environment framework, in Methodology.

OEPS EXPLORER

To explore, download, and visualize OEPS data, and learn more about this project, visit the OEPS Explorer.

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RISK ENVIRONMENT FRAMEWORK

The Opioid Environment Policy Scan data warehouse builds on previous research on risk environment frameworks, like work by MAARC Spatial Program team members investigating rural risk environments for opioid-related overdoses and associated health consequences (Kolak et al., 2020). 'Risk environment' frameworks hypothesize that drug-related harm is a product of influences from social, physical, economic, and political environments (Ciccarone, 2017, Cooper et al., 2016; Heimer et al., 2014; Rhodes, 2009). Characterizing the risk environment in a particular area or for a particular disease shifts the focus of drug-related harm research away from individuals, and toward environmental factors driving or enabling trends at the community level. This model produces generative findings, rather than causal, encouraging greater understanding of the contexts in which opioid use harm occurs (Rhodes, 2009).

We used a risk environment framework to guide data selection for the Opioid Environment Policy Scan. Data were stratified into seven spheres of influence: Policy, Health, Demographic, Economic, Built Environment, and COVID-19. The warehouse includes 45 data variable constructs across spheres characterizing the opioid use risk environment across U.S. geographies and spatial scales at the Census tract, ZIP Code Tract Area (ZCTA), county, and state levels.

This data can be used in Exploratory Spatial Data Analysis (ESDA), multivariate regionalization techniques, or other data-driven research models to investigate and uncover consistent spatial and temporal trends in justice populations impacted by opioid use disorder. They can also be used as individual community contextual indicators when integrating with individual-level data by linking by spatial location (tract, ZCTA, county, or state).

DATA OVERVIEW

Variable constructs have been grouped thematically to highlight the multi-dimensional risk environment of opioid use in justice populations. The variable themes are: **Geographic Boundaries**, **Policy**, **Health**, **Demographic**, **Economic**, **Built Environment**, and **COVID-19**.

For more information about the individual variables, please refer to the complete **Data Dictionary** below.

Geographic Boundaries

Variable Construct	Description	Source	Metadata	Spatial Scale
Geographic Boundaries	State, County, Census Tract, Zip Code Tract Area (ZCTA)	US Census, 2018	Geographic Boundaries	State, County, Tract, Zip

Policy Variables

Variable Construct	Description	Source	Metadata	Spatial Scale
Prison Incarceration Rates	Prison population rate and prison admission rate by gender and ethnicity	Vera Institute of Justice, 2016	PS01 / Prison Variables	County
Jail Incarceration Rates	Jail population rate by gender and ethnicity	Vera Institute of Justice, 2017	PS02 / Jail Variables	County
Prescription Drug Monitoring Programs (PDMP)	Any PDMP; Operational PDMP; Must-access PDMP; Electronic PDMP	OPTIC, 2017	PS03 / PDMP	State
Good Samaritan Laws	Any Good Samaritan Law; Good Samaritan Law protecting arrest	OPTIC, 2017	PS04 / GSL	State

Naloxone Access Laws	Any Naloxone law; law allowing distribution through a standing or protocol order; law allowing pharmacists prescriptive authority	OPTIC, 2017	PS05 / NAL	State
Medicaid Expenditure	Total Medicaid spending	KFF, 2019	PS06 / MedExp	State
Medicaid Expansion	Spending for adults who have enrolled through Medicaid expansion	KFF, 2018	PS07 / MedExpan	State
Syringe Services Laws	Laws clarifying legal status for syringe exchange, distribution, and possession programs	LawAtlas, 2019	PS08 / Syringe	State
Medical Marijuana Laws	Law authorizing adults to use medical marijuana	PDAPS, 2017	PS09 / MedMarijLaw	State
State & Local Government Expenditures	Government spending on public health, welfare, public safety, corrections	US Census, 2018	PS11 / Government Expenditures	State, Local

Health Variables

Variable Construct	Description	Source	Metadata	Spatial Scale
Drug-related death rate	Death rate from drug-related causes	CDC WONDER, 2019 10-year ave.	Health01 / Drug-Related Death Rate	State, County
Hepatitis C infection rate	Hepatitis C prevalence and mortality	HepVu, 2017	Health02 / Hepatitis C Rate	State
Physicians	Number of Primary Care and Specialist Physicians	Dartmouth Atlas, 2010	Health03 / Physicians	County, Tract, Zip
Access to MOUDs	(1) Distance to nearest MOUD (2) Driving time to nearest MOUD (3) Count within 30 min. range	US Census, SAMHSA, Vivitrol, 2020	Access01 / Access: MOUDs	County, Tract, Zip
Access to Health Centers	Distance to nearest FQHC	US Census, HRSA, 2020	Access02 / Access: FQHCs	Tract, Zip
Access to Hospitals	Distance to nearest hospital	US Census, CovidCareMap, 2020	Access03 / Access: Hospitals	Tract, Zip
Access to Mental Health Providers	Distance to nearest mental health provider	US Census, SAMSHA 2020	Access04 / Access: Mental Health Providers	Tract, Zip
Access to Pharmacies	Distance to nearest pharmacy	US Census, InfoGroup 2018	Access05 / Access: Pharmacies	Tract, Zip

Access to Substance Use Treatment	Distance from centroid to nearest Substance Use Treatment facility	SAMHSA, US Census	Access06/ Access Substance Use Treatment	Tract, Zip
Access to Opioid Use Treatment	Distance from centroid to nearest Opioid Treatment Program	SAMHSA, US Census	Access07/ Access Opioid Treatment Program	Tract, Zip

Demographic Variables

Variable Construct	Description	Source	Metadata	Spatial Scale
Race & Ethnicity	Percentages of population defined by categories of race and ethnicity	ACS, 2018 5-year	DS01/ Race & Ethnicity Variables	State, County, Tract, Zip
Age	Age group estimates and percentages of population	ACS, 2018 5-year	DS01 / Age Variables	State, County, Tract, Zip
Disability	Percentage of population with a disability	ACS, 2018 5-year	DS01 / Other Demographic Variables	State, County, Tract, Zip
Educational Attainment	Population without a high school degree	ACS, 2018 5-year	DS01 / Other Demographic Variables	State, County, Tract, Zip
Social Determinants of Health	SDOH Neighborhood Typologies	Kolak et al, 2020	DS02 / SDOH Typology	Tract

(SDOH)				
Social Vulnerability Index (SVI)	SVI Rankings	CDC, 2018	DS03 / SVI	County, Tract, Zip
Veteran Population	Population with veteran status	ACS, 2017 5-year	DS04 / Veteran Population Variables	State, County, Tract, Zip
Homeless Population	Pupulation identified as homeless	ACS, 2019 5-year, Housing and Urban Development, 2020	DS05 / Homeless Population Variables	State, County, Tract, Zip

Economic Variables

Variable Construct	Description	Source	Metadata	Spatial Scale
Employment Trends	Percentages of population employed in High Risk of Injury Jobs, Educational Services, Health Care, Retail industries	ACS, 2018 5-year	EC01 / Jobs by Industry	State, County, Tract, Zip
Unemployment Rate	Unemployment rate	ACS, 2018 5-year	EC03 / Economic Variables	State, County, Tract, Zip
Poverty Rate	Percent classified as below poverty level, based on income	ACS, 2018 5-year	EC03 / Economic Variables	State, County, Tract, Zip
Per Capita Income	Per capita income in the past 12 months	ACS, 2018 5-year	EC03 / Economic Variables	State, County, Tract, Zip
Foreclosure Rate	Mortgage foreclosure and severe delinquency rate	HUD, 2009	EC04 / Foreclosure Rate	State, County, Tract

Built Environment Variables

Variable Construct	Description	Source	Metadata	Spatial Scale
Housing Occupancy Rate	Percent occupied units	ACS, 2018 5-year	BE01 / Housing Variables	State, County, Tract, Zip
Housing Vacancy Rate	Percent vacant units	ACS, 2018 5-year	BE01 / Housing Variables	State, County, Tract, Zip
Long Term Occupancy	Percentage of population living in current housing for 20+ years	ACS, 2018 5-year	BE01 / Housing Variables	State, County, Tract, Zip
Mobile Homes	Percent of housing units classified as mobile homes	ACS, 2018 5-year	BE01 / Housing Variables	State, County, Tract, Zip
Rental Rates	Percent of housing units occupied by renters	ACS, 2018 5-year	BE01 / Housing Variables	State, County, Tract, Zip
Housing Unit Density	Housing units per square mile	ACS, 2018 5-year	BE01 / Housing Variables	State, County, Tract, Zip
Urban/Suburban/ Rural Classification	Classification of areas using percent rurality (County) or RUCA codes (Tract, Zip)	USDA & ACS, 2018 5-year	BE02 / Rural-Urban Classifications	County, Tract, Zip

Alcohol Outlet Density	Alcohol outlets per square mile, alcohol outlets per capita	InfoGroup, 2018	BE03 / Alcohol Outlets	State, County, Tract, Zip
Hypersegregated Cities	US metropolitan areas where black residents experience hypersegregation	Massey et al, 2015	BE04 / Community Overlays	County
Southern Black Belt	US counties where 30% of the population identified as Black or African American	US Census, 2000	BE04 / Community Overlays	County
Native American Reservations	Percent area of total land in Native American Reservations	US Census, TIGER, 2018	BE04 / Community Overlays	County
Residential Segregation	Three index measures of segregation: dissimilarity, interaction, isolation	ACS, 2018 5-year	BE05 / Residential Segregation	County

COVID-19 Variables

Variable Construct	Description	Source	Metadata	Spatial Scale
Essential Worker Jobs	Percentage of population employed in Essential Jobs as defined during the COVID-19 pandemic	ACS, 2018 5-year	EC02 / Essential Worker Jobs	State, County, Tract, Zip
Cumulative Case Count	Daily cumulative raw case count (01/21/20 - 03/03/2021)	The New York Times, 2021	COVID01 / COVID Variables	State, County
Adjusted Case Count per 100K	Daily cumulative adjusted case count per 100K population (01/21/20 - 03/03/2021)	The New York Times, 2021	COVID02 / COVID Variables	State, County
7-day Average Case Count	7-day average case count (01/21/20 - 03/03/2021)	The New York Times, 2021	COVID03 / COVID Variables	State, County
Historical 7-day Average Adjusted Case Count per 100K	7-day average adjusted case count per 100K population (01/21/20 - 03/03/2021)	The New York Times, 2021	COVID04 / COVID Variables	State, County

DATA DICTIONARY

This Data Dictionary includes every variable and a brief accompanying description that is included within the variable construct dataset.

Geographic Boundaries

Variable Construct	Variable	Description
Geographic Boundaries	STATEFP	2-digit State code
	COUNTYFP	5-digit County code *(state + county)*
	ZCTA	5-digit ZIP Code Tract Area (ZCTA)
	TRACTCE	6-digit Census Tract designation
	GEOID	Unique 11-digit ID for Census Tracts *(state + county + tract)*

Policy Variables

Variable Construct	Variable	Description
Prison Incarceration Rates	TtlPrPpr	Total Prison Population Rate
	FmlPrPpr	Prison Population Rate, Female
	MlPrPpr	Prison Population Rate, Male
	AapiPrPpr	Prison Population Rate, Asian American Pacific Islander
	BlckPrPpr	Prison Population Rate, Black
	LtnxPrPpr	Prison Population Rate, Latinx
	NtvPrPpr	Prison Population Rate, Native American
	WhtPrPpr	Prison Population Rate, White

	TtlPrAPpr	Prison Prison Admissions Rate
	FmlPrAPpr	Prison Admission Rate, Female
	MlPrAPpr	Prison Admission Rate, Male
	AapiPrAPpr	Prison Admission Rate, Asian American Pacific Islander
	BlckPrAPpr	Prison Admission Rate, Black
	LtnxPrAPpr	Prison Admission Rate, Latinx
	NtvPrAPpr	Prison Admission Rate, Native American
	WhtPrAPpr	Prison Admission Rate, White
Jail Incarceration Rates	TtlJlPpr	Total Jail Population Rate
	FmlJlPpr	Jail Population Rate, Female
	MlJlPpr	Jail Population Rate, Male
	AapiJlPpr	Jail Population Rate, Asian American Pacific Islander
	BlckJlPpr	Jail Population Rate, Black
	LtnxJlPpr	Jail Population Rate, Latinx
	NtvJlPpr	Jail Population Rate, Native American
	WhtJlPpr	Jail Population Rate, White
	TtlJlAdmr	Total Jail Admissions Rate
	TtlJlPrtr	Pretrial Jail Population Rate
Prescription Drug Monitoring Programs (PDMP)	AnyPDMPfr	Any PDMP fraction
	AnyPDMPHfr	Any Horowitz PDMP fraction

	OpPDMPfr	Operational PDMP fraction
	MsAcPDMPfr	Must-access PDMP fraction
	ElcPDMPfr	Electronic PDMP fraction
	AnyPDMPdt	Any PDMP starting date
	AnyPDMPHdt	Any Horowitz PDMP starting date
	OpPDMPdt	Operational PDMP starting date
	MsAcPDMPdt	Must-access PDMP starting date
	ElcPDMPdt	Electronic PDMP starting date
Good Samaritan Laws	AnyGSLdt	Any Good Samaritan Law starting date
	GSLArrdt	Good Samaritan Law protecting arrest start date
	AnyGSLfr	Any Good Samaritan Law fraction
	GSLArrfr	Good Samaritan Law protecting arrest fraction
	AnyNaldt	Any Naloxone law effective date
Naloxone Access Laws	NalPrStdt	Naloxone law allowing distribution through a standing or order effective date
	NalPresdt	Naloxone law allowing pharmacists prescriptive authority effective date
	AnyNalfr	Fraction of year with any Naloxone law effective
	NalPrStfr	Fraction of year with Naloxone law allowing distribution through a standing or protocol order
	NalPresfr	Fraction of year with Naloxone law allowing pharmacists prescriptive authority
Medicaid Expenditure	TtlMedExpC	Total Medicaid spending (chr)
	TtlMedExpN	Total Medicaid spending (num)

Medicaid Expansion	TtlMedExp	Total Medicaid spending
	TradFedExp	Traditional Medicaid - federal spending
	TradSttExpN	Traditional Medicaid - state spending
	ExpnFedExp	Expansion Group - federal spending
	ExpnSttExp	Expansion Group - state spending
Syringe Services Laws	expSSP	Law explicitly authorizes SSPs
	noPrphLw	No state drug paraphernalia law
	ntPrFrDsSy	State law does not prohibit free distribution of syringes
	PrExcInj	Paraphernalia definition explicitly excludes objects used for injecting drugs
	PrNtRefInj	Paraphernalia definition does not refer to objects used for injecting drugs
	noLwRmUnc	No state law removing barriers or uncertainty as to SSP legality
Medical Marijuana Laws	MedMarijLaw	State law authorizing adults to use medical marijuana
Government Expenditures	plcFireExp_S	Police & fire expenditures, state
	crrctExp_S	Corrections expenditures, state
	healthExp_S	Public health expenditures, state
	wlfrExp_S	Public welfare expenditures, state
	plcFireExp_L	Police & fire expenditures, local
	crrctExp_L	Corrections expenditures, local
	healthExp_L	Public health expenditures, local

	wlfrExp_L	Public welfare expenditures, local
	plcFireExp_T	Police & fire expenditures, total state and local
	crrctExp_T	Corrections expenditures, total state and local
	healthExp_T	Public health expenditures, total state and local
	wlfrExp_T	Public welfare expenditures, total state and local

Health Variables

Variable Construct	Variable	Description
Drug-Related Death Rate	deaths	Total deaths from drug-related causes
	pop	Total population
	rawDeathRt	Raw death rate
	adjDeathRt	Adjusted death rate per 100K population
Hepatitis C State Prevalence	State Cases	Average, 2013-2016
	State Rate	
	Male Cases	
	Male Rate	
	Female Cases	
	Female Rate	
	Age Less than 50 Cases	
	Age Less than 50 Rate	
	Age 50-74 Cases	
	Age 50-74 Rate	
	Age 75 Plus Cases	
	Age 75 Plus Rate	

	Black Non-Hispanic Cases	
	Black Non-Hispanic Rate	
	Non-Black Other Cases	
	Non-Black Other Rate	
Hepatitis C State Mortality	State Death Rate_20XX	Individual years, 2014-2017
	Male Death Cases_20XX	
	Male Death Rate_20XX	
	Female Death Cases_20XX	
	Female Death Rate_20XX	
	American Indian/Alaska Native Death Cases_20XX	
	American Indian/Alaska Native Death Rate_20XX	
	Asian or Pacific Islander Death Cases_20XX	
	Asian or Pacific Islander Death Rate_20XX	
	Black Death Cases_20XX	
	Black Death Rate_20XX	
	Hispanic Death Cases_20XX	
	Hispanic Death Rate_20XX	
	White Death Cases_20XX	

	White Death Rate_20XX	
	Age Less than 50 Death Cases_20XX	
	Age Less than 50 Death Rate_20XX	
	Age 50-74 Death Cases_20XX	
	Age 50-74 Death Rate_20XX	
	Age 75 Plus Death Cases_20XX	
	Age 75 Plus Death Rate_20XX	
Hepatitis C County Mortality	County HCV Death Rate_20XX	Individual years, 2014-2017
	Age Less than 40 HCV Death Rate_20XX	
	Age 40+ HCV Death Rate_20XX	
	County HCV Death Rate_20XX	
	Age Less than 40 HCV Death Rate_20XX	
	Age 40+ HCV Death Rate_20XX	
	County HCV Death Rate_20XX	
	Age Less than 40 HCV Death Rate_20XX	
	Age 40+ HCV Death Rate_20XX	
	County HCV Death Rate_20XX	
	Age Less than 40 HCV Death Rate_20XX	

	Age 40+ HCV Death Rate_20XX	
Physicians	pcp_total	Number of primary care physicians
	sp_total	Number of specialty physicians
Access to MOUD	minDisMOUD	Euclidean distance (miles) to nearest MOUD provider (all types)
	minDisBup	Euclidean distance (miles) to nearest buprenorphine provider
	time_to_nearest_buprenorphine	Driving time (minutes) to nearest buprenorphine provider
	count_in_range_buprenorphine	Count of methadone providers in 30 minute driving time range
	minDisMet	Euclidean distance (miles) to nearest methadone provider
	time_to_nearest_methadone	Driving time (minutes) to nearest methadone provider
	count_in_range_methadone	Count of methadone providers in 30 minute driving time range
	minDisNalV	Euclidean distance (miles)to nearest naltrexone provider
	time_to_nearest_naltrexone	Driving time (minutes) to nearest naltrexone provider
	count_in_range_naltrexone	Count of naltrexone providers in 30 minute driving time range
Access to FQHCs	minDisFQHC	Distance to nearest FQHC

Access to Hospitals	minDisHosp	Distance to nearest hospital
Access to Mental Health Providers	minDisMH	Distance to nearest mental health provider
Access to Pharmacies	minDisRx	Distance to nearest pharmacy
Access to Substance Use Treatment	minDist_SUT	Distance to nearest Substance Use Treatment Program
Access to Opioid Treatment Programs	minDist_OTP	Distance to nearest Opioid Treatment Program

Demographic Variables

Variable Construct	Variable	Description
Race & Ethnicity	whiteP	Percentage of pop. with race identified as white alone
	blackP	Percentage of pop. with race identified as Black or African American alone
	hispP	Percentage of pop. with ethnicity identified as Hispanic or Latinx
	amIndP	Percentage of pop. with race identified as Native American or Alaska Native alone
	asianP	Percentage of pop. with race identified as Asian alone
	pacIsP	Percentage of pop. with race identified as Native Hawaiian and Other Pacific Islander alone
	otherP	Percentage of pop. with race not mentioned in any of the options above (includes two or more races)
Age	age18_64	Total adult population under age 65
	age0_4	Total population between age 0-4
	age0_4	Total population between age 5-14
	age15_19	Total population between age 15-19
	age20_24	Total population between age 20-24
	age15_44	Total population between age 15-44
	age40_49	Total population between age 45-49
	age50_54	Total population between age 50-54
	age55_59	Total population between age 55-59
	age60_64	Total population between age 60-64

	ageOv65	Total population at or over age 65
	a15_24P	Percentage of population between ages 15 - 24
	und45P	Percentage of population below age 45
	ovr65P	Percentage of population over age 65
Population with a Disability	noHSP	Percentage of population age 25 years and over with less than high school degree
Educational Attainment	disbP	Percentage of civilian non-institutionalized population with a disability
Social Determinants of Health (SDOH)	SDOH	One of seven typologies: 1 = Rural Affordable; 2 = Suburban Affluent; 3 = Suburban Affordable; 4 = Extreme Poverty; 5 = Multilingual Working; 6 = Urban Core Opportunity; 7 = Sparse Areas
Social Vulnerability Index (SVI)	SVIth1	SVI Ranking, Theme 1: Socioeconomic
	SVIth2	SVI Ranking, Theme 2: Household Composition & Disability
	SVIth3	SVI Ranking, Theme 3: Minority Status & Language
	SVIth4	SVI Ranking, Theme 4: Housing Type & Transportation
	SVIS	Overall SVI summary ranking
Veteran Population	TotalPop	Total population
	TotalVetPop	Total veteran population
	MalePop	Male population
	MaleVetPop	Male veteran population

	Male18To34	Male population, 18-34
	MaleVet18To34	Male veteran population, 18-34
	Male35To54	Male population, 35-54
	MaleVet35To54	Male veteran population, 35-54
	Male55To64	Male population, 55-64
	MaleVet55To64	Male veteran population, 55-64
	Male65To74	Male population, 65-74
	MaleVet65To74	Male veteran population, 65-74
	Male75Plus	Male population, 75+
	MaleVet75Plus	Male veteran population, 75+
	Female18To34	Female population, 18-34
	FemaleVet18To34	Female veteran population, 18-34
	Female35To54	Female population, 35-54
	FemaleVet35To54	Female veteran population, 35-54

	Female55To64	Female population, 55-64
	FemaleVet55To64	Female veteran population, 55-64
	Female65To74	Female population, 65-74
	FemaleVet65To74	Female veteran population, 65-74
	Female75Plus	Female population, 75+
	FemaleVet75Plus	Female veteran population, 75+
	VetPercent	Percent of population that are veterans
Homeless Population	TotalPop	Total population
	Non-relatedGroupDwelling	Number of people under one roof that are unrelated
	GroupQuarters	Number of people under one roof
	HomelessPercent	Estimate of homelessness over total population
	BED_COUNT	Number of beds available to homeless populations in group quarters available at the time of the census
	POINT_IN_TIME	Number of housing-insecure individuals at a shelter on the day of the count
	YEARLY_BED_COUNT	Number of beds available to homeless populations in group quarters available year-round

Economic Variables

Variable Construct	Variable	Description
Employment Trends	hghRskP	Percentage of population employed in high risk of injury jobs
	eduP	Percentage of population employed in educational services
	hltCrP	Percentage of population employed in health care and social services industries
	retailP	Percentage of population employed in retail industries
Unemployment Rate	unempP	Unemployment rate
Poverty Rate	povP	Percentage of population below poverty level
Per Capita Income	pciE	Mean per capita income in 2018 inflation-adjusted dollars
Foreclosure Rate	fordq_rate	Estimated percent of mortgages to start foreclosure process or be seriously delinquent during the 2008 Recession

Built Environment Variables

Variable Construct	Variable	Description
Housing	occP	Percentage of housing units occupied
	vacantP	Percentage of housing units vacant
	lngTermP	Percentage of population who moved into their current housing more than 20 years ago
	rentalP	Percentage of occupied housing units that are rented
	mobileP	Percentage of total housing units categorized as mobile housing structures
	unitDens	Number of housing units per square mile of land area
Rural/Urban/Suburban Classification - Tract, ZCTA	RUCA1	Primary RUCA Code
	RUCA2	Secondary RUCA Code
	rurality	Urban/Suburban/Rural classification
Rural/Urban/Suburban Classification - County	rcaUrbP	Percentage of tracts classified as urban using RUCA codes
	rcaSubrbP	Percentage of tracts classified as suburban using RUCA codes
	rcaRuralP	Percentage of tracts classified as rural using RUCA codes
	urbPop10	Population living in urban areas
	rurlPop10	Population living in non urban areas
	cenRuralP	Percentage of population living in non urban areas
Alcohol Outlet Density	alcDens	Number of alcohol outlets per square mile
	alcPerCap	Number of alcohol outlets per capita

	alcTotal	Total number of alcohol outlets
Hypersegregated Cities	DmySgrg	Dummy variable for whether county is part of a hypersegregated city or its metropolitan area
Southern Black Belt	DmyBlckBlt	Dummy variable for whether county is in the Southern Black Belt region
Native American Reservations	PrctNtvRsrv	Percentage of county land area that belongs to Native American reservation(s)
Residential Segregation	dissim.b	Dissimilarity index for Black and non-Hispanic white residents
	inter.bw	Interaction index for Black and non-Hispanic white residents
	iso.b	Isolation index for Black and non-Hispanic white residents
	dissim.h	Dissimilarity index for Hispanic and non-Hispanic white residents
	inter.hw	Interaction index for Hispanic and non-Hispanic white residents
	iso.h	Isolation index for Hispanic and non-Hispanic white residents
	dissim.a	Dissimilarity index for Asian and non-Hispanic white residents
	inter.a	Interaction index for Asian and non-Hispanic white residents
	iso.a	Isolation index for Asian and non-Hispanic white residents

COVID-19 Variables

Variable Construct	Variable	Description
Essential Workers	essnWrkP	Percentage of population employed in Essential Jobs as defined during the COVID-19 pandemic
Cumulative Case Count	Cm200121	Cumulative confirmed case count for date (i.e. Jan. 21, 2020)
Adjusted Case Count per 100K	CmAd200121	Confirmed cases per 100K people for date (i.e. Jan. 21, 2020)
7-Day Average Case Count	Wk200121	7-Day average confirmed cases for date (i.e. Jan. 21, 2020)
7-Day Average Adjusted Case Count per 100K	WkAd200121	7-Day average adjusted cases per 100K people for date (i.e. Jan. 21, 2020)

DATA STANDARDS

This section provides information on standards that we maintain for all data currently included in the OEPS and guidelines for any future contributions or additions to the project. Please refer to the Data Dictionary or the individual metadata documentation pages for complete information about specific datasets or variables.

FILE NAMES

All final .csv datasets are named using the following convention:

ThemeAbbreviation + 2-digit number_SpatialScale.csv

For example, the Policy theme dataset on Prison Incarceration Rates (PS01) at the county-level is named ***PS01_C.csv.*** *The same dataset at the state level is* ***PS01_S.csv,*** *at the tract-level would be* ***PS01_T.csv****, and at the zip code level* ***PS01_Z.csv****.*

Theme Abbreviations	**Spatial Scales**
Policy: *PS* Health: *Health*[1], *Access*[2] Demographic: *DS* Economic: *EC* Built Environment: *BE* COVID-19: *COVID*	Tract: *T* Zip/ZCTA: *Z* County: *C* State: *S*

GEOGRAPHIC IDENTIFIERS

All datasets have geographic identifiers included as a variable. We use the following labeling convention for each spatial scale.

Variable	**Variable ID**	**Description**
State	STATEFP	2-digit State code
County	COUNTYFP	5-digit County code (state + county)
ZIP Code / ZCTA	ZCTA	5-digit assigned ZCTA
Census Tract	TRACTCE	6-digit Census Tract designation
Census Tract GEOID	GEOID	11-digit ID for Census Tract (state + county + tract)

[1] Variables labeled “Health” include: Drug-Related Death rate, Hepatitis C, Physicians
[2] Variables labeled “Access” include: Access to MOUDs, Health Centers, Hospitals, Mental Health Providers, Pharmacies, Substance Use Treatment Facilities, Opioid Treatment Programs

DATA FORMATTING

Watch for leading zeros. Some geographic identifiers for states, counties, zip codes, and tracts start with “0” or “00”; i.e. leading zeros. However, .csv and other text file formats drop leading zeros automatically upon opening. This means that a state FIPS code of “02” becomes “2”, a county code of “02004” becomes “2004”, a zip code of “07436” becomes “7436”, etc. If you are merging .csvs with any other data by their geographic identifier, you will need to add in the leading zeros (or conversely, drop the leading zeros in the other file) so that they match. This is particularly important when you are trying to merge shapefiles, such as the geographic boundary files, with the .csv files.

Most variable names are no more than 10 characters (with some exceptions) for ease of data wrangling with shapefiles and GIS software. Some variable names are therefore shortened or abbreviated from the source data.

Numeric data are rounded to the nearest tenth (two decimal places).

Missing data are represented as “NA” or empty, depending on the language or platform you are working with. These should not be mistaken for or confused with the numeric “0”.

GUIDELINES FOR CONTRIBUTING

If you are interested in contributing to the OEPS, please keep in mind the following:

- Variables names should be no more than 10 characters
- Numeric observations should be rounded to the nearest tenth (two decimal places)
- Remove any index columns
- Remove quotations marks or commas from the data
- Code missing as unavailable data as *NA* or empty

TEAM

This data warehouse was developed for the Justice Community Opioid Innovation Network (JCOIN) by Marynia Kolak, Qinyun Lin, Susan Paykin, Moksha Menghaney, and Angela Li of the Healthy Regions and Policies Lab and Center for Spatial Data Science at the University of Chicago.

The University of Chicago serves as the JCOIN Methodology and Advanced Analytics Resource Center (MAARC), providing data infrastructure and statistical and analytic expertise to support individual JCOIN studies and cross-site data synchronization.

JCOIN is part of the NIH HEAL (Helping to End Addiction Long-term℠) Initiative. The NIH HEAL Initiative℠ supports a wide range of programs to develop new or improved prevention and treatment strategies for opioid addiction. JCOIN conducts research to address gaps in Opioid Use Disorder (OUD) treatment and related service in a wide range of criminal justice settings, including jails, drug and other problem-solving courts, policing and diversion, re-entry, and probation and parole.

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