THE OPIOID CRISIS IN ILLINOIS: DATA AND THE STATE'S RESPONSE

Statewide Drug Overdose Trends

Nature of the Opioid Use Disorder Problem – The opioid crisis has manifested itself in the form of multiple public health problems. An analysis of the nature and extent of these problems provides evidence of the seriousness of the opioid crisis in Illinois, the widespread prevalence of these problems across our state, and the existence of populations and local areas with the most critical gaps in services.

Opioid Overdose-Related Deaths – Perhaps none of these problems has heightened the awareness of the general public to the same degree as the dramatic increase in opioid overdose deaths over the last decade. Among the 70,237 drug overdose deaths that occurred in the U.S. in 2017, 47,600 (67.8 percent) involved opioids.[1] Like many states, Illinois has experienced a notable increase in drug overdose-related deaths. Illinois was one of only twenty-two states to experience a statistically significant (14.3%) increase in the drug overdose-related death rate between 2016 and 2017; an increase driven largely by opioid overdose-related fatalities.[2]

- The Illinois Department of Public Health (IDPH) show 2,779 drug-related overdose deaths during 2017. This represents a 76 percent increase over the 1,579 drug-related overdose deaths reported in 2013.
- Of the 2,779 Illinois statewide drug overdose deaths in 2017, 2,202 (72%) were opioid overdose-related fatalities.
- Although the state is making progress toward expanding treatment for opioid use disorders, particularly medication assisted treatment (MAT), 58 Illinois counties remain "MAT deserts" without ready access to such treatment.
- Much of the increase in overdose fatalities in Illinois is attributable to synthetic opioids other than methadone, primarily fentanyl, the use of which accelerated in 2015 and has continued increasing through 2017.
- Although the state is making progress toward expanding treatment for opioid use disorders, particularly medication assisted treatment (MAT), 58 Illinois counties remain "MAT deserts" without ready access to such treatment.

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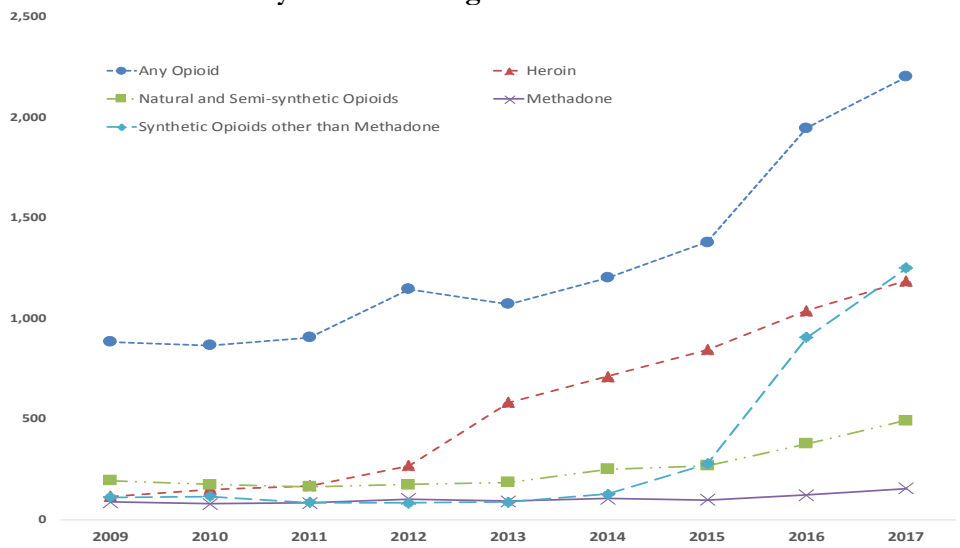
[1] Scholl, L., Seth, P. Kariisa, M., Wilson, N. & Baldwin, G. (January 2019). Drug and opioid-involved overdose deaths – United States, 2013-2017. *MMWR*, Centers for Disease Control and Prevention.
[2] Statistically significant drug overdose death rate increase from 2016 to 2017, US States. Centers for Disease Control and Prevention. Retrieved from: https://www.cdc.gov/drugoverdose/data/statedeaths.html, March 3, 2019.

Death records data obtained from the Illinois Department of Public Health (IDPH) show 2,779 drug-related overdose deaths during 2017. This represents a 76 percent increase over the 1,579 drug-related overdose deaths reported in 2013. The statewide increase in drug-related overdose deaths is almost totally accounted for by an increase in opioid-related overdose deaths. Of the 2,779 Illinois statewide drug overdose deaths in 2017, 2,202 (72%) were opioid overdose-related fatalities. Based on their review of multiple national databases, the CDC concluded that for every opioid overdose death there are 130 individuals with an opioid use disorder (OUD) per DSM-5 diagnostic criteria. Applying this factor to Illinois, it can be estimated that there are about 286,000 persons with an OUD. An even higher estimate is obtained applying a World Health Organization (WHO) estimate an annual incidence rate of .65% of fatal overdoses per opioid dependent individuals.[3] This translates into a population estimate of 338,769 Illinois residents with an OUD.

Number of Illinois Opioid Overdose-Related Fatalities by Year and Drug Class: 2009 – 2017



Note. Opioid-related fatality data were obtained from the CDC WONDER data base. Records with underlying causes of death due to drug-poisoning were selected using ICD-10 codes: X40-X44, X60-X64, X85, and Y10-Y14. Multiple cause of death codes was used to identify a specific drug or drug classes: T40.0-T40.4 and T40.6 (any opioid); T40.1 (heroin); T40.2 (natural and semi-synthetic opioids); T40.3 (methadone); and synthetic opioids other than methadone (T40.4). Deaths involving more than one drug were counted for each drug involved. Natural and semi-synthetic opioids include: morphine, oxycodone, and hydrocodone. Synthetic opioids other than methadone include: fentanyl and analog drugs as well as tramadol.

Much of the increase in opioid overdose-related fatalities In Illinois (and nationally) is attributable to opioid analgesics, a broad class of drugs that includes natural, semi-synthetic opioids, methadone, and synthetic opioids other than methadone. To a lesser but still measurable extent, the increase in opioid overdose-related fatalities was also attributable to an increase in heroin overdoses. The chart above provides additional detail on the specific types of drugs most responsible for the increase in Illinois' opioid overdose-related fatalities in 2017. The trend lines shown above are based on data obtained from the CDC Wide-ranging Online Data for Epidemiological Research (WONDER) database which, among other public health-related information, tracks the underlying causes of fatalities for all 50 states as provided to the CDC by state coroners.

[3] World Health Organization (August 2018). *Information sheet on opioid overdose.* Retrieved from: https://www.who.int/substance_abuse/information-sheet/en/, March 16, 2019.

As this chart shows, much of the increase in overdose fatalities in Illinois is attributable to synthetic opioids other than methadone, which accelerated in 2015 and has continued increasing through 2017. Although this class of drugs includes tramadol (i.e., marketed as Ultram® or ConZip®) as well as fentanyl and analog versions of fentanyl, numerous epidemiological reports from state as well as national sources indicate the primary drugs responsible for most of the recent (since 2015) and continuing increases in opioid overdose-related fatalities are fentanyl and its chemical analogs.[4] Moreover, whereas field reports and crime lab analysis of drug seizures indicate fentanyl is frequently used to cut/augment not only heroin; it is also now being pressed into illegally produced pills and being sold as Oxycontin® as well as being used in the illicit production of non-opioid drugs such as 3,4-methylenedioxy methamphetamine (MDMA; i.e., Ecstasy or "Molly"), cocaine, benzodiazepines such as alprazolam (i.e., Xanax®) and amphetamines.[5] In 2017, the number of overdose-related fatalities attributable to synthetic opioids other than morphine exceeded the number of such fatalities due to heroin in 9 Illinois counties: Kane, Kankakee, Lake, Sangamon, McLean, St. Clair, Peoria, Madison, and Cook. The problem seems most acute in Madison County, where the number of synthetic opioid overdose-related fatalities (N=65) was more than three times the number of reported heroin overdose-related fatalities (N=21).

The maps below show the number and population rates of opioid overdose-related deaths across Illinois' 102 counties during 2017. Both maps provide evidence that the opioid crisis continues to impact communities and individuals throughout Illinois although Cook County accounted for nearly 47 percent of the opioid overdose deaths during 2017. As with the statewide data, the 1,037 Cook County opioid-related overdose deaths in 2017 represented a large increase (113%) over the 486 such deaths reported in 2013. Specific to Chicago, the 637 opioid overdose-related deaths in 2017 represents a one hundred eleven percent increase over the 301 such deaths reported in 2013. As has been the case in previous years, the counties bordering Cook and other counties with relatively high resident populations, particularly Madison, Peoria, St. Clair, and Winnebago counties, were major contributors to the statewide number of opioid overdose deaths in 2017.

The map based on county population rates of opioid overdose deaths provides further insight into the locality-specific and statewide severity of this problem. The overall rate of opioid-related fatalities for the state per 100,000 residents ages 18 or older was 22.1, just above the U.S. national average of 21.4% for 2017. This map shows that in 2017, 28 Illinois counties had rates of opioid overdose deaths greater than the Cook County rate of 30.2 deaths per 100,000 residents ages 18 or older. Fifteen (15) of the counties with the highest 2017 population rates of opioid overdose deaths are in IDHS Regions 4 and 5. These two service regions have the lowest levels of currently-available opioid use disorder (OUD) medication assisted treatment (MAT) resources in the state.

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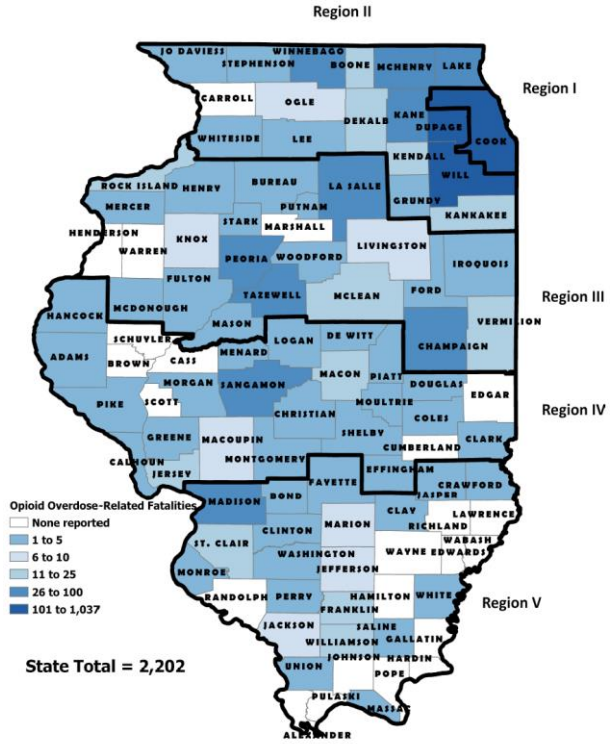
[4] Armenian, P., Vo, K.T., Barr-Walker, J., Lynch, K. L. (2017). Fentanyl, fentanyl analogs and novel synthetic opioids: A comprehensive review. *Neuropharmacology,* 1-12.

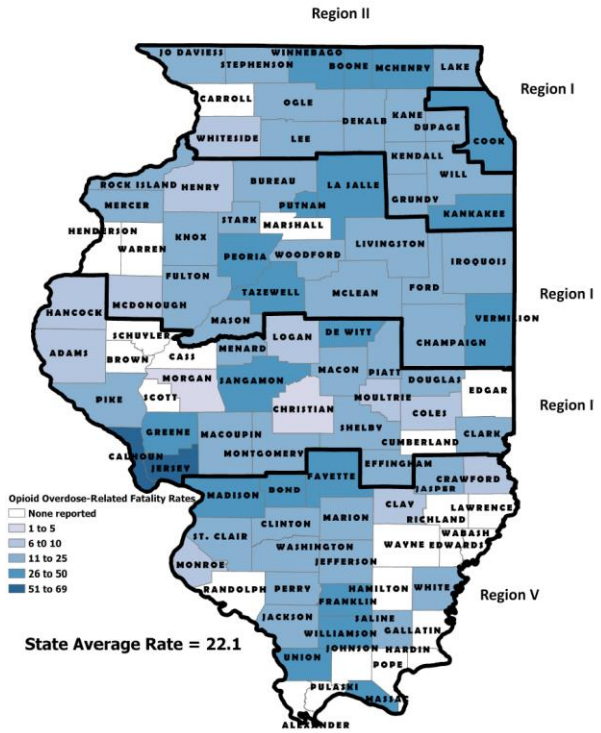
Hedegaard, H. et al. (2018). Drugs most frequently involved in drug overdose deaths: United States, 2011-2016. *National Vital Statistics Reports, 67*(9), 1-14.

[5] Ouellet, L. (November 2018). *Chicago metro sentinel community site (SCS) drug use patterns and trends, 2018. National Drug Early Warning System (NDEWS)*, National Institute on Drug Abuse, Rockville, MD.

NUMBER OF OPIOID OVERDOSE-RELATED DEATHS BY ILLINOIS COUNTY – 2017



RATE OF OPIOID OVERDOSE-RELATED DEATHS BY ILLINOIS COUNTY – 2017



Note. Opioid fatality data provided by the IDPH Division of Health Data and Policy and reflect fatalities related to use of any opioid (e.g., heroin, analgesics). Fatality rates per 100,000 are based on the number of opioid overdose-related fatalities within a given county, divided by that county's adult population 18 years of age or older per 2017 American Community Survey estimates.

Naloxone Administrations – In response to the increasing problem of opioid overdose deaths among our state's residents, Illinois Public Act 096-0361 took effect in 2010. This act made it legal in Illinois for non-medical persons to administer the drug overdose reversal medication naloxone to another individual in order to prevent an opioid/heroin overdose from becoming fatal. In 2012, the Illinois Public Act 097-0687 *Good Samaritan* law ensured that the individual providing emergency medical assistance and the person experiencing the overdose are not charged or prosecuted for felony possession (within specified limitations). IDHS/SUPR established its **Drug Overdose Prevention Program (DOPP)** as a result of this law. Through this program, IDHS/SUPR provides 1) training for 'Enrolled Programs' that then train multiple sites within their communities to administer naloxone and 2) assistance with access to naloxone, including actual distribution of the medicine, but also training regarding additional paths to access naloxone. Naloxone has been successfully prescribed and distributed to many heroin and opioid users, their families and friends, and first responders including law enforcement, non-profit agencies, hospitals, treatment facilities, and public health departments in Illinois and throughout the United States.

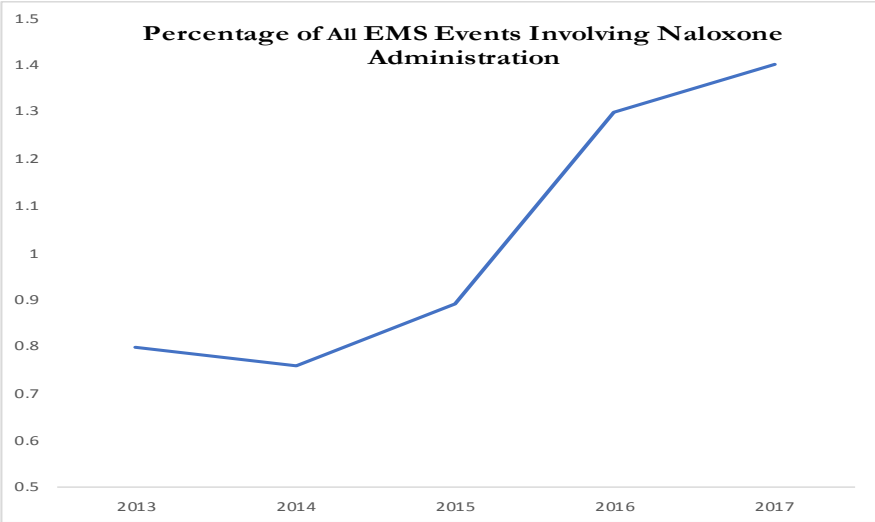
Local governments and organizations voluntarily provide information regarding naloxone training and education activities, naloxone administrations, and overdose reversals back to the DOPP. In state fiscal year 2017, IDHS/SUPR enrolled 37 new programs. Enrolled programs trained 1,068 new sites and 16,092 individuals throughout the state that year. As a result of these efforts, 548 opioid overdoses were prevented. From the inception of the DOPP in SFY14, a total of 70 overdose prevention programs have been enrolled, with 1,195 separate trained program sites. In addition, since

SFY14, a total of 28,832 first responders have been trained and 878 overdose reversals have been reported to DHS.

IDPH collects data on naloxone administrations provided as part of emergency medical service (EMS) runs or "events" by fire department, private, governmental non-fire or hospital-based ambulance services. As reported to IDPH for 2017, there were 13,093 EMS events (1.4% of the 987,642 total events analyzed) that involved one or more naloxone administrations, representing a 93 percent increase over the 7,301 EMS events where naloxone administration was reported in 2013. The percentage of all EMS events involving naloxone administration has steadily increased since 2013 rising fastest since 2015 as shown in the line chart below. The 2017 data suggest the trend in increasing numbers of naloxone runs might by leveling off, as there was less than a 1 percent

Number of Naloxone Dosages per Reported EMS Event where Naloxone was Administered: 2013-2017

	Dosages					
Year	**1**	**2**	**3**	**4**	**4+**	**Totals**
2013	5,944	942	171	55	189	**7,301**
2014	6,246	1,063	190	51	89	**7,657**
2015	7,491	1,444	310	67	84	**9,396**
2016	10,629	2,594	559	107	145	**14,034**
2017	10,112	2,874	621	176	150	**13,933**
Percent Change 2013-2017	**70%**	**205%**	**263%**	**220%**	**-21%**	**93%**
Percent Change 2016-2017	**-5%**	**11%**	**11%**	**64%**	**3%**	**< -1%**



Note. Estimates of the number of EMS events involving naloxone administration as well as naloxone dosages per reported EMS event are based on the EMS data set maintained by the IDPH Division of EMS and Highway Safety.

decrease compared with 2016. However, as the 2017 data are still provisional and subject to change given additional reporting by agencies with outstanding data, the figures could show a larger number of naloxone runs than presently represented in the data available at the time this report was written. With that caveat, it appears the rate of increase in naloxone administrations by EMS technicians plateaued in 2017 after years of steady increases, possibly due to the state's efforts to distribute

naloxone to and train first responders and bystanders to administer naloxone in the event of an overdose.

This provisional positive news of a leveling off in EMS naloxone runs must be balanced against the fact that the number of dosages administered per run when naloxone was administered has steadily increased from 2013 to 2017. For example, in 2017 the number of EMS runs where three dosages of naloxone were administered (621) compared with the number of such runs in 2013 (171) reflects a 263 percent increase. Similarly, the number of EMS runs that required two naloxone administrations increased by 205 percent from 2013-2017 and the number of runs that required four administrations increased by 64 percent over the same time.

This trend suggests overdoses requiring an EMS response and naloxone administration are increasingly occurring as a result of persons who overdose using a greater amount of or more potent opioids than in prior years, necessitating multiple naloxone dosages to initiate and/or sustain a reversal.[6] Additionally, the increase in naloxone dosages can also be attributed to the increased presence of fentanyl and other synthetic opioids in the opioids being used as indicated by the CDC fatality data cited above. There are also reports of a recent "supply shock" to the U.S. heroin distribution system whereby certain drug distributers have been flooding the market with highly pure (~75% pure) heroin to corner the market, potentially contributing to the need for multiple naloxone dosages to achieve revival.[7]

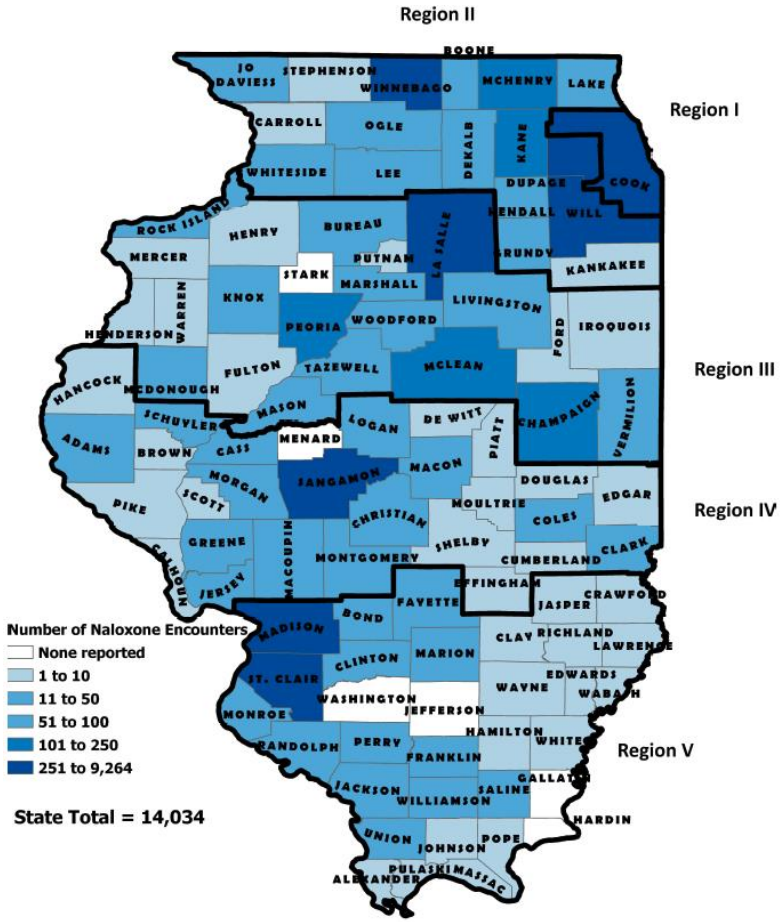
Following are additional Illinois maps depicting numbers and rates of EMS runs (per all EMS runs) where naloxone administration was reported to IDPH for 2016 and 2017. There do not appear to have been large shifts among counties between 2016 and 2017, suggesting a stable pattern of counties that have high, moderate, or low rates of overdoses and reversals over the past two years. Cook and its bordering counties account for the majority of naloxone administrations. Nevertheless, county population rates as well as the rate of naloxone administrations per all EMS runs (see table below) provides evidence that just as opioid overdose-related deaths occur throughout our state, so too do the reversal efforts.

Illinois Counties with the Highest Number, Rates per All EMS Activations and Population Rates of Naloxone Administrations in 2017

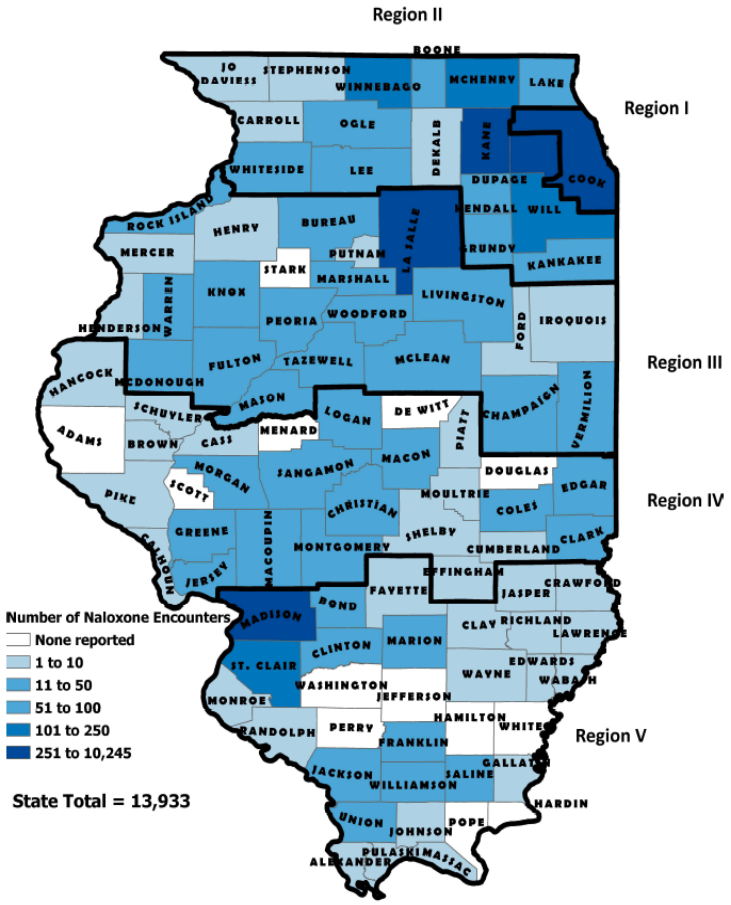
Highest Number of Naloxone Runs		Highest Rates per 1,000 total EMS Activations		Highest County Population Rates of Naloxone Runs	
Cook	10,245	**Stephenson**	20.4	**Lake**	3.6
DuPage	351	**Cook**	20.3	**Logan**	2.6
Lake	311	**Kankakee**	19.3	**Cook**	2.5
Madison	303	**Peoria**	17.4	**Marion**	2.1
Kane	261	**Bureau**	17.4	**Jersey**	2.1
St. Clair	207	**Pulaski**	17.0	**Mason**	1.7
Will	178	**Winnebago**	16.2	**Christian**	1.5
Winnebago	174	**Marshall**	15.8	**Saline**	1.5
McHenry	143	**Logan**	15.6	**Madison**	1.5
Sangamon	100	**Madison**	13.5	**Lee**	1.4

[6] Lynn, R. R., & Galinkin, J. L. (2018). Naloxone dosage for opioid reversal: current evidence and clinical implications. *Therapeutic Advances in Drug Safety, 10*, online publication.
[7] Ciccarone, D. (2017). Editorial for "US heroin in transition: Supply changes, fentanyl adulteration and consequences" IJDP special section. *International Journal on Drug Policy, 46*, 107-111.

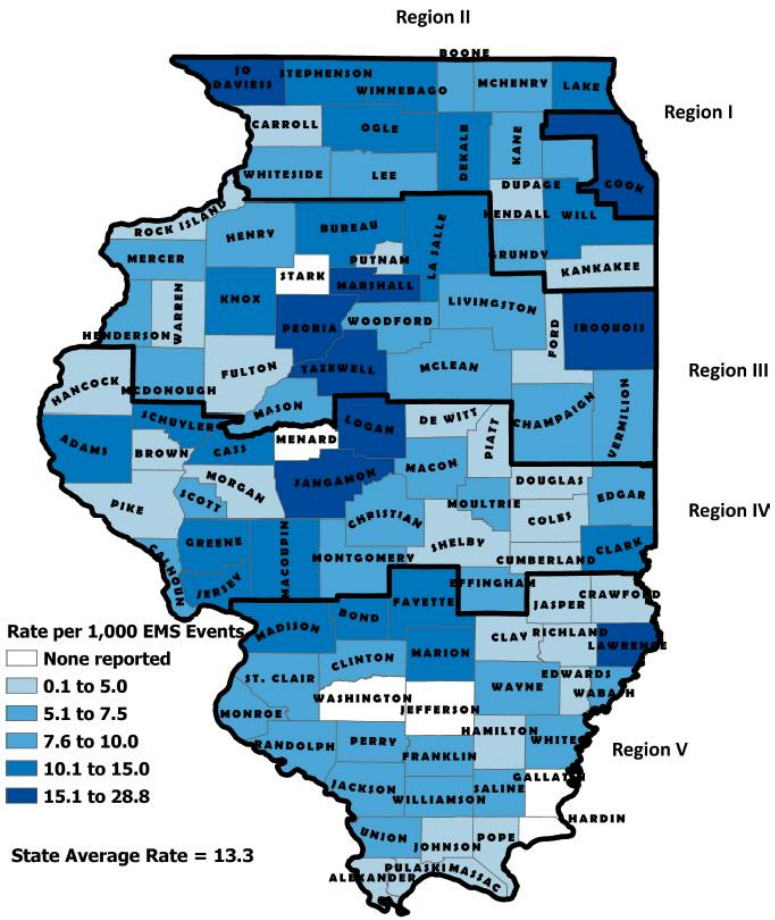
NUMBER OF REPORTED EMS ENCOUNTERS
WITH ONE OR MORE NALOXONE ADMINISTRATIONS
BY ILLINOIS COUNTY – 2016



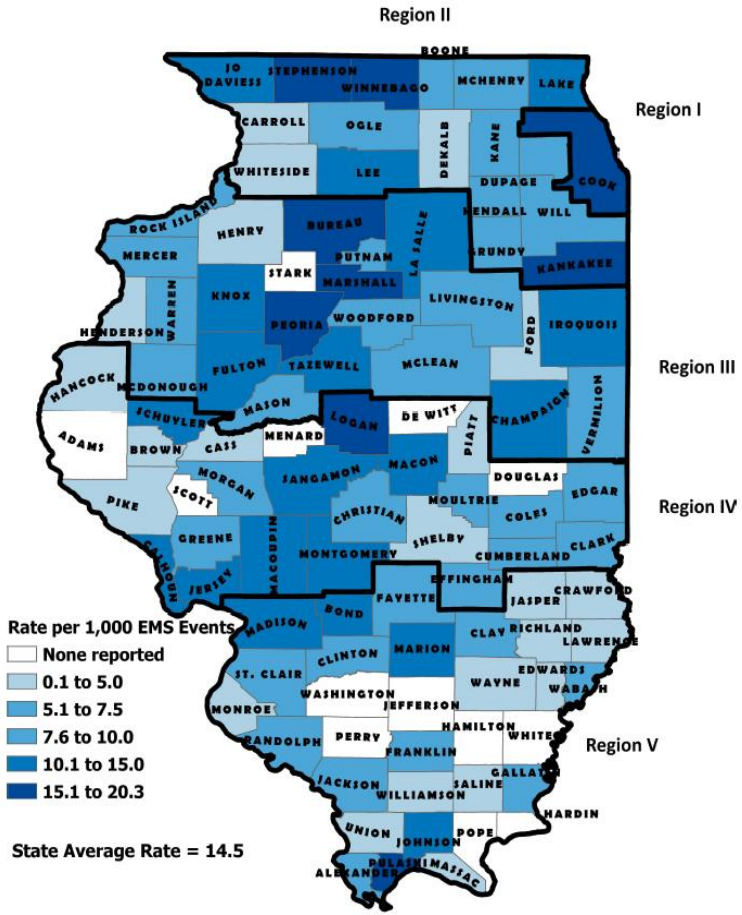
NUMBER OF REPORTED EMS ENCOUNTERS
WITH ONE OR MORE NALOXONE ADMINISTRATIONS
BY ILLINOIS COUNTY – 2017



RATE/1,000 REPORTED EMS EVENTS WITH ONE OR MORE NALOXONE ADMINISTRATIONS BY ILLINOIS COUNTY – 2016



RATE/1,000 REPORTED EMS EVENTS WITH ONE OR MORE NALOXONE ADMINISTRATIONS BY ILLINOIS COUNTY - 2017



Note. Estimates of the number and rates of naloxone events based on the EMS data set maintained by IDPH Division of EMS and Highway Safety. Rates are calculated per 1,000 EMS events for events of any type.

Up until now, the purchase of naloxone kits, their distribution, and the training and education that support these activities have been provided in Illinois through local public health departments, other units of local government, various public and private organizations, and in some cases, individuals who have been directly impacted by this crisis. However, the funding to support these activities is often temporary and almost always not sufficient to meet the need. In 2016, IDHS was awarded a Prescription Drug/Opioid Overdose (PDO) grant from the Center for Substance Abuse Prevention/Substance Abuse and Mental Health Services Administration (CSAP/SAMHSA).

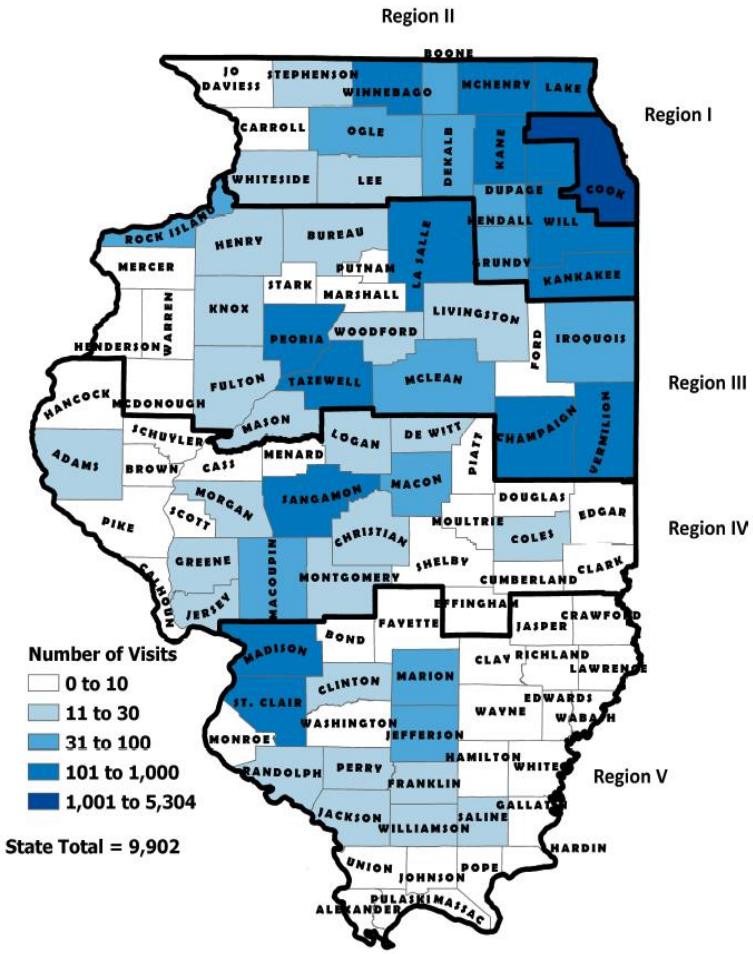
Through this grant, funding for the purchase and distribution of naloxone kits is being provided to coordinating entities in the following six counties: Cook, Madison, St. Clair, Du Page, Lake and Will. To further address this need, IDHS/SUPR included proposed funding for naloxone kit purchases and support services in additional counties in Illinois in its Opioid State Targeted Response (STR) application to the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA). A notice of award was received May 2017, which allowed IDHS/SUPR to expand Overdose Education and Naloxone Distribution (OEND) across the counties that were not part of the PDO grant. The funds received allowed for the coordination and delivery of OEND services across 96 counites as local need was assessed and responded to by seven coordinating entities.

OPIOID-RELATED ED AND HOSPITAL VISITS - Provided on the this and the following page are a table and maps of the number and adult (18 and over) population rates of opioid-related ED visits and hospital admissions by Illinois county during 2017. County values of less than 10 were suppressed for confidentiality reasons. This suppression rule primarily effects the mapped representation of numbers and rates in lower population, predominantly rural Illinois counties, which are represented in white. Despite the undercounting the suppression rules engender, the tabulated and mapped IDPH data provide further evidence of the statewide impact of the opioid Illinois crisis.

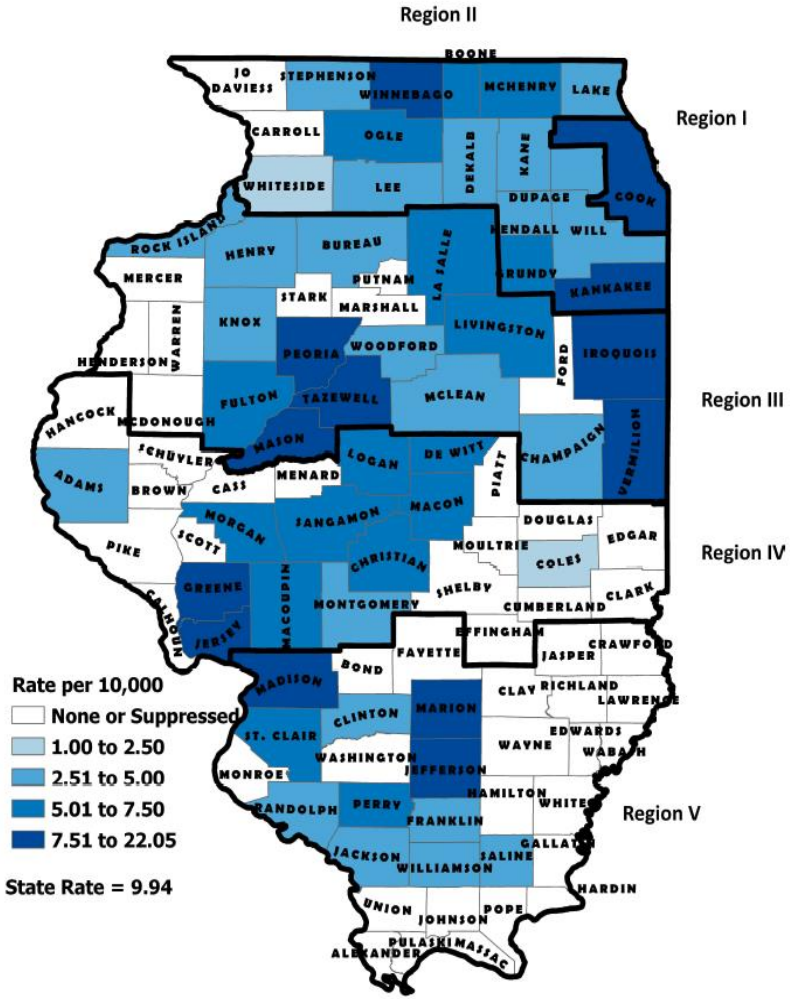
Illinois Counties with the Highest Number and Population Rates of Opioid-Related ED Visits and Hospitalizations in 2017

Highest Number of ED Visits		Highest ED Visit Rates per County Adult Population	
Cook	5,304	**Vermilion**	22.1
Will	383	**Mason**	18.6
DuPage	376	**Marion**	16.1
Lake	351	**Peoria**	16.0
Winnebago	330	**Iroquois**	15.9
Madison	310	**Jersey**	15.5
Peoria	228	**Winnebago**	15.1
Kane	220	**Madison**	14.9
McHenry	204	**Greene**	14.3
Sangamon	165	**Kankakee**	13.8
Highest Number of Hospitalizations		**Highest Hospitalization Rates per County Adult Population**	
Cook	1,622	**Marion**	6.6
DuPage	210	**Winnebago**	6.2
Will	163	**Macon**	5.6
Winnebago	136	**Logan**	5.6
Lake	130	**Iroquois**	5.0
McHenry	98	**Ogle**	4.8
Kane	74	**Montgomery**	4.7
St. Clair	64	**Adams**	4.7
Madison	64	**Christian**	4.5
Champaign	59	**Macoupin**	4.4

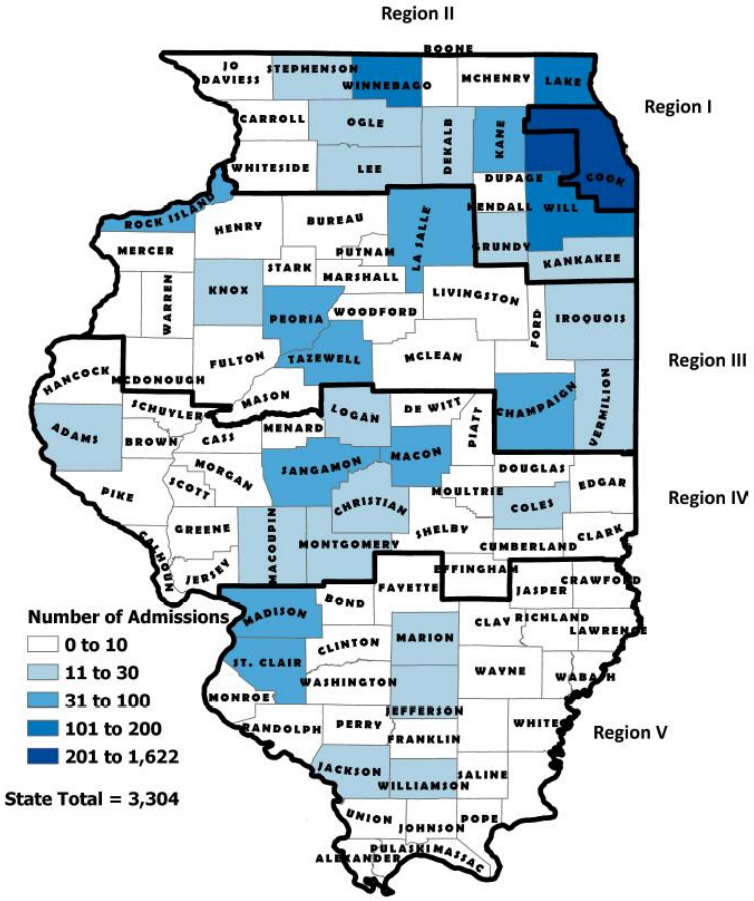
NUMBER OF ED OPIOID VISITS
BY ILLINOIS COUNTY – 2017



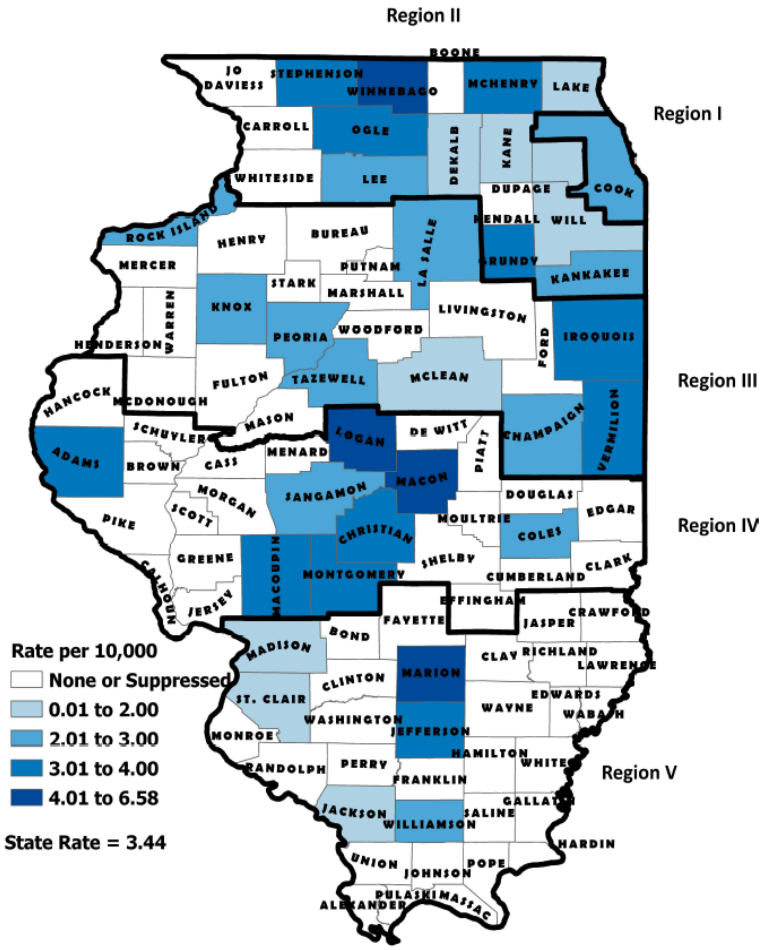
RATE PER 10,000 POPULATION OF ED OPIOID VISITS
BY ILLINOIS COUNTY – 2017



NUMBER OF HOSPITAL OPIOID ADMISSIONS
BY ILLINOIS COUNTY – 2017



RATE PER 10,000 POPULATION OF HOSPITAL OPIOID ADMISSIONS
BY ILLINOIS COUNTY – 2017



Note. Emergency department visits and hospital admissions data provided by the Illinois Department of Public Health, Division of Patient Safety and Quality. Visit and admission rates per 10,000 are based on the number of ED visits and hospital admissions for opioid related health issues within a given county, divided by that county's adult population 18 years of age or older per 2017 American Community Survey estimates.

IDHS/SUPR Treatment System

All IDHS/SUPR licensed treatment organizations that provide services supported by state general revenue, Medicaid fee-for-service, and other sources of public funding are required to report client demographic and service provision data through our Division Automated Reporting and Tracking System (DARTS).[8] Based on an analysis of DARTS data for State Fiscal Year 2017 (SFY 2017), there were 44,382 total admissions to IDHS/SUPR funded treatment services representing 30,755 unduplicated clients. A total of 13,257 (29.8%) of all admissions in SFY 2017 indicated opioids as their primary drug. Of these primary opioid admissions, 10,870 (82.0%) reported heroin as their primary drug with 2,387 (18.0%) reporting other opioids/synthetics as their primary drug class. Among all admissions, 1.257 (2.9%) were admitted to ASAM level I, outpatient methadone treatment. Persons admitted to state-funded treatment for opioid misuse were significantly older (mean age = 40.7 years) than persons admitted for other types of drug misuse (mean age = 33.7). Compared with persons admitted for drug misuse other than opioids, persons admitted for opioid misuse were also more likely to be female (42.5% vs 31.2%), and black/AA (38.3% vs. 28.4%).

MAT/Opioid Services

Within the substance use disorder treatment continuum of care, medication-assisted treatment (MAT) involves the use of a medication to treat a substance use disorder that includes one of several medication options in tandem with counseling and social supports. These medications are analogous to taking medication for diabetes or asthma – they help people manage their disorder so that they can maintain their recovery. It is NOT the same as substituting one addictive drug for another. Once stabilized, patients do not experience the compulsive thoughts and behaviors that define a substance use disorder. FDA-approved OUD medications include methadone, buprenorphine products, including single-entity buprenorphine products, buprenorphine/naloxone tablets, films, buccal preparations, long-acting injectable buprenorphine products, buprenorphine implants, and injectable extended-release naltrexone.

Each medication works differently. Naltrexone blocks the effects of opioids, making the person unable to get high from using them. It has no diversion risk or "street value" because it does not cause the psychoactive effects of an opioid. Methadone and buprenorphine reduce cravings and withdrawal symptoms without making the person feel high. Both of these medications work by masking the problem opioid. Patients must visit special methadone clinics daily to receive doses when they are on opioid maintenance therapy. Buprenorphine can be prescribed by a primary care doctor who has had special training and been granted a waiver to prescribe buprenorphine.

According to the CDC, expanding access to medication assisted treatment (MAT) is essential to an effective response to the dramatic increase in opioid-related problems[9]. Research evidence indicates that MAT for opioid clients, particularly outpatient methadone treatment (OMT), has the potential to save significantly more money than other forms of treatment[10]. These cost-saving impacts of MAT

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[8] Data attributed to DARTS was obtained from services submitted to, and accepted in, the database through September 30, 2017 DARTS only collects data for services reimbursed through SUPR contract and Medicaid Fee-For-Service (FFS) for income eligible clients. Data on services reimbursed by Medicaid Managed Care Organizations (MCO's), and third-party funding sources such as insurance and self-pay, are not reported by providers into DARTS and, therefore, their admissions and other service information are not included. Additionally, beginning in state fiscal year 2016, an increasing number of Illinois Medicaid patients belonged to an MCO and did not have MCO-reimbursed substance use disorder) treatment service data reported to DARTS.

[9] https://www.cdc.gov/vitalsigns/heroin/

[10] http://www.who.int/whr/2004/en/report04_en.pdf?ua=1

are attributable to a wide range of improvements in the health inequities that are commonly experienced by primary opioid clients, to include reduced rates of drug use, increased access to health care and other recovery support services, improved interpersonal relationships and living conditions, and decreased involvement in high-risk behaviors such as injection drug use. It has been observed that the regularly long-term involvement of opioid users in MAT plays a significant role in overall harm reduction practices. Additionally, there is evidence of harm reduction benefits among both primary opioid clients who continue to use while in MAT, and those who prematurely discontinue treatment[11].

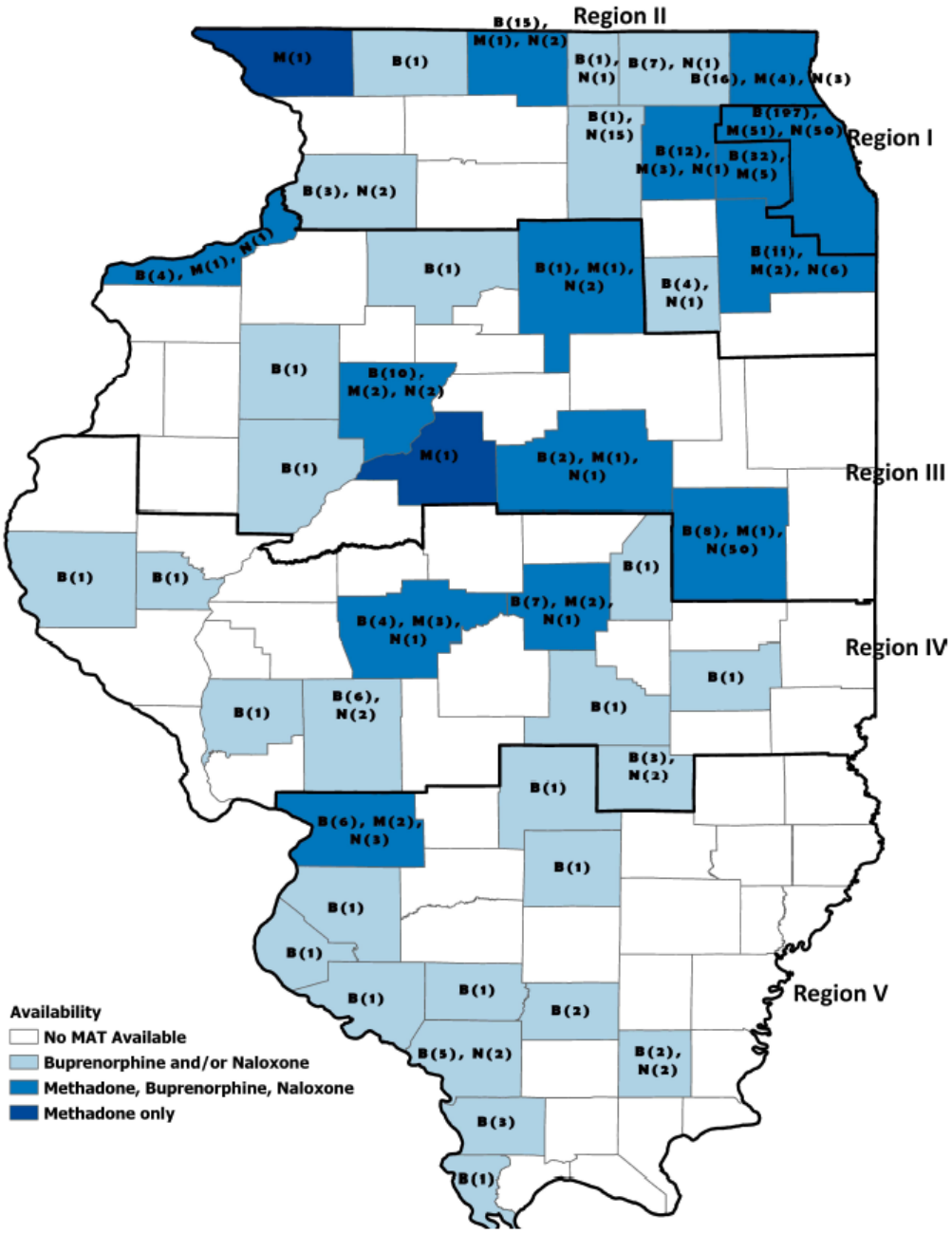
IDHS/SUPR was the recipient of two five-year CSAT-funded TCE-HIV grants in 2007. Each of these grants involved an expansion of OMT services to minority residents of Chicago. The following are some of the several statistically significant positive outcomes that were observed among these clients at six-month follow-up: an increase in the percentage of clients who reported being employed and an increase among the clients in average income from wages; a decrease in average income from illegal sources and a decrease in the average amount of money spent on illegal drugs; increases in the percentage of clients who reported attendance at groups that support recovery; reductions in average days of cocaine, marijuana and heroin use as compared to the 30 days prior to admission; an over 50 percent abstinence rate from heroin use at follow-up; and a significant reduction in the percentage of clients who report injection drug use.

Methadone treatment must be provided by a Federal and State approved clinic through a controlled dispensary procedure. Buprenorphine and naltrexone may be prescribed by a physician, physician assistant or nurse practitioner whose license allows them to prescribe medications. In order to prescribe buprenorphine, a practitioner must obtain a special waiver through the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Drug Enforcement Administration (DEA). Following the development of new synthetic opioid medications, SAMHSA noted the beginning of an increase in misuse of prescription opioids. New medications were developed, and Congress passed the Drug Addiction Treatment Act of 2000 setting up this new treatment option. The DATA waiver allows qualified physicians, nurse practitioners and physician assistants to treat opioid dependency with buprenorphine. Naltrexone may be prescribed by any physician who is licensed to prescribe medications; it is not a controlled substance.

SAMHSA maintains a directory of physicians who are waivered to provide buprenorphine treatment; however, a physician can opt out of having their name published on this list. In addition, physicians may hold a DATA Waiver but not be actively prescribing. By matching the information on the SAMHSA directory against Illinois' Prescription Drug Monitoring Program database, we found that many practitioners listed in the SAMHSA locator are not actively prescribing. This raised the concern that people seeking treatment could be referred to prescribers who weren't actually taking in new patients, thereby discouraging individuals seeking help for their opioid use disorder. There was also a concern that, at this time when IDHS was trying to improve access to MAT, lack of provider availability could pose a major barrier for patients seeking services. SUPR recognized the need to accurately determine the number of physicians who were waivered to prescribe this medication in Illinois, agreed to be listed on the directory, and were actively prescribing. This analysis resulted in the realization that there were 1.33 million Illinoisans, or 10% of the population, that lived in the 58 counties with no documented access to any of the three FDA-approved medications, "MAT deserts" (see map below).

[11] Thiede, H, Hagan, H & Murrill, CS. Methadone treatment and HIV and hepatitis b and C risk reduction among injectors in the Seattle area (2000). *Journal of Urban Health. 77*(3), pp 331–345.

The text in counties shows the number of **M**ethadone/buprenorphine programs, physician prescribers of **B**uprenorphine, or the availability of **N**altrexone. Access to all three forms of FDA approved medications for MAT is of critical importance given both the unique needs and geographic locations of individual persons suffering from opioid use disorder, and the various infrastructure requirements associated with the establishment of OMT service sites. The map below shows the distribution of major MAT resources in Illinois



IDHS/SUPR currently licenses 71 OMT service sites in Illinois. Thirty-one (31) of these OMT sites receive public funding support through IDHS/SUPR. The remainder of these OMT sites depend upon private or self-pay funding. It can be readily seen that the majority of the OMT service sites in Illinois are located in Cook County. There are only three OMT sites in IDHS Region 3, and only two

in each of Regions 4 and 5. A total of 7,370 unduplicated clients were served at the IDHS/SUPR-supported OMT sites during SFY 2017.[12]

The map of MAT treatment availability above also indicates the locations of "active" physicians, or physicians who have waivers to prescribe Buprenorphine for the treatment of OUD and have prescribed the medication within the past year. As of June 2018, there are 707 such physicians in Illinois. 493 of these physicians are in Cook County. There are 136 physicians in Region 4, and 105 in Region 5. 23 of the waivered physicians in Region 5 are in two counties (Madison and St. Clair).

In summary, there are large areas of Illinois within which residents have little or no access to any form of MAT for OUD. This is particularly problematic given the information provided through the maps on the following page that illustrate the distribution of IDHS/SUPR-funded primary opioid admissions across the state, and the corresponding county-specific population rates of such admissions. While Cook County residents account for a major portion of the number of SFY 2017 primary opioid admissions to IDHS/SUPR-funded treatment services, such admissions are distributed throughout the state. Given the marked differences in population size across Illinois counties, the companion map of primary opioid admissions per 1,000 residents provides a more useful picture of the relative distribution of such cases. It can be seen that several counties have population rates of primary opioid admissions to IDHS/SUPR-funded treatment services that are similar to that of Cook County. In addition, there are six counties that had SFY 2017 population rates of primary opioid admissions that were higher than that of Cook. Five of these were in Region 5 and the remaining one in Region 4, in areas in which meaningful access to MAT is extremely limited.

The third map illustrates the percentage of a county's IDHS/SUPR primary opioid admissions that were accounted for by admissions to OMT. It can be seen that several counties had no primary opioid admissions that were accounted for by OMT, and most others had less than 5 percent of such admissions who were served through this modality. Not surprisingly, those counties with the highest percentages of OMT primary opioid admissions corresponded with those who had OMT sites located within their boundaries. Given the limited availability of alternative forms of MAT in many areas of the state, it would seem safe to conclude that the majority of Illinois residents with OUD who are admitted to publicly-funded treatment do not participate in any form of MAT.

STATE'S RESPONSE

In May 2017, IDHS/SUPR received $16.3 million in grant funding from the DHHS/SAMHSA in 21st Century Cures Act-authorized funding under the State Targeted Response to the Opioid Crisis Grant (Opioid STR) program. Initiatives funded through Opioid STR align with the Statewide Opioid Action Plan (SOAP), which forms the strategic framework for addressing the opioid epidemic in Illinois. The SOAP[13] sets a statewide goal of reducing opioid- related deaths by one-third

[12] Data attributed to DARTS was obtained from services submitted to, and accepted in, the Division's Automated Reporting and Tracking System (DARTS) through September 30, 2017. DARTS only collects data for services reimbursed through SUPR contract and Medicaid Fee-For-Service (FFS) for income eligible clients. Data on services reimbursed by Medicaid Managed Care Organizations (MCO's), and third-party funding sources such as insurance and self-pay, are not reported by providers into DARTS and, therefore, their admissions and other service information are not included. Additionally, beginning in state fiscal year 2016, an increasing number of Illinois Medicaid patients belonged to an MCO and did not have MCO-reimbursed substance use disorder treatment service data reported to DARTS.

[13] http://dph.illinois.gov/sites/default/files/publications/final-soap-implementation-report.pdf

in three years and formulating a set of evidence-based strategies to achieve this goal, focusing on efforts falling into three pillars:

1) Prevention: preventing people from using opioids
2) Treatment and Recovery: providing evidence-based treatment and recovery services to Illinois citizens with opioid use disorder (OUD)
3) Response: avoiding death after overdose.

The Illinois Opioid STR program aims to address the opioid crisis by increasing access to treatment, reducing unmet treatment need, and reducing opioid overdose related deaths through the provision of prevention, treatment and recovery activities for opioid use disorder (OUD), including prescription opioids as well as illicit drugs such as heroin.

As of July 15, 2018, a total of 7,215 persons with opioid use disorder (OUD) had been served through the outreach, treatment, and recovery support services supported through the Illinois Opioid-STR grant. Provided below are brief summaries of the full range of services that are supported by this grant, and their accomplishments as reported through July 15, 2018 (unless otherwise specified).

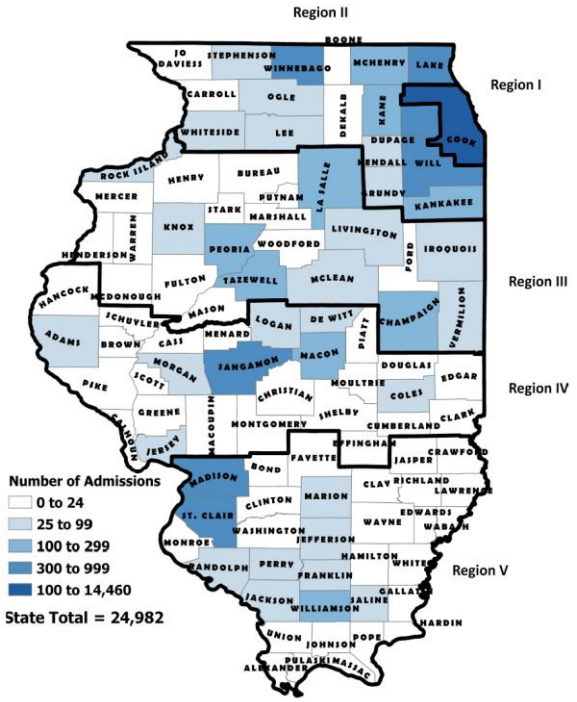
EXPANDED MEDICATION ASSISTED TREATMENT (MAT)

Within the substance use disorder treatment continuum of care, medication-assisted treatment (MAT) involves the use of a medication to treat a substance use disorder that includes one of several medication options in tandem with counseling and social supports. These medications are analogous to taking medication for diabetes or asthma – they help people manage their disorder so that they can maintain their recovery. Once stabilized, patients do not experience the withdrawals and cravings that partly define a substance use disorder. FDA-approved OUD medications include methadone, buprenorphine products, including single-entity buprenorphine products, buprenorphine/naloxone tablets, films, buccal preparations, long-acting injectable buprenorphine products, buprenorphine implants, and injectable extended-release naltrexone.

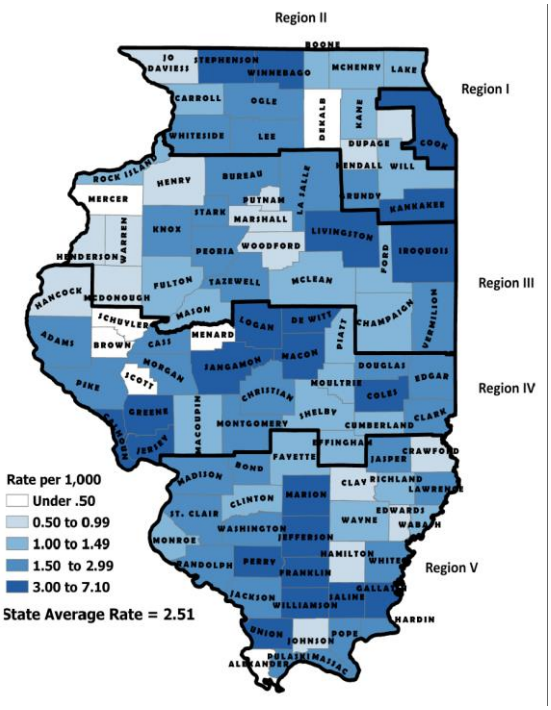
EXPANDED OUTPATIENT METHADONE TREATMENT (OMT) SERVICES. A total of 12 community-based licensed provider organizations responded to a competitive Notice of Funding Opportunity and have been contracted to provide expanded OMT services through the Opioid-STR grant. As of July 15, 2018, 2,179 clients have been admitted to these expanded OMT services.

JAIL-BASED MAT SERVICES. IDHS/SUPR entered into contracts with six (6) organizations to provide Medication Assisted Services for persons with OUD in Illinois county jails. These services consist of screening, assessment, initial injections, and post-release treatment referrals while incarcerated. As of July 15, 2018, services have been implemented at 11 county jails and 382 persons have been served. Of these 382 released offenders, 92.4% (353) were admitted by the community-based OUD treatment providers to which they were referred.

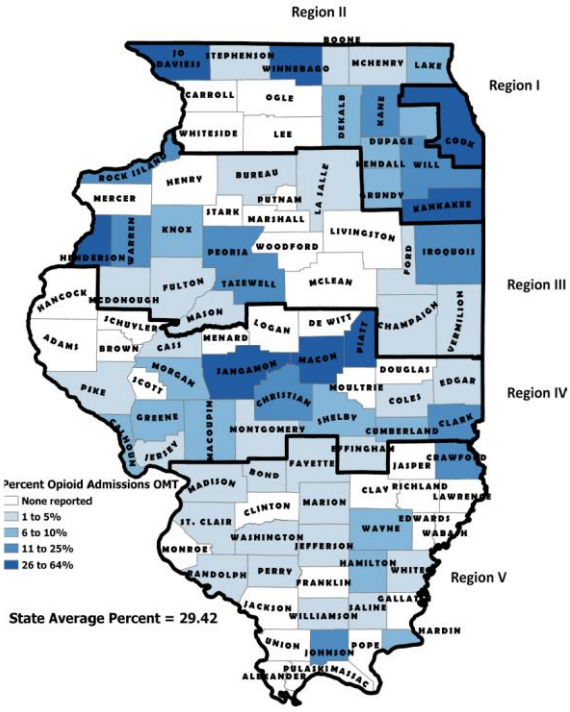
NUMBER OF PRIMARY OPIOID ADMISSIONS
BY ILLINOIS COUNTY – SFY 2017



RATE PER 1,000 OF PRIMARY OPIOID ADMISSIONS
BY ILLINOIS COUNTY – SFY 2017



PERCENT OF PRIMARY OPIOID ADMISSIONS
SUPR-FUNDED OMT BY ILLINOIS COUNTY – SFY 2017



Note.

SUPPORTIVE SERVICES FOR PERSONS WITH OUD

Supportive services, including recovery coaching, recovery housing, and linkage/referral services are critical to removing barriers to patient engagement and retention in treatment services.

EXPANDED RECOVERY HOME SERVICES FOR PERSONS WITH OUD. Three community-based licensed provider organizations responded to a competitive Notice of Funding Opportunity and have been contracted to provide expanded recovery home services. Recovery homes provide a structured alcohol and drug free environment for congregate living, offer regularly scheduled peer-led or community gatherings (self-help groups, etc.), and provide recovery education groups. Participation in Medication Assisted Treatment (MAT) is often a barrier to housing for persons with OUD, so a goal of Opioid STR was to remove that barrier by requiring these recovery homes to specifically engage participants who are active in some form of MAT. As of July 15, 2018, 54 clients have been admitted to expanded Opioid STR recovery home services.

HOSPITAL WARM HAND-OFF SERVICES FOR PERSONS WITH OUD. IDHS/SUPR contracted with four organizations to provide screening and warm hand-off services for persons with OUD in targeted Illinois hospitals. Patients who survive opioid overdoses are often discharged from hospitals without a firm treatment referral. In hospitals with warm handoff services, the referral is strengthened or "warmed" by involving a peer who draws from their recovery experience to engage the client in services. Services have been initiated at nine hospitals and multiple Cook County Health and Hospitals System locations, with 1,623 patients having been served. Of these 1,623 patients, 79.0% (1,282) were admitted by the community-based treatment providers to which they were referred following discharge.

COMMUNITY-BASED OUTREACH/LINKAGE/REFERRAL SERVICES. Street-based outreach services are critical for patients with OUD who do not typically seek services on their own. IDHS/SUPR contracted with community-based outreach, referral, and linkage service providers for persons with OUD in high-need areas across the state. Through this contract, 3,569 persons were provided outreach services through the end of May 2018, 1,932 of these persons screened positive for opioid use and expressed an interest in treatment, 956 of these completed a meeting with a linkage manager, and 806 showed for the treatment intake.

OPIOID CRISIS HELPLINE. Concerned that stigma is preventing individuals from coming forward and asking for help, IDHS/SUPR ensured that funds were included in the Opioid STR grant to support a statewide 24-hour, 7-day/week, 365 day/year helpline for persons with OUD-related issues. The Helpline was launched on December 5, 2017 and has received 4,915 calls as of July 15, 2018. The Helpline's website was launched in March 2018 and has received 3,411 visits by 2,010 unique individuals as of June 30, 2018.

RUSH UNIVERSITY HOSPITAL MULTI-DISCIPLINARY PROGRAMS. IDHS/SUPR Opioid-STR funds also support multiple programs with Rush University Hospital, which is located on the west side of Chicago. Through the end of June 2018, Rush provided Screening, Brief Intervention, and Referral to Treatment (SBIRT) services to 3,641 patients, of whom 1,086 screened positive for any SUD, with 341 of these patients screening positive for OUD. Buprenorphine services were initiated for 116 patients, and 108 were referred to external SUD providers.

IMMEDIATE RESPONSE

Consistent with the response pillar of the State Opioid Action Plan (SOAP), programs that could have an immediate impact on overdose deaths were supported throughout the state.

EXPANDED OVERDOSE EDUCATION AND NALOXONE DISTRIBUTION SERVICES.

Naloxone is a medication that reverses an overdose by blocking opioids, including prescription opioids and heroin. During the period when an overdose can become fatal, if properly used, naloxone can reverse respiratory depression. IDHS/SUPR had previously received funding for overdose education and naloxone distribution services for the six counties with the highest opioid overdose rates via the FFY2016 SAMHSA/CSAP Prescription Drug/Opioid (PDO) Overdose grant. Illinois Opioid-STR prevention funding supports an expansion of these services to the remaining Illinois counties that were not represented in the PDO grant. As of July 15, there have been 8,477 individuals trained through these services. 5,327 naloxone kits have been distributed and 473 opioid overdose reversals have been reported. Since reporting is voluntary, this is likely an underreporting of lives saved. Each of the original and expanded OEND programs either head or are actively involved in local opioid crisis response coalitions which are crucial for understanding the local landscape. Information shared by coalition members across sectors help in adjusting responses to local substance use trends such as the increase in synthetic opioid overdose-related fatalities found in Kane, Kankakee, Lake, Sangamon, McLean, St. Clair, Peoria, Madison, and Cook counties.

IMPROVED MEDICAL PROVIDER EHR OPIOID-PRESCRIBER REPORTING

An important component of a state's response to over prescribing opioids is a Prescription Monitoring System which can deter patients from seeking opioid medications from several doctors.

The IDHS Office of Clinical, Administrative and Program Support (OCAPS) - Bureau of Pharmacy and Clinical Support Services (BPCSS) has the Illinois Prescription Monitoring Program (PMP), which receives Controlled Substance prescription data from retail pharmacies and allows Prescribers and Dispensers to view the historical data for current and prospective patients. Prescribers are required to review the PMP when considering opioids for individual patients. IDHS/SUPR has transferred Illinois Opioid-STR funds to the IDHS-OCAPS-BPCSS to support improved opioid prescriber reporting in commonly used Electronic Health Record (EHR) systems among Illinois medical provider systems. These "automated connections" make it more convenient for prescribers to check the PMP through their EHR, rather than logging into an external system. As of June 2018, there were 35 new PMP/EHR connectivity implementations (PMPnow). In addition, Senate Bill 722 (SB722), which took effect on January 1, 2018, mandates that all prescribers possessing an Illinois Control Substance license must register with the PMP. The PMP attributes the new law, along with the increase in automated connections, to a massive influx of PMP registrations. As of June 2018, there are 65,670 registered PMP users, and 4,371,775 searches conducted through PMP connections. During June 2018, there were 462 new users. This translates to an increase in prescribers and dispensers (pharmacies) checking the PMP before prescribing opioids.

INFORMATION FOR THE GENERAL POPULATION

Public awareness campaigns inform the general population of important health concerns and potential actions they can take to mitigate risk.

Through the use of STR funds, IDHS/SUPR supported the implementation of several public awareness campaigns consistent with the prevention pillar of the SOAP. Starting in December 2017, public awareness focused on the promotion of the Illinois Helpline, launched at a Governor's press

conference. Another prong of the public awareness campaign, Guard and Discard, focused on raising awareness of the safe use, storage, and disposal of prescription pain medications. The second prong called #ending Opioid Misuse in Illinois promoted messaging that encouraged people who have an OUD, their families and friends, and community members to seek OUD treatment and support those seeking treatment. As of June 30, 2018, over 69,000 English and 24,000 Spanish #EOM posters have been distributed throughout Illinois communities. Interior rail and bus cards are being displayed on Chicago's trains and buses with an estimated 5.7 million views. Displays through gas stations and convenience stores statewide have an estimated 45.1 million views by members of the public. Over 191,000 Guard and Discard posters and 716,000 postcards in both English and Spanish, 457,000 stickers, and 31,000 magnets are being displayed or circulated.

FUNDING FOR CONTINUED OPIOID RESPONSE

State Opioid Response (SOR) Grant. Illinois received $28.9 million in grant funding for each of two years (TI081699) through the State Opioid Response Grants (SOR). This grant program's stated aim is "to address the opioid crisis by increasing access to medication-assisted treatment (MAT) using the three FDA-approved medications for the treatment of opioid use disorder (OUD), reducing unmet treatment need, and reducing opioid overdose related deaths through the provision of prevention, treatment and recovery activities for OUD (including prescription opioids, heroin, and illicit fentanyl and fentanyl analogs)." The service initiatives included in the Illinois SOR project plan are designed to expand upon the services supported through the Opioid-STR grant, but also include new initiatives. The grant period spans from October 2018 – September 2020, contingent on an approved second year of funding, and funds total nearly $58 million.

These funds will support the expansion of treatment and recovery support interventions across the state, medication-assisted treatment services for individuals with opioid use disorders who are incarcerated in county jails, and resources for hospitals to help link patients experiencing opioid overdoses to treatment programs in their communities. Housing for persons in recovery from opioid use disorder and supportive services for patients at federally qualified healthcare centers (FQHCs) will also be supported as part of the grant. The award will also strengthen and enhance the Illinois Prescription Monitoring Program (PMP), to continue the state's efforts to prevent the misuse of prescription opioids. In addition, this grant will continue to support the availability of naloxone.