Nebraska State Opioid Response Grant Needs Assessment

Prepared for the Nebraska Department of Health and Human Services – Division of Behavioral Health

September 30, 2021

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Executive Summary

The Nebraska Department of Health and Human Services (DHHS) Division of Behavioral Health (DBH) collaborates with the University of Nebraska Public Policy Center (NUPPC) on the Nebraska State Opioid Response Grant (SOR-II) to assess Nebraska's statewide needs specific to opioid and stimulant use and the state's efforts to prevent and treat substance use. This report was modeled after the *Nebraska Opioid Crisis (Opioid STR) Grant 2017 Needs Assessment* and assesses data collected between 2015 and 2021 from various statewide sources – including Nebraska's prescription drug monitoring program (PDMP), Medicaid Long-Term Care (MLTC), and Centralized Data System (CDS*)* – as well as information provided through additional research, needs assessments, and reports. This needs assessment is primarily based on secondary data analysis and would not be possible without the effort of DBH to request data from multiple divisions and departments within Nebraska DHHS and provide data to the NUPPC. Additionally, some data from the SOR-II evaluation are included in this report.

It should be noted that these diverse sources of data varied in terms of availability, overall and by year, as well as by geographic boundaries of interest (e.g., Behavioral Health Regions, Local Health Departments. Details on how these boundaries align can be found in Appendix A).

This needs assessment identifies the following key findings:

- The number of prescriptions for Opioids has decreased over time, while prescriptions for stimulants have increased.
- In 2019, Nebraska experienced more drug overdose deaths than in 2015. While overdoses attributed to Opioids were consistent during this time, the proportion of deaths attributed to stimulants increased.
- Individuals served in treatment who report opiates as their primary drug of choice decreased between 2016 and 2021.
- Since 2017, Nebraska has engaged in a coordinated effort related to Naloxone training and distribution. As a result, over 2,000 individuals have been trained and nearly 8,000 kits distributed.
- All but three of the 12 Nebraska Local Health Departments experiencing an increased rate of drug overdose deaths have access to Naloxone or will have access soon.
- Since 2017, the number of Medication Assisted Treatment (MAT) providers has increased to 97. These providers are located in all six of Nebraska's Behavioral Health Regions.
- Between 2017 and 2020, the proportion of prescribers making MAT prescriptions for FDA-approved medications increased from 51% to 78%.
- Substance Use Disorder (SUD) treatment claims increased statewide between 2017 and 2020, with four local health departments doubling the number of patients receiving treatment.

1. Demonstrated Need

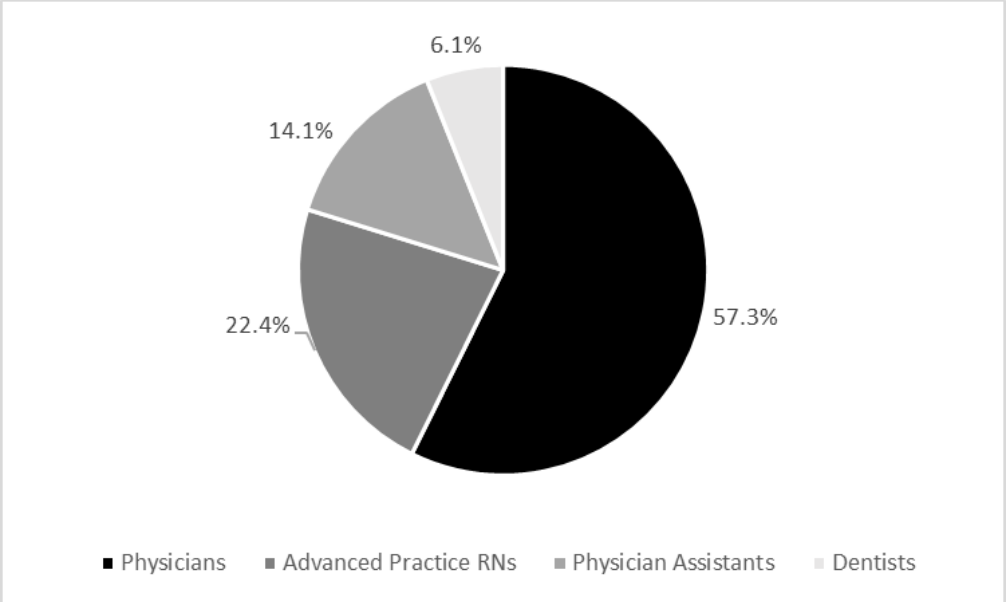
1.1 Availability of Prescription Drugs

In 2017, baseline data on the availability of prescription drugs were collected from pharmacies as a part of Nebraska's Prescription Drug Monitoring Program (PDMP). From January to June 2017, the number of unique pharmacies reporting data to PDMP ranged from 464 to 606 (Nebraska Department of Health and Human Services Division of Behavioral Health (Nebraska DHHS DBH), 2017). Additionally, 2,525 pharmacists were enrolled in the program. This represented 45.8% of all eligible pharmacists in the state of Nebraska.

As of April 2021, there were 4,983 prescribers—including physicians, advanced practice RNs, physician assistants, and dentists—provisioned and registered with the PDMP portal. This represents 23.8% of eligible prescribers. A review of these prescribers by role illustrates that the majority of prescribers were physicians (n=2,857, 57.3%; Figure 1).

Figure 1.

Prescribers Provisioned and Registered with the Nebraska Prescription Drug Monitoring Program (PDMP), April 2021



PDMP data also provide insight into the number of pharmacies providing opioid, benzodiazepine, and stimulant prescriptions between 2017 and 2020. During this time period, 952 unique pharmacies provided prescriptions. The number of unique pharmacies providing these prescriptions varied each year, ranging from 558 in 2018 to 688 in 2019. Each of these pharmacies provided between 1 and 341 prescriptions during this period. The proportion of pharmacies providing prescriptions for opioids, benzodiazepines, and stimulants varied by year, with the largest proportion of pharmacies providing either Opioid Agonists or Benzodiazepines in 2020 (Table 1).

Table 1.

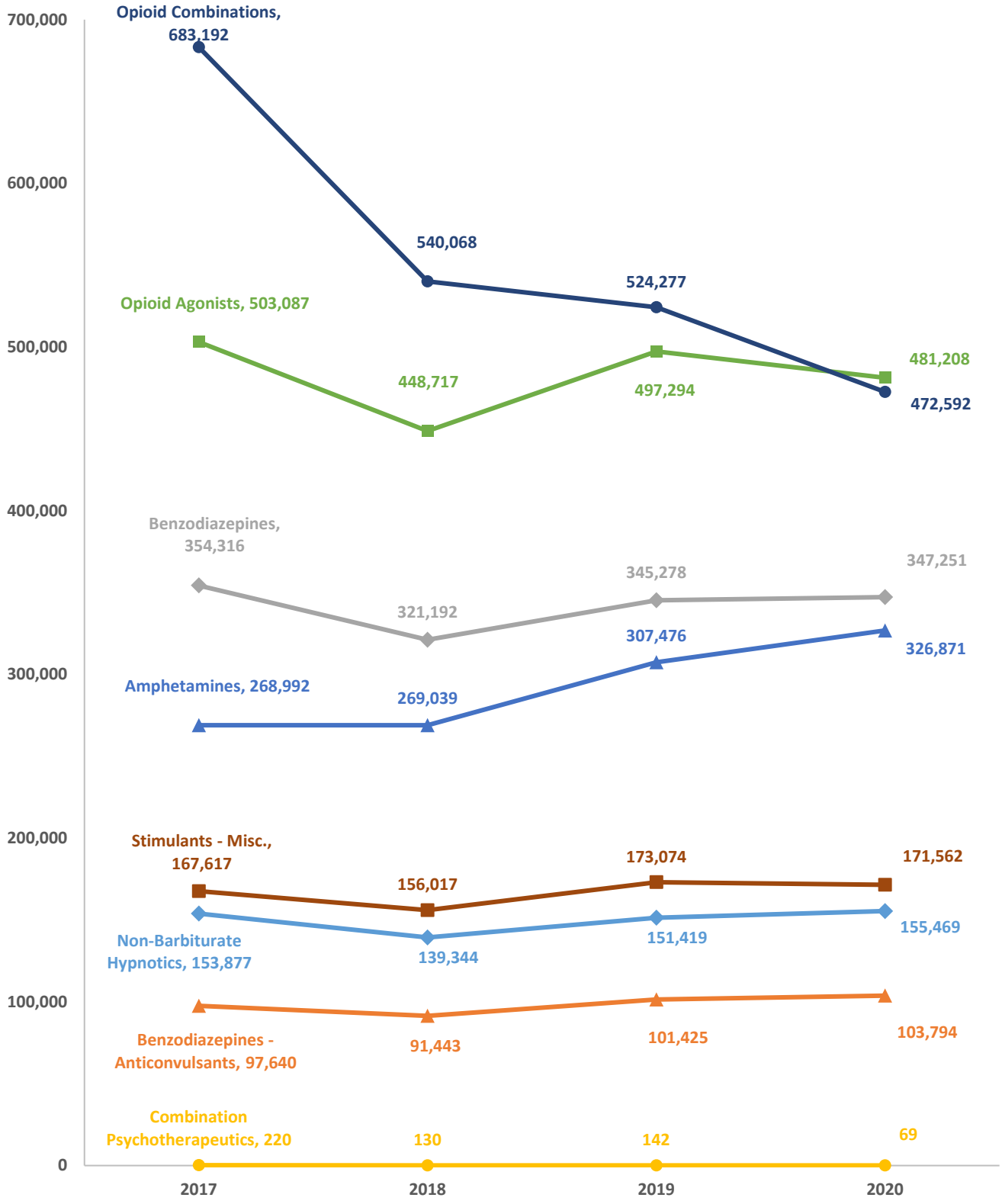
Proportion of PDMP Pharmacies with Prescriptions by Year and Type, 2017-2020

Year	Total Pharmacies	Pharmacies with Prescriptions							
		Amphetamines	Anticonvulsants - Benzodiazepines	Benzodiazepines	Combination Psychotherapeutics	Non-Barbiturate Hypnotics	Opioid Agonists	Opioid Combinations	Stimulants - Misc.
2017	674	81.9%	90.4%	87.4%	7.6%	91.8%	95.4%	92.6%	84.0%
2018	558	81.7%	89.1%	93.2%	5.7%	90.3%	93.4%	89.8%	84.9%
2019	688	76.2%	84.3%	93.2%	4.2%	84.6%	91.4%	87.8%	79.8%
2020	592	77.5%	85.0%	90.7%	3.4%	84.1%	90.4%	84.6%	81.6%

A review of unique prescriptions reported to the PDMP for opioids and stimulants indicates that the total number of prescriptions varied by year and type (Figure 2). While the number of prescriptions for opioids (both agonists and combinations) decreased between 2017 and 2020, prescriptions for stimulants increased during the same time period.

Figure 2.

PDMP Reported Prescriptions by Year and Type



Examination of data from Medicaid Long-Term Care (MLTC) provides insight into the prevalence of claims related to prescriptions of Opioids, Benzodiazepines, and Stimulants, as well as information regarding the number of patients who are receiving these prescriptions.

The number of total claims made for Opioids and Benzodiazepines decreased between 2017 and 2020, with Opioid prescription claims decreasing by 43.7% and prescriptions for Benzodiazepines decreasing by 23.4%. Prescriptions for stimulants stayed largely consistent across all years (Table 2).

Table 2.

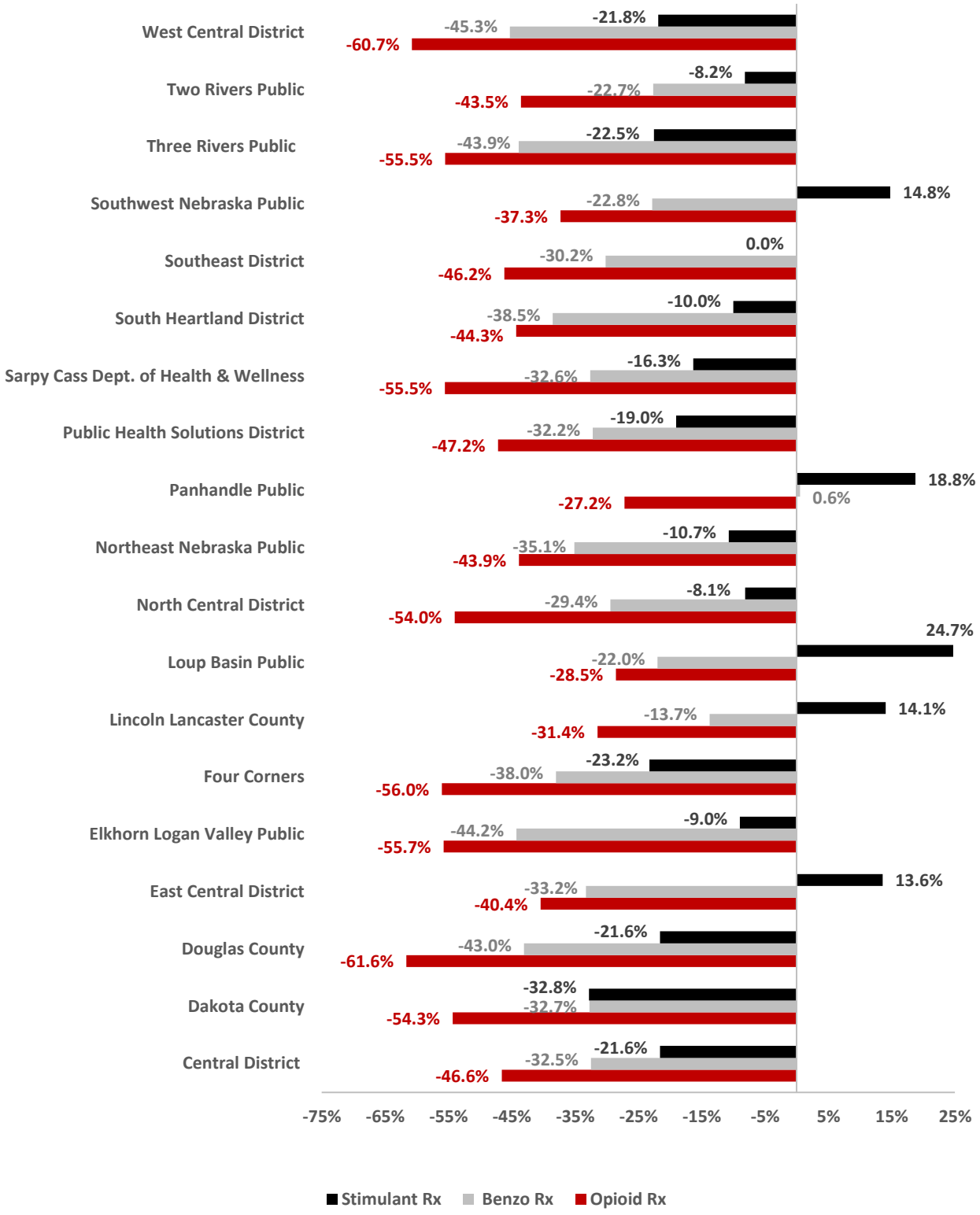
Number of Prescription Claims in Nebraska by Drug and Year

Year	Prescription Claims		
	Opioids	Benzodiazepines	Stimulants
2017	131,579	71,394	131,098
2018	123,847	76,071	135,431
2019	79,273	52,165	132,213
2020	73,988	54,692	131,759
Total	**408,686**	**254,322**	**530,501**

A closer examination of medications prescribed by pharmacies within the 19 Nebraska local health departments illustrates some variation in prescription changes by region (See Appendix A for the geographic location of local health departments). Across Nebraska, the change in Opioid prescriptions over time ranged from a decline of 61.6% (Douglas County) to an decrease of 27.2% (Panhandle Public) between 2017 and 2020. The change in number of Benzodiazepine prescriptions ranged from a 45.3% decrease (West Central District) to a 0.6% increase (Panhandle Public; Figure 3; See Appendix B for additional detail). For stimulants, the overall difference in total number of prescriptions remained consistent from 2017 to 2020, as shown in Table 2, but this difference varied by local health department, ranging from a decrease of 32.8% (Dakota County) to an increase of 24.7% (Loup Basin Public).

Figure 3.

Change in Number of Prescriptions between 2017 and 2020 by Nebraska Local Health Department



MLTC records also provide insight into the number of Nebraskans who are prescribed Opioids and Stimulants due to a primary or secondary diagnosis. Across all years, 3,029 unique patients had a primary or secondary diagnosis that required an Opioid prescription, and 8,079 unique patients had a Stimulant prescription due to a primary or secondary diagnosis. Even though the total number of Opioid prescriptions decreased between 2017 and 2020, the number of patients with opioid prescriptions due to primary or secondary diagnoses increased (Table 3).

Table 3.

Number of Patients with Primary and Secondary Diagnoses treated with Opioids and Stimulants, by Year

Year	Patients			
	Opioid		Stimulant	
	Primary Dx	Secondary Dx	Primary Dx	Secondary Dx
2017	457	512	1,104	1,111
2018	467	459	1,160	1,123
2019	470	473	1,199	1,181
2020	510	618	1,523	2,027
Unique Patients Across All Years	**1,325**	**1,704**	**3,769**	**4,310**

1.2 Annual Overdose Deaths

Between 2015 and 2019, Nebraska averaged 156.4 (SD=18.5) drug overdose deaths per year. The total number of deaths ranged from 128 (in 2016) to 183 (in 2017; Table 4). In 2019, the number of drug overdose deaths totaled 168, representing a 9.0% increase over the previous year and a 12.8% increase since 2015. The rate of all overdose deaths per 100,000 individuals also increased during this time period, from 7.88 to 8.68.

Table 4.

Number and Rate of Nebraska Drug Overdose Deaths*

Year	All Overdose Deaths	
	n	Rate*
2015	149	7.88
2016	128	6.72
2017	183	9.54
2018	154	7.98
2019	168	8.68

*Rate per 100,000 individuals

1.2.1 Overdose Deaths by Local Health District

Examination of drug overdose deaths by local health departments (Table 5) illustrates that the greatest proportion of deaths are located in the most populated regions of the state – Douglas, Lancaster, Sarpy and Cass counties.

Table 5. *Proportion of Total Annual Drug Overdose Deaths by Local Health Department and Year*

Year	N	Local Health Department																		
		Douglas County	Lincoln-Lancaster	Sarpy/Cass	Panhandle	Two Rivers	Central District	Four Corners	Three Rivers	East Central	Elkhorn Logan Valley	Public Health Solutions	Southeast	Southwest	South Heartland	Loup Basin	Northeast	North Central	West Central	Dakota County
2015	145	41%	15%	10%	6%	3%	1%	4%	2%	1%	3%	3%	3%	0%	3%	0%	1%	2%	1%	0%
2016	124	37%	21%	12%	4%	2%	4%	2%	4%	2%	3%	2%	0%	2%	2%	1%	1%	0%	0%	1%
2017	172	38%	17%	8%	4%	6%	2%	4%	3%	2%	2%	1%	1%	3%	1%	2%	1%	1%	1%	1%
2018	145	32%	23%	14%	6%	2%	3%	2%	3%	3%	0%	1%	2%	2%	1%	2%	0%	1%	3%	0%
2019	167	37%	20%	14%	2%	4%	3%	1%	4%	2%	3%	2%	2%	2%	1%	1%	1%	0%	1%	1%
All Years	753	37%	19%	12%	5%	4%	3%	3%	3%	2%	2%	2%	2%	2%	2%	1%	1%	1%	1%	0%

Table 6. *Rate[1] of Drug Overdose Deaths by Local Health Department and Year*

Year	Local Health Department																		
	Southwest	Loup Basin	Dakota County	Central	Three Rivers	Sarpy/Cass	Northeast	Lincoln-Lancaster	Two Rivers	East Central	Elkhorn Logan Valley	West Central	Douglas County	Public Health Solutions	South Heartland	Southeast	North Central	Four Corners	Panhandle
2015	0.0	0.0	0.0	2.6	3.9	7.5	3.3	7.2	4.1	3.8	7.1	5.2	10.8	7.4	8.7	12.9	6.6	13.6	17.7
2016	5.2	3.3	4.9	6.4	6.4	7.4	3.2	8.4	3.1	5.7	7.1	0.0	8.3	3.7	4.4	0.0	0.0	6.8	9.9
2017	15.6	9.7	5.0	5.1	6.4	6.7	6.5	9.2	11.3	7.6	7.1	5.2	11.8	3.7	4.4	5.2	2.2	15.8	14.2
2018	7.8	9.8	0.0	5.1	5.1	10.0	0.0	10.4	3.1	9.4	0.0	10.5	8.1	1.9	4.4	7.8	2.2	6.8	18.5
2019	7.8	6.5	5.0	6.4	7.6	10.8	6.5	10.3	7.2	5.7	8.9	5.3	10.7	5.6	4.4	7.8	0.0	4.5	8.3
Change[2]	*7.8*	*6.5*	*5.0*	*3.8*	*3.7*	*3.3*	*3.3*	*3.2*	*3.1*	*1.9*	*1.8*	*0.1*	*-0.1*	*-1.8*	*-4.3*	*-5.1*	*-6.6*	*-9.1*	*-9.4*

[1] Per 100,000 people [2] Between 2015 and 2019

However, examination of the rates of overdose death (per 100,000 individuals) and the changes in rates between 2015 and 2019 (Table 6), illustrates that the greatest changes in overdose deaths are not experienced in these same health districts. While Southwest, Loup Basin, and Dakota County Health Districts had 0 deaths in 2015, they experienced rates of 7.8, 6.5, and 5 deaths per 100,000 individuals in 2019. Overall, 12 of 19 local health districts with overdose deaths (63%) reported an increase in the overdose death rate per 100,000 people, while seven (37%) reported decreases in the death rate.

1.2.2 Overdose Deaths by Gender and Age

Between 2015 and 2019, an average of 67 women (SD = 9.17) and 89 men (SD = 10.17) died of drug overdoses each year. While the rate of male deaths per 100,000 individuals varied across years, the 2015 (9.65) and 2019 rates (9.73) were similar. The rate of deaths per 100,000 women also varied but increased from 2015 (6.11) to 2019 (7.64).

Drug overdose deaths also varied by age group between 2015 and 2019 (Table 7). Rates increased between 2015 and 2019 for the following age groups: 15-24 years (1.88 in 2015 to 5.22 in 2019), 45-54 years (16.27 in 2015 to 19.45 in 2019), 65-74 years (3.29 in 2015 to 7.27 in 2019), and 85+ (2.37 in 2015 to 6.97). While many of these groups do not represent large proportions of the total number of overdose deaths, they do demonstrate an increase in deaths at both ends of the age spectrum.

Table 7.

Number and Rate of Drug Overdose Deaths in Nebraska by Gender and Age*

	Year									
	2015		2016		2017		2018		2019	
	n	Rate	*n*	Rate	*n*	Rate	*n*	Rate	*n*	Rate
Gender										
Female	58	6.11	56	5.86	80	8.33	67	6.97	74	7.64
Male	91	9.65	72	7.57	103	10.76	87	9.03	94	9.73
Age										
0-1	0	0	0	0	<5	3.87	0	0	0	0
2-14	0	0	0	0	0	0	<5	3.25	0	0
15-24	5	1.88	8	2.98	17	6.34	10	3.7	14	5.22
25-34	30	11.86	26	10.24	30	11.75	29	11.34	28	10.96
35-44	32	14.07	26	11.29	35	14.95	39	16.3	34	13.98
45-54	38	16.27	27	11.79	46	20.47	28	12.73	42	19.45
55-64	35	14.7	34	14.12	35	14.44	39	16.05	33	13.62
65-74	5	3.29	<5	2.51	9	5.4	7	4.06	13	7.27
75-84	<5	3.59	<5	3.58	7	8.22	<5	05	<5	1.11
85+	<5	2.37	0	0	<5	6.97	<5	2.32	<5	6.97

*Rate per 100,000 individuals

1.2.3 Overdose Deaths by Substance

Overdose deaths are reported each year in association with selected drugs. Between 2015 and 2019, Opioids were associated with 38% of all drug overdose deaths (297 of 782). Use of Methamphetamine was associated with another 25% of all deaths (193 of 782). However, while the number of overdose

deaths related to opioids was similar across all years (Table 8), the proportion of deaths associated with Methamphetamine increased 41.7% between 2015 and 2019; from 36 to 51. Deaths associated with Heroin and Cocaine, while fewer in total number, also increased during this time.

Table 8.

Proportion of Drug Overdose Deaths by Selected Drugs and Year

Year	All Overdoses (N)	Selected Drug					
		All Opioid	Meth	Benzodiazepine	Heroin	Cocaine	Unspecified
2015	149	39%	24%	16%	3%	3%	54%
2016	128	35%	15%	20%	3%	8%	59%
2017	183	34%	27%	17%	3%	2%	52%
2018	154	44%	24%	26%	6%	3%	43%
2019	168	38%	30%	18%	9%	4%	33%

1.3 Hospital Discharge Data

Hospital discharge data specific to overdoses were unavailable for this report. However, the perspectives of healthcare and first responders, specific to drug overdose prevention, were captured in a 2019 needs assessment conducted for the Nebraska DHHS (Groeneweg et al., 2019). Highlights from this report include:

- Documentation of a growing concern among healthcare providers over methamphetamine use and its involvement in overdoses
- Healthcare providers were more concerned about the role of methamphetamine in overdoses than opioids
- Concerns regarding overdoses varied by Behavioral Health Region, with Regions 3, 4, and 6 concerned about opioids and all regions concerned about methamphetamine
- Overall, it was perceived that the number of overdoses related to opioids had not changed in the past two years
    - Examination of this perception by Behavioral Health Region illustrated a perceived increase in the number of opioid related overdose deaths in Region 6

1.4 Additional Drug Use Behaviors

The 2020 DHHS Drug Overdose Prevention Needs Assessment, a series of studies conducted by the University of Nebraska Omaha, has additional findings that are relevant to this report. Each of the studies provides details regarding stakeholder perspectives on opioid and stimulant use, rates of use, and promising practices (see https://digitalcommons.unomaha.edu/step_reports/). Key findings applicable to this report include:

- Providers perceived that “while a growing number of individuals seek treatment for opioids, more seek treatment for methamphetamines, alcohol, and drug combinations,” (Harder et al., 2020, p.7).
- “Providers report that 25% of their clients have an opioid use disorder” (Harder et al., 2020, p. 18).

- Methamphetamine and prescription drugs are the greatest drug threats in Nebraska (Frain et al., 2019).

2. Meeting the Need

2.1 Prevention Efforts

2.1.1 Media Campaigns

In 2017, the State of Nebraska committed to participation in a drug prevention campaign called Dose of Reality (Nebraska DHHS DBH, 2017). Since that time, a coordinated statewide media campaign was organized and implemented by the Nebraska Department of Health and Human Services.

During 2019, Nebraska DHHS launched a prescription drug awareness media campaign in partnership with the CDC. This media campaign, which took place from June 14, 2019, to September 30, 2019, was multi-faceted and included billboards, TV and radio ads, video popspots, and posts to social media. The campaign covered the entire state, targeting individuals at risk of being affected by opioid addiction. Highlights of the campaign as reported by SD Communications, LLC. (2019), included:

- Billboards in 15 markets; emphasis on major population centers
- Pandora and Spotify audio and broadcast radio messages statewide
- iHeart Media's Over-The-Top (OTT) video placement in major metropolitan areas
- Popspot video in grocery stores in 7 markets
- Screenvision Movie theater ads in 28 theaters
- DHHS social media posts on Facebook, Instagram, and Twitter
- Google search ads for individuals searching keywords related to overdose, drugs, and pain

Overall, these efforts delivered 17,590,645 impressions over the course of the 3.5-month campaign, 18.3% more impressions than earlier anticipated (SD Communications, 2019).

From October 2019 to September 2020, the State Opioid Response (SOR-I) project, funded by the Substance Abuse Mental Health Services Administration (SAMHSA) provided 39,291 radio spots aired by the Nebraska Broadcasters Association. This campaign reached 209,496 individuals. Additionally, the project developed three supplemental videos on pain management for medical providers. These videos were viewed 4,416 times. The following year, from October 2020 to June 2021, the SOR-II grant project included media campaigns that reached 426,641 people through population-based media, and 11,011 with evidence-based practices.

2.1.2 Naloxone Training and Distribution

Over the past five years, efforts surrounding Naloxone training and distribution have changed drastically in the state of Nebraska. As of 2017, there was "not an organized, statewide effort to distribute Naloxone given restrictions on current funding mechanisms," (Nebraska DHHS DBH, 2017, p.12). Since that point in time, funding provided by the SOR-I and SOR-II grants has supported Naloxone training and distribution across the state. As illustrated in Table 9, a total of 2,149 people were trained in Naloxone administration between 2019 and 2021. In 2021, training efforts were expanded beyond individuals to entities, of which 17 were trained. While the number of Naloxone kits distributed varied between 2018 and 2021, nearly 8,000 kits were distributed overall.

Table 9.

Naloxone Efforts in Nebraska between 2018 and 2021

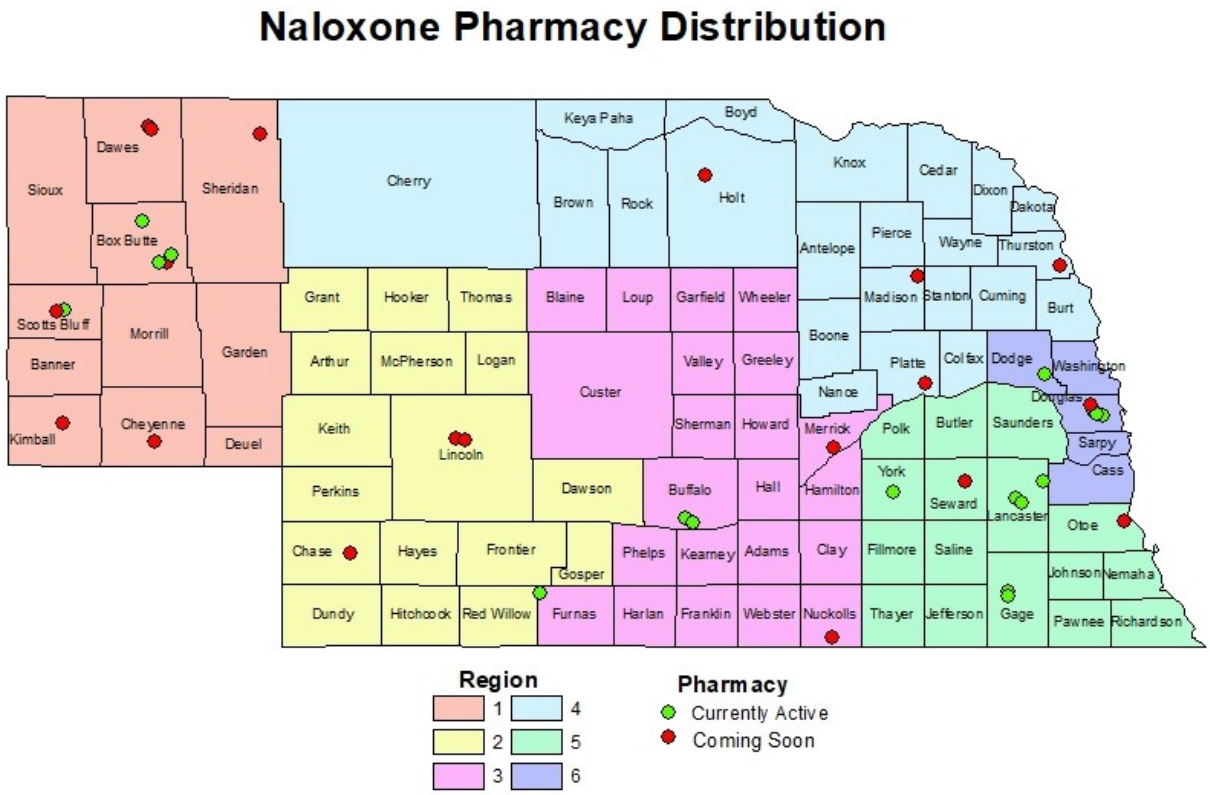
Naloxone Efforts	Year				Total
	2018	2019	2020	2021	
Individuals Trained in Naloxone Administration		159	1,326	664	2,149
Entities Trained in Naloxone Administration				17	17
Naloxone Kits Distributed	1,871	1,721	3,293	1,047	7,932

Note: All numbers reported are for the fiscal year. Grey shading indicates that data were not available for the year and effort.

A closer examination of the distribution of Naloxone in Nebraska pharmacies illustrates that Naloxone is available statewide (Figure 4). It is currently available in four of the six behavioral health regions (Regions 1, 3, 5, 6), with plans to increase availability across all regions in the near future (See Appendix A for further detail regarding Behavioral Health Regions).

Figure 4.

Naloxone Pharmacy Distribution in Nebraska



Additionally, a survey and series of focus groups conducted in 2019 with Nebraska healthcare providers found that nearly all "felt confident in their ability to administer Naloxone if needed" and also indicated their departments had the resources necessary to respond to opioid overdose (Groeneweg et al., 2019,

p.4). Furthermore, 75% of respondents reported receiving appropriate training on opioid use and response to opioid overdose (Groeneweg et al., 2019). However, these healthcare providers also indicated that little was known and understood about Naloxone in their communities. Specifically, they did not think the general public understood that Naloxone could be accessed without a prescription. They also reported that Naloxone kits were not provided to individuals who overdosed or to their families, despite nearly half of those who had administered Naloxone in the last 12 months indicating that they had administered it to the same person on different occasions (Groeneweg et al., 2019)

Comparison of the availability of Naloxone, by Behavioral Health Region (Figure 4.), with the change in the rate of overdose deaths by local health districts from 2015 to 2019 (Table 6), illustrates that not all local health districts with an increase in overdose deaths have access to Naloxone through the pharmacy distribution program. Of the 12 local health districts with an increasing rate in overdose deaths, three (25%) currently have access to Naloxone at a pharmacy somewhere within their district. Six districts (50%) have pharmacies that will soon offer Naloxone. However, the remaining 3 districts (25%; Loup Basin, Dakota County, and Sarpy/Cass) do not currently have access to Naloxone through the pharmacy distribution program. It should be noted that all local health districts have access to Naloxone through Behavioral Health District distribution to first responders.

2.1.3 State Opioid Response Grants: Drug Disposal Events

During the first year of the State Opioid Response grant, prevention efforts included drug disposal events which collected 25,970 pounds of medication, purchased 239 pill pods, and distributed 14,440 at-home drug disposal product units. During the first three quarters of the second grant, six drug disposal events collected 19,169 pounds of medication.

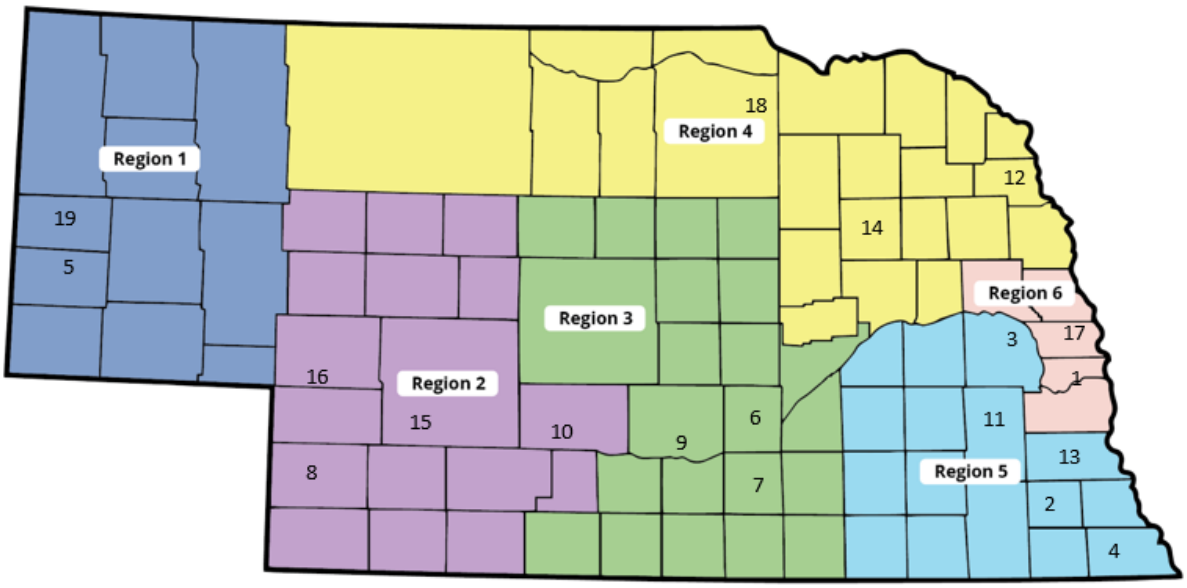
2.2 Treatment and Recovery Services

2.2.1 Medication Assisted Treatment

The SOR-II project has documented and tracked a comprehensive list of MAT providers in the state of Nebraska. As of April 2021, there were 97 MAT providers across the state, located in 21 unique communities. While providers were more concentrated in population centers, such as Omaha (n=43, 44.3%) and Lincoln (n=16, 16.5%), there were providers located in each Behavioral Health Region (Figure 5; See Appendix A for further detail on Behavioral Health Regions). The number of communities in which MAT providers are located has almost doubled, from 10 to 19, since 2017 (Nebraska DHHS DBH, 2017).

Figure 5.

Location and Number of MAT Providers in Nebraska Behavioral Health Regions



Location

1. Bellevue (2)
2. Cook (1)
3. Elkhorn (1)
4. Falls City (1)
5. Gering (1)
6. Grand Island (3)
7. Hastings (1)
8. Imperial (1)
9. Kearney (4)
10. Lexington (2)
11. Lincoln (15)
12. Macy (1)
13. Nebraska City (1)
14. Norfolk (9)
15. North Platte (2)
16. Ogallala (1)
17. Omaha (43)
18. O'Neill (2)
19. Scottsbluff (3)

SAMHSA's Buprenorphine Treatment Provider Locator currently lists 102 practitioners certified to provide Buprenorphine for treatment of Opioid Use Disorder (OUD) in Nebraska. This compares to 44 physicians certified to prescribe the drug in 2017 (Nebraska DDHS DBH, 2017).

Prescribers provisioned and registered with the PDMP portal also reported the prescriptions they made for MAT. These prescriptions were for 15 different medications, with the total prescribers varying by medication (Table 10). While no single medication was prescribed by the majority of prescribers, in 2017, Butrans was prescribed at least once by the greatest proportion of prescribers (37%), whereas in 2018, 2019 and 2020, Naltrexone HCI was prescribed by the greatest number of prescribers (35%, 40% and 41%, respectively). It should be noted that Naltrexone HCI is an FDA-approved medication, whereas Butrans is not.

Table 10.

Number of PDMP Prescribers Making MAT Prescriptions, by Year and Drug

		Number of Prescribers														
		MAT Medications Prescribed														
Year	Total Prescribers	Belbuca	Bunavail[1]	Buprenex	Buprenorphine[1]	Buprenorphine HCl[1]	Buprenorphine HCl-Naloxone HCl[1]	Butrans	Contrave	Embeda	Naltrexone HCl[1]	Relistor	Sublocade[1]	Suboxone[1]	Vivitrol[1]	Zubsolv[1]
2017	4,288	191	8	8	217	660	172	1,593	91	242	163	3	0	907	12	66
2018	10,613	295	3	5	544	570	301	906	2,650	305	3,762	190	22	855	227	73
2019	6,364	382	1	0	443	318	532	315	946	125	2,574	202	21	262	19	42
2020	12,624	748	2	0	1,140	883	1,408	478	1,406	14	5,233	223	50	426	668	90

[1]FDA Approved Medication

Further comparison of prescribers who prescribed FDA-approved and non-FDA approved medications illustrates a positive trend (Table 11). Overall, between 2017 and 2020, the proportion of prescribers making non-FDA approved MAT prescriptions decreased, while the proportion making prescriptions for FDA approved medications increased.

Table 11.

Prescribers Making MAT Prescriptions for FDA Approved and non-FDA Approved Medications, by Year

Year	Total Prescribers	Number of Prescribers with MAT Prescriptions			
		Non-FDA Approved		FDA-Approved	
		n	%	n	%
2017	4,288	2,128	50%	2,205	51%
2018	10,613	4,351	41%	6,357	60%
2019	6,364	1,970	31%	4,212	66%
2020	12,624	2,869	23%	9,900	78%

In 2020, the number of prescriptions for each MAT medication ranged from zero (Bunavail) to 12,929 (Naltrexone HCl). Comparison of 2017 and 2020 prescriptions shows that the total number of prescriptions made for MAT medications by PDMP prescribers increased 115% across all medications (Table 12). However, this increase was not experienced across all medications. A decrease in total prescriptions occurred for Bunavail (*n*=-213, -100%), Embeda (*n*=-428, -97%), Buprenex (*n*=-15, -88%), Butrans (*n*=-2,262,-59%) and Suboxone (*n*=-6,351, -59%). Three of these five medications are not FDA-approved (Embeda, Buprenex, and Butrans). During this same time period, though, the number of prescriptions of other medications increased by over 100%. This included Buprenorphine (*n*=2,403, 352%), Buprenorphine HCl-Naloxone HCl (*n*=11,233, 729%), Belbuca (*n*=2,897, 840%), Contrave (*n*=2,990, 2769%), Naltrexone HCl (*n*=12,681, 5113%), Relistor (*n*=304, 10,133%) and Vivitrol (*n*=1,257, 10,475%). Of these seven drugs, four are FDA-approved for MAT (Buprenorphine, Buprenorphine HCl-Naloxone HCl, Naltrexone HCl, and Vivitrol).

Table 12.

Number of Prescriptions for MAT medications

Medication	Year				Change
	2017	2018	2019	2020	
Belbuca	345	2,626	1,199	3,242	840%
Bunavail[1]	213	145	2	0	-100%
Buprenex	17	5	0	2	-88%
Buprenorphine[1]	682	2,567	730	3,085	352%
Buprenorphine HCl[1]	4,527	8,726	643	6,468	43%
Buprenorphine HCl-Naloxone HCl[1]	1,540	6,091	1,321	12,773	729%
Butrans	3,848	3,871	551	1,586	-59%
Contrave	108	6,498	1,129	3,098	2,769%

Medication	Year				Change
	2017	2018	2019	2020	
Embeda	443	797	178	15	-97%
Naltrexone HCl[1]	248	15,348	3,847	12,929	5,113%
Relistor	3	328	261	307	10,133%
Sublocade[1]	0	179	63	241	--
Suboxone[1]	10,741	18,913	917	4,390	-59%
Vivitrol[1]	12	610	299	1,269	10,475%
Zubsolv[1]	490	2,431	84	607	24%
TOTAL	23,217	69,135	11,224	50,012	115%

[1]FDA Approved Medication

2.2.2 State Opioid Response Grants: Extension for Community Healthcare Outcomes

The Extension for Community Healthcare Outcomes (ECHO) project was included in both the SOR-I and SOR-II grants funded through SAMHSA. This project allows for virtual trainings on best treatment practices for Opioid Addiction through bi-weekly, one-hour sessions. Between October 2019 and September 2020, 161 professionals were trained as part of the SOR-I grant. Between October 2020 and June 2021, 50 providers received training as part of the SOR-II grant.

2.2.3 Substance Abuse Treatment Claims

MLTC data provides insight into the number of patients with medical claims for substance abuse treatment. Between 2017 and 2020, over 15,000 unique patients had claims related to some type of substance use disorder (Table 13). Each year between 4% and 8.5% of these treatments included Buprenorphine. It should be noted that the proportion of patients with claims that included Buprenorphine more than doubled between 2019 and 2020, from 273 to 593. The total number of individuals receiving any substance use disorder treatment also increased by 32.4% during this time period, from 5,290 in 2019 to 6,965 in 2020. While it is unclear what this increase can be attributed to, it should be noted that the SOR-I funding began in October 2019 and both SOR-I and SOR-II funding was available throughout all of 2020.

Table 13.

Number of patients with Substance Use Disorder Claims (SUD), by Treatment and Year

Year	Patients		
	Any SUD Treatment	Buprenorphine Naloxone	Buprenorphine only
2017	4,911	200	49
2018	5,347	273	67
2019	5,260	273	48
2020	6,965	593	103
Unique Patients Across All Years*	**15,351**		

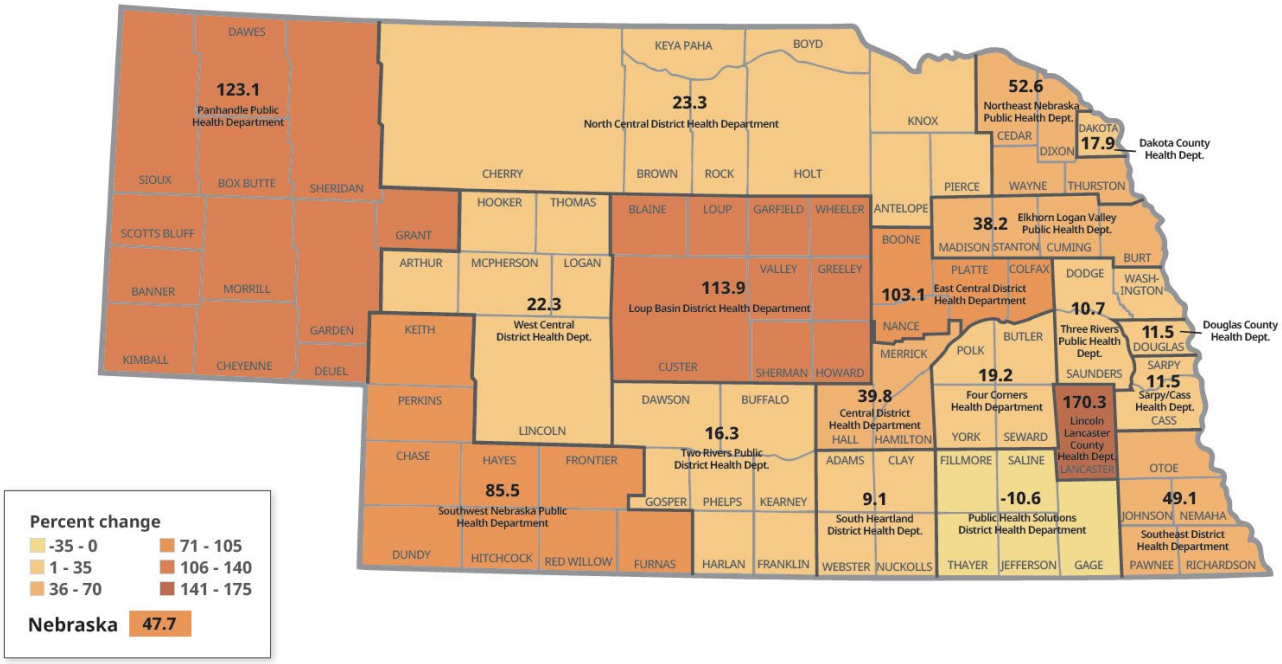
*Number of Unique Patients not available for use of Buprenorphine and Naloxone

2.2.4 Substance Abuse Treatment by Local Health Department

Review of SUD treatment data by Local Health Department illustrates an increase in the number of patients in all health departments but one (Public Health Solutions District; See Appendix A for further detail on Local Health Districts). The percentage change in patients with any SUD treatment, between 2017 and 2020, ranged from a 10.6% decline to a 170.3% increase (Figure 6.; See Appendix B, Table B2, for more detail).

Figure 6.

Percent Change[1] in the Number of Patients with any Substance Use Disorder Treatment by Local Health Department



[1]From 2017 to 2020

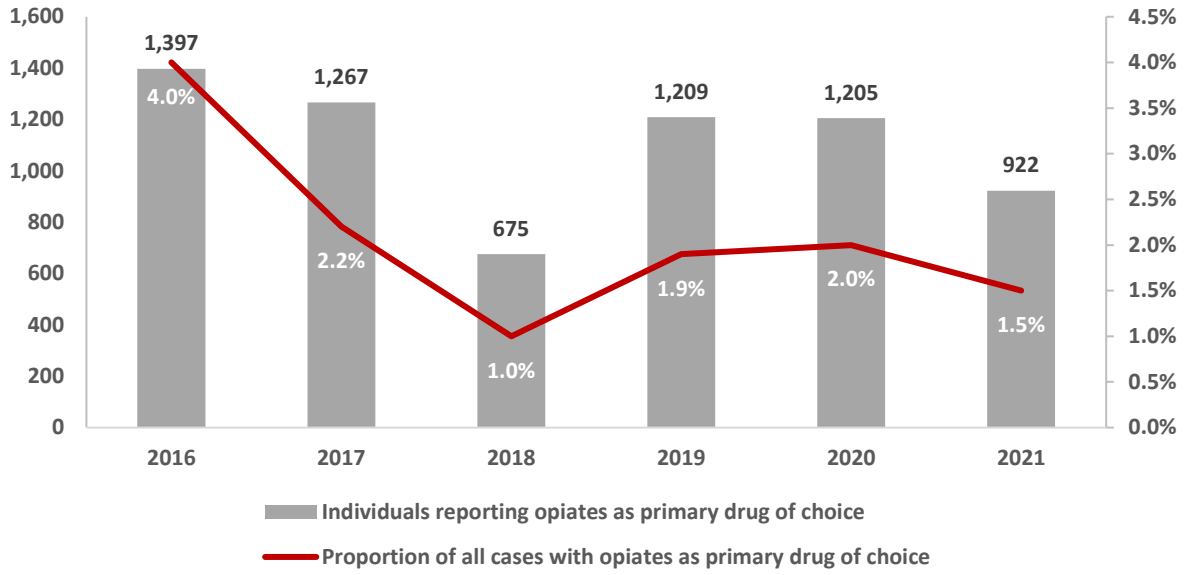
2.2.5 Individuals and Services Reported to the Centralized Data System (CDS)

In Nebraska, service utilization records are submitted to the Nebraska Department of Behavioral Health by service providers through the Centralized Data System (CDS) database. This system allows for monitoring of the prevalence of opioid use disorder (OUD), services received by those with OUD and the completion or termination of treatment.

As illustrated in Figure 7, between 2016 and 2021 the number of individuals who reported opiates as their primary drug of choice ranged from 675 to 1,397. Overall, the total number of individuals has decreased over time, as is the proportion of all individuals served who identify opioids as their primary drug of choice. This proportion has decreased from a high of 4% in 2016 to 1.5% in 2021.

Figure 7.

Individuals Served who Reported Opiates as Primary Drug of Choice



Between 2016 and 2021, the services which individuals with an opioid-related diagnosis received remained relatively consistent. While the proportion of individuals participating in each service varied by year, overall, a greater proportion of individuals participated in an opioid treatment program (21.1%) and assessment (18.2%) in 2021 than in all prior years (Table 14).

Table 14.

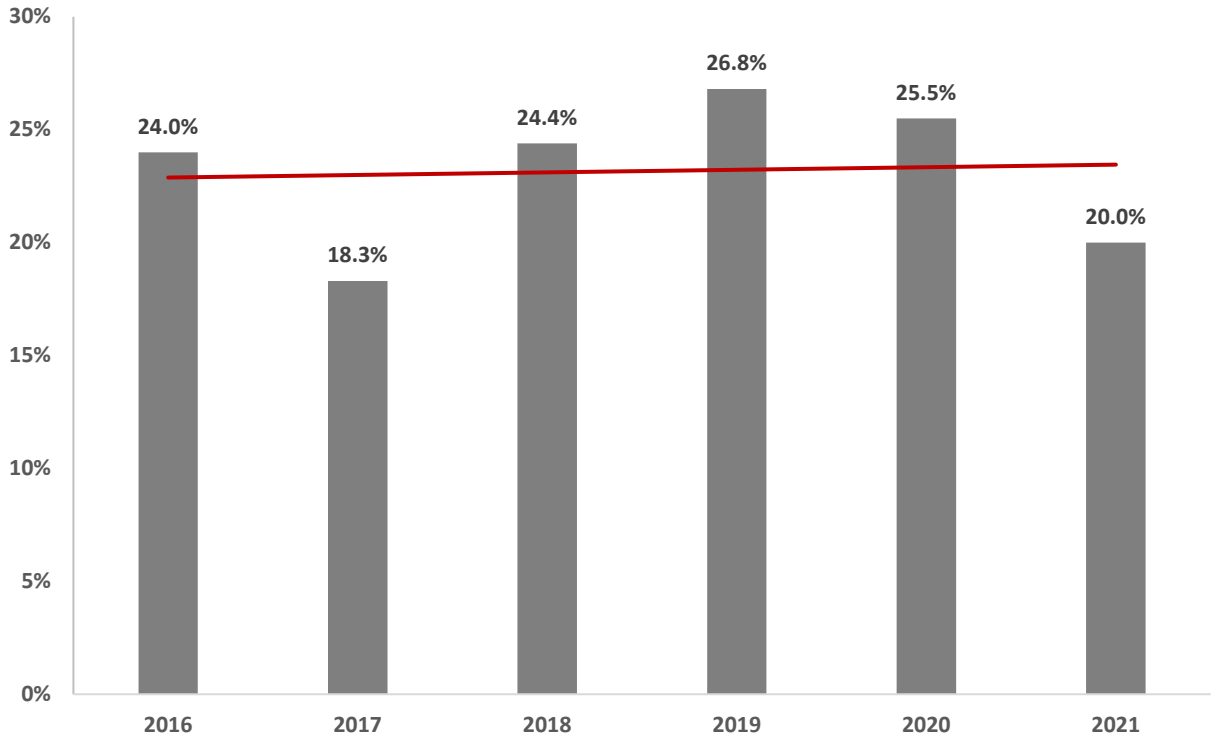
Services Most Commonly Used Among Individuals with an Opioid-related Diagnosis

Service	Year					
	2016	2017	2018	2019	2020	2021
Outpatient psychotherapy	13.5%	17.3%	17.7%	17.2%	15.1%	14.1%
Opioid treatment program	17.4%	16.2%	14.7%	14.6%	16.3%	21.1%
Assessment	14.2%	14.7%	16.1%	15.3%	17.0%	18.2%
Short-term residential	8.2%	11.4%	10.2%	8.9%	8.0%	
Intensive outpatient/adult-SUD	6.8%	6.2%	5.8%		6.2%	
Medication management	9.7%	5.6%	5.9%		7.5%	6.7%
Total	69.8%	71.4%	70.5%	63.0%	67.7%	60.1%

Finally, CDS data provides detail regarding the number of individuals with opioid related diagnosis discharged from services. Between 2016 and 2021, an average of 1,252 individuals (SD = 113.8) were discharged from services each year, ranging from 1,038 (2021) to 1,368 (2019) per year. The proportion of those served who completed treatment stayed relatively consistent across the six years for which data were available (Figure 8).

Figure 8.

Proportion of Clients Discharged who Completed Treatment, by Year



Comparison of the reasons for which individuals do not complete services between persons with OUD and all clients reveals that the most prevalent reasons for discharge were drop out and terminated by facility. Historically, individuals with OUD were discharged for these rates twice as often, if not more, than all clients. However, more recently there have been downward trends in the proportion of persons with OUD discharged for both reasons (See Appendix C, Figure C1 and Figure C2). For those terminated by facility, this downward trend was also experienced by all clients. However, while the proportion of individuals with OUD who were discharged because of termination by faculty decreased over time, the proportion of all clients discharged for this reason remained consistent.

2.2.6 State Opioid Response Grants: Recovery Houses and Outpatient Treatment

The state of Nebraska has received two State Opioid Response grants (SOR-I and SOR-II), which have provided services to those with opioid and stimulant substance use disorders since October 2019. These grants provided funding for recovery in the form of Oxford Houses, or sober houses, and outpatient treatment.

Oxford Houses served 724 total individuals between October 2019 and September 2020. On average, 82 clients stayed in these houses. Between October 2020 and June 2021, the average number of monthly residents nearly doubled – with an average of between 119 and 165 individuals being served each

month for Opioid Use Disorder and a monthly average of between 195 and 214 being served for stimulant use disorder[1].

Outpatient treatment services were provided to 68 participants during the SOR-I grant period (October 2019 to September 2020). During the ongoing SOR-II grant, 144 clients participated in services between October 2020 and June 2021. Therefore, more than twice the number of clients served in the first grant were served in the first three quarters of the second grant. This may be the result of expanding the scope of work to include individuals with both opioid and stimulant use disorders.

2.2.7 State Opioid Response Grants: Peer Support Training

During the second State Opioid Response Grant (SOR-II), recovery services were enhanced by the training of 184 Peer Support Workers. A standardized Peer Support Curriculum was used during the training, which took place between October 2020 and June 2021.

2.2.8 Additional Needs Related to Treatment

The 2020 DHHS Drug Overdose Prevention Needs Assessment addressed key questions related to substance abuse treatment in Nebraska (Harder et al., 2020). Key findings related to opioid and stimulant use, and treatment more broadly, include:

- Clients receiving treatment are more likely to be male. This gender gap in treatment may occur because of financial and childcare barriers to treatment experienced by women.
- For alcohol and opioid substance use disorder, 75% of outpatient providers reported referring to medication assisted treatment (MAT); however urban providers made referrals more often than rural providers.
- Cost is a barrier to clients receiving needed MAT services.
- Increased access to naloxone was seen by interview participants as important for overdose prevention.

3. Policy and Legislation related to the Opioid Overdose Crisis

Since 2017, the Nebraska State Legislature has enacted several laws that address the opioid use epidemic. Policy and legislation related to the opioid overdose crisis which was enacted prior to 2018 is detailed in the Nebraska Opioid Crisis (Opioid STR) Grant 2017 Needs Assessment (Nebraska DHHS DBH, 2017).

3.1 2018 Policies and Legislation

3.1.1 Qualified Immunity for Reporting Drug Overdose Emergencies

LB487 (2018) provided limited immunity from criminal drug and drug paraphernalia possession laws for those who request emergency medical assistance for drug overdoses. The law thus encourages people to request emergency help for drug overdoses. LB 487 incorporated provisions from other bills that also provide qualified immunity from administrative or criminal prosecution and civil lawsuits for emergency responders and law enforcement officers who administer Naloxone to those experiencing apparent opioid overdoses. LB487 also included a synthetic opioid called U-47700 or “pink heroin” as a Schedule I drug.

[1] Individuals served in Oxford Houses may have both opioid and stimulant use disorder.

3.1.2 Continuing Education

LB 731 (2018) mandated continuing education about opiate prescription issues for some health care providers as part of continuing competency requirements. Nurse midwives, dentists, physicians, physician assistants, nurse practitioners, podiatrists, and veterinarians must take at least three hours of continuing education about prescription opioids biennially.

3.1.3 Restrictions and Conditions on Opiate Prescriptions

LB 931 (2018) placed limits on opiate prescriptions. The bill maintained a seven-day limit on opioid prescriptions for minors. Exceptions were included for chronic pain, cancer, and palliative care. The bill also required medical providers to notify parents or guardians of minors of the risks of addiction and abuse, and alternative treatments if available. LB 931 also required presentation of a valid photo identification for picking up an opiate prescription, with an exception for prescriptions dispensed within a licensed facility.

3.1.4 Prescription Drug Monitoring Program Enhancements

On January 1, 2018, the Nebraska Prescription Drug Monitoring Program (PDMP) began requiring the collection of prescription information for all dispensed medication prescriptions. This included information on the patient, dispensing pharmacy, date of prescription, and dosage and quantity prescribed. The Nebraska PDMP was created via LB237 in 2011. In 2018, the Legislature also passed LB 1034 to require veterinarians to report dispensed prescriptions to the PDMP and include prescription medication dispensed in in-patient facilities.

3.2 2019 Policies and Legislation

3.2.1 Prescription Drug Monitoring Program Enhancements

LB 556 (2019) amended the Nebraska Prescription Drug Monitoring Program (PDMP) to enhance the confidentiality and security of prescription drug information, and allowed the Nebraska Department of Health and Human Services to share PDMP data with other states' prescription drug monitoring programs, state and regional health information exchange programs, Nebraska Medicaid, other Nebraska state-administered health insurance programs, organizations that facilitate information exchange and interoperability between state prescription drug monitoring and health information exchange systems, and electronic health and pharmacy record systems. Sharing of data was restricted to those entities with at least the same privacy protections as the Nebraska PDMP. LB 556 also required that additional information be included in PDMP records, including: prescription medication information about refills, patient contact and identification information, and patient gender.

3.3 2020 Policies and Legislation

3.3.1 Nebraska Opioid Recovery Fund

LB 1124 (2020) created the Nebraska Opioid Recovery Fund – a repository for any funds received by Nebraska from government lawsuits against opioid manufacturers. The statute mandates that any funds received be spent in accordance with the terms of any judgments or settlements. It should be noted that in 2021, the State of Nebraska will receive portions of a multistate settlement against opioid manufacturers that will be dedicated towards addiction treatment, recovery, prevention, and law

enforcement efforts. The Nebraska Attorney General's Office estimated that the state and its political subdivisions may receive up to $100 million over 18 years from these settlements (Nebraska Attorney General Doug Peterson, 2021).

3.3.2 Health Information Technology Board and Prescription Drug Monitoring Program Enhancements

LB 1183 (2020) created a Health Information Technology Board to identify criteria for data collection and information disbursement by the statewide health information exchange, alignment with technological standards, and oversight regarding federal privacy and security standards. LB 1183 also required that prescription drug information be entered daily into the PDMP after sale.

3.4 2021 Policies and Legislation

3.4.1 Electronic Issuance of Prescriptions

LB 583 (2021) required electronic prescriptions for controlled substances as identified by Nebraska law. Electronic prescription information shall be provided to the statewide health information exchange. LB 583 will help prevent fraudulent disbursements of prescription medication, including but not limited to prescription opiate-based products. Exemptions are also included in the law for certain situations or providers.

4. Limitations

This needs assessment was limited in multiple ways. First, the majority of data analyzed and reported in this needs assessment were secondary data, meaning that the NUPPC did not participate in the collection of these data. Rather, the NUPPC made requests for all data from partners at the Nebraska Department of Health and Human Services – Division of Behavioral Health. This needs assessment would not be possible without the efforts of DBH to request data from multiple divisions and departments within Nebraska DHHS. Second, not all data requested and included in previous needs assessment were available for inclusion in this report. Some data were not available in the same format, some requests were not able to be filled, and some systems for data collection have changed. While this provided greater depth of information in certain circumstances (e.g., the level of detail in available PDMP data) it also meant that specific data sources were not considered (e.g., hospital discharge data). Third, given that the data available and provided to the NUPPC came from a number of different data collection systems and departments, the variables associated with these data included different units of analysis. For example, in terms of geographic location some data sources included Behavioral Health Regions while others included Local Public Health Departments. Many of the data sources were available across varying years, with the most recent data available ranging from 2019 to 2021. These varying units of analysis made it difficult to make comparisons and draw firm conclusions across data sources.

5. Conclusion

From 2017 to 2020, both PDMP and MLTC data demonstrate a decrease in the proportion of pharmacies filling prescriptions for Opioids and Stimulants and a decrease in prescriptions for Opioids. This decrease in the number of Opioid prescriptions was consistent across all local health departments. While the total number of Stimulant prescriptions remained consistent from 2017 to 2020, the number decreased in all but five of Nebraska's local health districts (Southwest, Panhandle, Loup Basin, Lincoln/Lancaster

County, and East Central District). These changes in total number of prescriptions for Opioids and Stimulants occurred despite an increase in the number of individuals with primary or secondary diagnoses which called for Opioid and Stimulant prescriptions.

Despite decreases in the number of prescriptions available, the total number of overdose deaths and the rate of deaths (per 100,000) increased from 2015 to 2019. The most populated local health districts accounted for the largest proportion of all overdose deaths. Yet, local health districts with a small proportion of total overdose deaths had the greatest change in rate of overdose deaths per 100,000 individuals. While the number of male overdose deaths were greater than the number of female overdose deaths, the rate of female overdose deaths increased from 2015 to 2019, while the rate of male overdose deaths stayed consistent. From 2015 to 2019, Opioid use accounted for the largest proportion of overdose deaths among Opioids, Stimulants, and Benzodiazepines.

Prevention efforts increased between 2017 and 2021, in part due to the funding of two separate State Opioid Response programs. Within these efforts, Naloxone distribution and training efforts have increased the number of individuals trained, kits distributed, and locations in which Naloxone is or will be located. This includes current or planned distribution in nine of the twelve local public health departments which experienced an increase in the rate of overdose deaths per 100,000 individuals.

Similar expansion was noted in the number of MAT providers located in Nebraska, with 97 total providers located in all six of Nebraska's Behavioral Health Regions. The number of communities in which MAT providers are located has almost doubled since 2017, from 10 to 19. Analysis of PDMP data indicates that some providers are still prescribing non-FDA approved medications. However, the proportion of prescribers using non-FDA approved medications has decreased by more than 50% between 2017 and 2020, while the proportion prescribing FDA approved medications has increased by more than 50%.

The use of substance use disorder treatment has also increased between 2017 and 2020. Further analysis of records of individuals served, provided through the Centralized Data System (or CDS), illustrates that the number of individuals served who reported Opiates as their primary drug of choice decreased between 2016 and 2021. While the proportion of those receiving services who completed treatment stayed consistent, there was a decrease in the proportion of individuals discharged both for dropping out (or leaving against professional advice) and for those terminated by the facility.

Prevention and treatment efforts, as well as the state's overall ability to assess needs, may be enhanced as the result of policy and legislative actions between 2018 and 2021. These included establishment and enhancements to the prescription drug monitoring program, qualified immunity which may support emergency help during a drug overdose, while protecting first responders who administer Naloxone, as well as establishment of the Nebraska Opioid Recovery Fund, which will provide services with funding received from future settlements against opioid manufacturers.

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LB237 — Provide for Creation of a Prescription Drug Monitoring Program (102nd Legislature) (2011).

LB 487 — Provide and Change Immunity Provisions Relating to Naloxone and Asthma and Allergic Reactions and Change Provisions of the Uniform Controlled Substances Act (105th Legislature) (2017).

LB 731 — Change Provisions Relating to Physical Therapy, Respiratory Care, and the Cosmetology, Electrology, Esthetics, Nail Technology, and Body Art Practice Act, Provide for Mobile Salons and Remote Dispensing Pharmacies, and Adopt the Physical Therapy Licensure Compact (105th Legislature) (2018).

LB 931 — Provide Requirements for Opiate and Controlled Substance Prescriptions (105th Legislature) (2018).

LB 1034 — Change Credentialing Provisions for Health Care Professions and Occupations and Licensure Provisions for Health Care Facilities and Services and School-age Child Care Programs and Adopt the EMS Personnel Licensure Interstate Compact and the Psychology Interjurisdictional Compact (105th Legislature) (2018).

LB 556 — Change Provisions Relating to Prescriptions for Controlled Substances and the Prescription Drug Monitoring Program (106th Legislature) (2019).

LB 1124 — Adopt the Opioid Prevention and Treatment Act (106th Legislature) (2020).

LB 1183 — Adopt the Population Health Information Act, Create the Health Information Technology Board, and Change Prescription Drug Monitoring Program and Statewide Health Information Exchange Provisions (Arch, Blood, and Vargas) (106th Legislature) (2020).

LB 583 — Require Electronic Prescriptions for Controlled Substances (107th Legislature) (2021).

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Appendix A

Table A1.

Comparison of Nebraska Behavioral Health Regions, Local Health Departments, and Counties

Behavioral Health Region	Local Health Department	Counties Served
Region 1	Panhandle Public Health District*	Banner, Box Butte, Cheyenne, Dawes, Deuel, Garden, Kimball, Morrill, Scotts Bluff, Sheridan, Sioux
Region 2	Panhandle Public Health District*	Grant
	Southwest Nebraska Public Health Department*	Chase, Dundy, Frontier, Hayes, Hitchcock, Keith, Perkins, Red Willow
	Two Rivers Public Health Department*	Dawson, Gosper
	West Central District Health Department	Arthur, Hooker, Lincoln, Logan, McPherson, Thomas
Region 3	Central District Health Department	Hall, Hamilton, Merrick
	Loup Basin Public Health Department	Blaine, Custer, Garfield, Greeley, Howard, Loup, Sherman, Valley, Wheeler
	South Heartland District Health Department	Adams, Clay, Nuckolls, Webster
	Southwest Nebraska Public Health Department*	Furnas
	Two Rivers Public Health Department*	Buffalo, Franklin, Harlan, Kearney, Phelps
Region 4	Dakota County Health Department	Dakota
	East Central District Health Department	Boone, Colfax, Nance, Platte
	Elkhorn Logan Valley Public Health Department	Burt, Cuming, Madison, Stanton
	North Central District Health Department	Antelope, Boyd, Brown, Cherry, Holt, Keya Paha, Knox, Pierce, Rock
	Northeast Nebraska Public Health Department	Cedar, Dixon, Thurston, Wayne
Region 5	Four Corners Health Department	Butler, Polk, Seward, York
	Lincoln Lancaster County Health Department	Lancaster
	Public Health Solutions District Health Department	Fillmore, Gage, Jefferson, Saline, Thayer
	Southeast District Health Department	Johnson, Nemaha, Otoe, Pawnee, Richardson
	Three Rivers Public Health Department*	Saunders
Region 6	Douglas County Health Department	Douglas
	Sarpy Cass Department of Health and Wellness	Cass, Sarpy
	Three Rivers Public Health Department*	Dodge, Washington

Appendix B

Table B1.

Number of Opioid, Benzo, and Stimulant Prescriptions by Local Health Department in Nebraska

Local Health Department	Claims by Year														
	Opioid Rx					Benzo Rx					Stimulant Rx				
	2017	2018	2019	2020	Change	2017	2018	2019	2020	Change	2017	2018	2019	2020	Change
Central District	5,173	5,096	3,271	2,764	-46.6%	3,296	3,508	2,419	2,226	-32.5%	6,594	6,432	6,499	5,171	-21.6%
Dakota County	1,193	1,062	754	545	-54.3%	532	535	433	358	-32.7%	1,537	1,567	1,441	1,033	-32.8%
Douglas County	44,183	39,522	24,276	16,960	-61.6%	20,999	22,037	14,865	11,960	-43.0%	37,960	39,922	38,600	29,768	-21.6%
East Central District	2,124	2,089	1,254	1,265	-40.4%	1,516	1,645	1,018	1,012	-33.2%	2,709	3,088	2,948	3,077	13.6%
Elkhorn Logan Valley Public	3,560	3,251	1,983	1,576	-55.7%	1,885	1,976	1,168	1,051	-44.2%	3,184	3,388	3,309	2,899	-9.0%
Four Corners	2,583	2,466	1,582	1,136	-56.0%	1,531	1,707	1,114	949	-38.0%	2,793	2,733	2,499	2,144	-23.2%
Lincoln Lancaster County	21,286	20,282	13,323	14,592	-31.4%	13,321	13,932	9,595	11,493	-13.7%	21,074	21,415	21,141	24,037	14.1%
Loup Basin Public	1,930	1,840	1,250	1,379	-28.5%	897	886	648	700	-22.0%	1,581	1,704	1,579	1,972	24.7%
North Central District	2,858	2,703	1,681	1,315	-54.0%	956	1,218	834	675	-29.4%	2,003	1,991	2,090	1,840	-8.1%
Northeast Nebraska Public	1,564	1,583	1,222	878	-43.9%	684	812	586	444	-35.1%	1,566	1,559	1,646	1,398	-10.7%
Panhandle Public	6,860	7,243	4,953	4,995	-27.2%	2,681	2,961	2,016	2,696	0.6%	6,657	6,902	6,581	7,906	18.8%
Public Health Solutions District	4,186	4,305	2,884	2,212	-47.2%	2,637	2,847	2,064	1,788	-32.2%	4,665	4,670	4,736	3,777	-19.0%
Sarpy Cass Dept. of Health & Wellness	7,581	7,133	4,312	3,372	-55.5%	5,193	5,654	4,227	3,500	-32.6%	11,957	12,011	11,938	10,004	-16.3%
South Heartland District	4,055	3,859	2,469	2,259	-44.3%	2,543	2,565	1,807	1,564	-38.5%	4,496	4,364	4,118	4,047	-10.0%
Southeast District	3,310	3,305	2,031	1,782	-46.2%	1,919	2,013	1,293	1,340	-30.2%	3,014	3,479	3,386	3,013	0.0%
Southwest Nebraska Public	2,585	2,512	1,780	1,621	-37.3%	1,369	1,427	1,086	1,057	-22.8%	2,555	2,642	2,615	2,933	14.8%
Three Rivers Public	6,321	5,875	4,037	2,812	-55.5%	3,312	3,603	2,396	1,859	-43.9%	6,298	6,582	6,131	4,880	-22.5%
Two Rivers Public	5,224	5,083	3,602	2,950	-43.5%	2,772	3,175	2,468	2,144	-22.7%	6,443	6,734	7,054	5,916	-8.2%
West Central District	4,707	4,359	2,389	1,848	-60.7%	3,173	3,369	1,950	1,737	-45.3%	3,613	3,826	3,509	2,824	-21.8%
Out of State/Unknown	296	279	220	7,727	2,510.5%	178	201	178	6,139	3,348.9%	399	422	393	13,120	3,188.2%

Table B2.

Number of Nebraska Patients Receiving Substance Use Disorder Treatment by Year and Local Health Department

Local Health Department	Patients														
	Any SU					Buprenorphine Naloxone					Buprenorphine only				
	2017	2018	2019	2020	Change	2017	2018	2019	2020	Change*	2017	2018	2019	2020	Change*
Central District	171	218	210	239	39.8%	≤5	7	9	8		≤5	≤5	≤5	≤5	
Dakota County	39	46	42	46	17.9%	**	≤5	≤5	≤5		**	≤5	≤5	≤5	
Douglas County	1,820	1,989	2,021	2,029	11.5%	58	80	66	64	10.3%	15	25	10	13	-13.3%
East Central District	96	126	130	195	103.1%	≤5	6	12	14		≤5	≤5	≤5	≤5	
Elkhorn Logan Valley Public	173	190	206	239	38.2%	≤5	7	9	14		≤5	≤5	≤5	≤5	
Four Corners	73	99	99	87	19.2%	7	9	8	9	28.6%	≤5	≤5	≤5	≤5	
Lincoln Lancaster County	842	897	848	2,276	170.3%	48	63	56	133	177.1%	9	10	6	20	122.2%
Loup Basin Public	36	42	40	77	113.9%	≤5	≤5	≤5	8		≤5	≤5	≤5	≤5	
North Central District	86	84	97	106	23.3%	≤5	≤5	≤5	9		≤5	≤5	≤5	≤5	
Northeast Nebraska Public	76	85	100	116	52.6%	≤5	**	≤5	≤5		≤5	**	≤5	≤5	
Panhandle Public	277	282	325	618	123.1%	≤5	≤5	10	39		≤5	≤5	≤5	8	
Public Health Solutions District	199	193	177	178	-10.6%	13	20	16	19	46.2%	≤5	≤5	≤5	≤5	
Sarpy Cass Dept. of Health & Wellness	295	345	312	329	11.5%	18	25	24	27	50.0%	≤5	≤5	6	7	
South Heartland District	165	201	197	180	9.1%	6	≤5	≤5	8	33.3%	≤5	≤5	≤5	≤5	
Southeast District	112	110	94	167	49.1%	≤5	6	≤5	18		≤5	≤5	≤5	≤5	
Southwest Nebraska Public	69	77	63	128	85.5%	≤5	≤5	≤5	11		≤5	≤5	≤5	≤5	
Three Rivers Public	197	217	191	218	10.7%	17	16	12	17	0.0%	≤5	≤5	≤5	≤5	
Two Rivers Public	215	222	213	250	16.3%	≤5	6	13	14		≤5	≤5	≤5	≤5	
West Central District	148	161	155	181	22.3%	9	11	8	11	22.2%	9	≤5	≤5	≤5	
Out of State/Unknown	80	85	155	1,731	2,063.8%		≤5	≤5	167			≤5	≤5	29	

*Change was not measured when number of patients was 5 or less; ** Data for this year is missing.

Appendix C

Figure C1.

Comparison of Individuals Discharged for Leaving Against Professional Advice, by Year

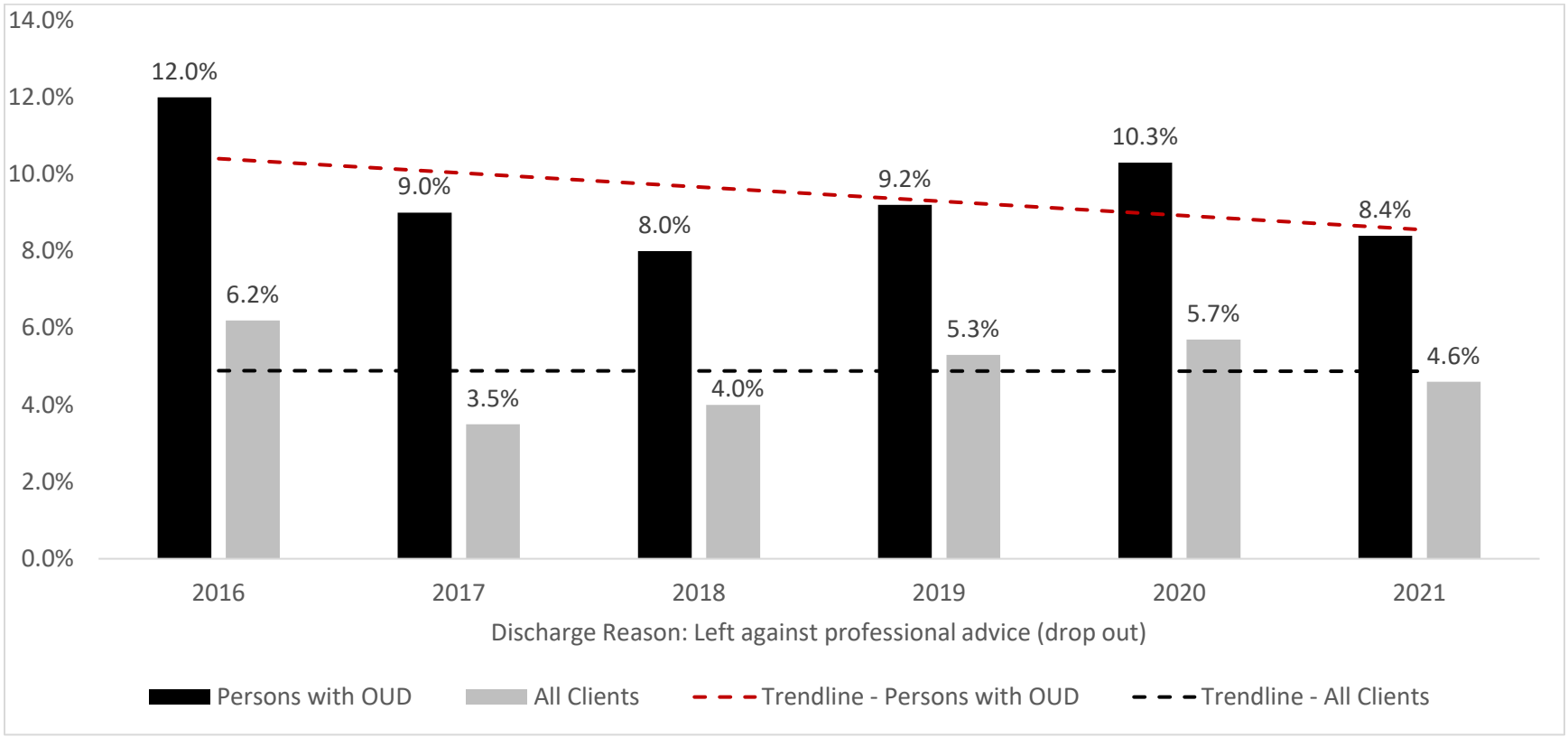

Figure C2.

Comparison of Individuals Discharged by Facility, by Year