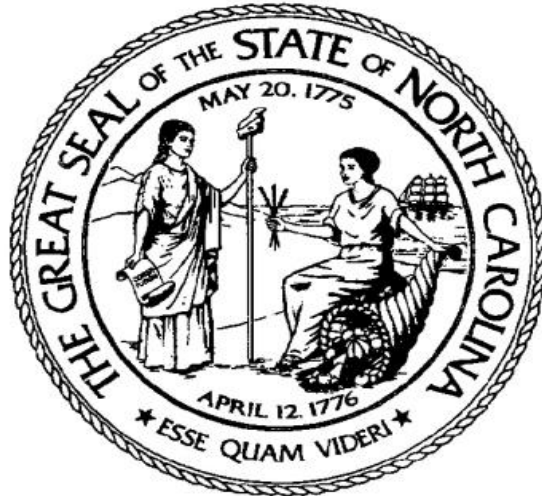


**Controlled Substances Reporting System Annual Report**

**NC GS 90-113.75B**

**Amended by Session Law 2017-74, Section 12**



**Report to the**

**Joint Legislative Oversight Committee on Health and Human Services**

**North Carolina Medical Board**

**North Carolina Board of Podiatry Examiners**

**North Carolina Board of Nursing**

**North Carolina Dental Board**

**North Carolina Veterinary Medical Board**

**North Carolina Board of Pharmacy**

**By**

**North Carolina Department of Health and Human Services**

**February 27, 2019**

## **INTRODUCTION**

*§ 90-113.75B Annually on February 1, beginning February 1, 2019, the Department shall report to the Joint Legislative Oversight Committee on Health and Human Services, the North Carolina Medical Board, the North Carolina Board of Podiatry Examiners, the North Carolina Board of Nursing, the North Carolina Dental Board, the North Carolina Veterinary Medical Board, and the North Carolina Board of Pharmacy on data reported to the controlled substances reporting system.*

## **BACKGROUND**

In 2017, House Bill 243 was introduced with several sections directly addressing the North Carolina Controlled Substances Reporting System (CSRS). It was signed into law on June 29, 2017. One of the requirements in this law is an annual report to the General Assembly and licensing boards (as specified in the introduction above) to be delivered on February 1<sup>st</sup> of each year beginning in 2019. The report must include at least all of the following information about targeted controlled substances reported to the system during the preceding calendar year:

- (1) The total number of prescriptions dispensed, broken down by Schedule.
- (2) Demographics about the ultimate users to whom prescriptions were dispensed.
- (3) Statistics regarding the number of pills dispensed per prescription.
- (4) The number of ultimate users who were prescribed a controlled substance by two or more practitioners.
- (5) The number of ultimate users to whom a prescription was dispensed in more than one county.
- (6) The categories of practitioners prescribing controlled substances and the number of prescriptions authorized by each category of practitioner. For the purpose of this subdivision, medical doctors, surgeons, palliative care practitioners, oncologists and other practitioners specializing in oncology, pain management practitioners, practitioners who specialize in hematology, including the treatment of sickle cell disease, and practitioners who specialize in treating substance use disorder shall be treated as distinct categories of practitioners.
- (7) Any other data deemed appropriate and requested by the Joint Legislative Oversight Committee on Health and Human Services, the North Carolina Medical Board, the North Carolina Board of Podiatry Examiners, the North Carolina Board of Nursing, the North Carolina Dental Board, the North Carolina Veterinary Medical Board, or the North Carolina Board of Pharmacy.

## **DATA COLLECTION AND EXPLANATORY NOTES**

Pharmacies in North Carolina are responsible for submitting data on any Schedule II-V controlled substances they dispense no later than the close of the next business day after the prescription is delivered. The data comes in a standard American Society for Automation in Pharmacy (ASAP) format, which includes details on the transaction such as the patient, prescriber, and pharmacy.

The quality of the prescription data is dependent on the accuracy of pharmacist submissions. Prescriptions are constantly being added and modified within the system, so the values in this report will change slightly with time. Prescriber specialty (Exhibit 6) is based on self-reported specialties in the National Plan and Provider Enumeration System (NPPES), the Drug Enforcement Agency (DEA), the North Carolina Medical Board, and the Controlled Substances Reporting System (CSRS).

## EXHIBITS AND NOTES

### **Exhibit 1: Prescriptions by Schedule**

Of the 18,389,645 total controlled substance prescriptions by schedule, the majority were either Schedule II or Schedule IV (Table 1.1 below).

*Table 1.1 - Total Controlled Substance Prescriptions by Schedule in 2018*

<b>Schedule</b>	<b>TOTAL</b>
II	8,411,202
III	1,286,780
IV	7,566,244
V	293,518
Uncategorized	831,901
<b>TOTAL</b>	<b>18,389,645</b>

Schedule II: Drugs, substances, or chemicals defined as drugs with a high potential for abuse, with use potentially leading to severe psychological or physical dependence. Examples include Dilaudid, Demerol, and OxyContin

Schedule III: Drugs, substances, or chemicals defined as drugs with a moderate to low potential for physical and psychological dependence. Examples include Tylenol with codeine, testosterone, and anabolic steroids

Schedule IV: Drugs, substances, or chemicals defined as drugs with a low potential for abuse and low risk of dependence. Examples include Xanax, Darvocet, and Valium

Schedule V: Drugs, substances, or chemicals defined as drugs with lower potential for abuse than Schedule IV and consist of preparations containing limited quantities of certain narcotics and are generally used for antidiarrheal, antitussive, and analgesic (pain relief) purposes. Examples include Robitussin AC, Lomotil, and Lyrica

### **Exhibit 2: Demographics**

It is noted that Mecklenburg has the smallest controlled substance prescription per patient ratio of all North Carolina counties and Mitchell has the highest (Table 2.1 below).

*Table 2.1 - Number of Controlled Substance Prescriptions Dispensed by County of Patient Residence in 2018*

<b>NC County</b>	<b>Prescriptions</b>	<b>Patients</b>	<b>Rx per Patient</b>
Alamance	276,743	50,583	5.47
Alexander	88,321	12,612	7.00
Alleghany	21,913	3,860	5.68
Anson	44,343	8,246	5.38
Ashe	58,510	9,144	6.40
Avery	41,561	6,483	6.41

<b>NC County</b>	<b>Prescriptions</b>	<b>Patients</b>	<b>Rx per Patient</b>
Beaufort	117,693	17,451	6.74
Bertie	35,936	6,609	5.44
Bladen	71,485	11,063	6.46
Brunswick	309,263	50,645	6.11
Buncombe	450,340	75,813	5.94
Burke	203,759	28,987	7.03
Cabarrus	371,197	65,049	5.71
Caldwell	207,389	30,441	6.81
Camden	13,998	2,733	5.12
Carteret	171,762	24,847	6.91
Caswell	23,784	3,930	6.05
Catawba	376,108	59,822	6.29
Chatham	74,868	13,943	5.37
Cherokee	69,547	10,412	6.68
Chowan	23,157	4,748	4.88
Clay	25,615	4,041	6.34
Cleveland	251,575	39,223	6.41
Columbus	147,758	20,975	7.04
Craven	212,033	35,018	6.06
Cumberland	500,610	89,222	5.61
Currituck	31,296	5,800	5.40
Dare	74,724	12,875	5.80
Davidson	307,481	47,885	6.42
Davie	89,124	14,675	6.07
Duplin	85,754	15,460	5.55
Durham	351,824	71,636	4.91
Edgecombe	86,002	16,217	5.30
Forsyth	665,423	120,491	5.52
Franklin	100,140	18,078	5.54
Gaston	543,208	79,046	6.87
Gates	10,874	2,127	5.11
Graham	20,243	2,961	6.84
Granville	78,951	13,981	5.65
Greene	28,699	4,939	5.81
Guilford	883,637	162,426	5.44
Halifax	94,889	16,431	5.78
Harnett	195,557	32,327	6.05
Haywood	141,231	22,312	6.33
Henderson	221,412	38,821	5.70
Hertford	32,864	6,281	5.23

<b>NC County</b>	<b>Prescriptions</b>	<b>Patients</b>	<b>Rx per Patient</b>
Hoke	56,876	11,170	5.09
Hyde	7,913	1,350	5.86
Iredell	369,988	60,912	6.07
Jackson	69,666	11,142	6.25
Johnston	295,600	51,113	5.78
Jones	23,659	3,938	6.01
Lee	128,183	22,535	5.69
Lenoir	105,665	19,681	5.37
Lincoln	190,344	31,606	6.02
McDowell	91,764	15,074	6.09
Macon	64,856	11,817	5.49
Madison	39,244	6,464	6.07
Martin	50,584	8,364	6.05
Mecklenburg	1,344,286	283,095	4.75
Mitchell	39,437	5,096	7.74
Montgomery	48,923	8,175	5.98
Moore	176,067	30,819	5.71
Nash	163,629	29,164	5.61
New Hanover	466,784	76,148	6.13
Northampton	29,352	5,635	5.21
Onslow	285,139	46,279	6.16
Orange	186,430	36,446	5.12
Pamlico	23,352	3,842	6.08
Pasquotank	60,576	12,424	4.88
Pender	123,858	19,607	6.32
Perquimans	21,462	4,143	5.18
Person	84,483	13,014	6.49
Pitt	308,357	51,711	5.96
Polk	33,845	5,662	5.98
Randolph	260,817	42,609	6.12
Richmond	116,555	16,490	7.07
Robeson	290,733	46,286	6.28
Rockingham	237,353	32,727	7.25
Rowan	290,625	44,618	6.51
Rutherford	161,371	23,500	6.87
Sampson	112,684	20,123	5.60
Scotland	77,067	13,046	5.91
Stanly	130,214	21,740	5.99
Stokes	110,411	16,583	6.66
Surry	180,624	27,310	6.61

NC County	Prescriptions	Patients	Rx per Patient
Swain	42,455	6,538	6.49
Transylvania	74,031	11,364	6.52
Tyrrell	5,936	1,096	5.42
Union	368,230	68,618	5.37
Vance	79,402	13,946	5.69
Wake	1,496,965	298,830	5.01
Warren	19,837	4,000	4.96
Washington	23,176	4,079	5.68
Watauga	65,456	11,420	5.73
Wayne	192,309	34,759	5.53
Wilkes	160,497	22,830	7.03
Wilson	142,516	25,360	5.62
Yadkin	90,675	14,003	6.48
Yancey	39,168	5,942	6.59
Out of State	491,466	158,360	3.10
Unspecified	6,149	2,255	2.73
<b>TOTAL</b>	<b>18,389,645</b>	<b>3,152,027*</b>	<b>5.83</b>

\*This is a count of unique patients and differs from the sum of all categories because patients may have moved between counties during the reporting period causing them to be indicated in more than one county.

The data also shows that the age bracket obtaining the most controlled substance prescriptions is 50 – 59; with females at a one-third higher rate than males of the same age range (Table 2.2 below).

*Table 2.2 - Number of Prescriptions Dispensed by Age and Gender*

Age Range	Male	Female	Unknown	TOTAL
0-9	304,970	144,314	1,531	450,815
10-19	656,985	400,300	2,299	1,059,584
20-29	502,796	761,301	853	1,264,950
30-39	855,124	1,387,581	1,964	2,244,669
40-49	1,129,549	1,845,397	2,200	2,977,146
50-59	1,566,764	2,324,388	2,041	3,893,193
60-69	1,477,067	2,050,212	1,281	3,528,560
70-79	800,438	1,196,524	577	1,997,539
80+	282,433	614,656	458	897,547
Unknown	111	111	75,420	75,642
<b>TOTAL</b>	<b>7,576,237</b>	<b>10,724,784</b>	<b>88,624</b>	<b>18,389,645</b>

**Exhibit 3: Pill Statistics**

The highest category of controlled substance prescription is shown to be Opioids (Table 3.1 below).

***Table 3.1 – Pill Quantity by Classification***

<b>Quantity Range</b>	<b>Benzodiazepine</b>	<b>Opioid</b>	<b>Muscle Relaxant</b>	<b>Stimulant</b>	<b>Sedative</b>	<b>No CDC Class<sup>^</sup></b>	<b>TOTAL</b>
1-30	1,696,874	2,589,193	23,696	1,857,408	1,044,747	1075129	8,287,047
31-60	1,151,306	1,543,393	24,774	598,040	30,771	481437	3,829,721
61-90	719,698	1,103,004	35,564	186,034	77,441	305711	2,427,452
91-120	165,659	1,067,790	13,837	25,268	361	121173	1,394,088
121-150	18,766	133,814	335	4,291	495	14093	171,794
151-180	48,439	219,123	1210	11,598	959	54965	336,294
181+	27,558	116,747	1505	3,698	44	30292	179,844
Not pills	29,716	584,302	3	36,511	6,058	1,106,815	1,763,405
<b>TOTAL</b>	<b>3,858,016</b>	<b>7,357,366</b>	<b>100,924</b>	<b>2,722,848</b>	<b>1,160,876</b>	<b>3,189,615</b>	<b>18,389,645</b>

<sup>^</sup>No CDC Class – The Center for Disease Control (CDC) does not have a classification on file for the drug  
 “Not Pills” – Any dosage not in pill or capsule form; such as liquid, sprays, or patches

**Exhibit 4: Patients with Multiple Prescribers**

The data reflects that a majority of patients were prescribed a controlled substance by only one practitioner within the reporting period. The next largest category was prescribed a controlled substance by two practitioners within the reporting period (Table 4.1 below).

***Table 4.1 – Prescriber Counts***

<b>Prescribers</b>	<b>Patients</b>	<b>Percentage</b>
1	1,911,966	60.66%
2	698,796	22.17%
3	292,931	9.29%
4	130,996	4.16%
5	59,837	1.90%
6	28,542	0.91%
7	13,850	0.44%
8	6,983	0.22%
9	3,586	0.11%
10+	4,540	0.14%
<b>TOTAL</b>	<b>3,152,027</b>	

**Exhibit 5: Patients with Multiple County Dispensing**

The largest percentage of patients had controlled substance prescriptions dispensed in only one county (Table 5.1 below).

*Table 5.1 – Dispenser Counties*

<b>Counties</b>	<b>Patients</b>	<b>Percentage</b>
1	2,809,496	89.13%
2	291,781	9.26%
3	42,461	1.35%
4	6,538	0.21%
5+	1,338	0.04%
Unknown	413	0.01%
<b>TOTAL</b>	<b>3,152,027</b>	

**Exhibit 6: The Categories of Practitioners prescribing Controlled Substances and the Number of Prescriptions authorized by each Category of Practitioner**

Of the identified specialties, the largest categories for both controlled substance prescriptions and patients are Medical Doctor and Pain Management (Table 6.1 below).

*Table 6.1 – Number of controlled substance prescriptions dispensed by prescriber specialty*

<b>Category</b>	<b>Prescriptions</b>	<b>Patients</b>	<b>Rx per Patient</b>
Dentist	316,663	244,324	1.30
Hematology	2,334	676	3.45
Medical Doctor	6,108,025	1,371,083	4.45
Oncology	78,010	21,187	3.68
Pain Management	5,872,703	1,276,042	4.60
Palliative Care	237,502	45,150	5.26
Substance Use Disorder	20,117	5,342	3.77
Surgeons	20,314	3,005	6.76
Other+	590,430	289,179	2.04
Unspecified	5,143,547	1,240,808	4.15
<b>TOTAL</b>	<b>18,389,645</b>	<b>3,152,027*</b>	<b>5.83</b>

+Specialty other than those in this list (e.g., Nurse Practitioner, Prescribing Pharmacist, et. al.)

\*This is the total of unique patients and differs from the sum of all categories because unique patients may see more than one practitioner specialty.



**Table 6.2 – Number of prescriptions dispensed by prescriber specialty and drug class**

<b>Specialty</b>	<b>Benzodiazepine</b>	<b>Opioid</b>	<b>Muscle Relaxant</b>	<b>Stimulant</b>	<b>Sedative</b>	<b>No CDC Class<sup>^</sup></b>	<b>TOTAL</b>
Dentist	40,783	262,259	355	170	203	12,893	316,663
Hematology	241	1,889	2	13	76	113	2,334
Medical Doctor	1,414,867	2,197,367	40,643	854,393	489,615	1,111,140	6,108,025
Oncology	16,096	47,879	100	1,729	3,163	9,043	78,010
Pain Management	1,264,961	2,262,816	26,227	1,051,057	334,796	932,846	5,872,703
Palliative Care	7,625	203,700	1,554	574	2,154	21,895	237,502
Substance Use Disorder	6,979	9,800	85	435	603	2,215	20,117
Surgeons	1,979	14,650	58	2,120	257	1,250	20,314
Other+	33,426	495,344	4,422	5,550	4,314	47,374	590,430
Unspecified	1,071,059	1,861,662	27,478	806,807	325,695	1,050,846	5,143,547
<b>TOTAL</b>	<b>3,858,016</b>	<b>7,357,366</b>	<b>100,924</b>	<b>2,722,848</b>	<b>1,160,876</b>	<b>3,189,615</b>	<b>18,389,645</b>

<sup>^</sup>No CDC Class – The Center for Disease Control (CDC) does not have a classification on file for the drug

<sup>+</sup>Specialty other than those in this list (e.g., Nurse Practitioner, Prescribing Pharmacist, et. al.)

## CONCLUSION

In 2018, over 18 million controlled substance prescriptions were entered into the North Carolina Controlled Substances Reporting System. More than 43,000 registered practitioners, pharmacists, and their delegates had access to new tools, such as improved data analytics, visualizations, and overdose risk scores, within a user-friendly software environment.