

EXHIBIT E

12/31/2017



Medication and Drug Overdose in Durham County, 1999-2016

Technical Notes

- The fatal data provided here are part of the Vital Registry System of the State Center for Health Statistics (SCHS) and have been used to historically track and monitor the drug overdose burden in NC using ICD10 codes. The definitive data on deaths come from the NC Office of the Chief Medical Examiner (OCME). For the most recent data and data on specific drugs, please contact at OCME at <http://www.ocme.dhhs.nc.gov/annreport/index.shtml>.
- Please note that for some counties, data may be suppressed and not reported due to low counts.
- Some counties are grouped to allow for greater reliability.
- Use caution when interpreting death counts under 10.
- Often times, rates have not been calculated due to challenges of small numbers at county levels and unreliability of rates.
- Speaking and technical notes should be read prior to using.

If you have questions or concerns about sharing this data, please contact Mary Beth Cox (MaryBeth.Cox@dhhs.nc.gov) before disseminating.

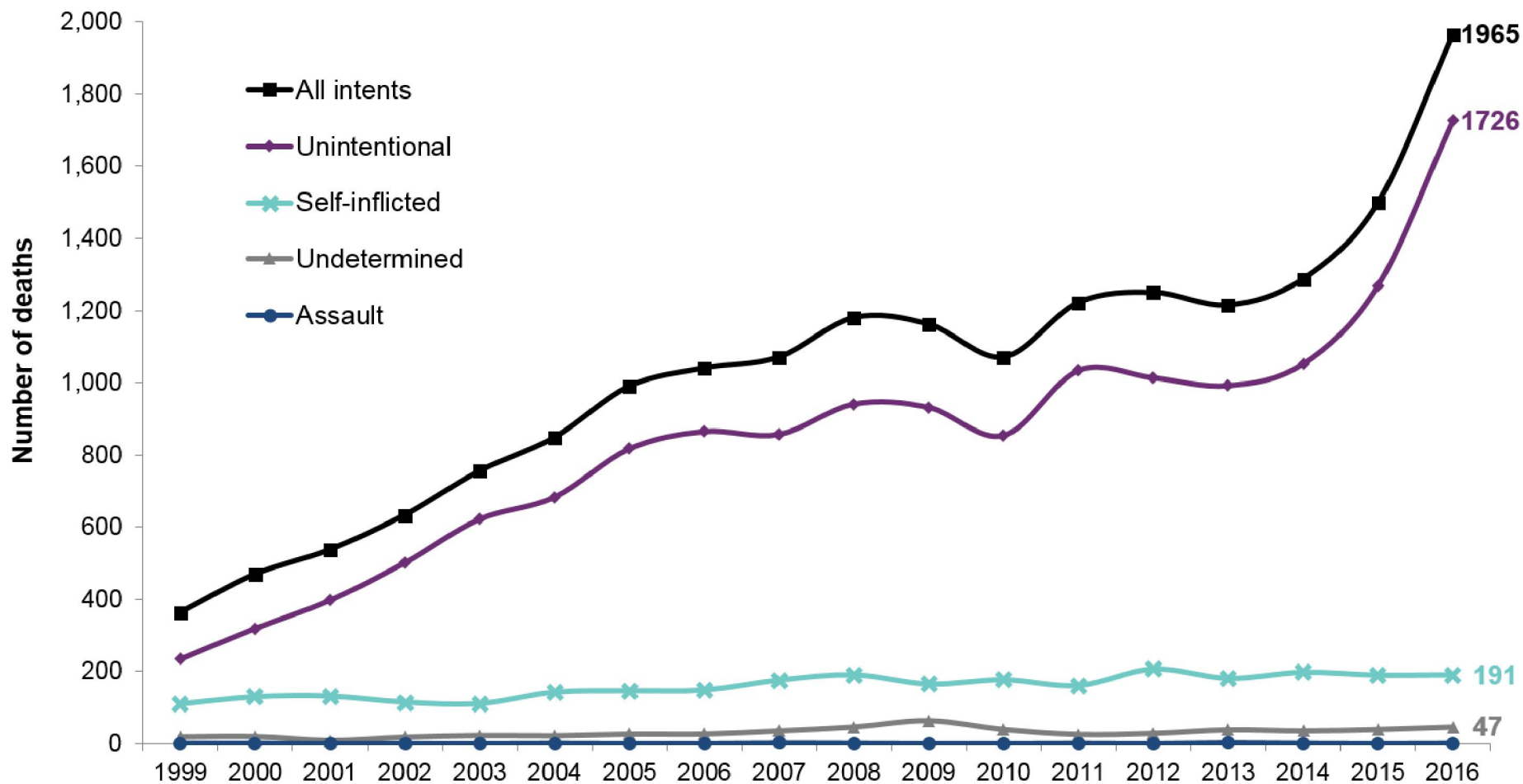
For counties with low counts, regional data is provided to allow more reliable analyses.

A map of North Carolina with its counties colored according to injury rates. The colors range from dark red (highest rates) to light green (lowest rates). The highest rates are concentrated in the western and central parts of the state, while the lowest rates are in the eastern part.

Medication & Drug Overdose by Intent

Statewide Medication & Drug Overdose Deaths by Intent

North Carolina Residents, 1999-2016



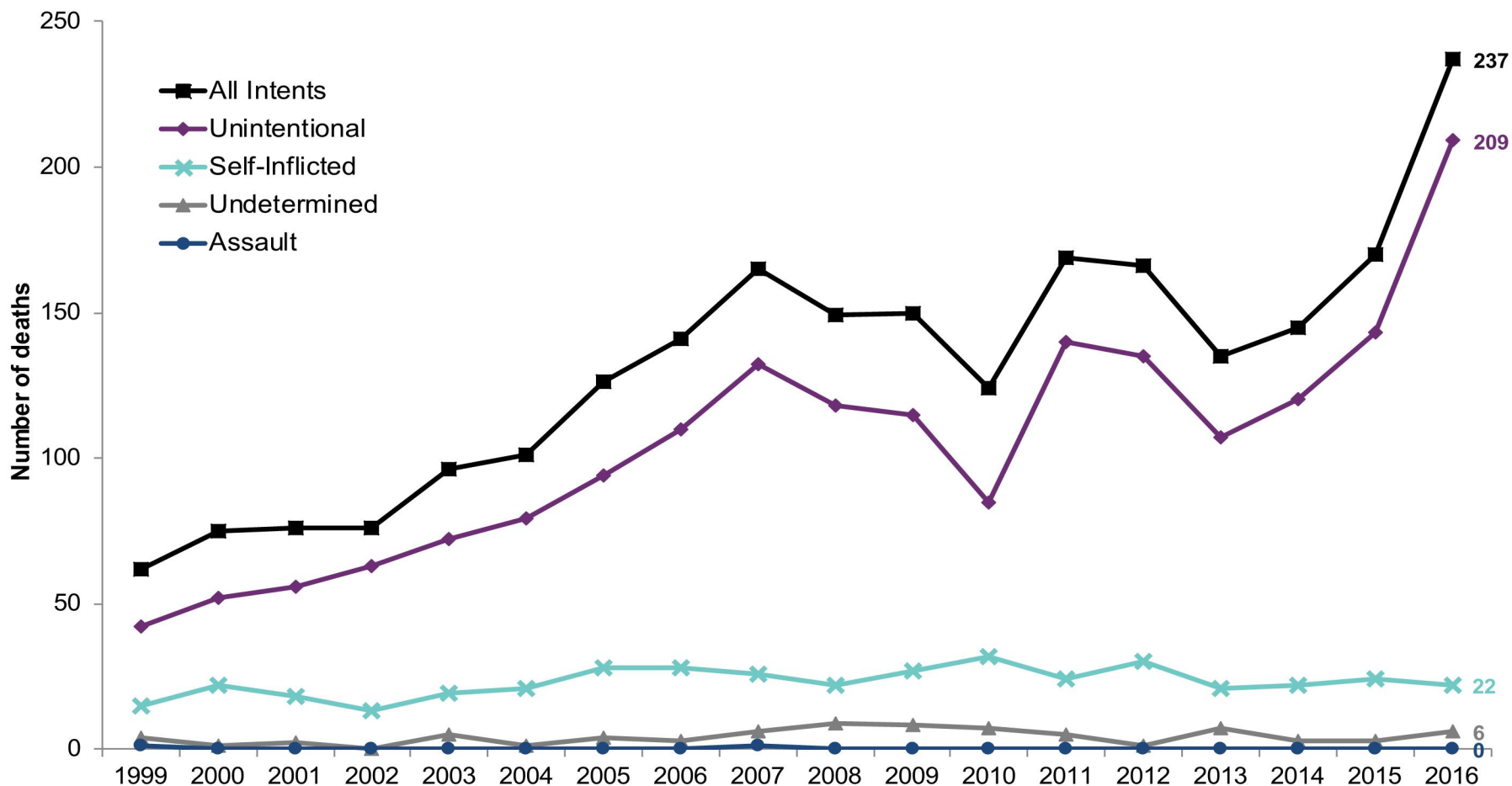
Source: N.C. State Center for Health Statistics, Vital Statistics-Deaths, 1999-2016

Medication and drug overdose: X40-X44, X60-X64, Y10-Y14, X85.

Analysis by Injury Epidemiology and Surveillance Unit

Regional Medication & Drug Overdose Deaths by Intent

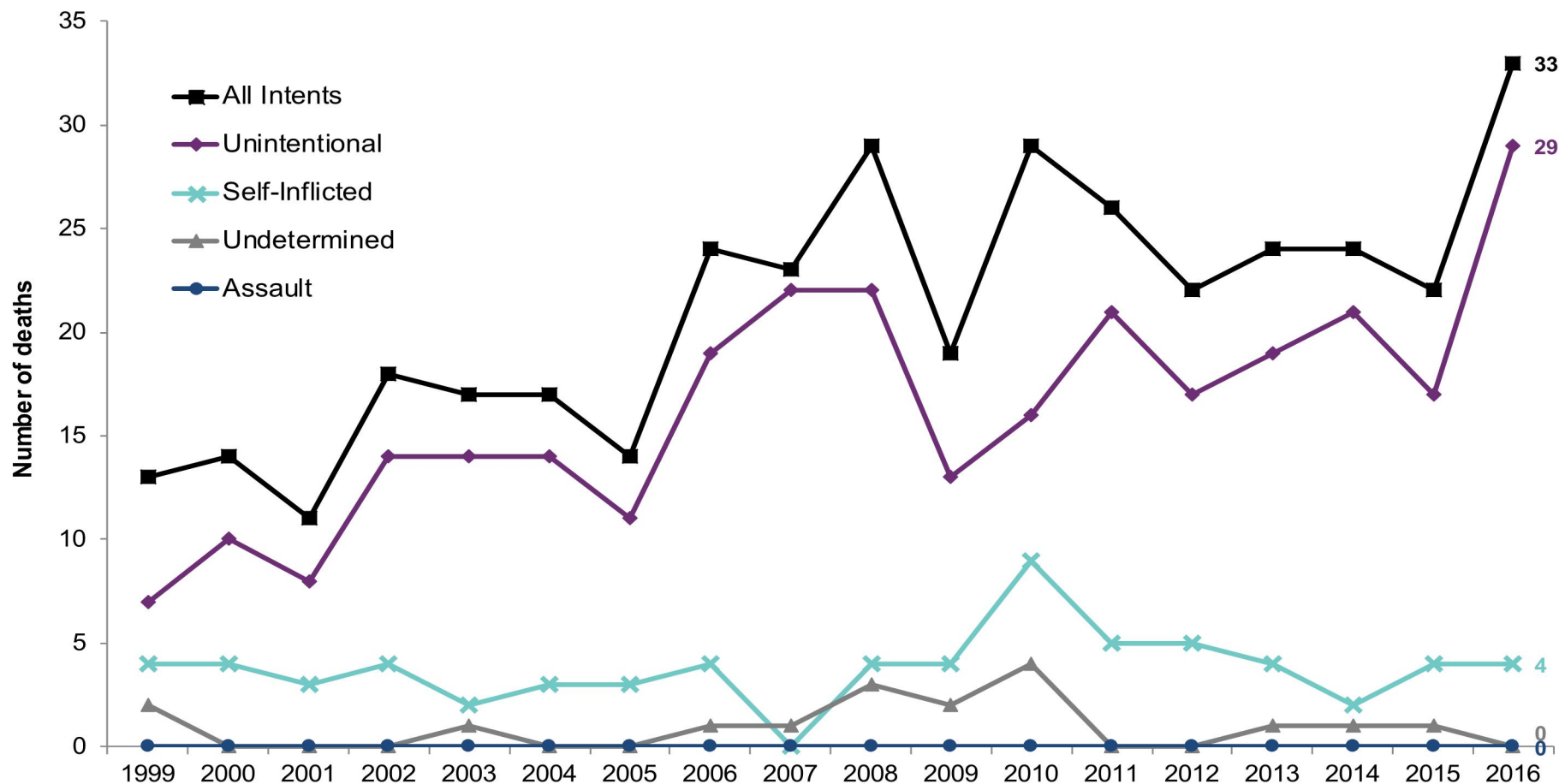
Local Health Director Region 5 Residents, 1999-2016



Source: N.C. State Center for Health Statistics, Vital Statistics-Deaths, 1999-2016
Medication and drug overdose: X40-X44, X60-X64, Y10-Y14, X85.
Analysis by Injury Epidemiology and Surveillance Unit

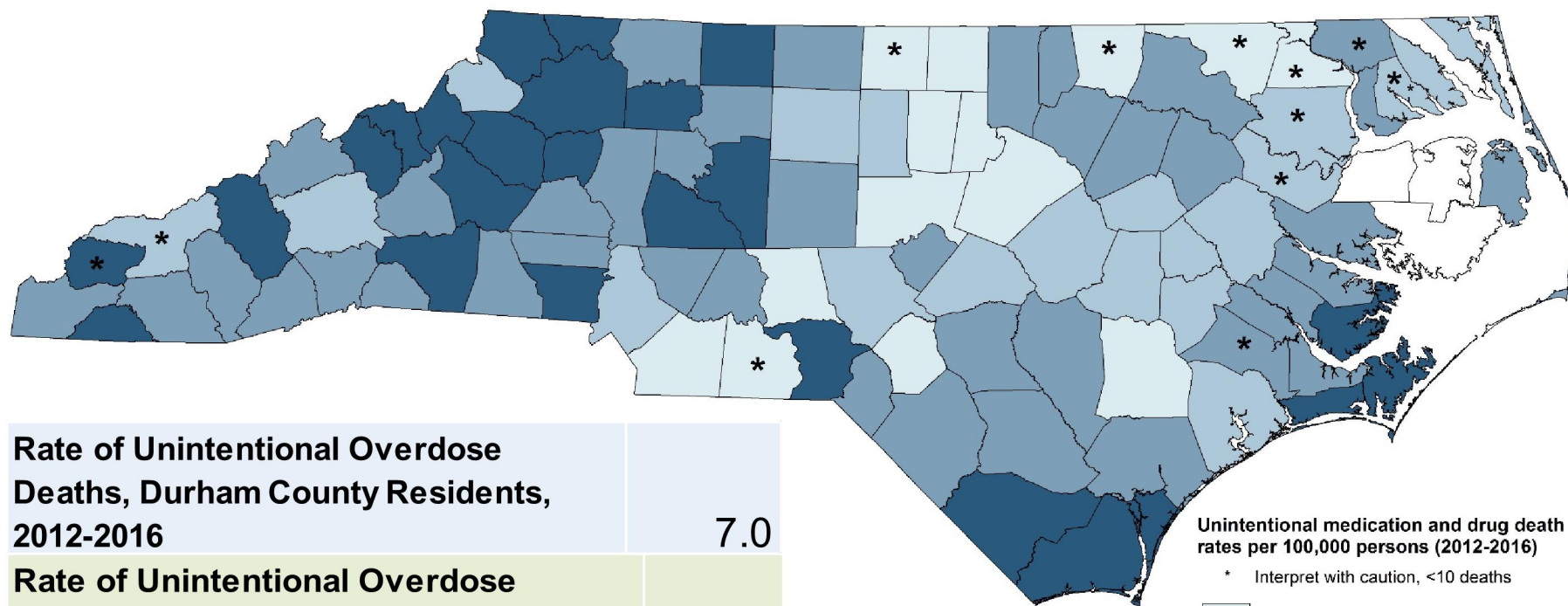
County Medication & Drug Overdose Deaths by Intent

Durham County Residents, 1999-2016



Rate of Unintentional Medication & Drug Deaths by County

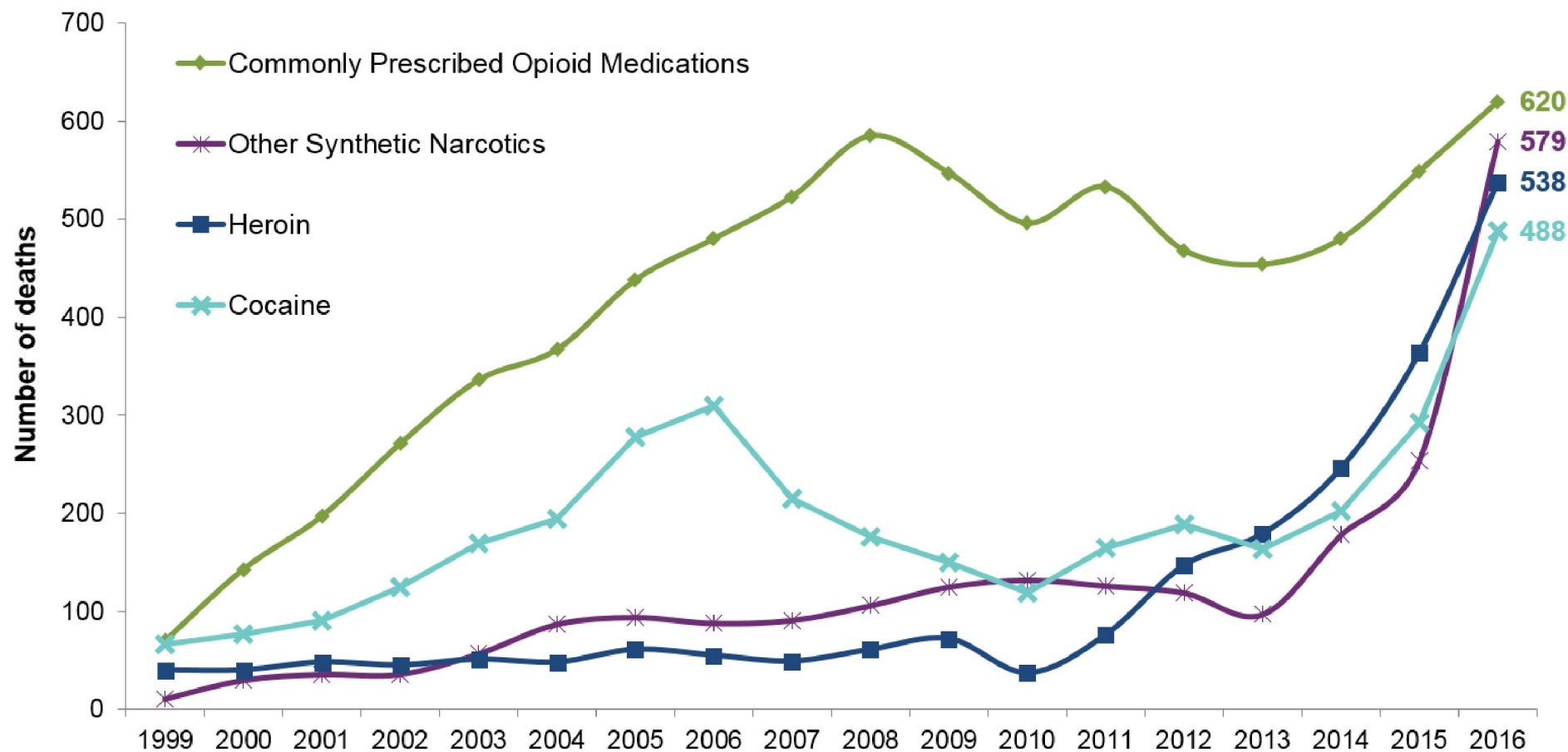
per 100,000 North Carolina Residents, 2012-2016



Rate of Unintentional Overdose Deaths, Durham County Residents, 2012-2016	7.0
Rate of Unintentional Overdose Deaths, Local Health Director Region 5 Residents, 2012-2016	9.7
Rate of Unintentional Overdose Deaths, North Carolina Residents, 2012-2016	12.2

Substances Contributing to Unintentional Overdose Deaths

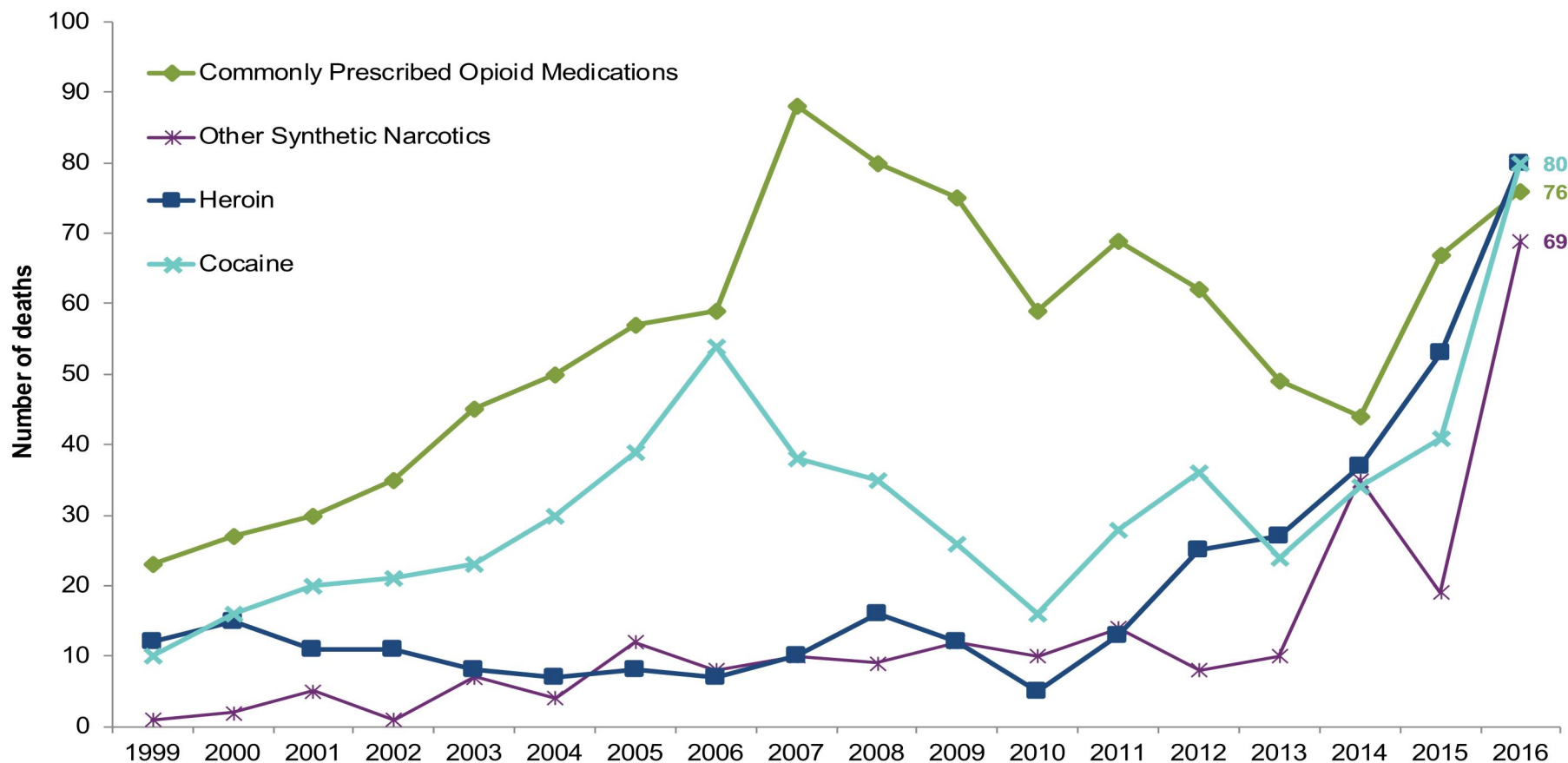
Substances* Contributing to Unintentional Medication and Drug Overdose Deaths, North Carolina Residents, 1999-2016



*These counts are not mutually exclusive. If the death involved multiple drugs it can be counted on multiple lines.

Source: N.C. State Center for Health Statistics, Vital Statistics-Deaths, 1999-2016,
Unintentional medication and drug overdose: X40-X44 with any mention of specific T-codes by drug type.
Analysis by Injury Epidemiology and Surveillance Unit

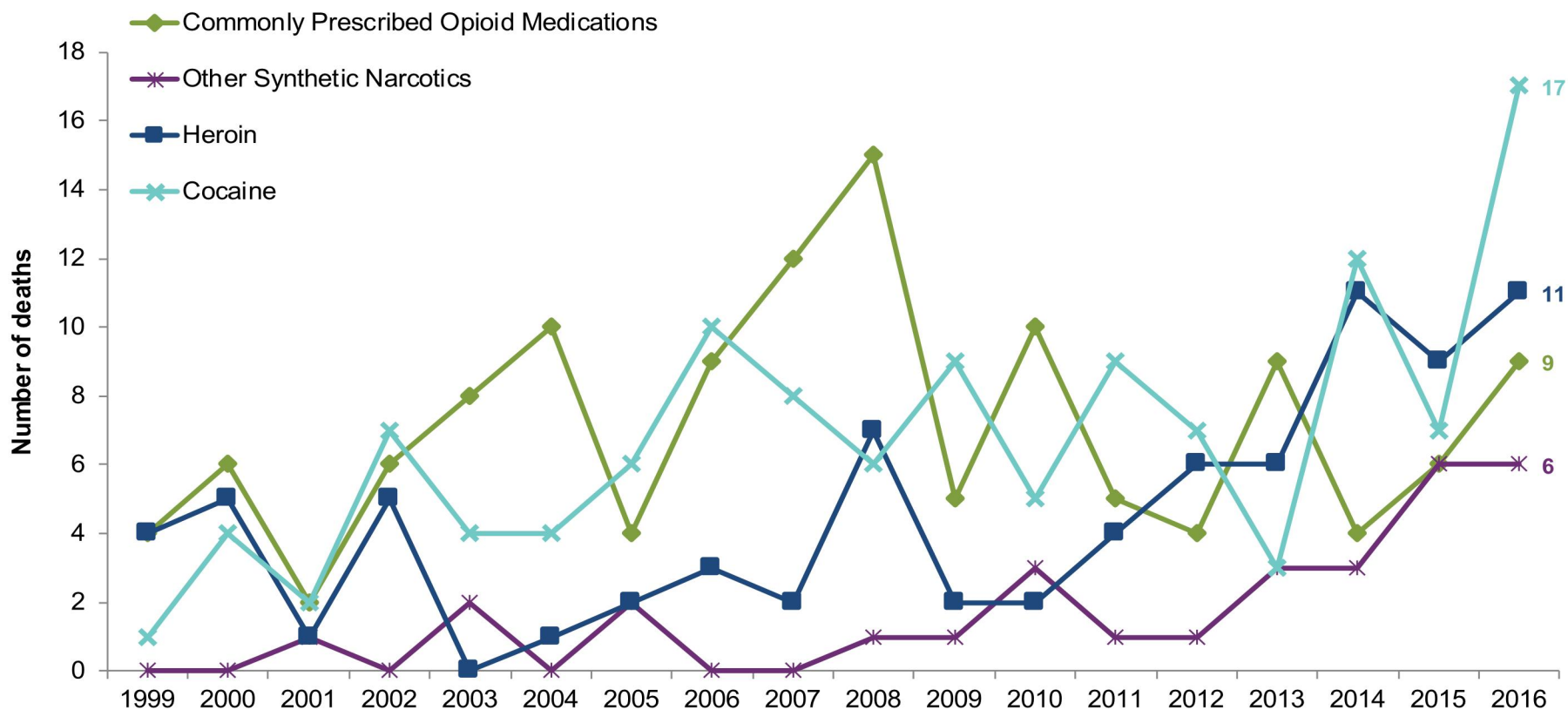
Substances* Contributing to Unintentional Medication and Drug Overdose Deaths, Local Health Director Region 5 Residents, 1999-2016



*These counts are not mutually exclusive. If the death involved multiple drugs it can be counted on multiple lines.

Source: N.C. State Center for Health Statistics, Vital Statistics-Deaths, 1999-2016,
Unintentional medication and drug overdose: X40-X44 with any mention of specific T-codes by drug type.
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Substances* Contributing to Unintentional Medication and Drug Overdose Deaths, Durham County Residents, 1999-2016



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Analysis by Injury Epidemiology and Surveillance Unit

Demographics of Unintentional Medication & Drug Overdose Deaths

Regional Demographics of Unintentional Medication & Drug Overdose Deaths, by sex, age: 2012-2016

	SEX		AGE				
	M	F	0-17	18-24	25-44	45-64	65+
<i>Local Health Director Region 5, Overall Population, 2012-2016</i>	48%	52%	22%	11%	26%	26%	14%
Unintentional Overdose Deaths, Local Health Director Region 5 Residents, 2012-2016	63%	37%	0%	9%	50%	37%	3%
Unintentional Overdose Deaths, North Carolina Residents, 2012-2016	63%	37%	0%	9%	49%	39%	3%

Source: Deaths-N.C. State Center for Health Statistics, Vital Statistics, 2012-2016, Unintentional medication and drug overdose: X40-X44/Population-National Center for Health Statistics, 2012-2016
Analysis by Injury Epidemiology and Surveillance Unit

County Demographics of Unintentional Medication & Drug Overdose Deaths, by sex, age: 2012-2016

	SEX		AGE				
	M	F	0-17	18-24	25-44	45-64	65+
<i>Durham County, Overall Population, 2012-2016</i>	48%	52%	22%	11%	33%	24%	11%
Unintentional Overdose Deaths, Durham County Residents, 2012-2016	68%	32%	1%	5%	54%	38%	2%
Unintentional Overdose Deaths, North Carolina Residents, 2012-2016	63%	37%	0%	9%	49%	39%	3%

Source: Deaths-N.C. State Center for Health Statistics, Vital Statistics, 2012-2016, Unintentional medication and drug overdose: X40-X44/Population-National Center for Health Statistics, 2012-2016
Analysis by Injury Epidemiology and Surveillance Unit

Regional Demographics of Unintentional Medication & Drug Overdose Deaths, by race/ethnicity: 2012-2016

	RACE				
	White	Black	Asian	Am. Indian	Hisp.
<i>Local Health Director Region 5, Overall Population, 2012-2016</i>	60%	26%	4%	0%	10%
Unintentional Overdose Deaths, Local Health Director Region 5 Residents, 2012-2016	79%	18%	0%	1%	1%
Unintentional Overdose Deaths, North Carolina Residents, 2012-2016	85%	11%	0%	2%	2%

Source: Deaths-N.C. State Center for Health Statistics, Vital Statistics, 2012-2016, Unintentional medication and drug overdose: X40-X44/Population-National Center for Health Statistics, 2012-2016
Analysis by Injury Epidemiology and Surveillance Unit

County Demographics of Unintentional Medication & Drug Overdose Deaths, by race/ethnicity: 2012-2016

	RACE				
	White	Black	Asian	Am. Indian	Hisp.
<i>Durham County, Overall Population, 2012-2016</i>	43%	38%	5%	0%	13%
Unintentional Overdose Deaths, Durham County Residents, 2012-2016	43%	50%	1%	2%	4%
Unintentional Overdose Deaths, North Carolina Residents, 2012-2016	85%	11%	0%	2%	2%

Source: Deaths-N.C. State Center for Health Statistics, Vital Statistics, 2012-2016, Unintentional medication and drug overdose: X40-X44/Population-National Center for Health Statistics, 2012-2016
Analysis by Injury Epidemiology and Surveillance Unit

Economic and Societal Costs of Medication & Drug Overdose Deaths

Estimated Total Lifetime Costs

Medical and Work Loss from Medication & Drug Fatalities

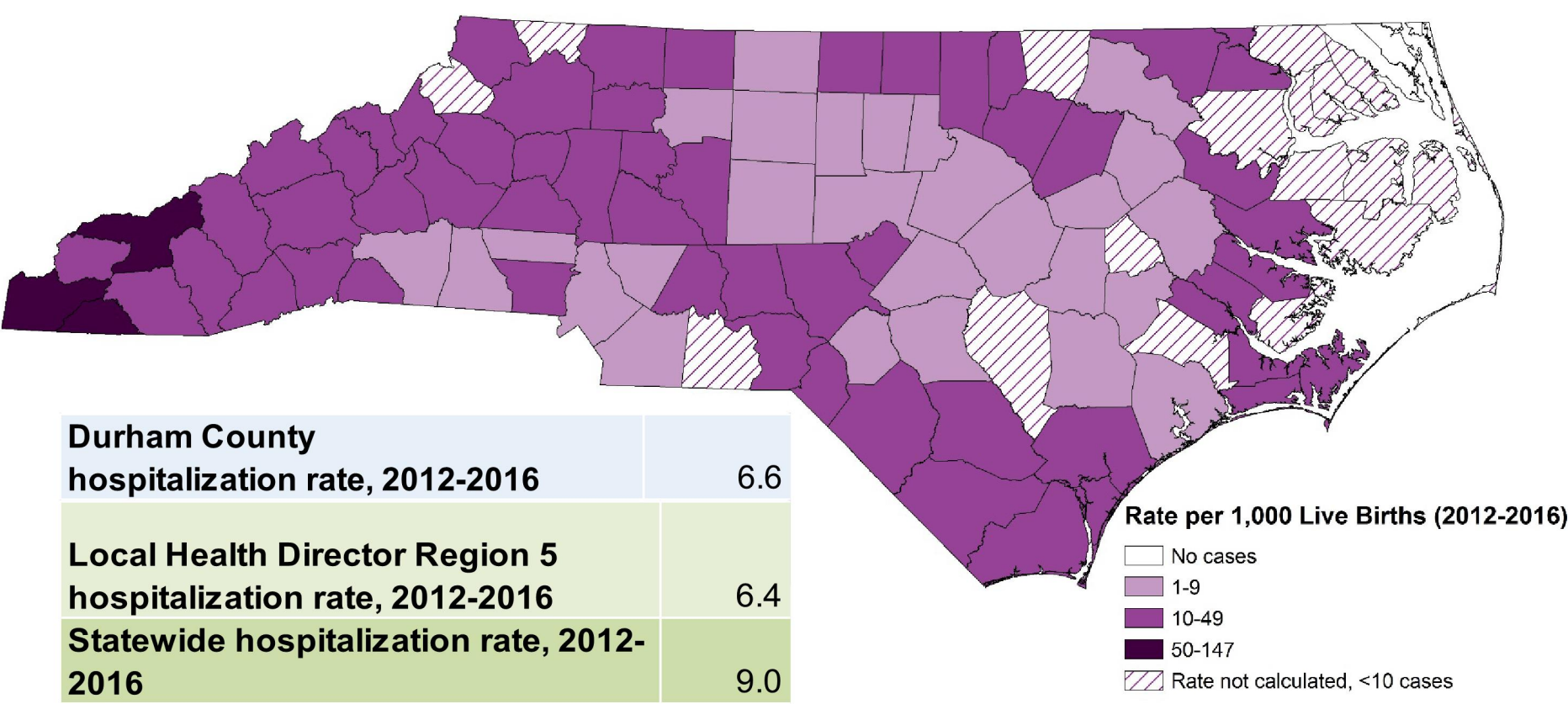
All intents, 2016

Total Medical Costs in Durham County, 2016	\$ 181,380
Total Work Loss Costs in Durham County, 2016	\$ 40,954,195
Combined Cost	\$ 41,135,575

Cost per capita in Durham County, 2016	\$ 134.34
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Source: Deaths-N.C. State Center for Health Statistics, Vital Statistics, 2016, Unintentional medication and drug overdose: X40-X44/Population-National Center for Health Statistics, 2016/Economic impact-CDC WISQARS, Cost of Injury Reports, National Center for Injury Prevention and Control, CDC for all medication and drug deaths (any intent), Base year (2010) costs indexed to state 2015 prices.
Analysis by Injury Epidemiology and Surveillance Unit

Hospitalizations Associated with Drug Withdrawal Syndrome in Newborns per 1,000 Live Births, North Carolina Residents, 2012-2016



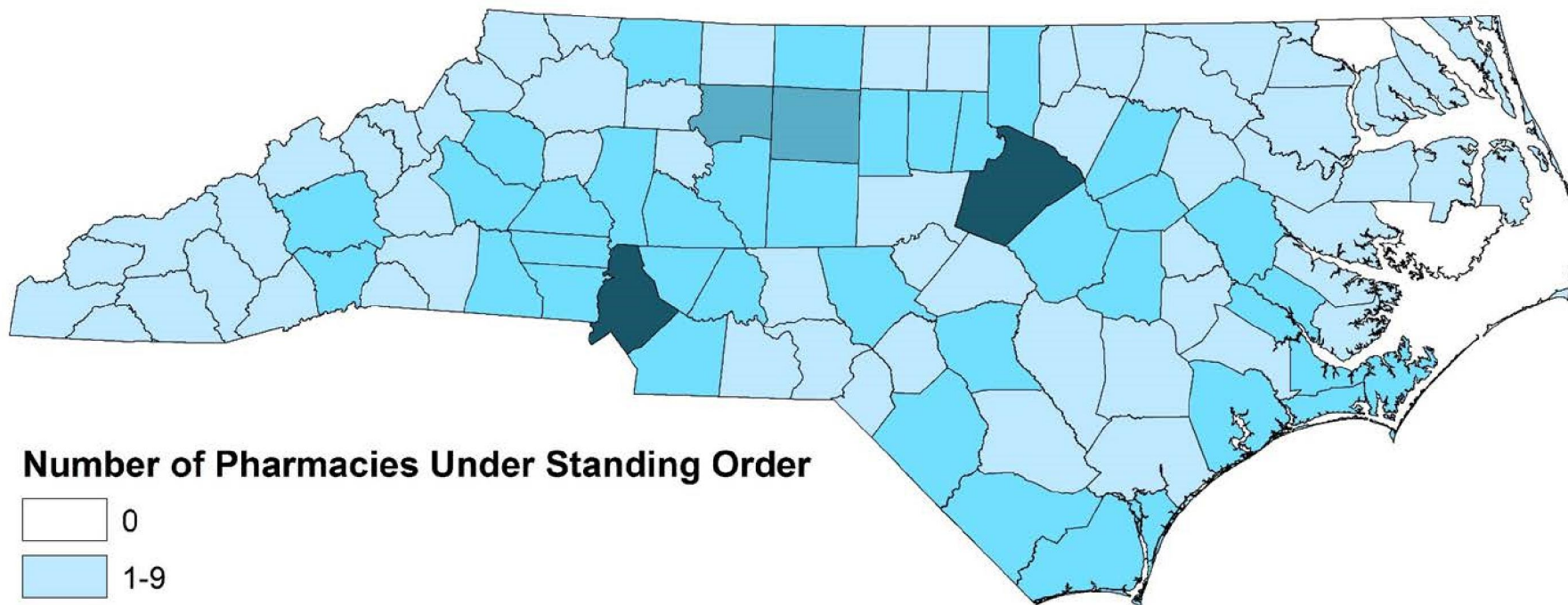
NOTE: 2014 data structure changed to include up to 95 diagnosis codes. 2015 ICD 9 CM coding system transitioned to ICD10 CM. The impact of these changes on surveillance is unclear.

Source: N.C. State Center for Health Statistics, Hospital Discharge Dataset, 2012-2016
 Analysis by Injury Epidemiology and Surveillance Unit

Prevention, Treatment, and Harm Reduction

Number of Pharmacies under Standing Order by County

October 2017 (N=1,407)



**Pharmacies in Durham County under
Standing Order, as of January 2018**

43

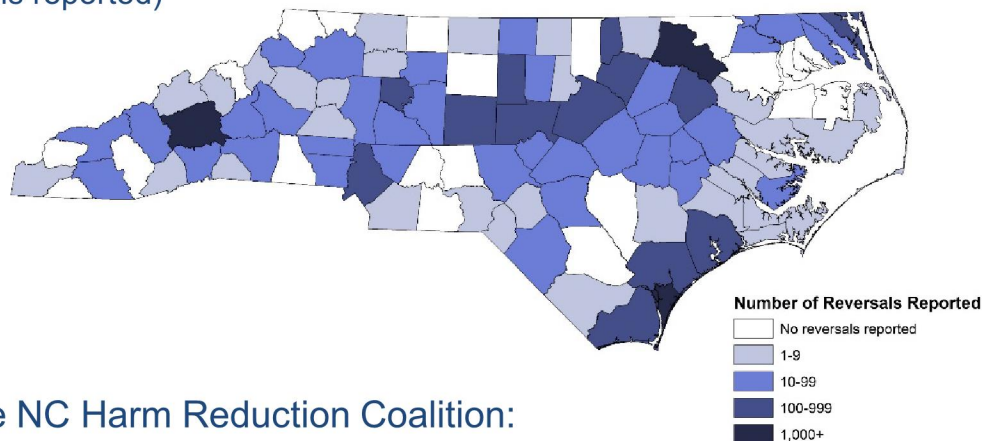
**Pharmacies in Local Health Director
Region 5 under Standing Order, as of
January 2018**

194

Opioid Overdose Reversals with Naloxone

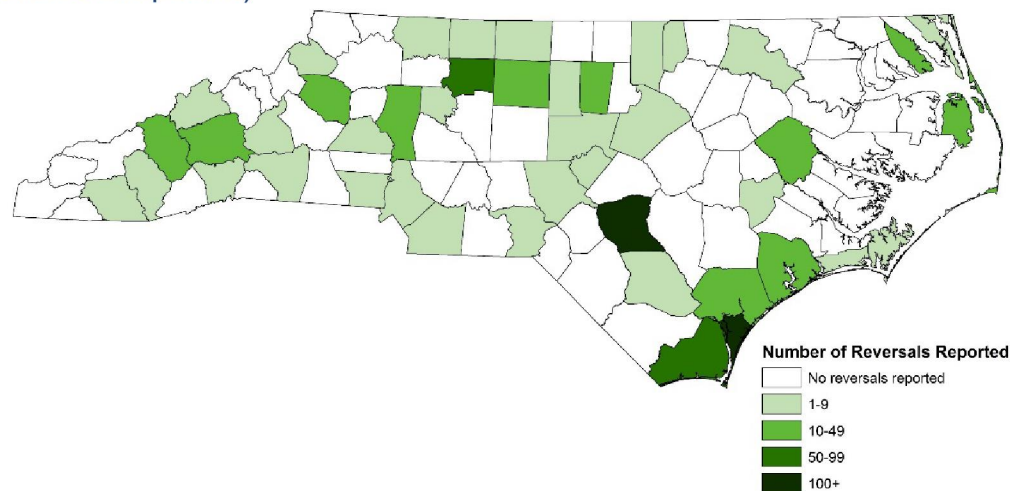
Community naloxone reversals reported to the NC Harm Reduction Coalition:
8/1/2013 - 12/31/2017 (9,632 total reversals reported)

Community Reversals in Durham County, as of 12/31/2017	3
Community Reversals in Local Health Director Region 5, as of 12/31/2017	510



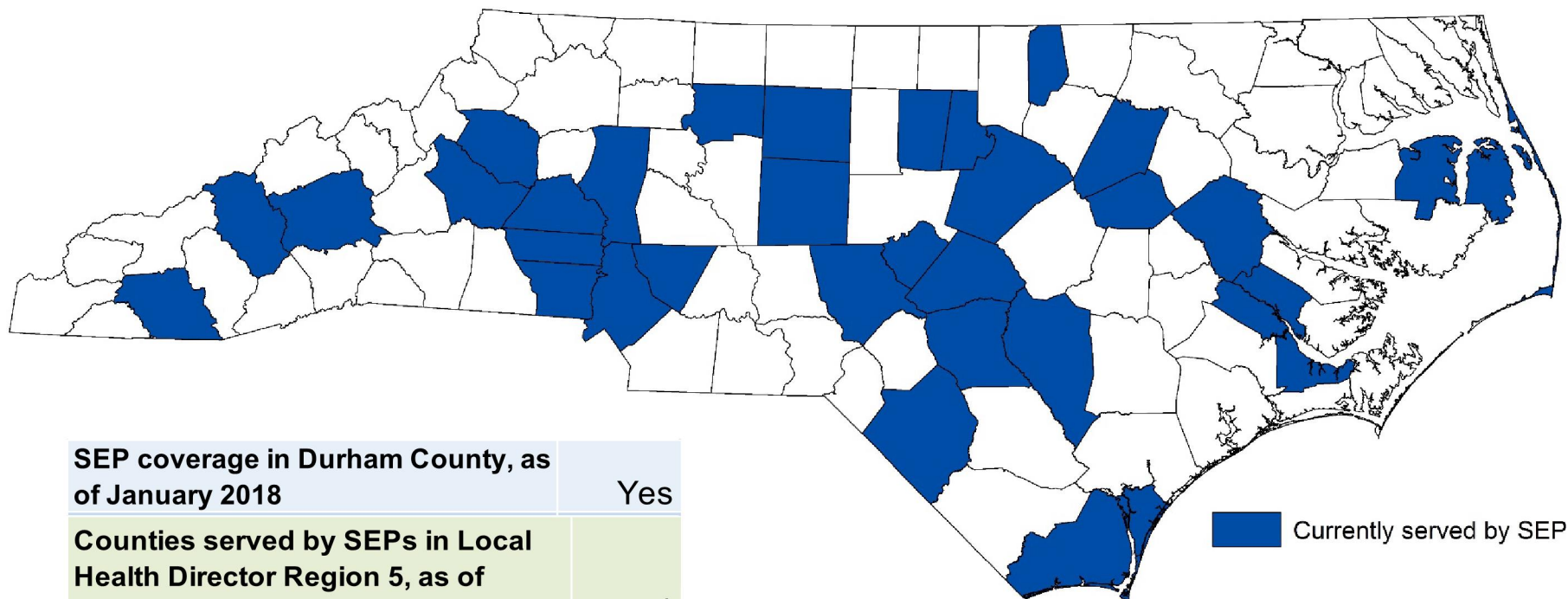
Law Enforcement naloxone reversals reported to the NC Harm Reduction Coalition:
1/1/2015 - 12/31/2017 (821 total reversals reported)

Law Enforcement Reversals in Durham County, as of 12/31/2017	0
Law Enforcement Agencies in Durham County carrying naloxone, as of 12/31/2017	2
Law Enforcement Reversals in Local Health Director Region 5 as of 12/31/2017	55
Law Enforcement Agencies in Local Health Director Region 5 carrying naloxone, as of 12/31/2017	22



Counties currently served by Syringe Exchange Programs (SEPs)

December 2017 (26 active* SEPs)



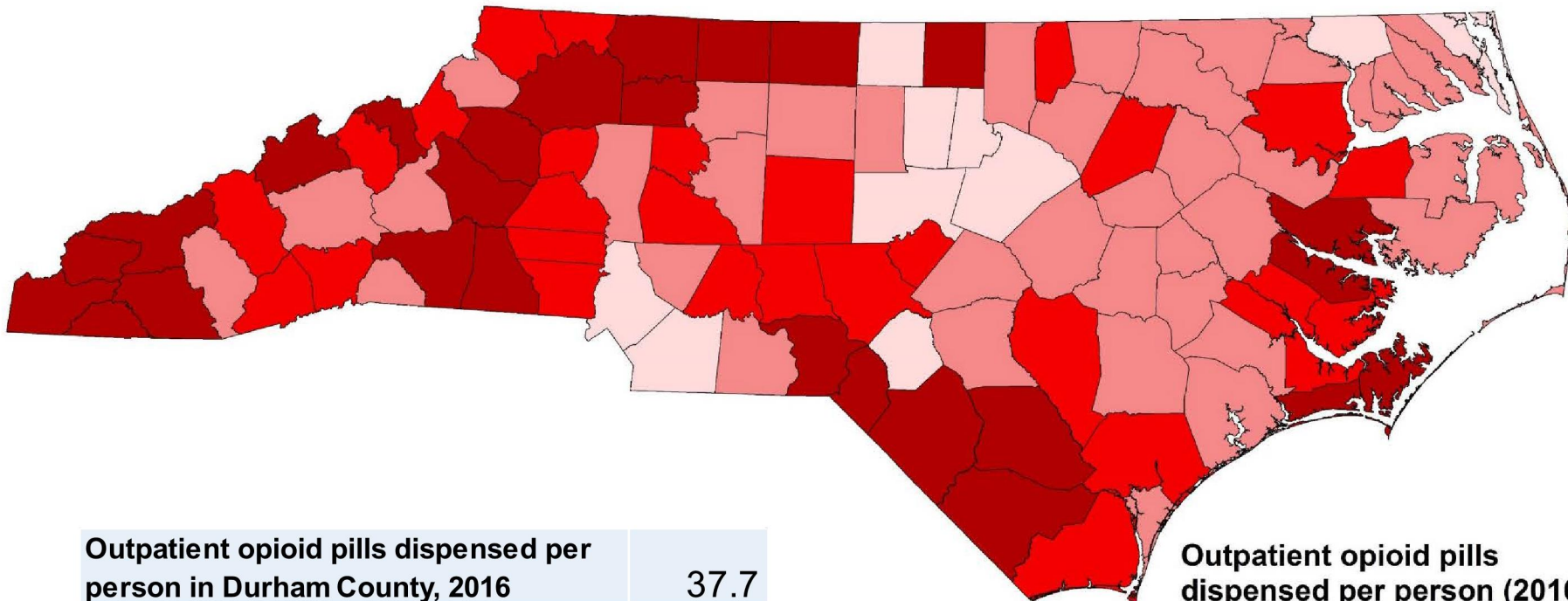
SEP coverage in Durham County, as of January 2018	Yes
Counties served by SEPs in Local Health Director Region 5, as of January 2018	4
Counties served by SEPs statewide, as of January 2018	32

*There may be SEPs operating that are not represented on this map; in order to be counted as an active SEP, paperwork must be submitted to the NC Division of Public Health.

Source: North Carolina Division of Public Health, January 2018
Analysis: Injury Epidemiology and Surveillance Unit

Rate of Outpatient Opioid Pills Dispensed by County

per North Carolina Resident, 2016

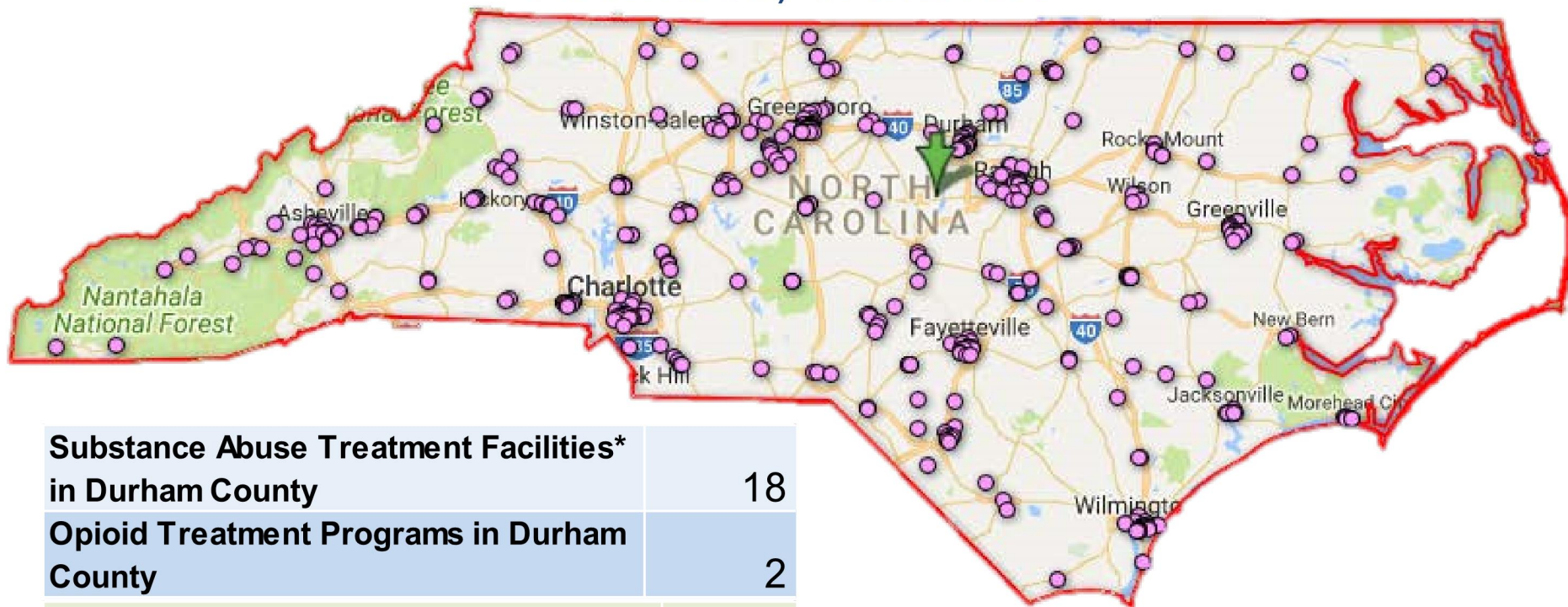


Outpatient opioid pills dispensed per person in Durham County, 2016	37.7
Outpatient opioid pills dispensed per person in Local Health Director Region 5, 2016	57.2
Outpatient opioid pills dispensed per person in North Carolina, 2016	66.5

Outpatient opioid pills dispensed per person (2016)



Availability of Substance Abuse Treatment Facilities, SAMHSA



Substance Abuse Treatment Facilities* in Durham County	18
Opioid Treatment Programs in Durham County	2
Substance Abuse Treatment Facilities* in Local Health Director Region 5	84
Opioid Treatment Programs in Local Health Director Region 5	7

*Substance abuse treatment facilities must meet certain eligibility criteria to be listed on the SAMHSA website; not all facilities are in-patient; see notes for more details.

Source: Behavioral Health Treatment Services Locator – SAMHSA, Substance Abuse Treatment Facilities, Accessed 10/2017. Medication Assisted Therapy, Opioid Treatment Program Directory – SAMHSA, Accessed 10/2017.

Questions?

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