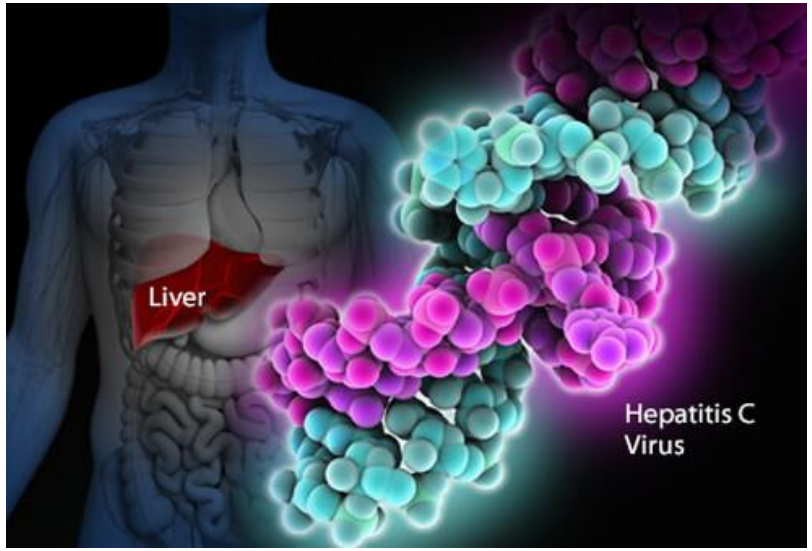
HEPATITIS C IN WESTERN NORTH CAROLINA

JACKSON COUNTY DEPARTMENT OF PUBLIC HEALTH

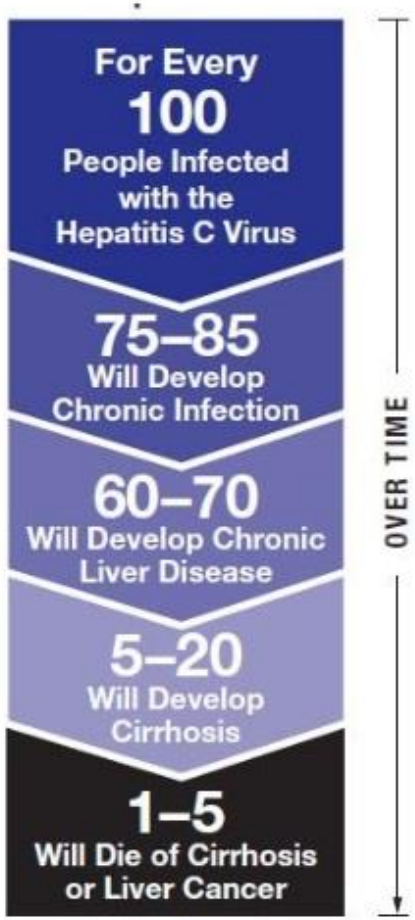
WHAT IS HEPATITIS C?

- Bloodborne pathogen
- Infection ranges in severity
  - Acute HCV: Mild, lasting a few weeks
  - Chronic HCV: Serious, lifelong illness
- Re-infection is possible
- No vaccine available
- Syndemic with HIV



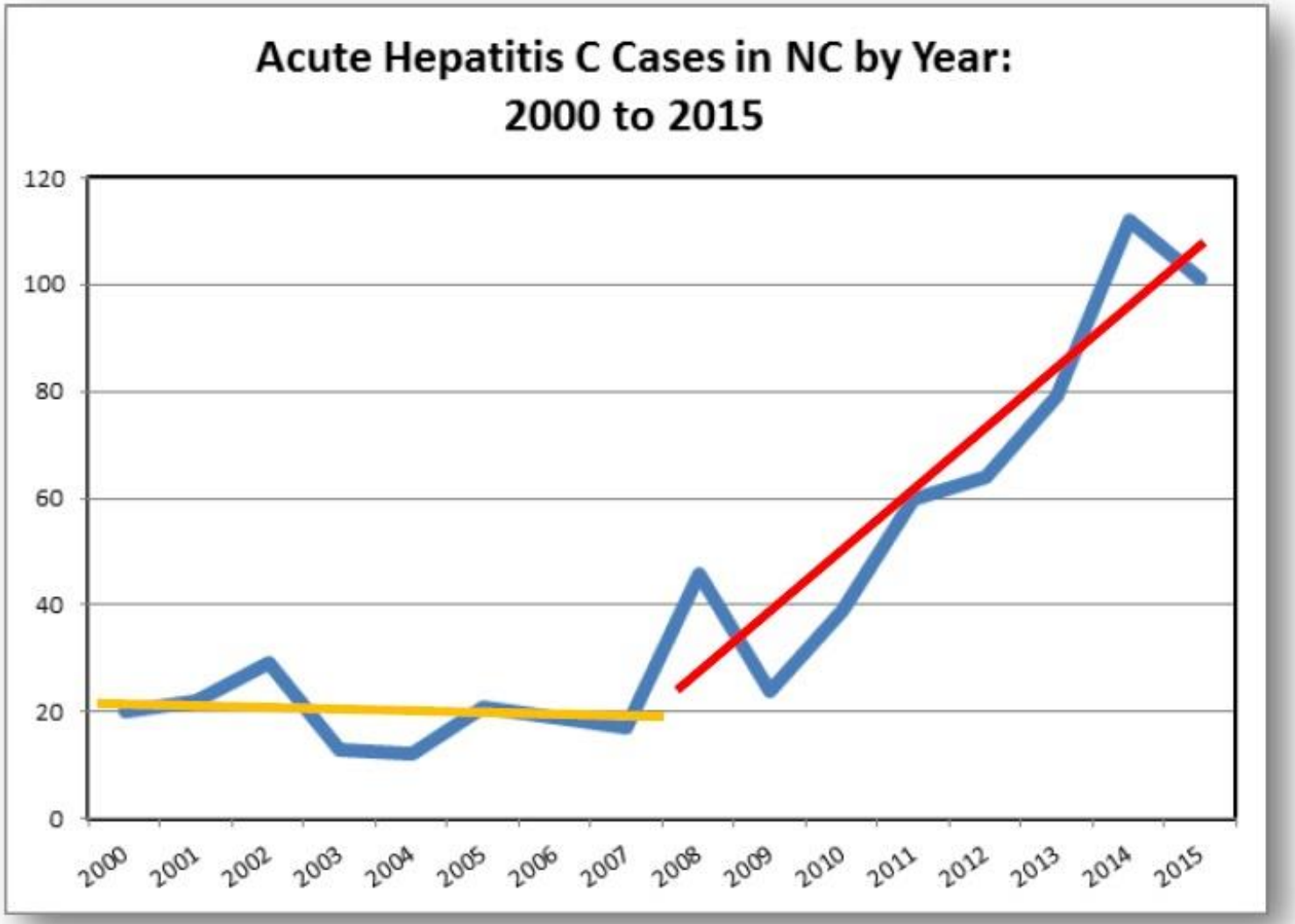
http://www.medicinenet.com/hepatitis_c_pictures_slideshow/article.htm

PROGRESSION OF HCV INFECTION



TRANSMISSION

- Primarily through exposure to infectious blood
  - **Injection drug use (IDU)**
  - Needlestick injuries
  - Birth to infected mother
- Infrequently through:
  - Sex
  - Sharing personal items
  - Invasive healthcare procedures


Acute Hepatitis C Cases in NC by Year:
2000 to 2015
120
100
80
60
40
20
0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015

TWO EPIDEMICS IN NC

Historic Epidemic

- Chronic
- 110,000+ infected
- 75% of cases are among baby boomers
- ~25% infected with HIV are co-infected with HCV
- 50% unaware of infection

Emerging Epidemic

- Acute
- Reported cases have tripled from 2010-2014
- Underreported & underestimated
- Coincides with increasing use of **injectable opioids**
- Mostly among:
  - Younger,
  - White,
  - and Rural persons in poorer communities

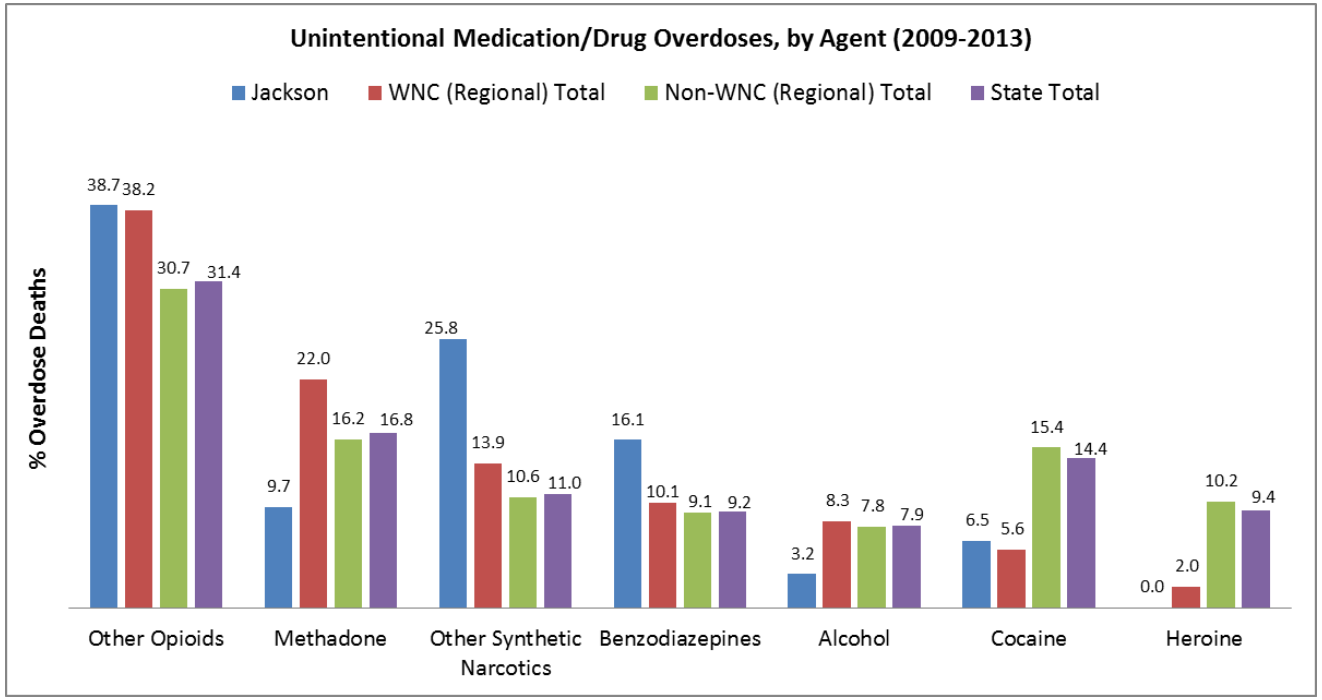
UNINTENTIONAL POISONING

- In the period 2009-2013, 34 Jackson County residents died as a result of unintentional poisoning, with a corresponding age-adjusted mortality rate of 17.1 deaths per 100,000 population, **higher than the WNC or NC averages.**
- Of the 34 unintentional poisoning deaths in the county in that period, **26 (76%) were due to medication or drug overdoses**, with a corresponding mortality rate of13.1, significantly higher than the average NC rate but lower than the WNC rate.

County	Unintentional Poisoning Deaths for Select Locations and Percent that are Medication/Drug Overdoses (2009-2013)*			Rate of Unintentional Medication/Drug Overdose Deaths (2009-2013)**	
	#	Rate per 100,000 NC Residents	% that are Medication/Drug Overdoses	#	Rate per 100,000 NC Residents
Jackson	34	17.1	76.5	26	13.1
WNC (Regional) Total	560	14.8	90.0	506	13.3
Non-WNC (Regional) Total	4,749	10.7	91.0	4,320	9.7
State Total	5,309	11.0	90.9	4,826	10.0

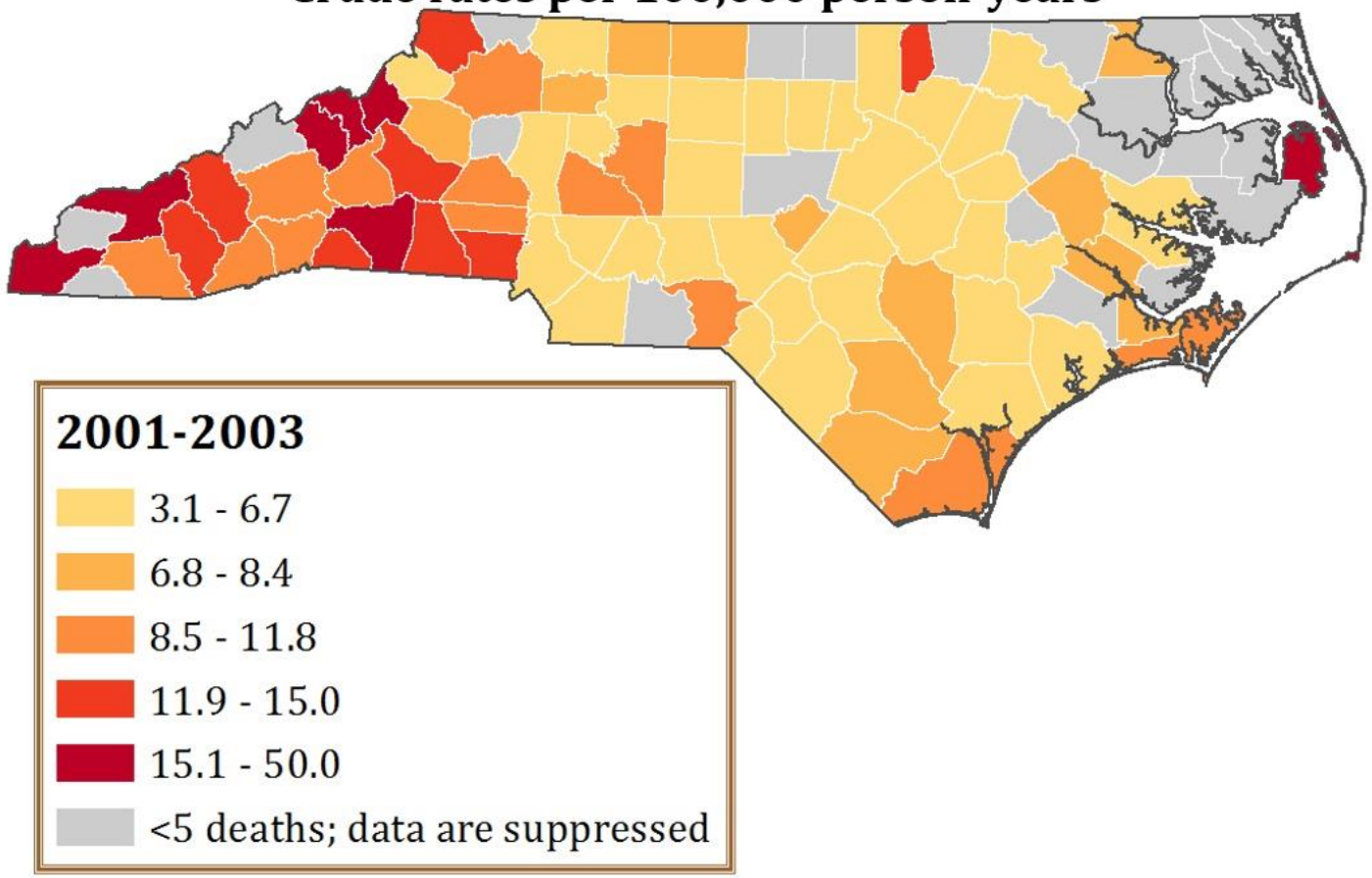
UNINTENTIONAL MEDICATION/DRUG OVERDOSES

- "Other opioids" caused the highest proportion of drug overdose deaths (38.7%) in Jackson County for 2009-2013.



Unintentional Poisoning Mortality Rates: North Carolina, 2001-2011

Crude rates per 100,000 person-years



Citation: North Carolina State Center for Health Statistics. NC Health Data Query System. Retrieved April 24, 2013 from http://www.schs.state.nc.us/schs/data/query.html.

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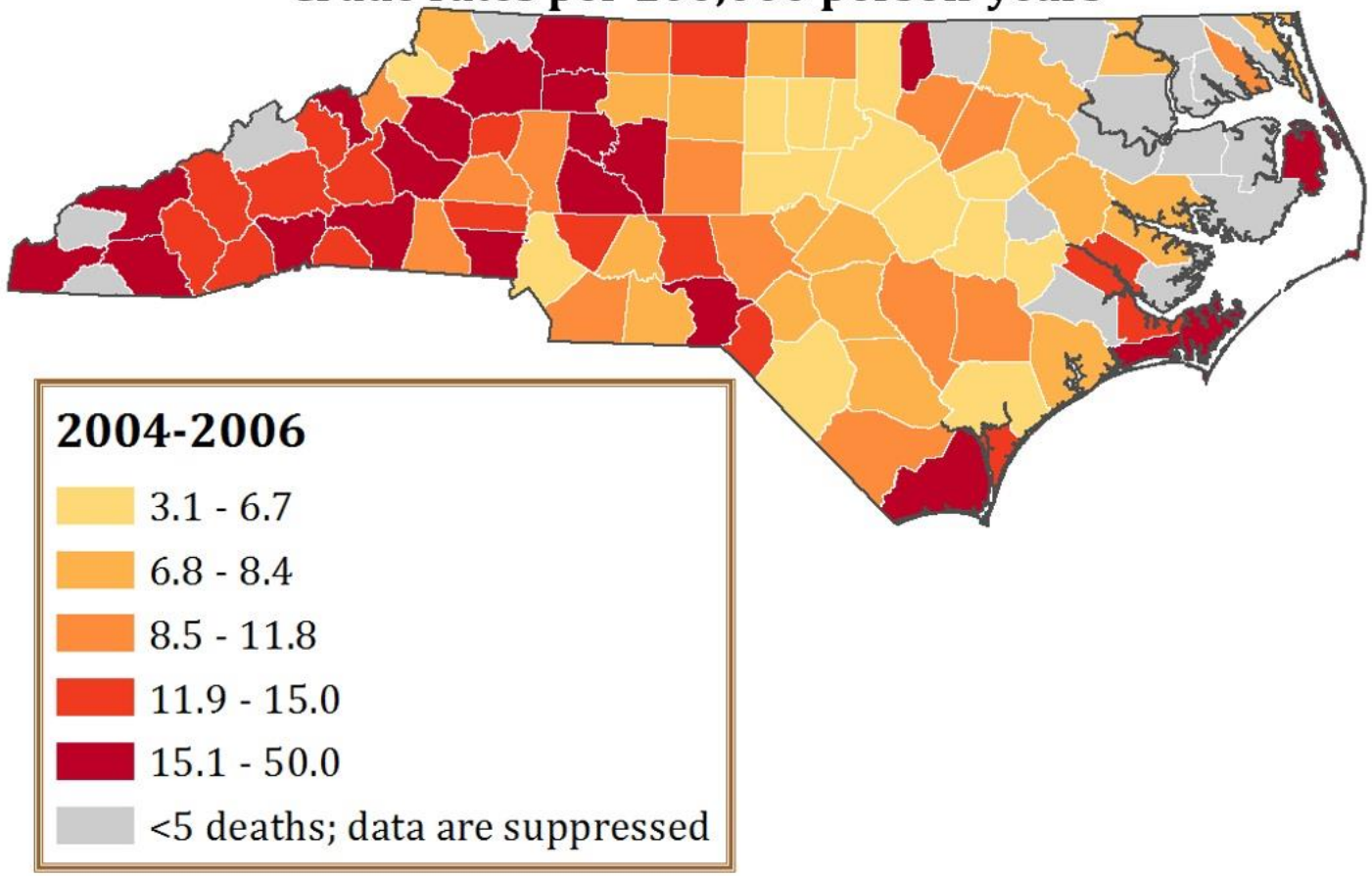

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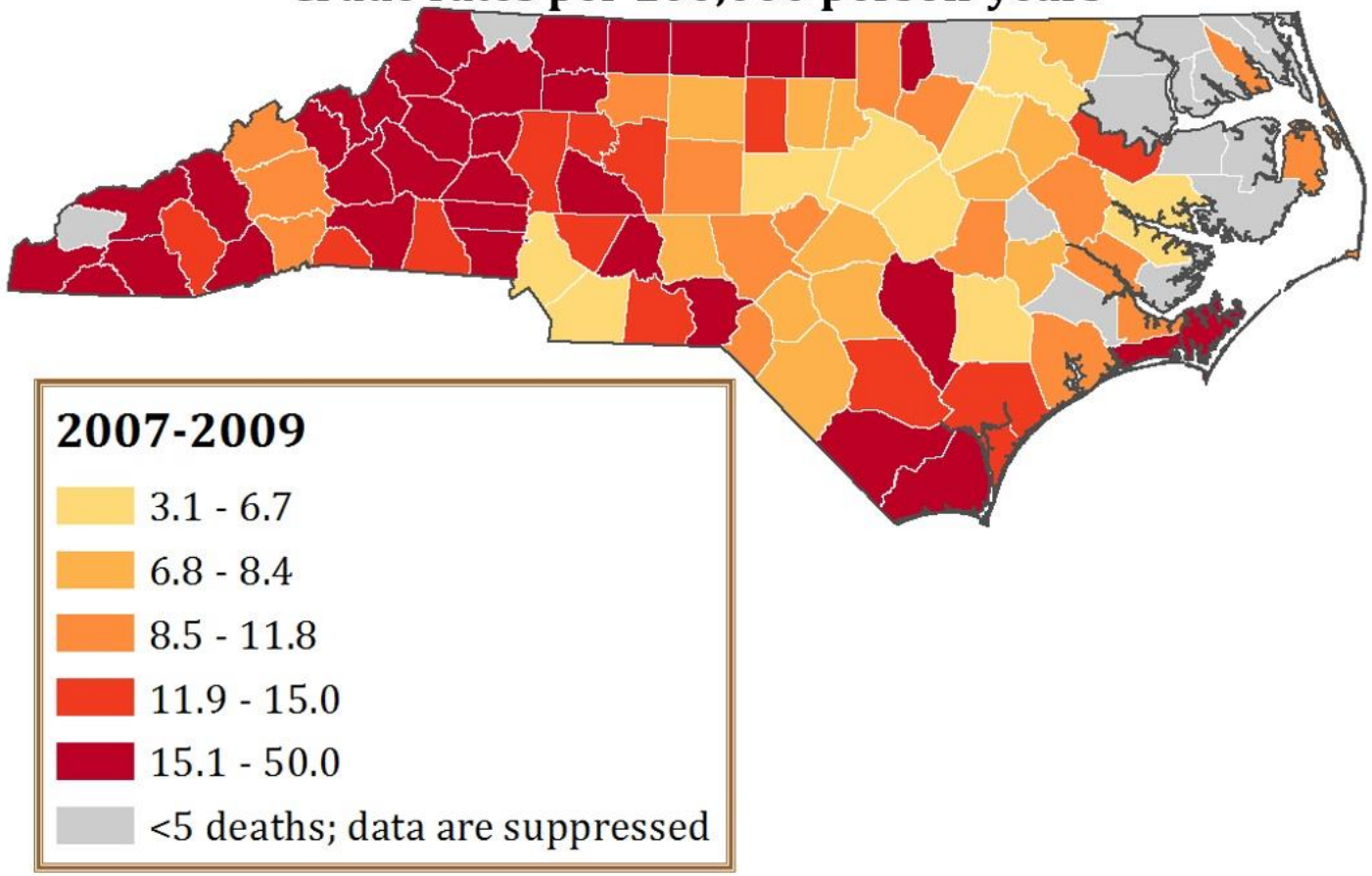

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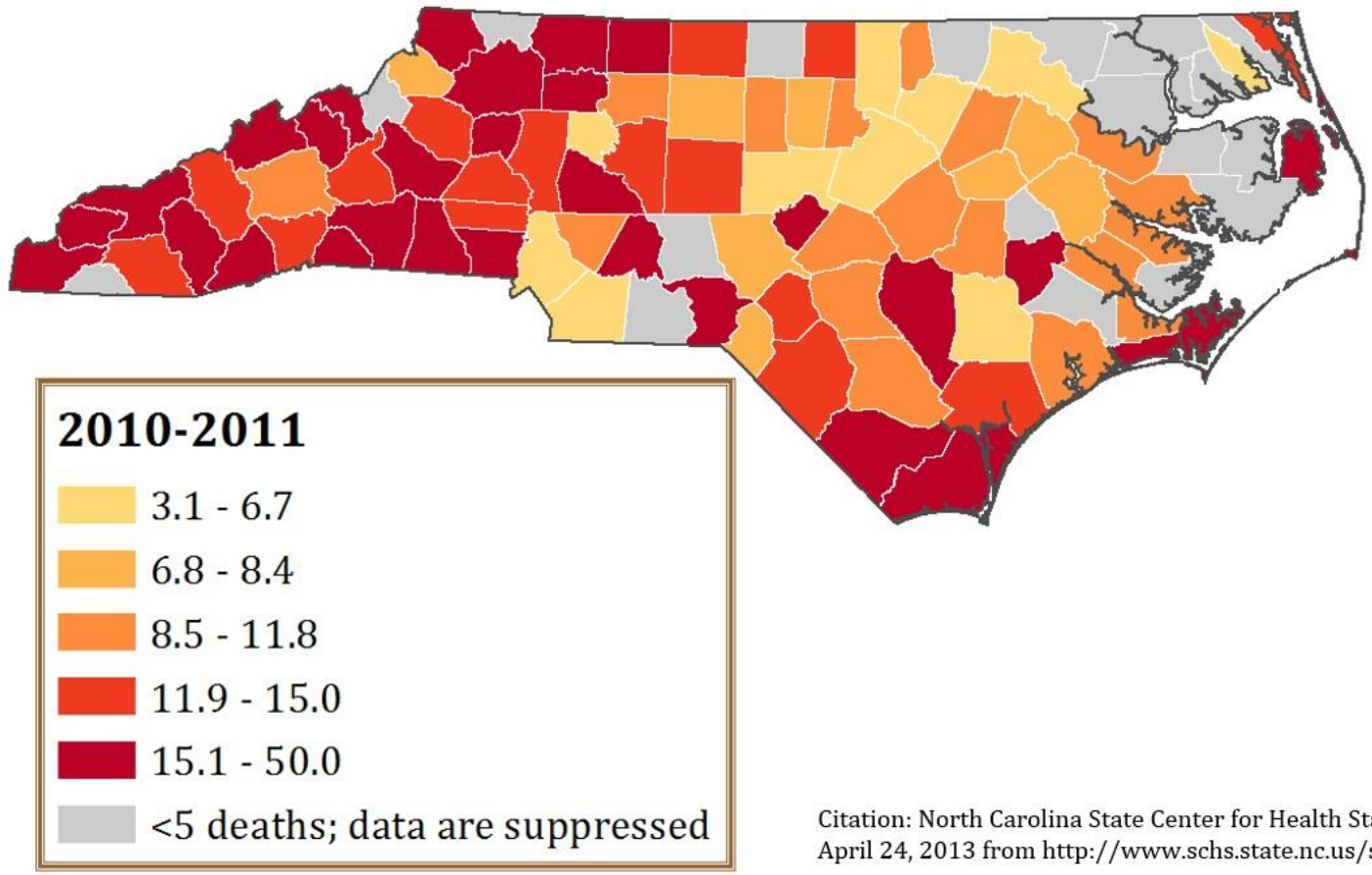

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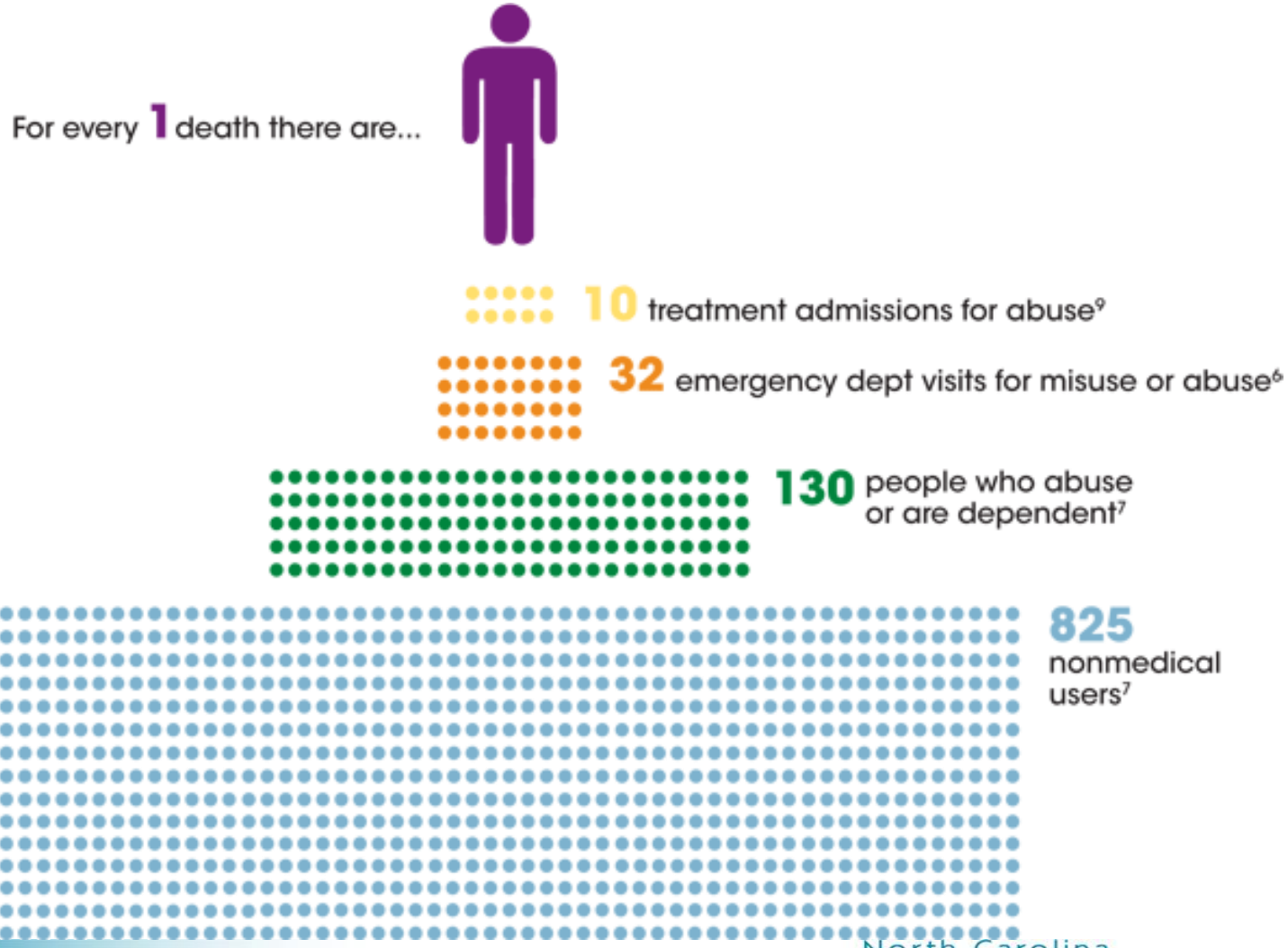
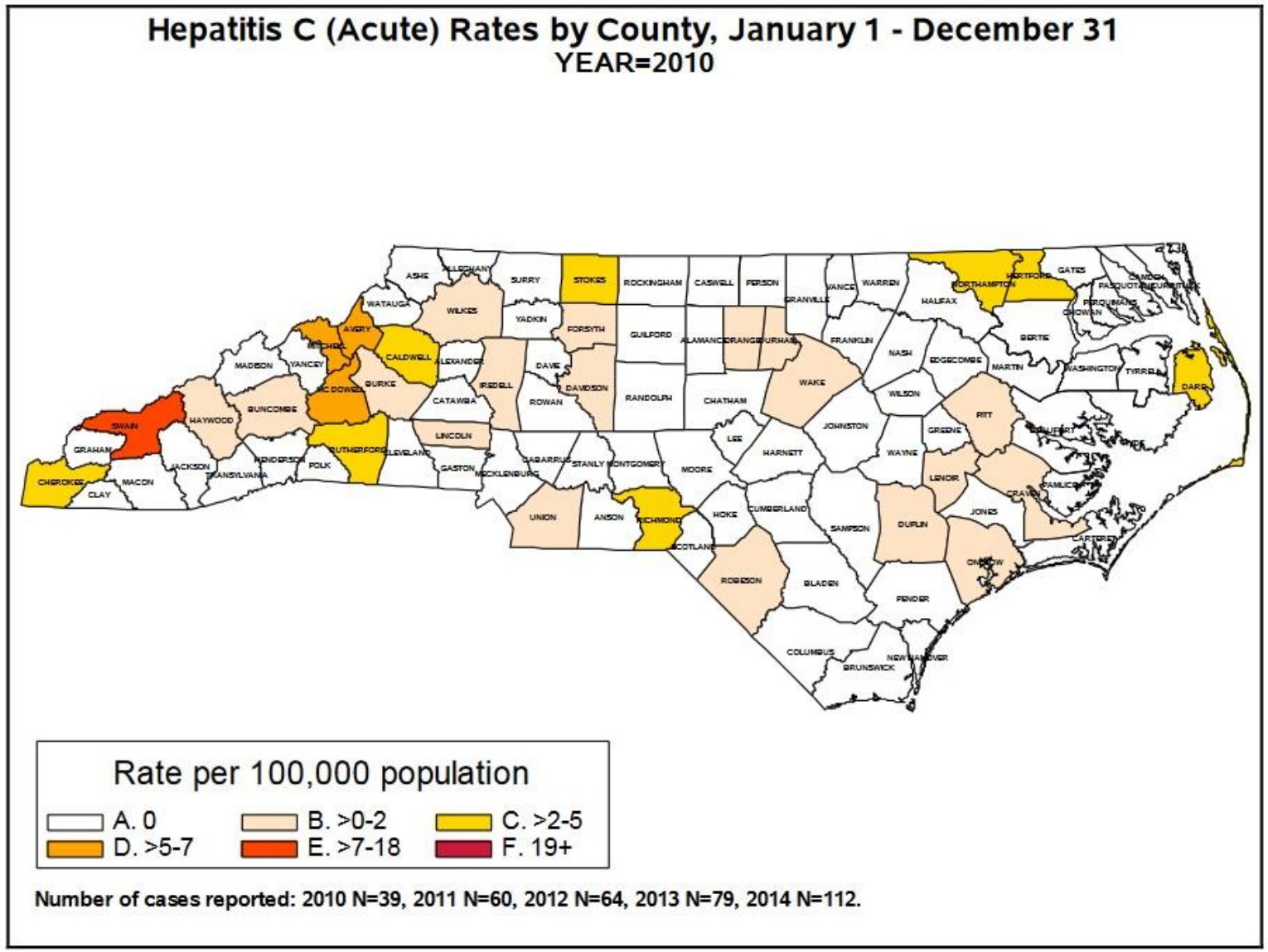
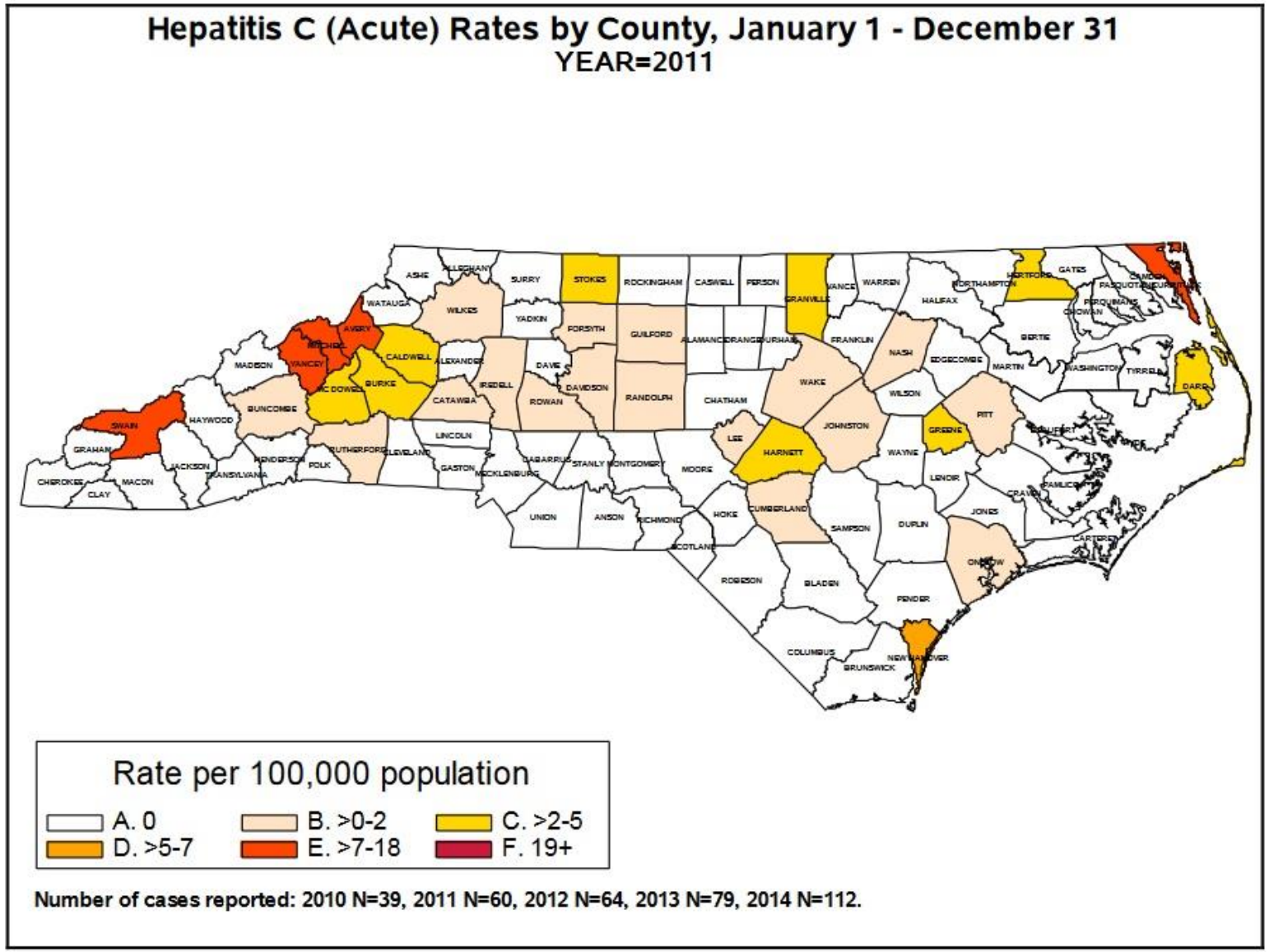
CDC POLICY IMPACT: PRESCRIPTION PAINKILLER OVERDOSES



Source: CDC-www.cdc.gov/homeandrecreationalsafety/rxbrief/


Hepatitis C (Acute) Rates by County, January 1 - December 31
YEAR=2010
Rate per 100,000 population
A. 0
B. >0-2
C. >2-5
D. >5-7
E. >7-18
F. 19+
Number of cases reported: 2010 N=39, 2011 N=60, 2012 N=64, 2013 N=79, 2014 N=112.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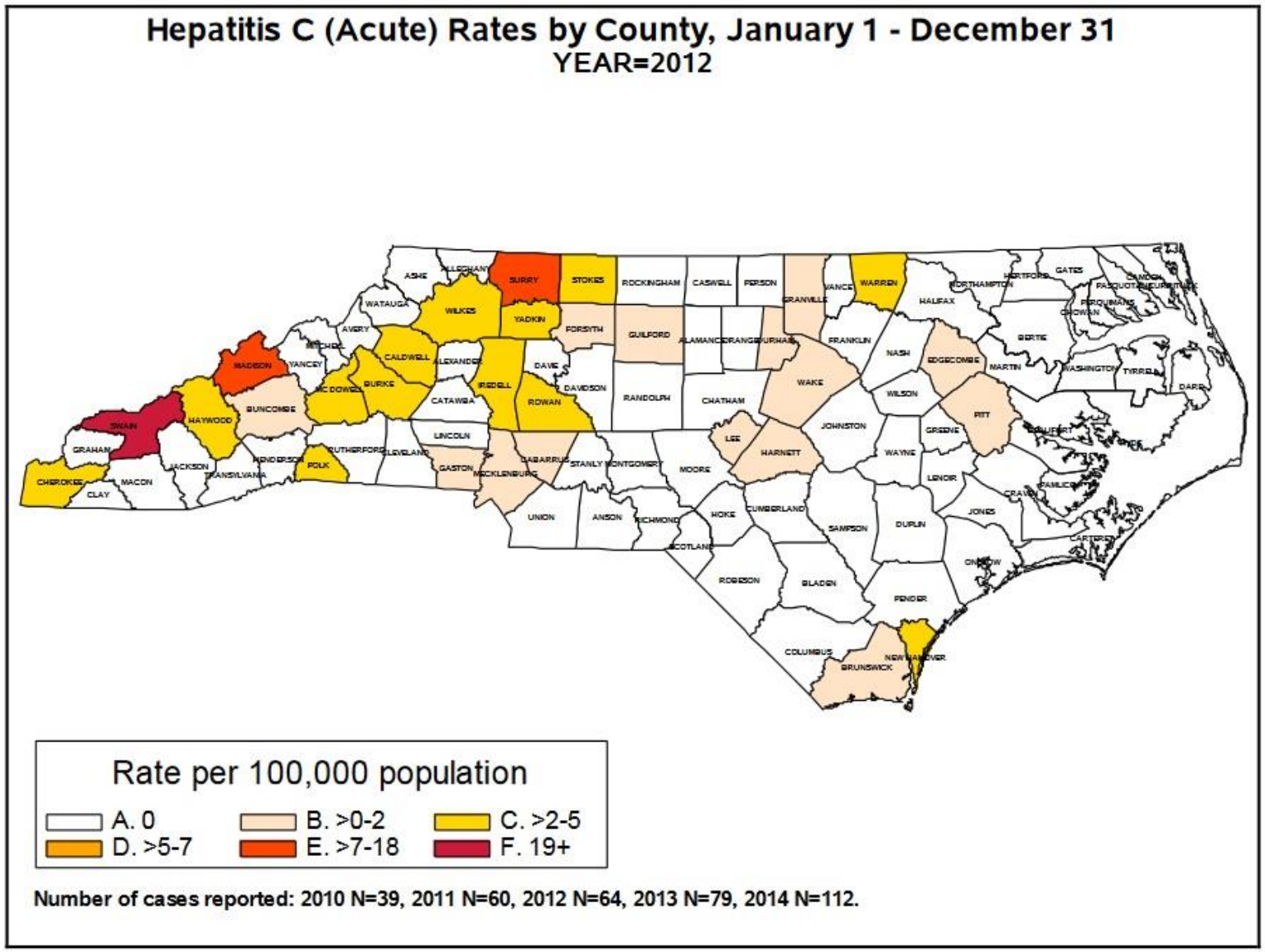
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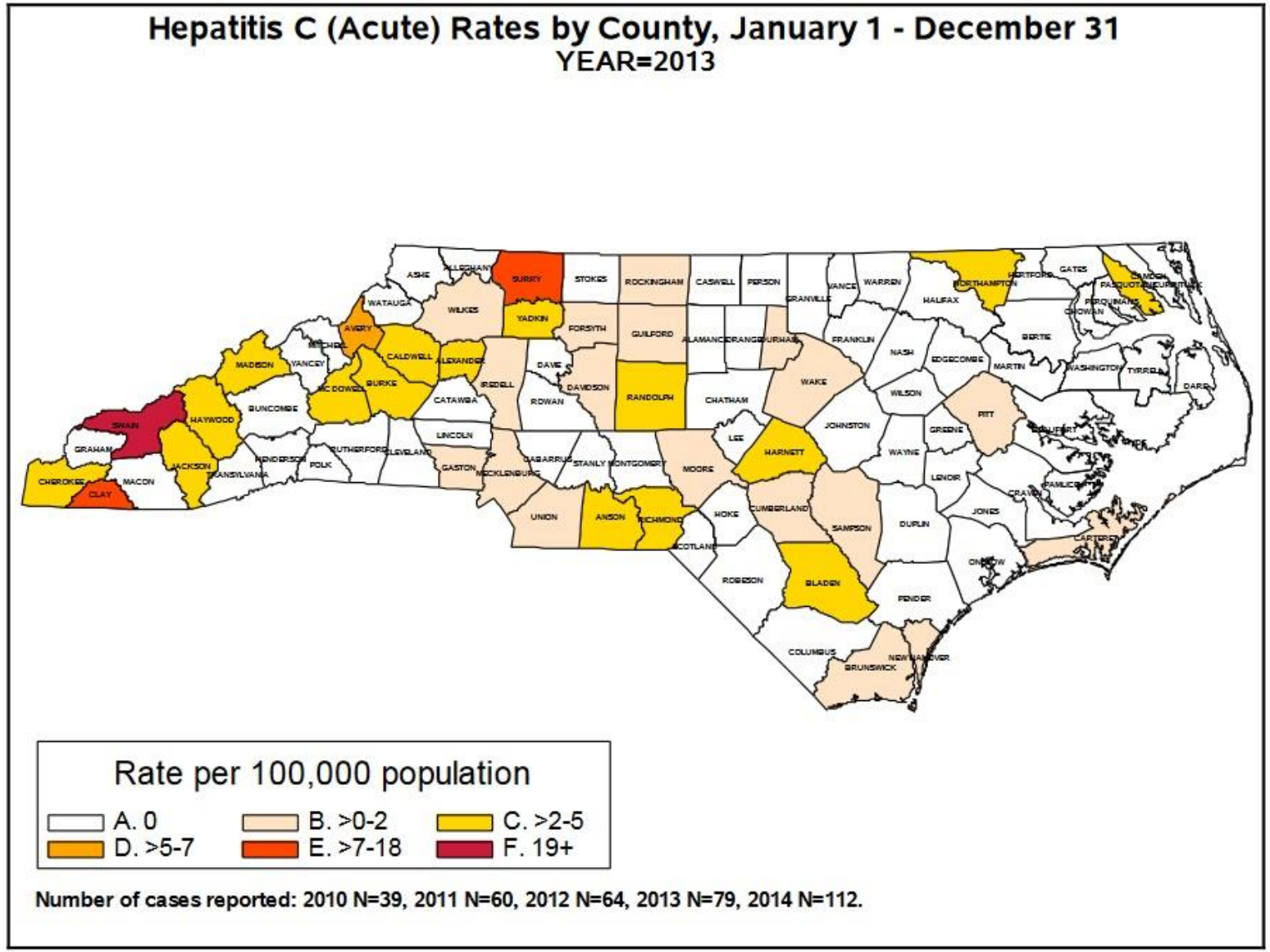
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COUNTIES MOST VULNERABLE TO A HCV/HIV OUTBREAK

- Data sources
  - Emergency department visits for opioid overdose
  - Reported cases of acute HCV
  - Chronic HCV data from Medicaid
  - Percent white population
  - Percent unemployed
- Identified 11 most vulnerable NC counties, all in Western NC

ACUTE HCV DEMOGRAPHIC COMPARISONS

Characteristics	Regions 1 & 2	Statewide
Cases 2011-2016	116 (56%)	470
5-year change	185%	200%
Average Age	33	35
Women	57%	52%
White (non-Hispanic)	87%	81%
American Indian	11%	4%

ROOT CAUSES OF HCV & IDU

Root causes	
SES	Living in poverty Lack of educational opportunities, affordable housing, living wage job opportunities Overburden of the healthcare system Criminalization of addiction & drug use which makes treatment & behavior change difficult
Environmental	Overprescribing of opioids leading to IDU Sharing needles ACEs
Cultural Bias	Perceptions of the disease & its cause as a personal failure vs. failure of the system Negative perceptions of addiction & the associated social stigma
Lack of Resources	Lack of primary & secondary prevention efforts Lack of knowledge & awareness of how HCV can be transmitted & prevented Lack of education for PCPs regarding HCV Lack of available clean needles for SSPs Limited access to PCPs or behavioral health care
Barriers to Access	Lack of insurance coverage making treatment inaccessible Cost of treatment Lack of treatment options Lag time between screening & treatment

HEP C TLC

Test

- High risk populations for HCV, HIV, and other sexually transmitted infections

Link

- Medical care for HCV infection
- Mental health and substance abuse disorder treatment
- Social services assistance, as appropriate

Cure

- Curative treatment
- Eliminate onward transmission and reduce prevalence

PUBLIC HEALTH RESPONSE TO HCV

- Enhanced surveillance
  - Chronic HCV reportable through electronic laboratory reporting (ELR)
- Outreach and screening
  - Targeted screening of high risk groups
  - Client education
  - HAV/HBV vaccination
- Linkage to cure
  - **HCV Bridge Counselors** 
  - Expanded primary care capacity to treat HCV

HCV BRIDGE COUNSELOR

- Position available to serve Region 1
- Fully funded by the NC DPH Communicable Disease Branch
  - Funding available for remaining of FY16-17
  - Potential to continue for future fiscal years

- Primary goals for position:
  1. Link people who are infected with HCV to clinical providers for treatment and care
  2. Provide disease specific education to patients and the community
  3. Link providers to the NC HCV Test, Link, and Cure Academic Mentorship Program

ACKNOWLEDGEMENTS

"Hepatitis C in North Carolina: Two Epidemics with One Public Health Response." Sarah Rhea, DVM, PhD. NC Division of Public Health.

"Hepatitis C: Two Epidemics, One Response." Aaron Fleischauer, PhD, MSPH. NC Public Health.

Hepatitis C (Acute) Rates by County. NC Communicable Disease Branch. http://epi.publichealth.nc.gov/cd/figures/HepCRatesbyCountyandYear_May2015.pdf

NC State Center for Health Statistics and NC DPH, Chronic Disease and Injury Section, Injury and Violence Prevention Branch