

Trends in the Supply and Distribution of Obstetric Delivery Providers in North Carolina

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Joint Legislative Oversight Committee on Health and Human Services
Subcommittee on Midwives

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Presentation Overview

1. Where do we get the data?
2. How many physicians provide deliveries in NC and how has that number change over time?
3. Do we have more or fewer CNMs relative to the nation? Where do they practice?
4. How many physicians supervise CNMs?



Fatalities by state for childbirth by setting and provider type

Where do we get the data? The North Carolina Health Professions Data System (HPDS)

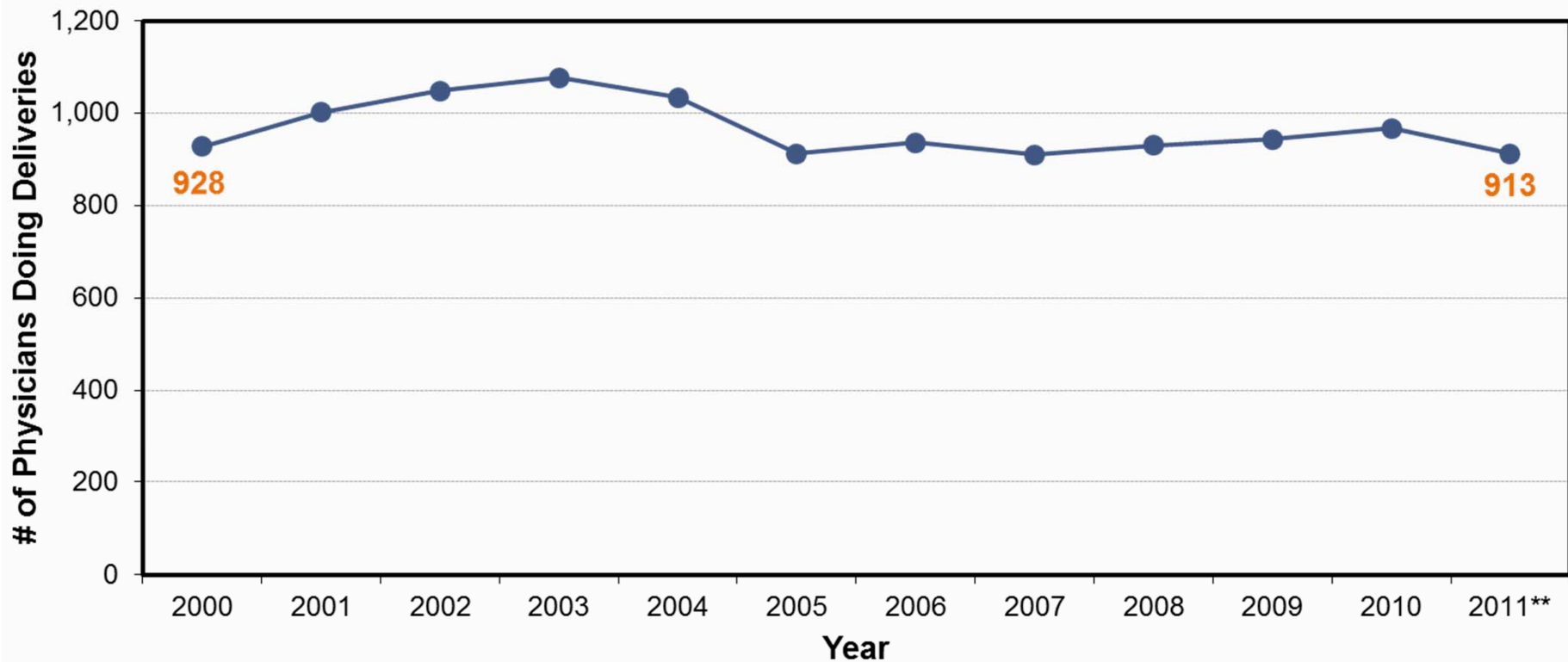
- HPDS draws on licensure data on 19 health professions from 12 licensure boards
- Today's data from Board of Nursing, Medical Board and Midwifery Joint Committee
- NC has unique (and much envied!) data system thanks to cooperation of licensure boards
- Based at Cecil G. Sheps Center for Health Services Research at UNC-CH but mission is statewide

We don't advocate. We provide 'straight up' data and analyses

- Health Professions Data System is independent of government and health care professionals
- Independence brings rigor and objectivity
- Funding provided by: NC AHEC Program Office, data request fees, project cross-subsidies, and the UNC-CH Office of the Provost (Health Affairs)

Slight decline in number of physicians providing deliveries in last 10 years

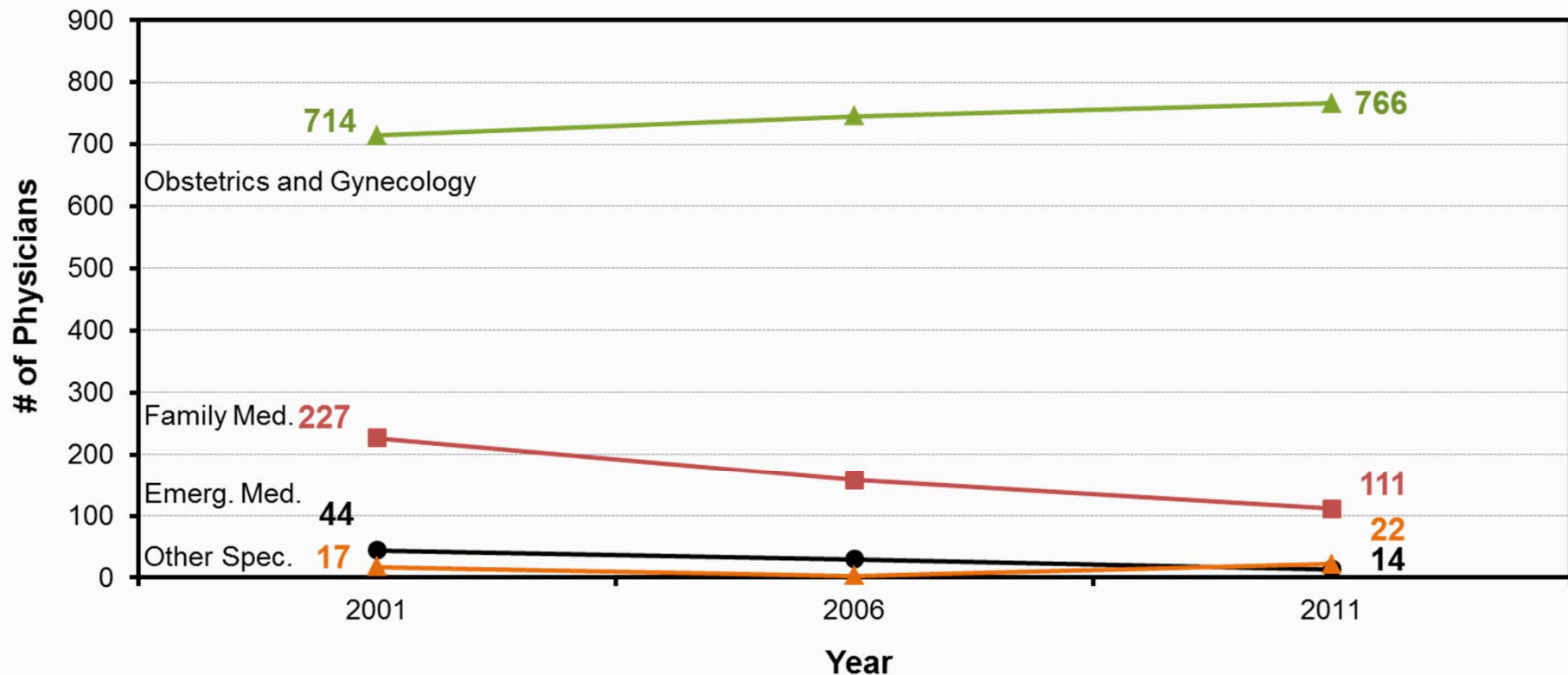
Total Physicians Doing Deliveries, North Carolina, 2000-2011



Note: Data include active, in-state, nonfederal, non-resident-in-training physicians licensed in North Carolina as of October 31, 2011 who reported that they provide obstetric deliveries. **Sources:** North Carolina Health Professions Data System, with data from the North Carolina Medical Board, 2011; US Census Bureau and Office of Management and Budget, 2013.

Due to significant decrease among Family Physicians doing deliveries

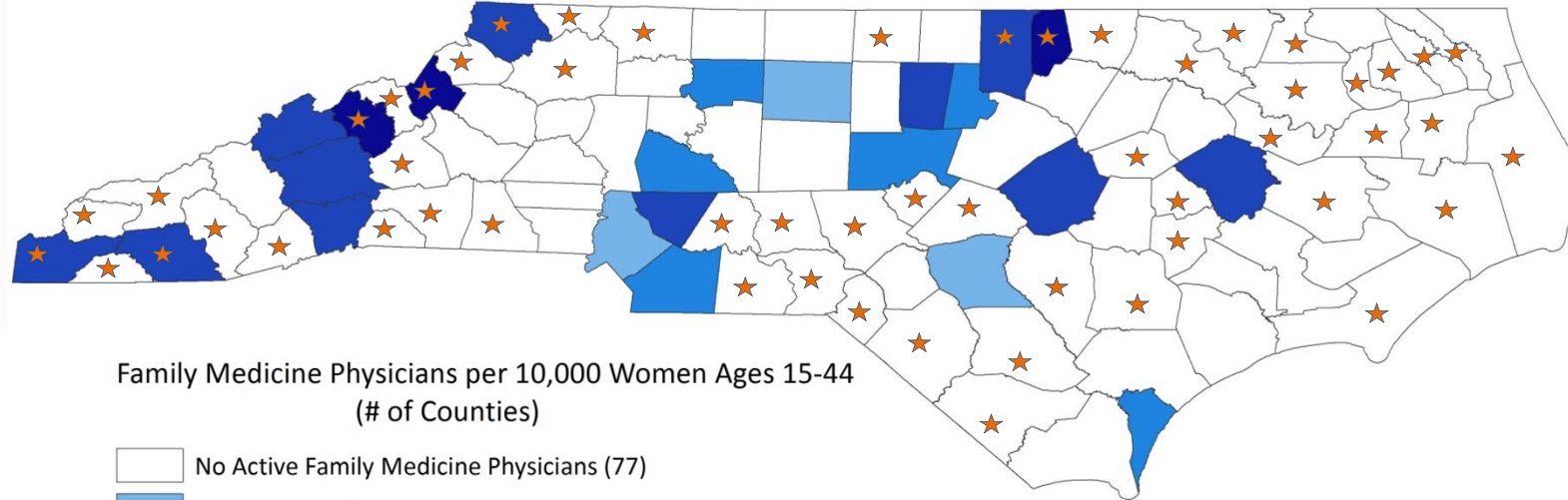
Specialty Type of Physicians Providing Obstetric Deliveries, North Carolina, 2001-2011



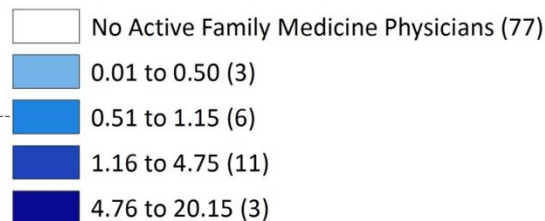
Note: Data include active, in-state, nonfederal, non-resident-in-training physicians licensed in North Carolina as of October 31, 2011 who reported that they provide obstetric deliveries. Specialties are based on self-reported Primary Area of Practice. **Sources:** North Carolina Health Professions Data System, with data from the North Carolina Medical Board, 2011; US Census Bureau and Office of Management and Budget, 2013.

Only 4% of Family Medicine physicians provide obstetric deliveries, clustered in western and central counties

Family Medicine Physicians Who Provide Routine Obstetric Deliveries per 10,000 Childbearing Age* Females, North Carolina, 2011



Family Medicine Physicians per 10,000 Women Ages 15-44
(# of Counties)



NC = 0.57 per
10,000 Population

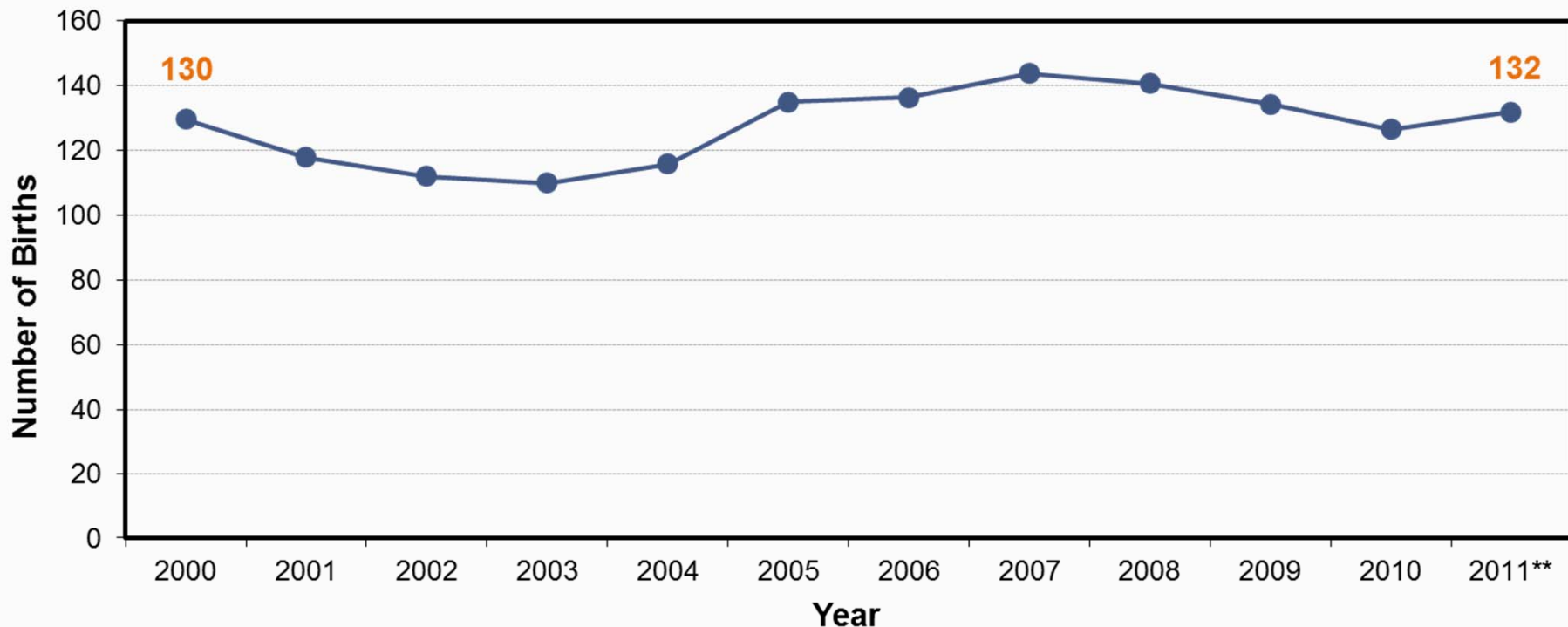
★ Nonmetropolitan County (54)

N = 111

Note: *Childbearing age: 15-44 years. Data include active, in-state, nonfederal, non-resident-in-training physicians licensed in North Carolina as of October 31, 2011 who reported a primary area of practice of "Family Medicine." **Sources:** North Carolina Health Professions Data System, with data from the North Carolina Medical Board, 2011; US Census Bureau and Office of Management and Budget, 2013.

Number of births per physician providing deliveries varies by year but overall stable over last 10 years

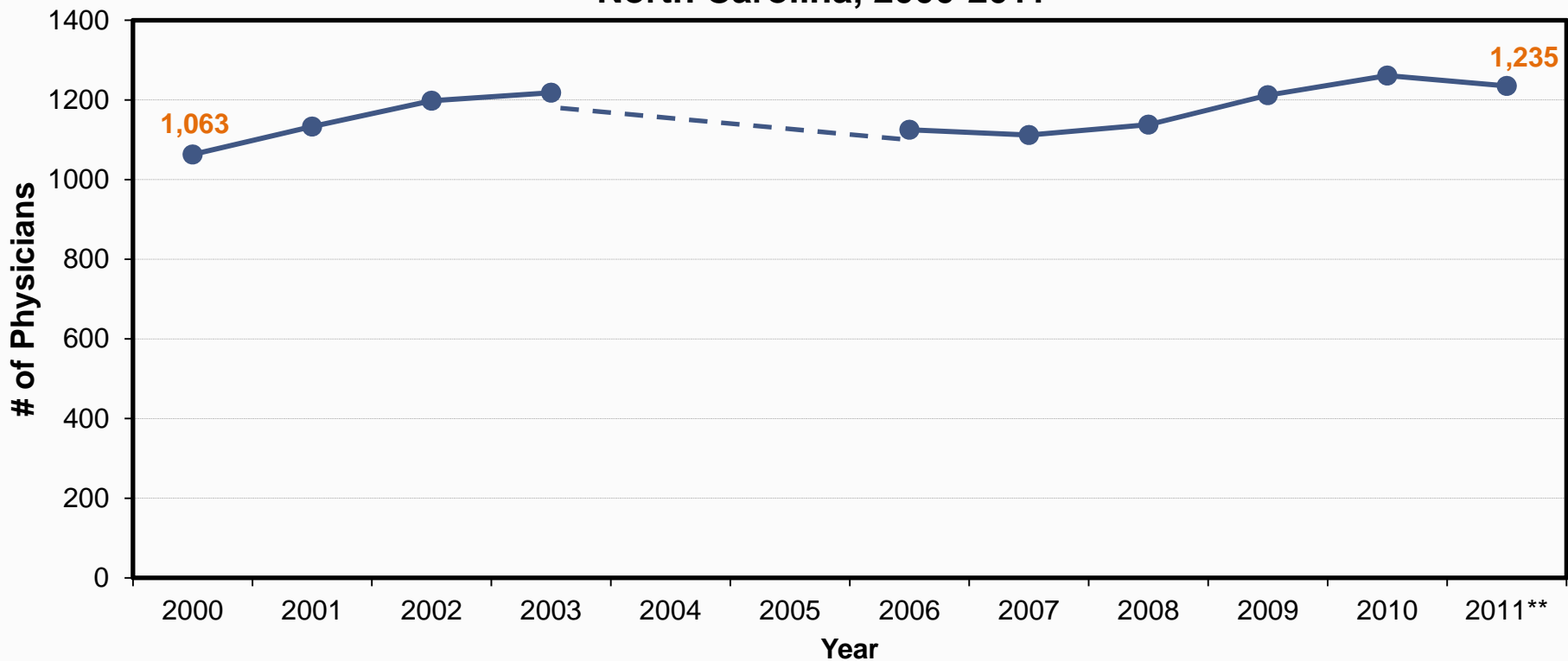
Number of Births per Physician Providing Deliveries, North Carolina, 2000-2011



Sources: Physician data: North Carolina Health Professions Data System, with data from the North Carolina Medical Board, 2011; Data include active, in-state, non-federal, non-resident-in-training physicians licensed in North Carolina as of October 31, 2011 who reported that they provide obstetric deliveries. The Maternal and Child Health, Family Planning, and Women's Health Program Directors in the U.S. Department of Health and Human Services (USDHHS) Region IV Office; and the Maternal and Child Health, Family Planning, and Women's Health Programs and the state statistical agencies in each state in USDHHS Region IV. A collaborative project of the Cecil G. Sheps Center for Health Services Research at The University of North Carolina at Chapel Hill;

Slight increase in number of physicians providing prenatal care

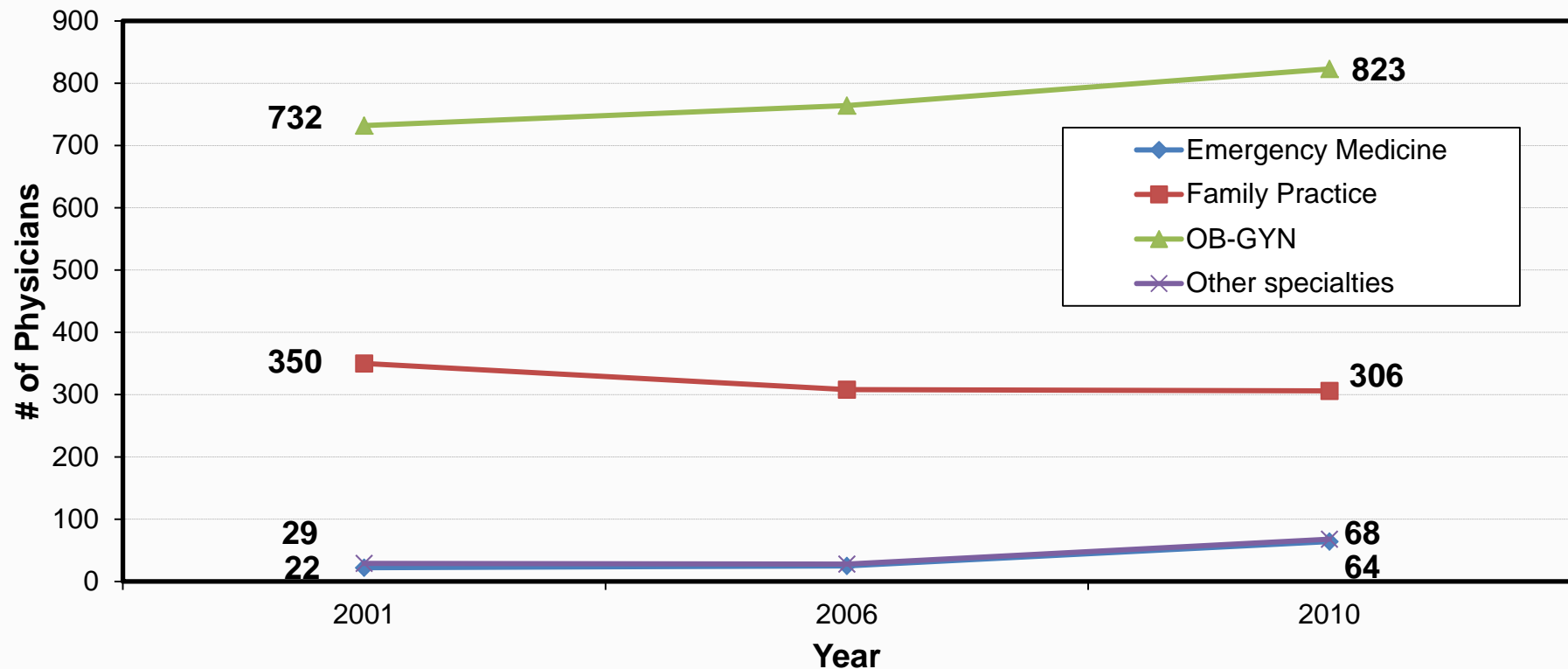
Number of Physicians Providing Prenatal Care
North Carolina, 2000-2011



Note: Data include active, in-state, non-federal, non-resident-in-training physicians licensed in North Carolina as of October 31, 2011 who reported that they provide prenatal care. Data omitted for 2004-2005 due to a high number of missing values. **Sources:** North Carolina Health Professions Data System, with data from the North Carolina Medical Board, 2011.

Mirroring obstetric delivery trends, decrease in Family Physicians providing prenatal care

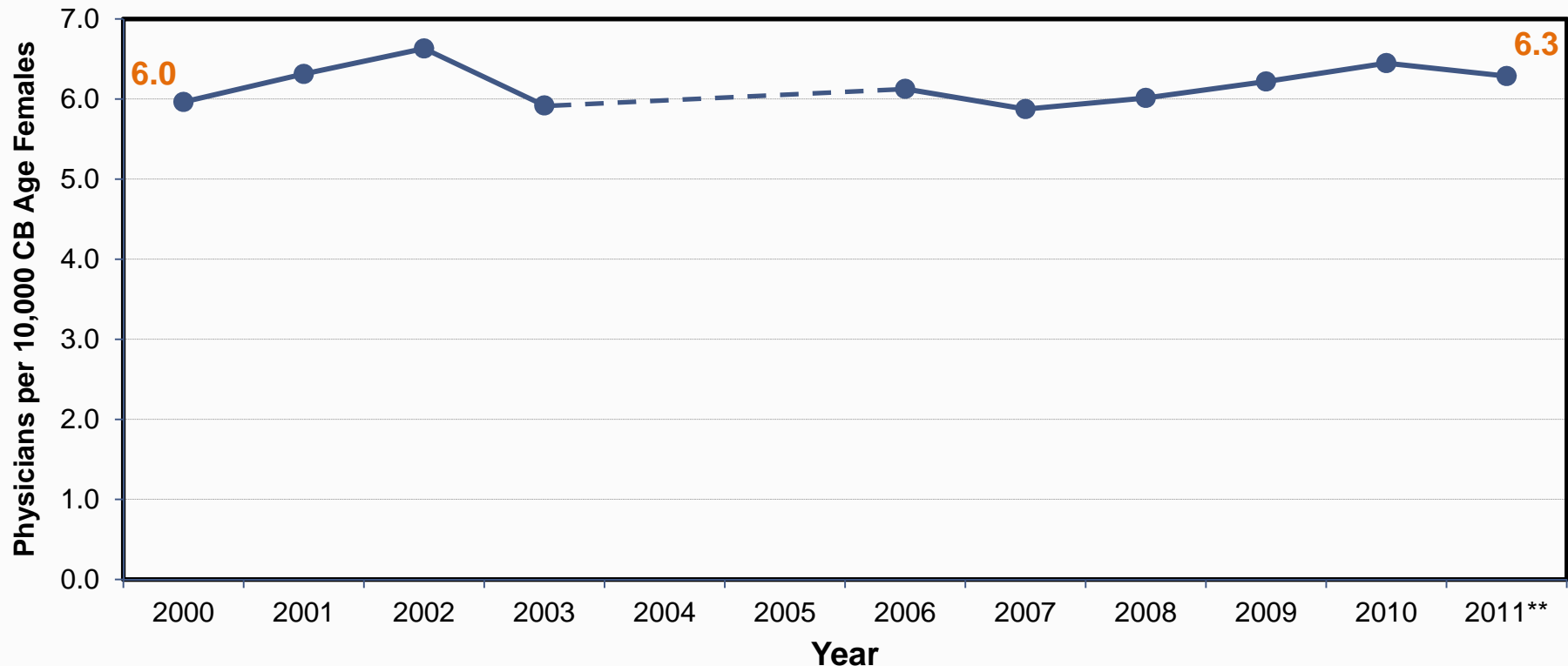
Number of Physicians Providing Prenatal Care by Specialty Type, North Carolina, 2000-2010



Note: Data include active, in-state, non-federal, non-resident-in-training physicians licensed in North Carolina as of October 31, 2011 who reported that they provide prenatal care. Specialties are based on self-reported Primary Area of Practice. **Sources:** North Carolina Health Professions Data System, with data from the North Carolina Medical Board, 2011.

Ratio of prenatal care physicians per child-bearing females relatively steady

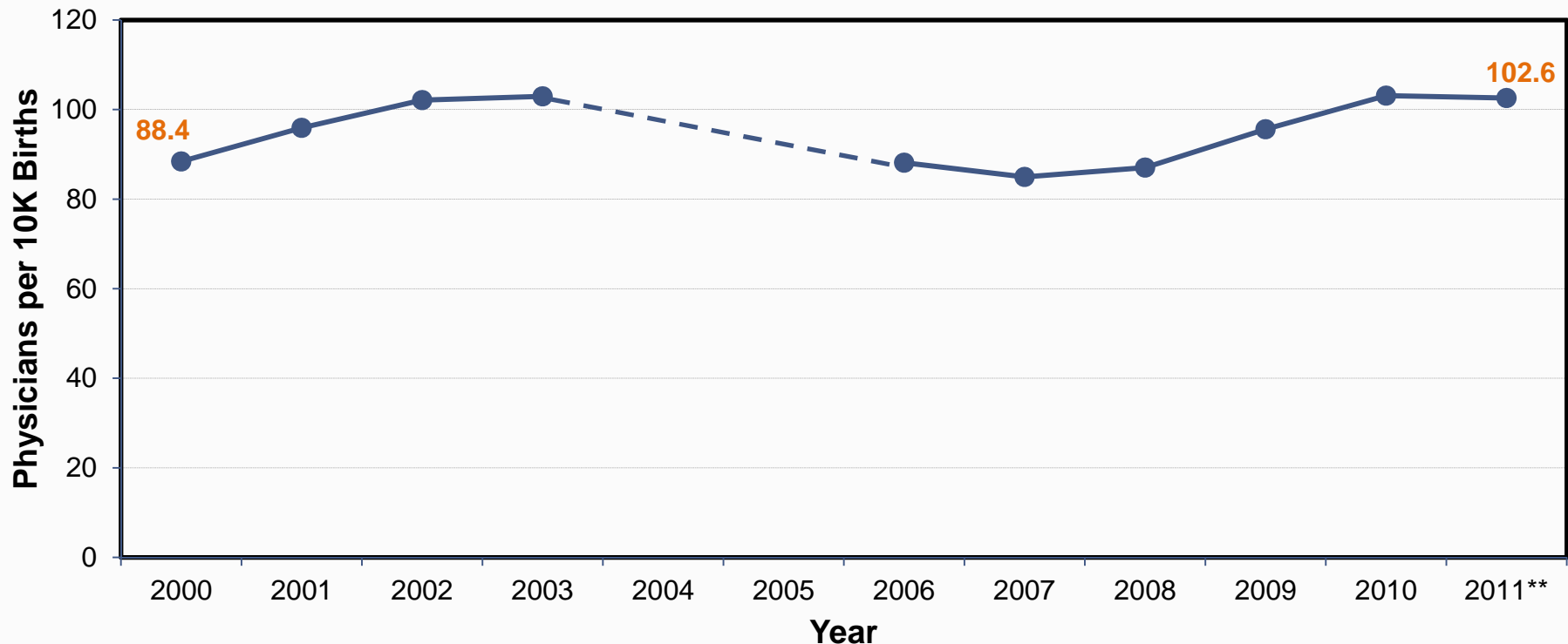
Number of Physicians Providing Prenatal Care per 10,000 Childbearing Age Females
North Carolina, 2000-2011



Note: Data include active, in-state, non-federal, non-resident-in-training physicians licensed in North Carolina as of October 31, 2011 who reported that they provide prenatal care. Data omitted for 2004-2005 due to a high number of missing values. **Sources:** North Carolina Health Professions Data System, with data from the North Carolina Medical Board, 2011; US Census Bureau and Office of Management and Budget, 2013.

Overall increase in prenatal physician supply relative to number of births (with some fluctuation)

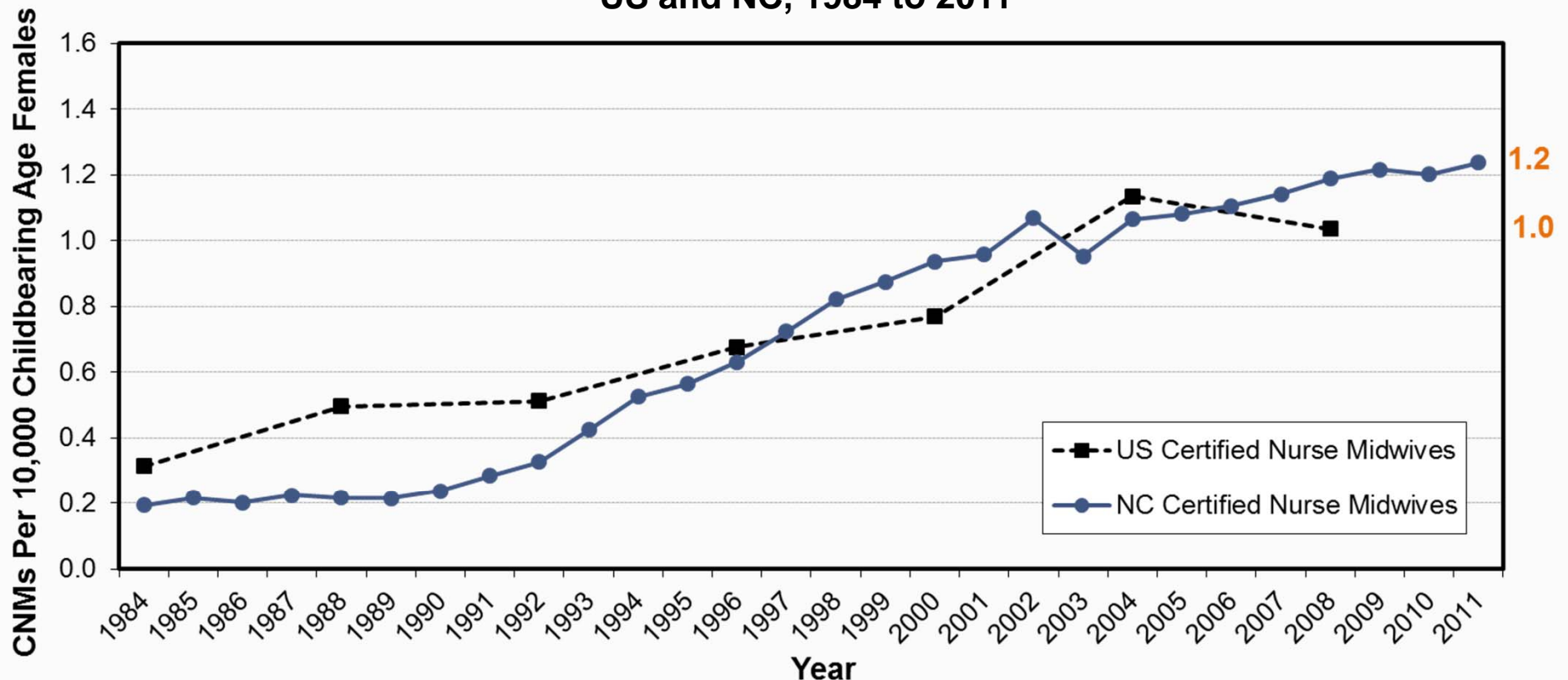
Number of Physicians Providing Prenatal Care per 10,000 Resident Births
North Carolina, 2000-2011



Sources: Physician data: North Carolina Health Professions Data System, with data from the North Carolina Medical Board, 2011; Data include active, in-state, non-federal, non-resident-in-training physicians licensed in North Carolina as of October 31, 2011 who reported that they provide prenatal care. The Maternal and Child Health, Family Planning, and Women's Health Program Directors in the U.S. Department of Health and Human Services (USDHHS) Region IV Office; and the Maternal and Child Health, Family Planning, and Women's Health Programs and the state statistical agencies in each state in USDHHS Region IV. A collaborative project of the Cecil G. Sheps Center for Health Services Research at The University of North Carolina at Chapel Hill;

NC has about average supply of CNMs relative to United States average

Certified Nurse Midwives (CNMs) per 10,000 Childbearing Age* Females, US and NC, 1984 to 2011

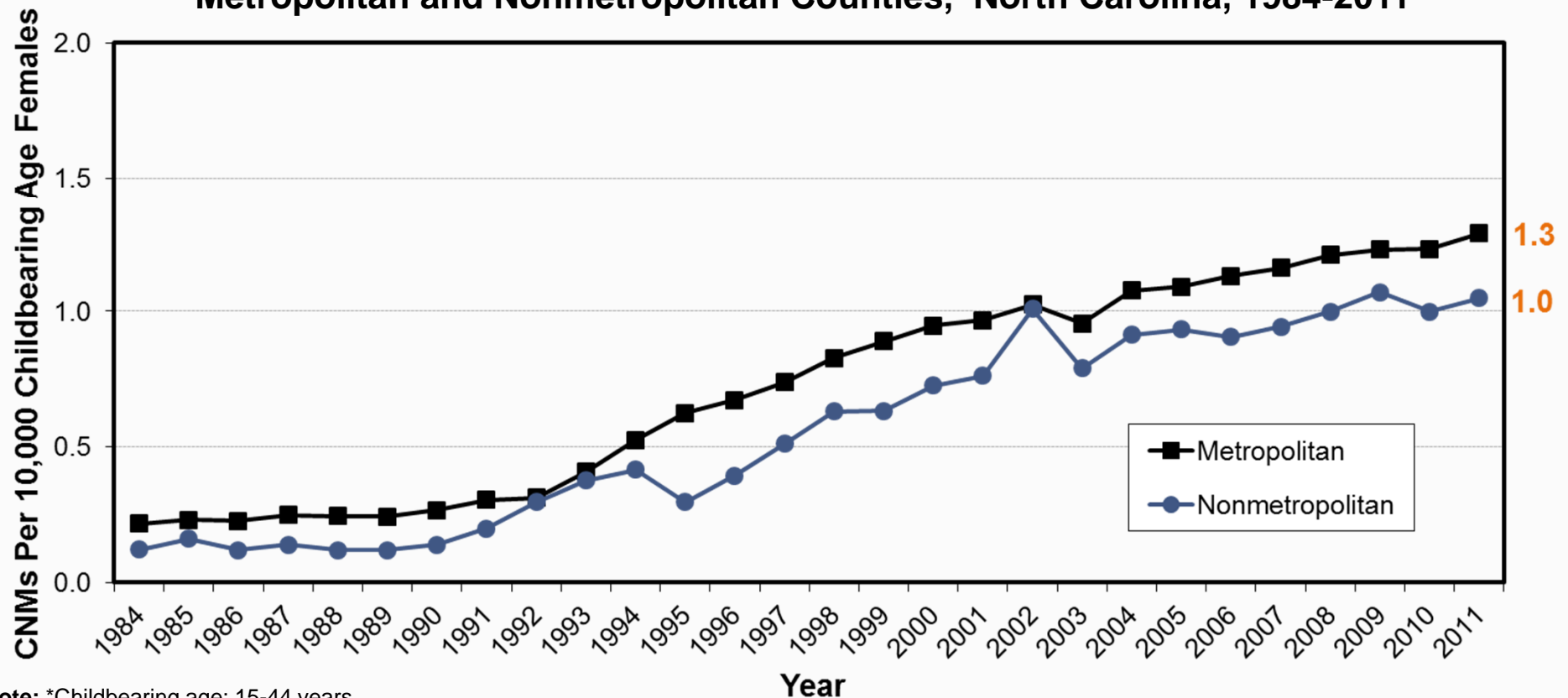


*Notes: Figures include all licensed, active, instate certified nurse midwives. Childbearing age:15-44 years.

Sources: North Carolina Health Professions Data System, 1979 to 2012; The Registered Nurse Population- Findings from the National Sample Survey of Registered Nurses, 2008, 2004, 2000, 1996,1992, 1988, 1984, 1980; North Carolina Office of State Planning; U.S. Bureau of the Census; North Carolina population data are smoothed figures based on 1980, 1990, 2000, and 2010 Censuses.

And a relatively even distribution of CNMs in rural and urban areas

Certified Nurse Midwives (CNMs) per 10,000 Childbearing Age* Females by Metropolitan and Nonmetropolitan Counties, North Carolina, 1984-2011

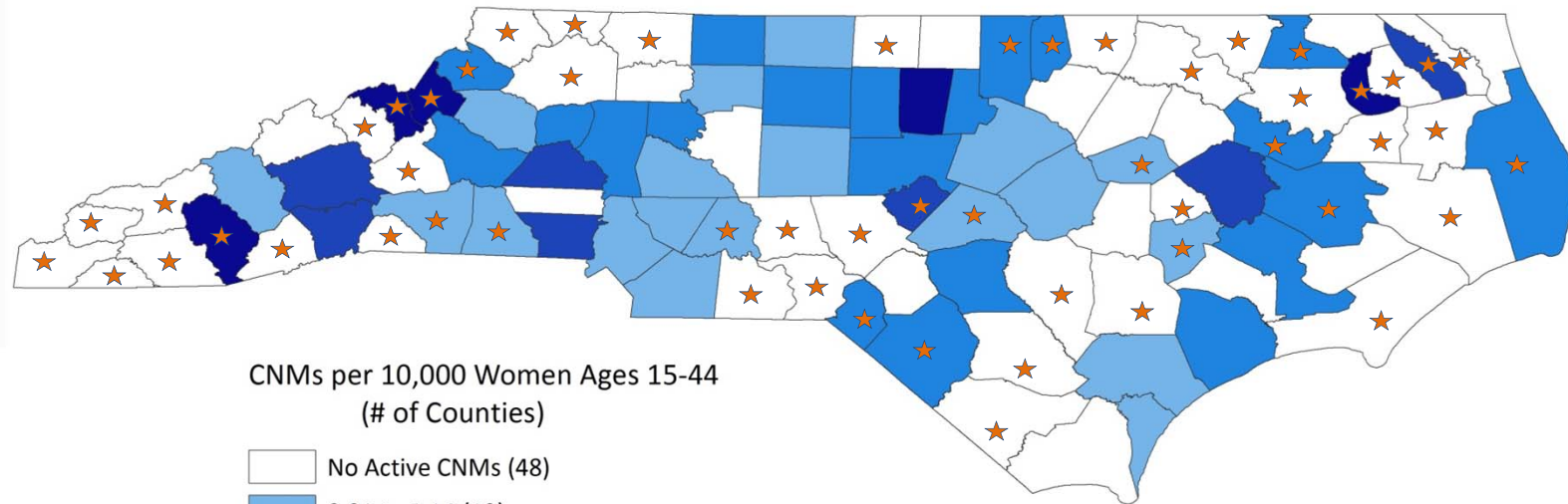


Note: *Childbearing age: 15-44 years.

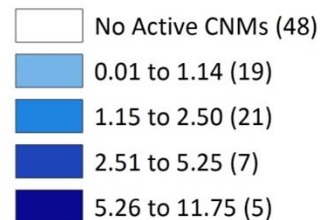
Sources: North Carolina Health Professions Data System, with data from the North Carolina Board of Nursing; Midwifery Joint Committee, 1984 to 2011; North Carolina Office of State Planning. Figures include all licensed, active, in-state CNMs. North Carolina population data are based on 1980, 1990, 2000, and 2010 Censuses and the NC Office of State Budget Management. Source for Metropolitan-Nonmetropolitan definition: Office of Management and Budget, 2013.

But about half (47) of NC's counties do not have a CNM; distribution generally in "clusters" around state

Certified Nurse Midwives (CNMs) per 10,000 Childbearing Age* Females North Carolina, 2011



CNMs per 10,000 Women Ages 15-44
(# of Counties)



NC= 1.24 per -----
10,000 Population

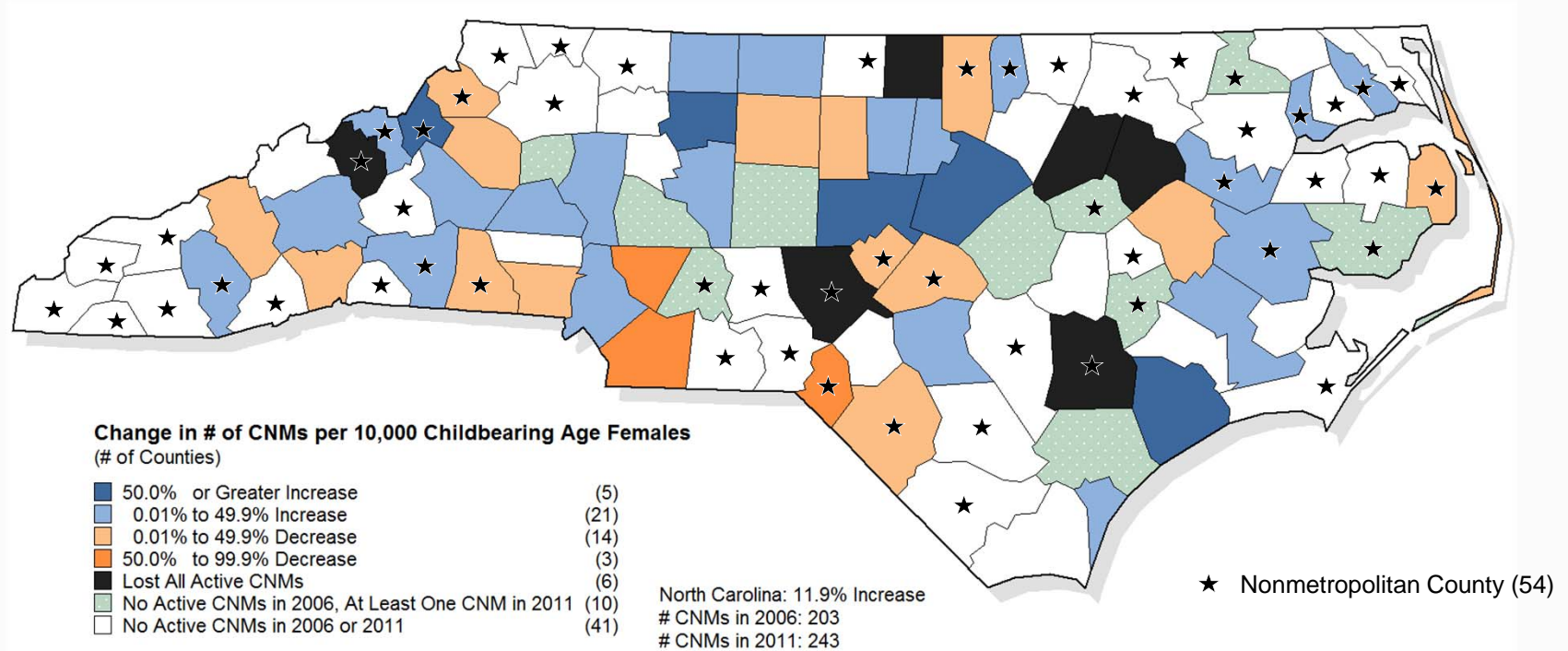
★ Nonmetropolitan County (54)

N = 243

Note: Data include active, instate CNMs licensed in North Carolina as of October 31, 2011. *Childbearing age: 15-44 years. **Sources:** North Carolina Health Professions Data System, with data from the North Carolina Board of Nursing; Midwifery Joint Committee, 2011; US Census Bureau and Office of Management and Budget, 2013.

6 counties lost and 10 counties gained CNMs between 2006 and 2011

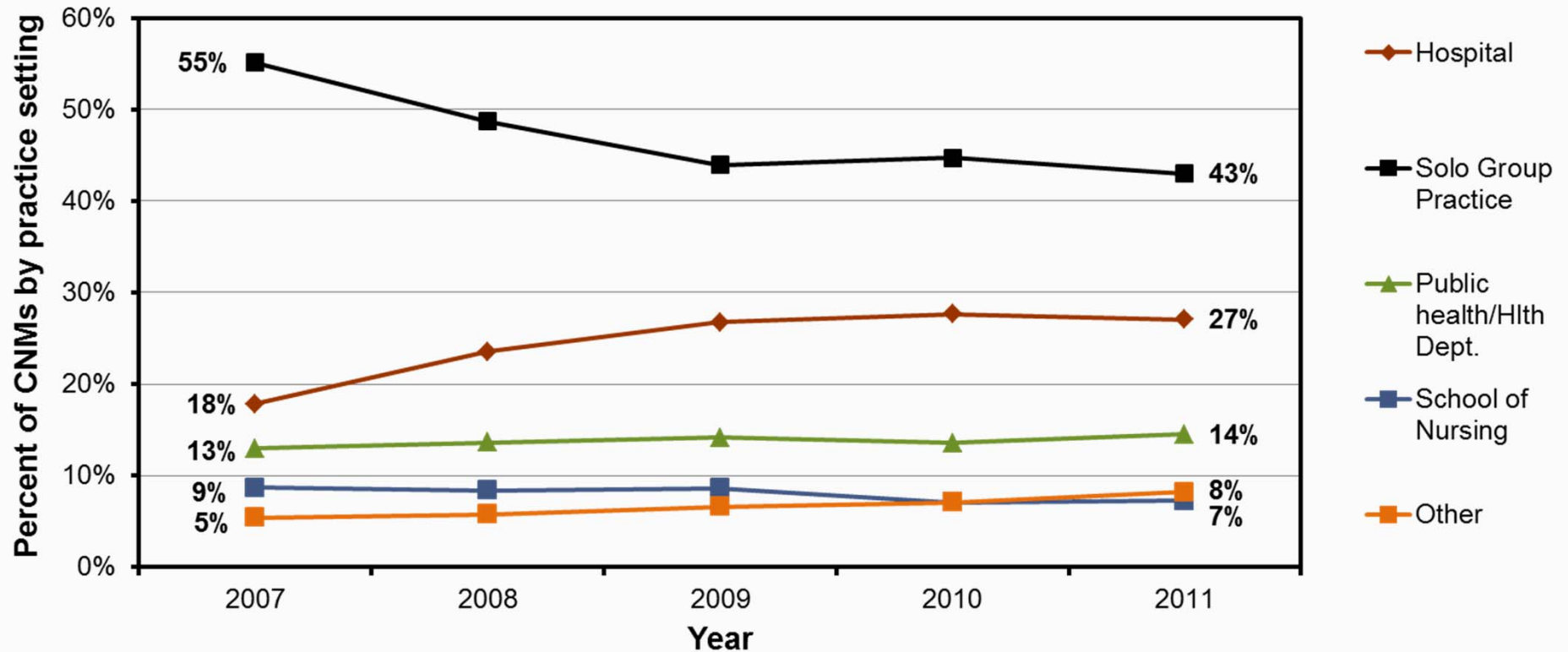
Change in Certified Nurse Midwives (CNMs) per 10,000 Childbearing Age* Females
North Carolina, 2006 to 2011



Note: Data include active, instate CNMs licensed in North Carolina as of October 31, 2011. *Childbearing age: 15-44 years. **Sources:** North Carolina Health Professions Data System, with data from the North Carolina Board of Nursing; Midwifery Joint Committee, 2011; US Census Bureau and Office of Management and Budget, 2013.

Increasing percent of CNMs in hospitals, decrease in group practice

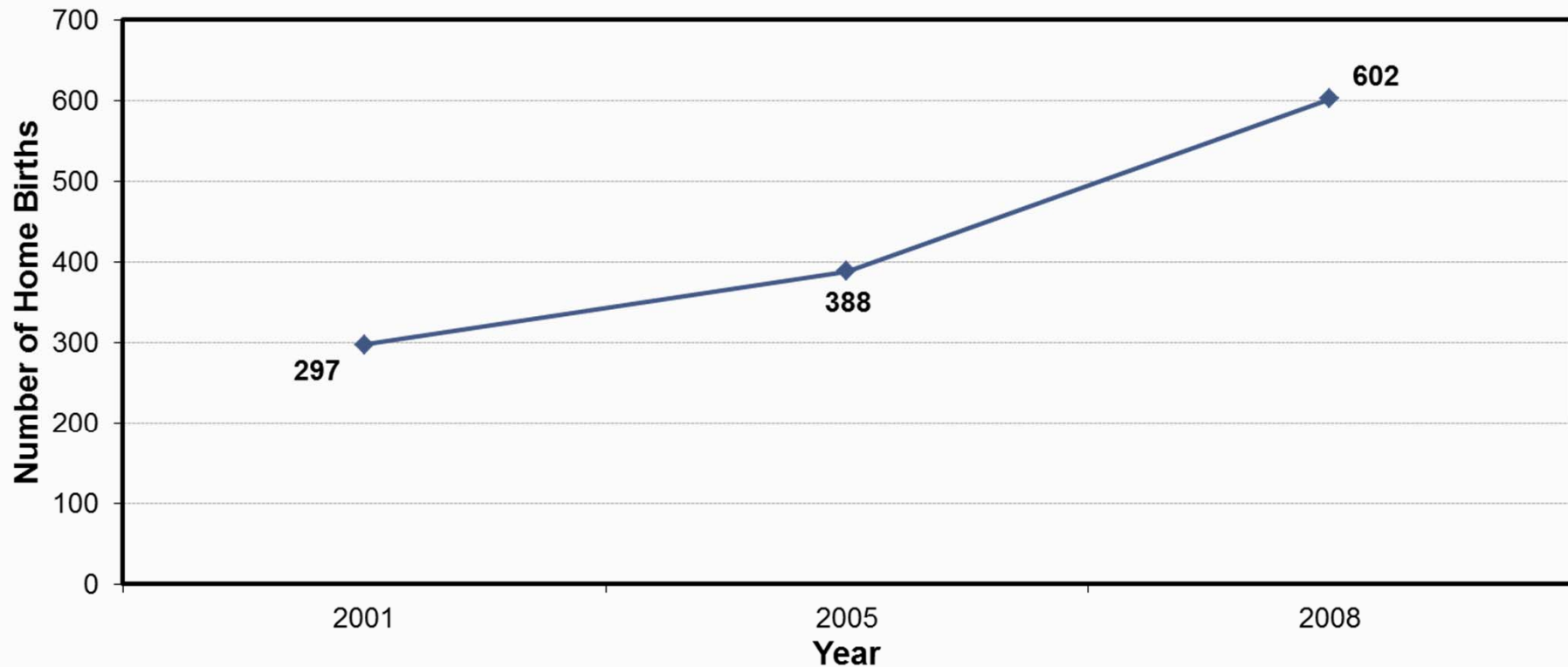
Certified Nurse Midwives by Practice Setting, North Carolina, 2007-2011



Note: Data include active, in-state CNMs licensed in North Carolina as of October 31, 2011. *Childbearing age: 15-44 years. **Sources:** North Carolina Health Professions Data System, with data from the North Carolina Board of Nursing; Midwifery Joint Committee, 2011; US Census Bureau and Office of Management and Budget, 2013.

Over 99% of NC births are in hospitals but rapid growth in home births

Number of Home Births, North Carolina, 2001-2008



Sources: Centers for Disease Control and Prevention. National Center for Health Statistics. VitalStats. www.cdc.gov/nchs/vitalstats.htm, accessed 2/25/14.

Most physicians who supervise CNMs Are OB/GYNs

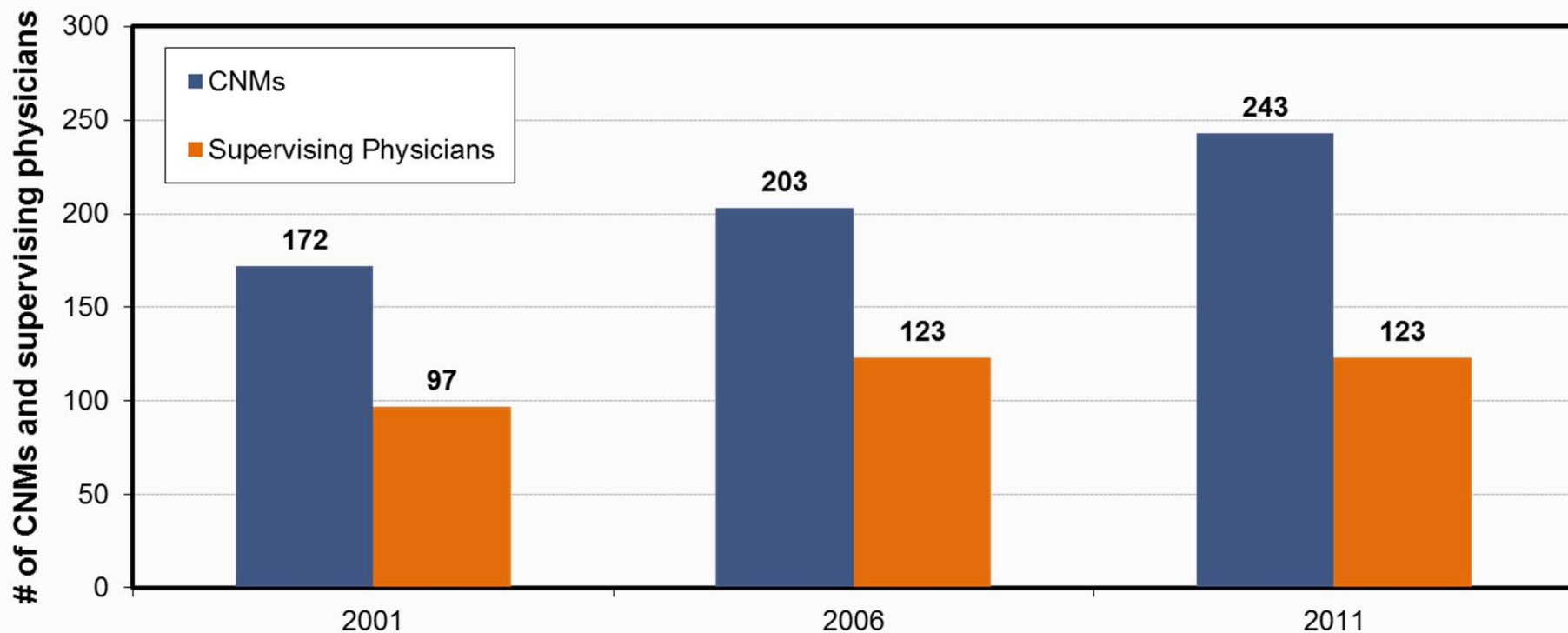
CNMs by Supervising Physician Specialty, North Carolina, 2011

Primary Practice Site Supervising Physician Specialty	# CNMs	(% of total)
Obstetrics & Gynecology	220	(90.5%)
Family Medicine	22	(9.1%)
General Surgery	1	(0.4%)
Total	243	

Note: Data include active, in-state CNMs licensed in North Carolina as of October 31, 2011. **Sources:** North Carolina Health Professions Data System, with data from the North Carolina Board of Nursing; Midwifery Joint Committee, 2011; US Census Bureau and Office of Management and Budget, 2013.

State gained 40 CNMs in last 5 years but saw no increase in number of supervising physicians

Number of CNMs and Supervising Physicians, North Carolina, 2001-2011



Note: Data include active, in-state CNMs licensed in North Carolina as of October 31, 2011. **Sources:** North Carolina Health Professions Data System, with data from the North Carolina Board of Nursing; Midwifery Joint Committee, 2011; US Census Bureau and Office of Management and Budget, 2013.

Result:

More CNMs per supervising physician

Number of CNMs per Supervising Physician, North Carolina, 2001-2011

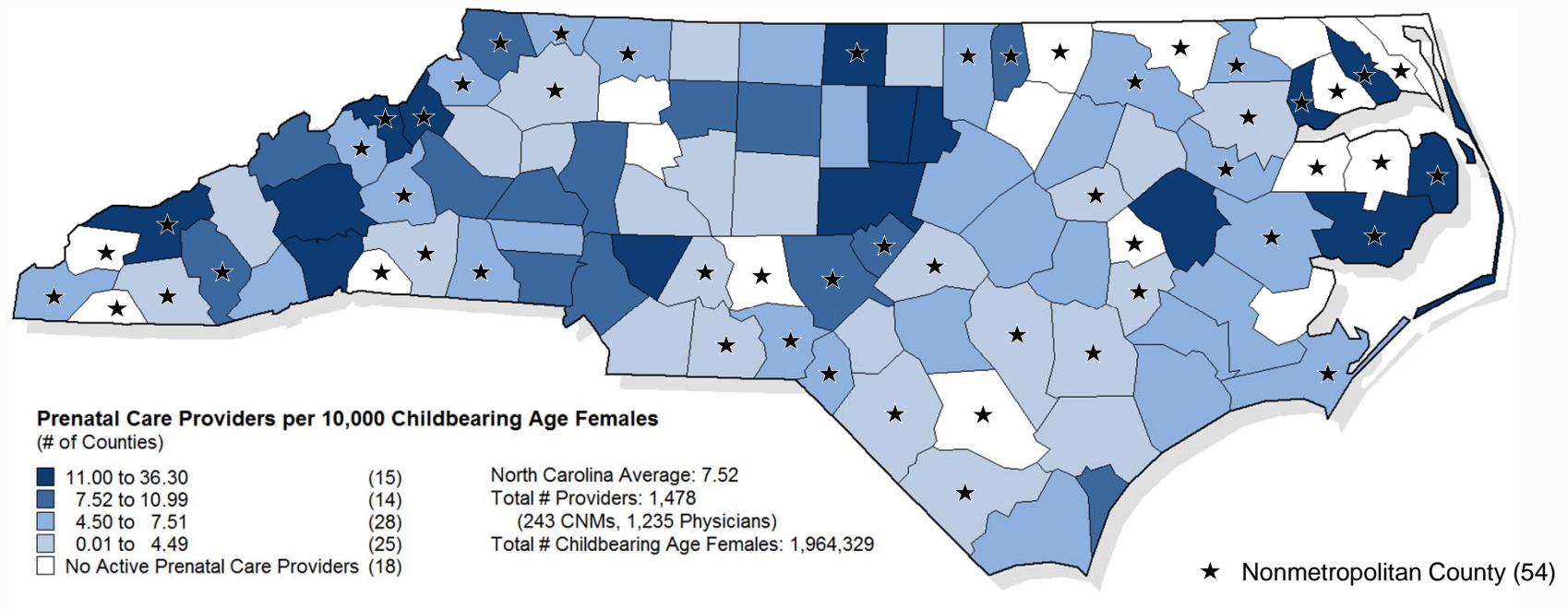
# of CNMs Supervised	# of Physicians Supervising by Year		
	2001	2006	2011
1	61	83	81
2	21	21	16
3	3	12	10
4	6	2	4
5	3	1	3
6	2	1	2
7	0	1	2
8	1	2	3
9	0	0	1
10	0	0	1
Total	97	123	123

In 2011, 57 CNMs (24% of workforce) were supervised by one of 7 physicians

Note: Data include active, in-state CNMs licensed in North Carolina as of October 31, 2011. **Sources:** North Carolina Health Professions Data System, with data from the North Carolina Board of Nursing; Midwifery Joint Committee, 2011; US Census Bureau and Office of Management and Budget, 2013.

More counties with prenatal providers than providers of OB deliveries, but...

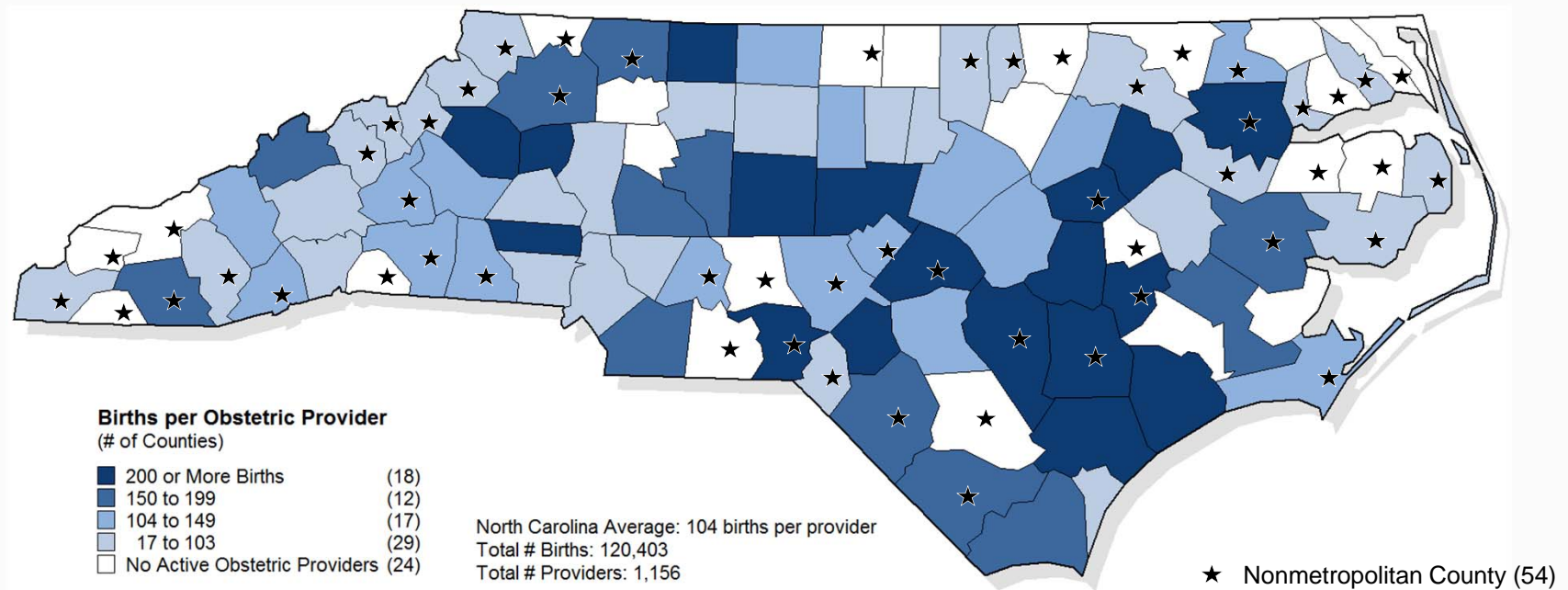
Prenatal Care Providers per 10,000 Childbearing Age Females
North Carolina, 2011



Note: Data include active, in-state CNMs licensed in North Carolina as of October 31, 2011, and active, in-state, non-federal, non-resident-in-training physicians licensed in North Carolina as of October 31, 2011 who reported that they provide prenatal care. Data exclude nurse practitioners and physician assistants. *Childbearing age: 15-44 years. **Sources:** North Carolina Health Professions Data System, with data derived from the North Carolina Board of Nursing, Midwifery Joint Committee, and North Carolina Medical Board, 2011; US Census Bureau and Office of Management and Budget, 2013.

24 counties have no obstetric care provider, either physician or CNM

Resident Births per Provider of Obstetric Deliveries North Carolina, 2011

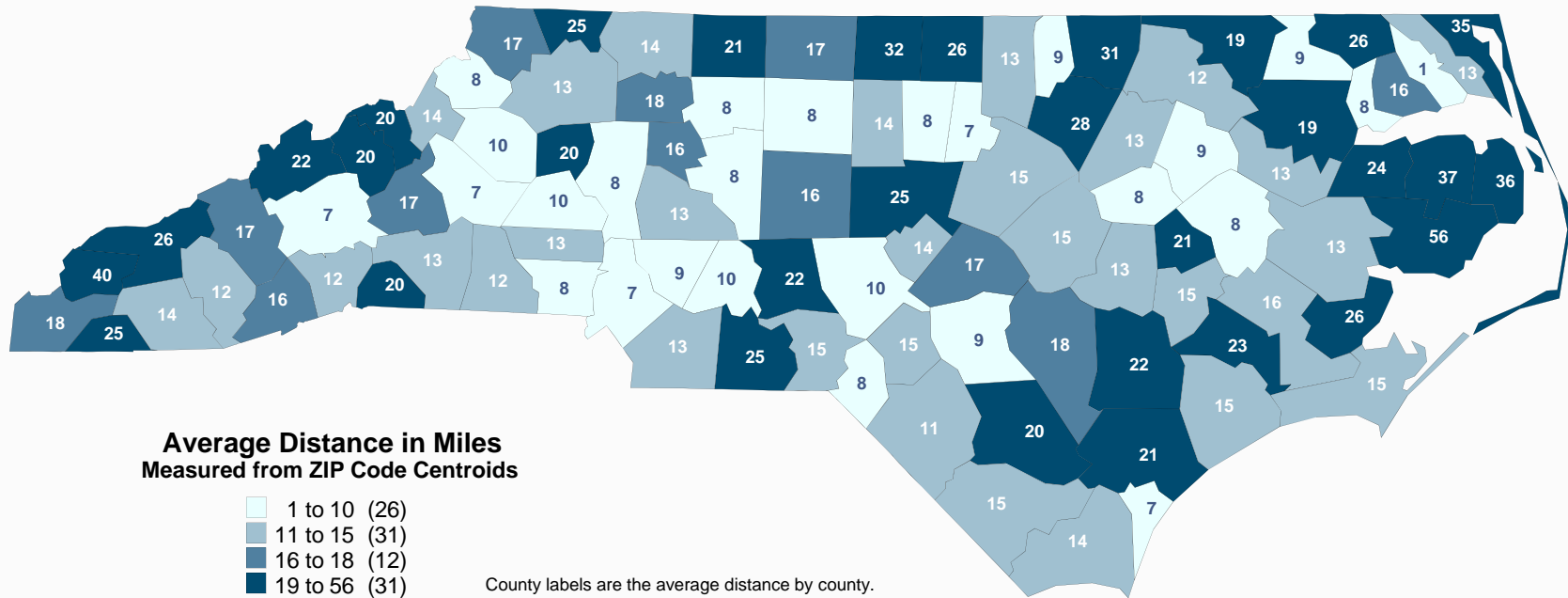


Note: Data include active, in-state Certified Nurse Midwives (CNMs) who were licensed in North Carolina as of October 31, 2011, and active, in-state, non-federal, non-resident-in-training physicians who were licensed in North Carolina as of October 31, 2011 and reported that they provide obstetric deliveries.
Source: Providers: North Carolina Health Professions Data System (NC HPDS), with data derived from the North Carolina Board of Nursing and North Carolina Medical Board, 2011. Births: Department of Health and Human Services, Vital Statistics, linc.state.nc.us, accessed 2/25/14.

Significant variation in travel times to birth, high travel times in counties with no obstetric care providers

Average Distance to Care for Discharges for Childbirth Miles from Residence to Hospital

Residents Discharged from North Carolina Hospitals: October 1, 2010 to September 30, 2011



Note: Childbirth discharges include DRGs 765-768, 774, 775.
 Data exclude North Carolina residents delivering babies in facilities across state lines.
 Source: Truven Health Analytics (formerly Thomson Healthcare), Fiscal Year 2011.
 Produced By: Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

Questions?

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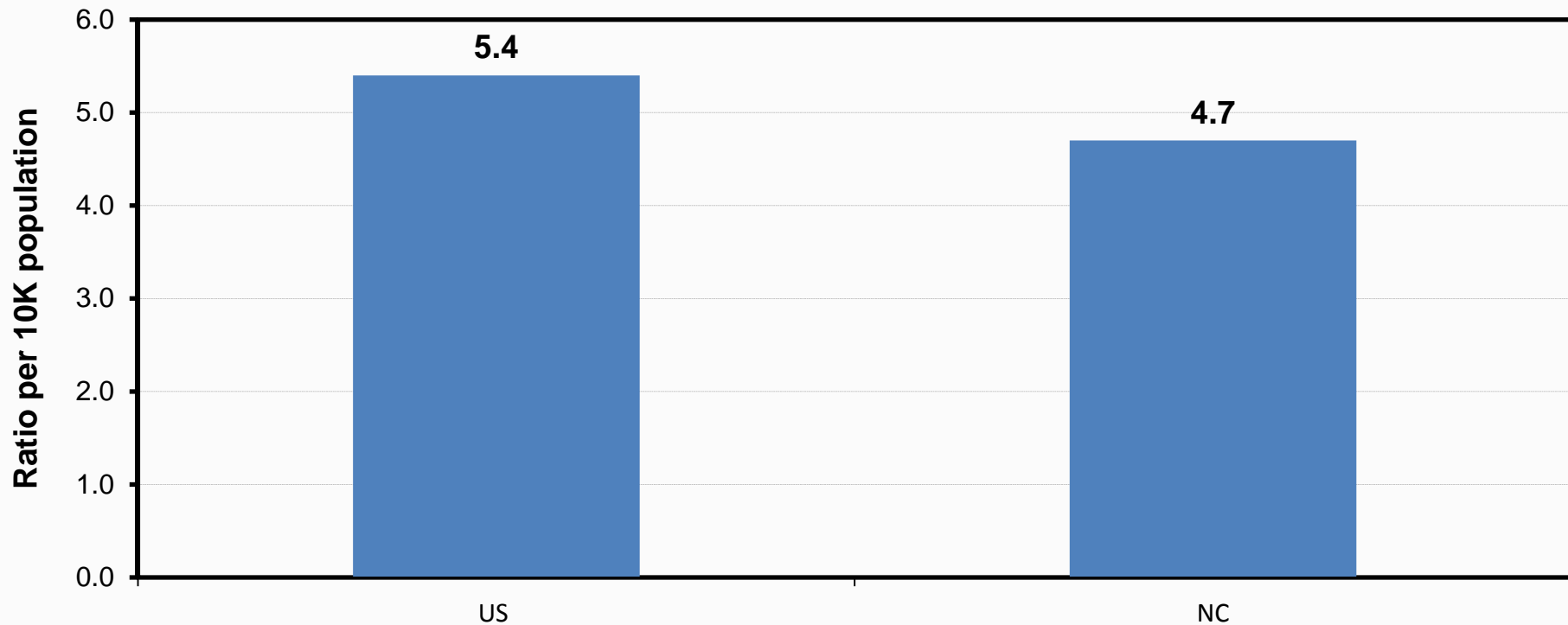
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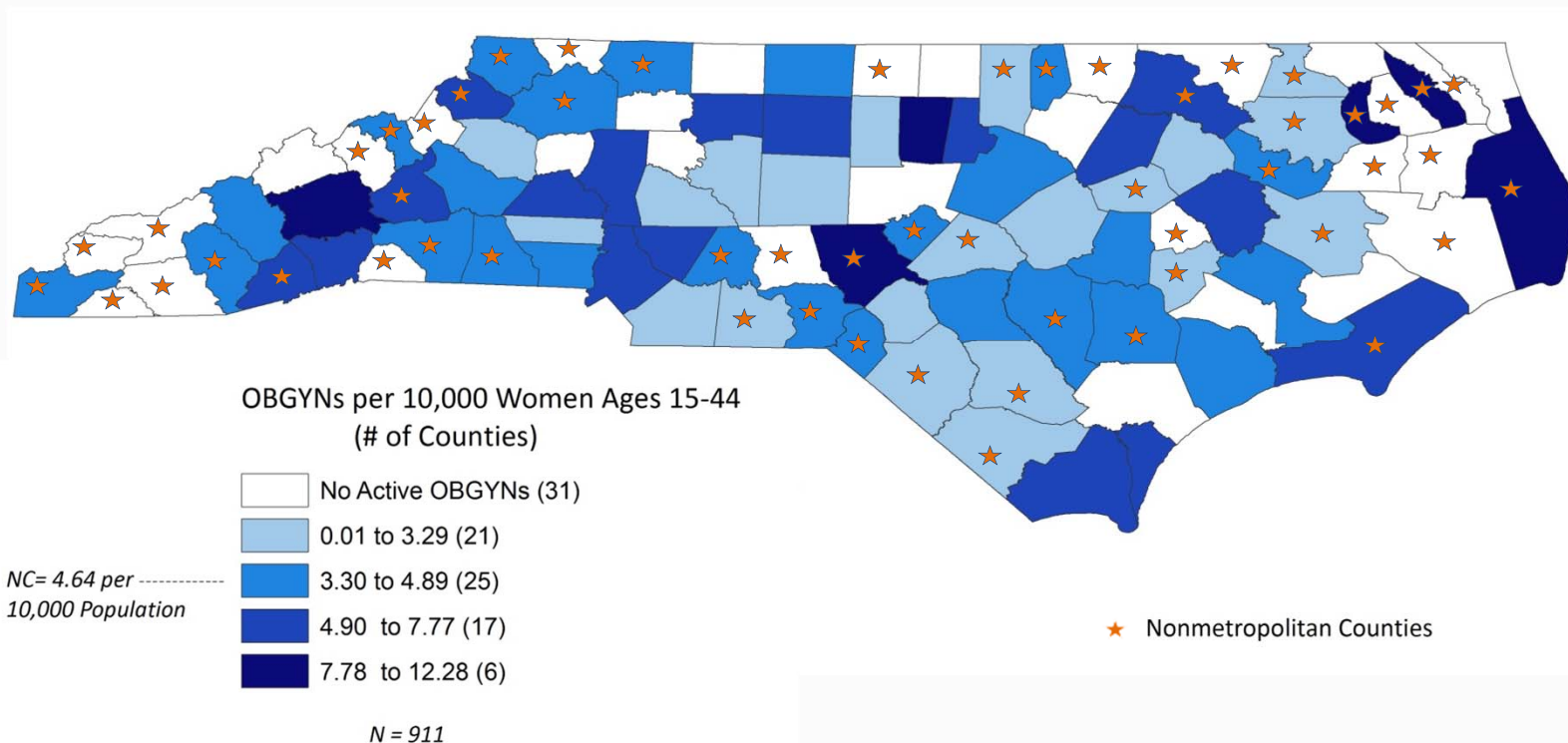
North Carolina has slightly fewer Ob-Gyns per capita than US average

Ob-Gyns per 10,000 population, United States and North Carolina, 2011



And 72 of NC's counties are below the state average of OBGYNs-to-childbearing population

OBGYNs per 10,000 Childbearing Age* Females North Carolina, 2011



Note: *Childbearing age: 15-44 years. Data include active, in-state, nonfederal, non-resident-in-training physicians licensed in North Carolina as of October 31, 2011 who reported a primary area of practice of "Obstetrics and Gynecology." **Sources:** North Carolina Health Professions Data System, with data from the North Carolina Medical Board, 2011; US Census Bureau and Office of Management and Budget, 2013.