

# Predisposing factors related to adolescent sexuality

*Kristin McIntosh, MPH, CHES*

*Justin B. Moore, PhD, MS*

*Lloyd F. Novick, MD, MPH*

*Omur Cinar Elci, MD, PhD*

*Division of Community Health and Preventive Medicine*

*Brody School of Medicine*

*East Carolina University*

# Background

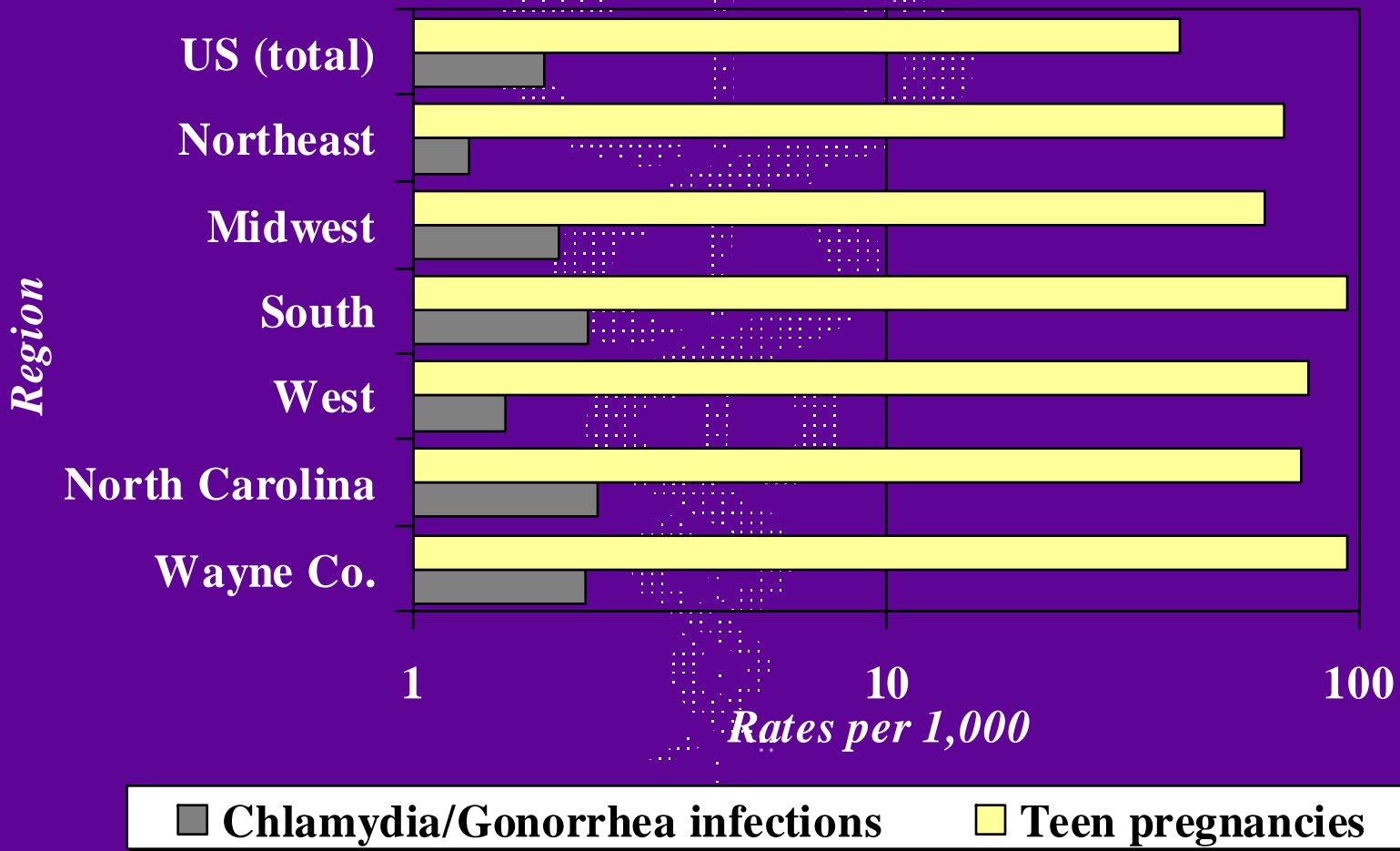


- In 2005, YRBSS data indicate:
  - 46.8% of adolescents report having ever had intercourse<sup>1</sup>
  - 33.9% of adolescents are currently sexually active<sup>1</sup>
  - 23.3% reported alcohol or drug use before last intercourse<sup>1</sup>
- Approximately one in three young women become pregnant before the age of twenty<sup>2</sup>
- Few studies examine predisposing factors

<sup>1</sup>Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance — United States, 2005. Surveillance Summaries, June 9, 2006 / 55(SS05); 1-108

<sup>2</sup>National Campaign to Prevent Teen Pregnancy analysis of Teen Pregnancy Data. (2006).

# Teen pregnancy & STD rates (yr. 2000)

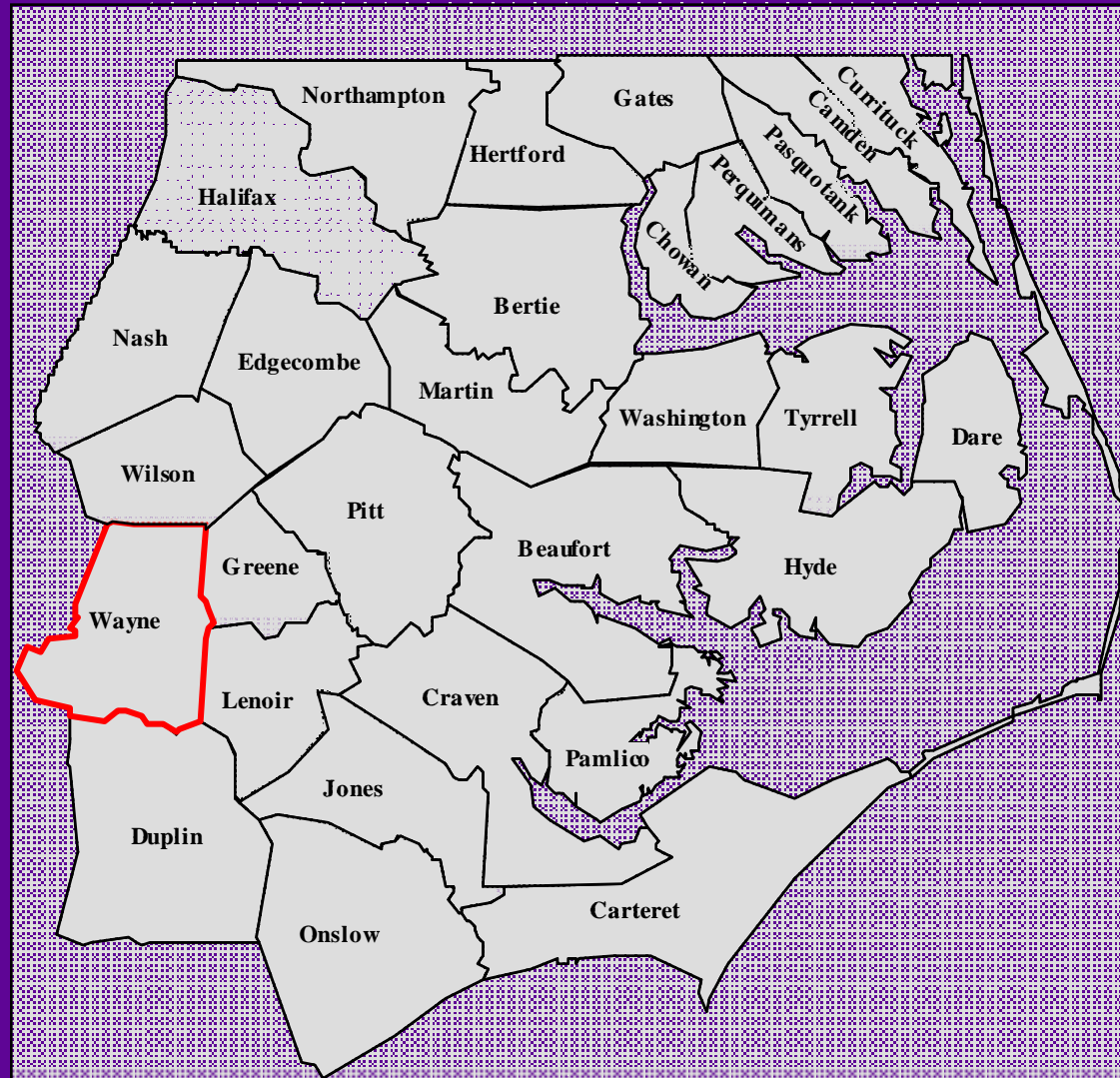


Source: CDC; NC SCHS; HIV/STD Prevention & Care

# Goals & Objectives

- Goal:
  - To describe predisposing factors which may be associated with adolescents' early sexual behavior, teenage pregnancy, and STD transmission.
- Objective:
  - To identify risk factors that predispose teens to early sexual behaviors in Wayne Co, NC.

# Wayne County, NC



Source: Constance Mason, Dr. Elci

# *Study Population*

- Target population:
  - Rural & urban Wayne Co. students
  - Enrolled in Wayne Co. SBHCs, during 2005-06 & 2006-07
  - Ages 10-19 yrs. (5<sup>th</sup> – 12<sup>th</sup> grades)
- Sample population:
  - Randomly selected 411 students
  - Systematic sampling

# Sample

Table 1: Study population

<i>School</i>	<i>Location</i>	<i>Total student population</i>	<i>% of total population</i>	<i>Sample size*</i>
A	Rural	568	16.5	68
B	Rural	305	8.9	37
C	Rural	1150	33.4	137
D	Urban	248	7.0	30
E	Urban	420	12.2	50
F	Urban	750	21.8	90
<i>Total</i>		<i>3,441</i>	<i>100</i>	<i>411</i>

# Study Instrument



## Guidelines for Adolescent Preventive Services Younger Adolescent Questionnaire

**Confidential** (Your answers will not be given out.)

Chart# \_\_\_\_\_

Name \_\_\_\_\_ Today's Date \_\_\_\_\_  
Last First Middle Initial month day year

Birthdate \_\_\_\_\_ Grade in School \_\_\_\_\_ Boy or Girl (*circle one*) Age \_\_\_\_\_  
month day year

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone Number \_\_\_\_\_ Pager/Beeper Number \_\_\_\_\_  
area code

What languages are spoken where you live? \_\_\_\_\_

Are you:  White  African-American  Asian/Pacific Islander  
 Latino/Hispanic  Native American  Other \_\_\_\_\_

### Medical History

1. Why did you come to the clinic/office today? \_\_\_\_\_  
\_\_\_\_\_

2. Are you allergic to any medicines?

No  Yes, name of medicine(s): \_\_\_\_\_  Not Sure



# *Data Collection*



- No identifying markers were collected or reported.
- Questionnaires were coded numerically for identification purposes.
- Data was retrieved from 410 questionnaires.
- Dependent variables for cross-sectional study
  - If a student had ever had sex
  - Ever been pregnant
  - Ever had a STD
- Possible risk factors were explored

# Analyses



- Descriptive statistics
- Categorical data analysis methods
  - The relationship between sexual activity and risk factors.
- Unconditional logistic regression models controlled with
  - age
  - race
  - gender
  - family dynamics (living with both parents, single parent, no parents)

# Results

	N	%		N	%
Age			Parental communication		
10-12 yrs.	116	28.3	Yes	353	86.1
13-15 yrs.	223	54.4	No	51	12.4
16-19 yrs.	71	17.3	History of abuse		
Gender			Yes	46	11.2
Male	156	38.0	No	350	85.4
Female	254	62.0	Tried tobacco		
Race			Yes	64	15.6
White	77	18.8	No	346	84.8
Black	277	67.6	Tried alcohol		
Other	56	13.7	Yes	86	21.0
Residency			No	324	79.0
Rural	270	65.9	Tried marijuana		
Urban	140	34.1	Yes	29	7.1
Family type			No	380	92.7
Both parents	99	24.1	Sexually active friends		
Single parent	267	65.1	Yes	200	48.8
No parents	41	10.0	No	121	29.5

# *Sexual activity by age*

	Ever had sex			Pregnancy			STD contraction		
	N	%	p	n	%	P	n	%	p
Age			<0.001			<0.001			0.002
10-12 yrs.	7	6.1		-	-		-	-	
13-15 yrs.	55	25.2		3	2.0		3	1.4	
16-19 yrs.	43	62.3		6	14.3		5	7.2	

- 26% of students were sexually active
- Linear trend by age

# Ever had sex

	N	%	p		N	%	p
Gender			0.602	History of abuse			0.007
Male	42	28.0		Yes	20	44.4	
Female	63	25.1		No	83	24.2	
Race			<0.001	Tried tobacco			<0.001
White	12	15.6		Yes	37	57.8	
Black	87	32.2		No	68	20.2	
Other	6	11.1		Tried alcohol			<0.001
Residency			<0.001	Yes	42	50.0	
Rural	53	20.1		No	63	19.9	
Urban	52	38.0		Tried marijuana			<0.001
Family type			0.020	Yes	23	79.3	
Both parents	16	16.7		No	82	22.0	
Single parent	80	30.5		Sexually active friends			<0.001
No parents	8	20.0		Yes	90	46.4	
Parental communication			0.383	No	6	5.0	
Yes	95	27.5					
No	10	20.4					

- Students engaged in early sexual activities were 2 times more likely to come from black, single parent households [OR: 2.0 (95% CI: 1.0-4.1)].

# *Sexual activity in urban vs. rural*

	OR (95% CI)	
	Urban	Rural
<b>Age</b>		
10-12 years	1.0 reference	1.0 reference
13-15 years	2.1 (0.6-6.7)	7.2 (2.1-24.9)
16-19 years	7.3 (1.8-29.6)	54.8 (14.4-208.6)
<b>Race</b>		
white	-	1.0 reference
black	-	3.0 (1.3-7.0)
other	-	1.2 (0.3-4.3)

# Parental communication & family structure\*

	OR (95% CI)	
	Urban	Rural
Parental communication		
no	1.0 reference	1.0 reference
yes	3.5 (1.1-12.0)	0.7 (0.2-2.0)
Family structure		
both parents	1.0 reference	1.0 reference
single parent	3.4 (0.8-14.1)	1.0 (0.4-2.5)
no parent	1.0 (0.2-5.2)	0.9 (0.2-4.3)

\*controlled w/students who reported "ever having had sex".

# Other risk factors

	OR (95% CI)	
	Urban	Rural
Tobacco use		
no	1.0 reference	1.0 reference
yes	3.3 (1.2-8.9)	6.5 (2.7-16.0)
Alcohol use		
no	1.0 reference	1.0 reference
yes	2.2 (0.8-5.7)	4.6 (2.1-10.4)
Marijuana use		
no	1.0 reference	1.0 reference
yes	2.5 (0.8-8.3)	37.2 (4.4-310.5)
History of abuse		
no	1.0 reference	1.0 reference
yes	0.8 (0.3-2.3)	3.1 (1.2-8.0)



# *Conclusion*

- Higher risk of early sexual activity
  - Black students
  - Urban students
  - Students from a single parent families
  - Students with history of abuse
  - Students who used substances
- Parental communication... what is being said?
  - Too little too late?



**Questions?**