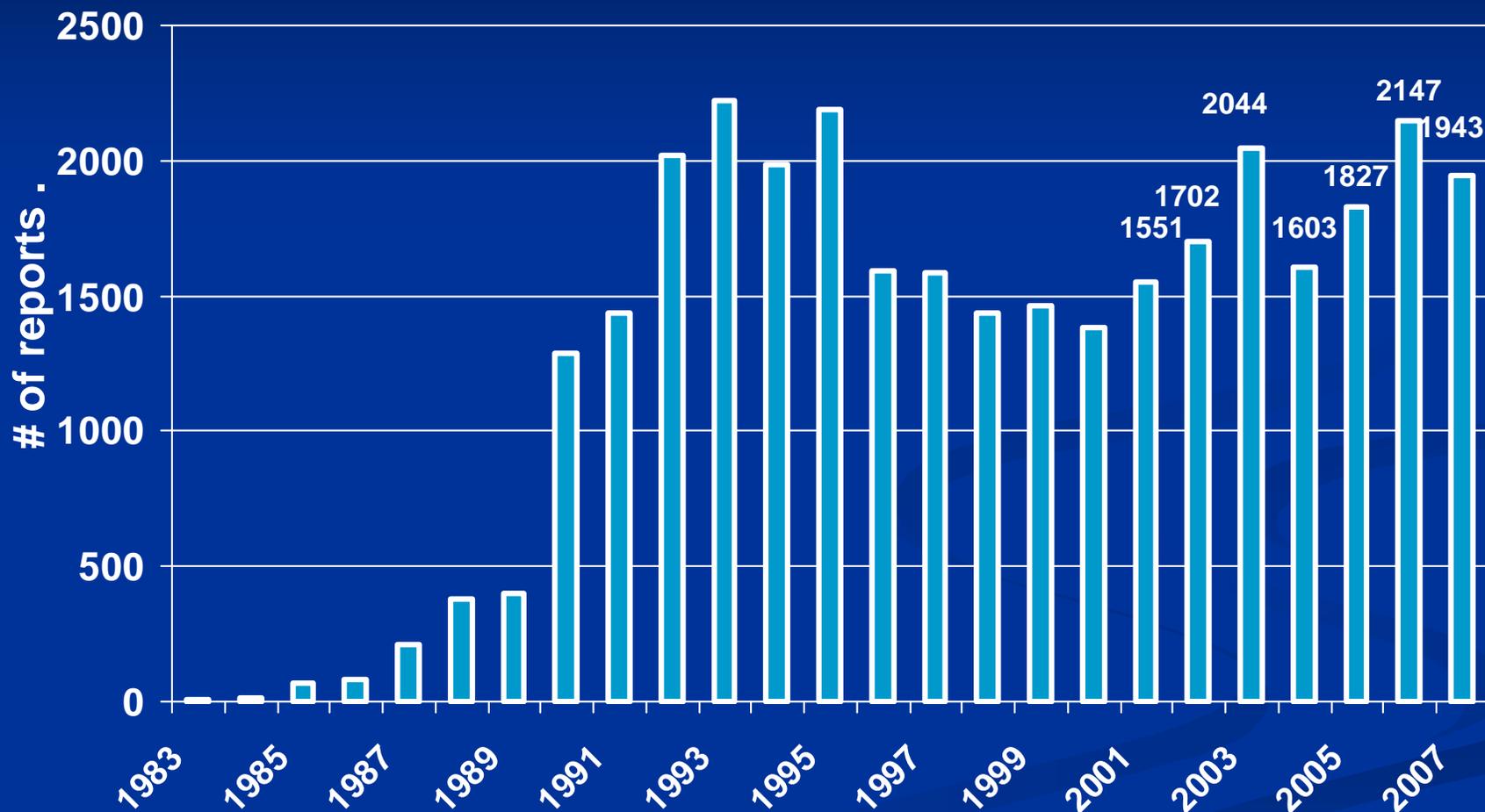


# **HIV/STD and Unintended Pregnancy in North Carolina**

**Jeffrey Engel, MD**  
**Section Chief Epidemiology**  
**NC Department of Health and Human Services**



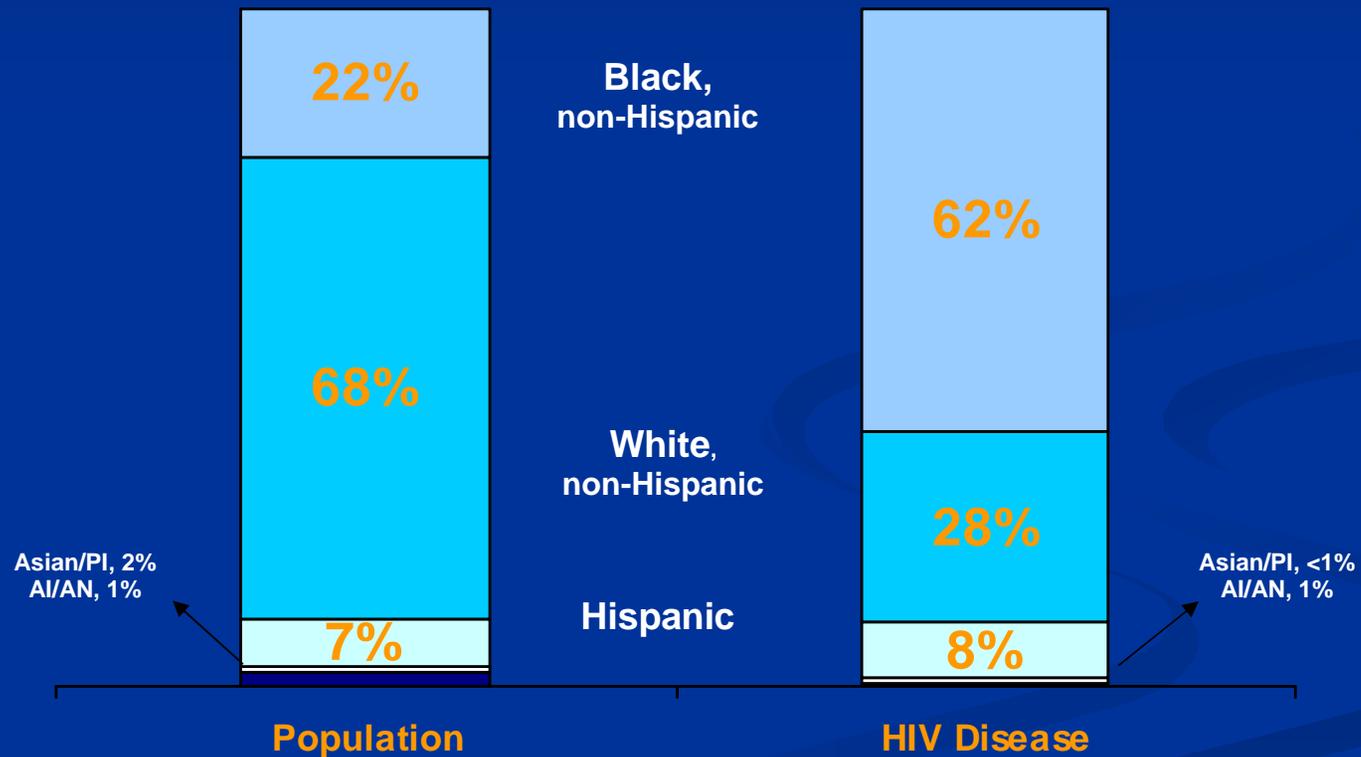
# North Carolina HIV Disease Reports



Each year ~ 25 - 30 percent of new HIV disease cases in North Carolina represent persons diagnosed concurrently with both HIV infection and AIDS.



# N.C. Population and new HIV Disease Reports, 2007



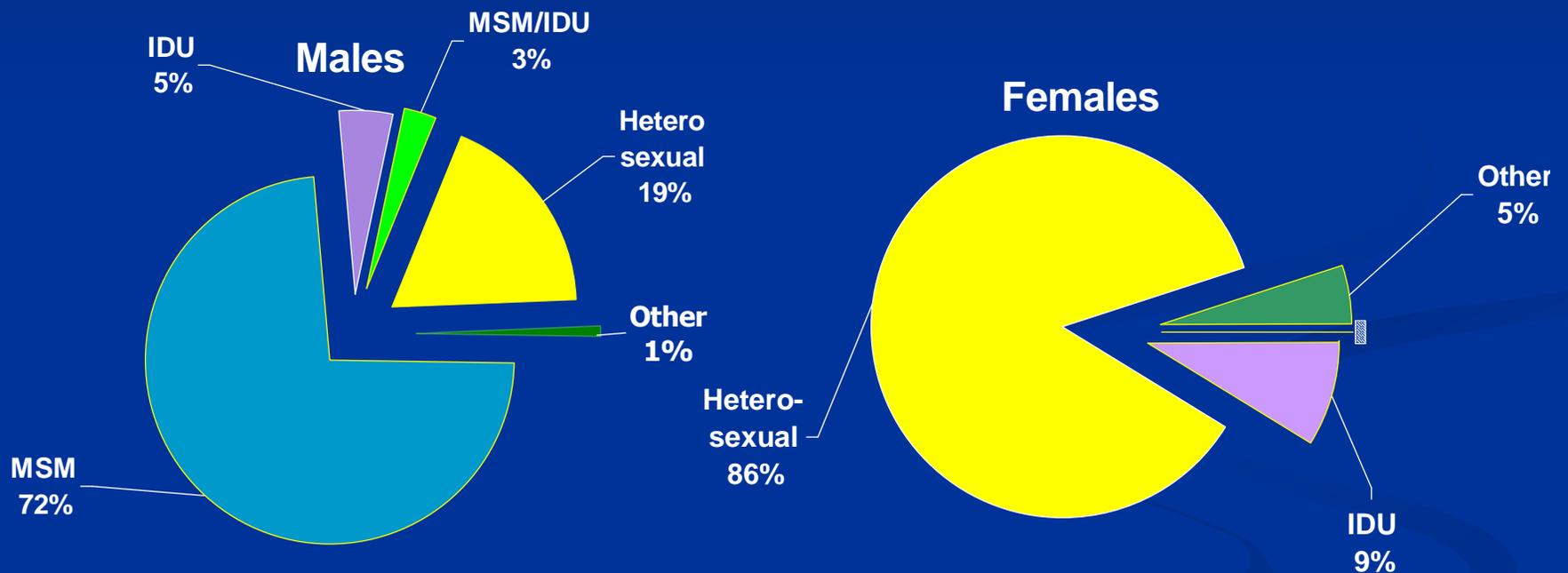
# Disparities for Females 2007 HIV Disease

- 2.8/100,000 White females
- 42.9/100,000 Black or African American females (more than 15 times that of Whites)
- 12.2/100,000 Hispanic females (more than 4 times that of Whites)

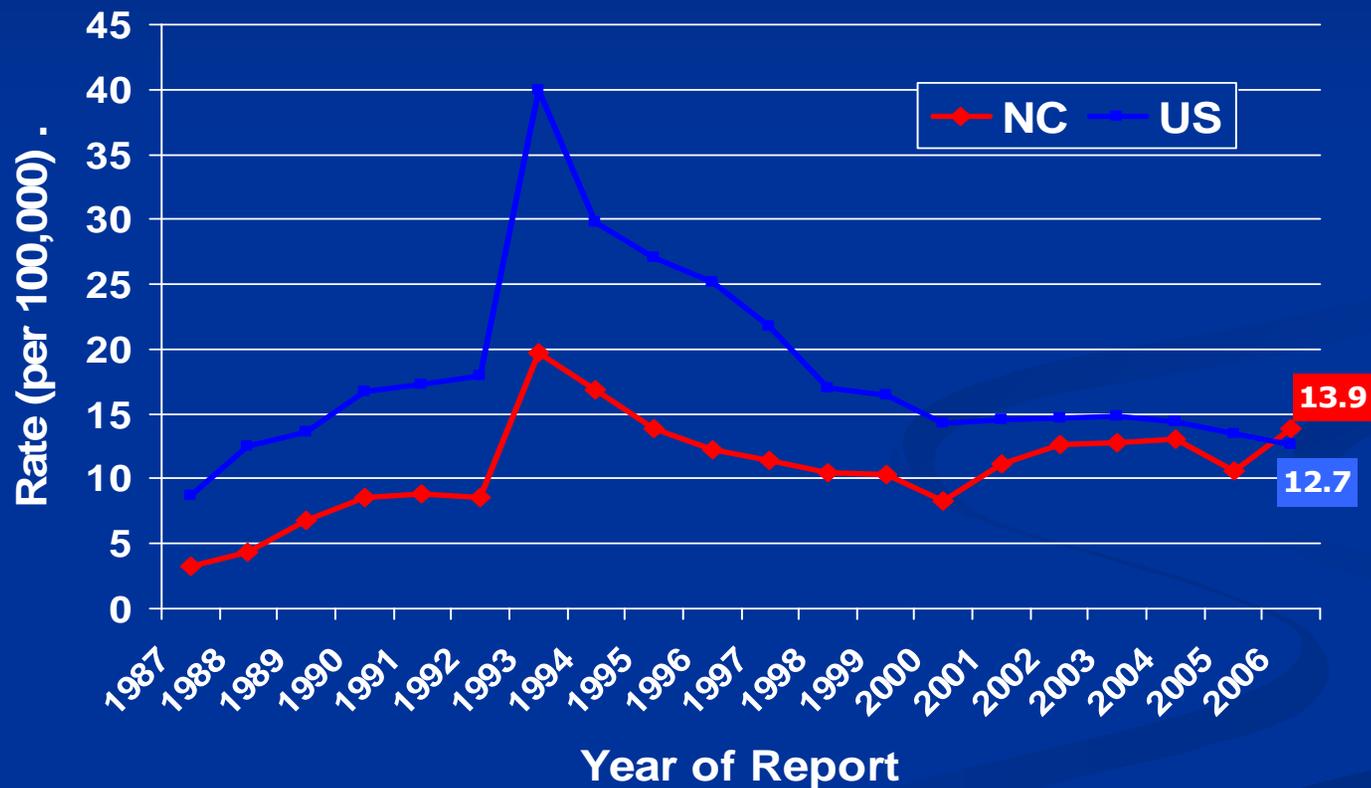
# Disparities for Males 2007 HIV Disease

- 15.7/100,000 White males
- 85.2/100,000 Black or African American males  
(more than 5 times that of Whites)
- 38.0/100,000 Hispanic males  
(more than 2 times that of Whites )

# NC adult/adolescent HIV disease 2007



# AIDS Rates 1987-2006: U.S. and N.C.



# HIV 2006 (incidence estimates)

## 22 States Participating

### NC ranked 4<sup>th</sup> (FL, NY, LA)

#### ■ NC

- 2,356 persons  
(32.2/100,000) - **40%**  
**higher than the US**

#### ■ NC

- Males represented  
72%
- Blacks represented  
**67%**
- Black rate was **9** times  
the rate for whites

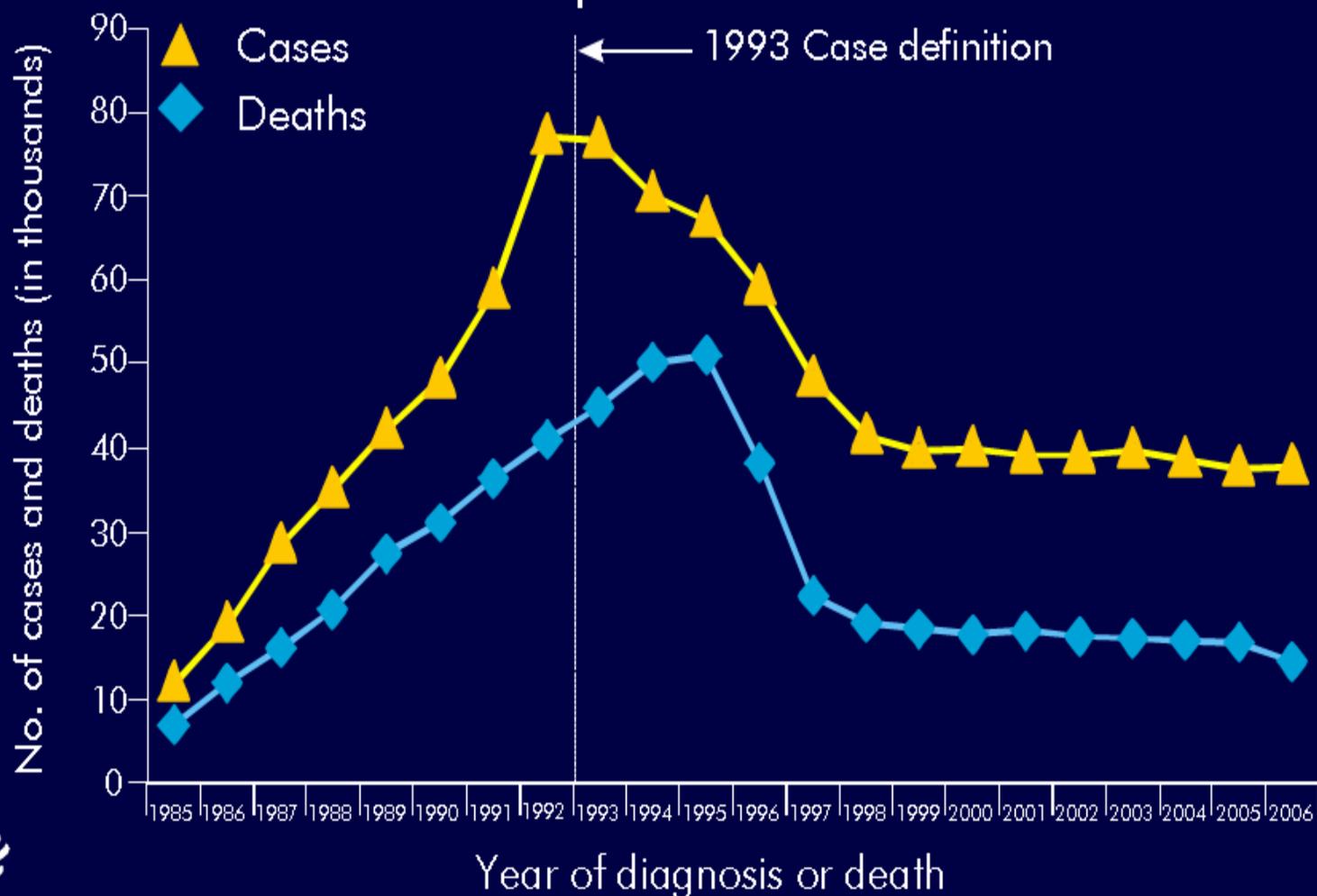
#### ■ US

- 56,300 persons  
(22.8/100,000)

#### ■ US

- Males represented  
73%
- Blacks represented  
45%
- Black rate was 7 times  
the rate for whites

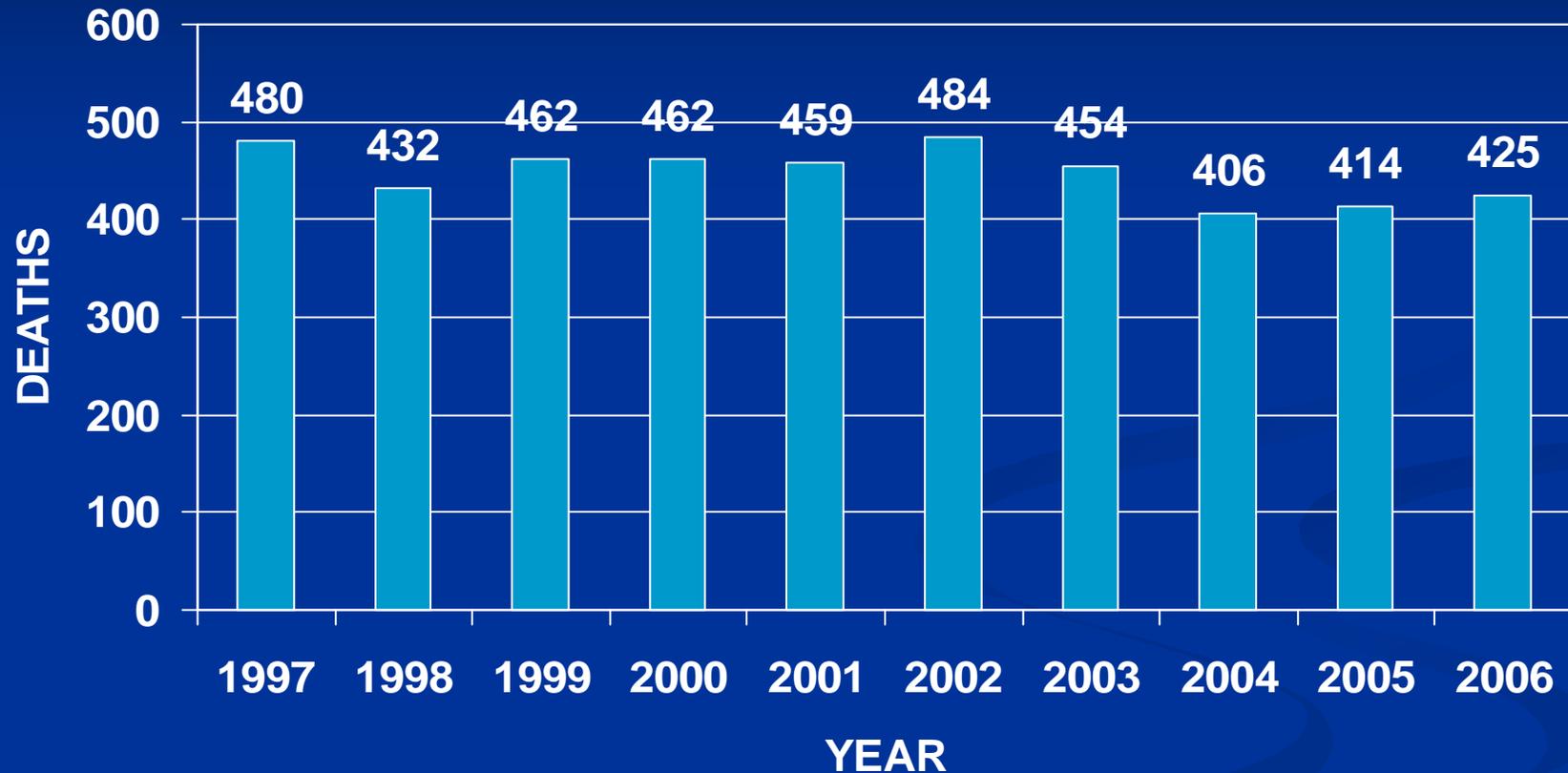
# Estimated Number of AIDS Cases and Deaths among Adults and Adolescents with AIDS, 1985–2006—United States and Dependent Areas



Note. Data have been adjusted for reporting delays.



# NC HIV MORTALITY\*



\*NC State Center for Health Statistics



# 2006 NC HIV Mortality\*

- HIV/AIDS was the 9<sup>th</sup> leading cause of death among 13-24 year olds
- HIV/AIDS was the 7<sup>th</sup> leading cause of death among 25-44 year olds
- HIV/AIDS was the 9<sup>th</sup> leading cause of death among blacks of all ages.

\*NC State Center for Health Statistics



# HIV Treatment Cost\*

- Life expectancy with treatment – 24 years
- Lifetime cost \$618,900 (not discounted)
- Treatment cost range from \$25,000/yr for persons diagnosed early (HIV-positive) to \$56,400/yr for persons with diagnosed late (AIDS)
- In NC, 20,000 persons with known HIV
  - Estimate 50% in treatment
  - \$250,000,000 to \$564,000,000/yr

\* *Medical Care*, Nov 2006

# 2006 STD rates

- **NC Chlamydia**  
**387.1/100,000 (15<sup>th</sup>\* )**
- **NC Gonorrhea**  
**199.4/100,000 (6<sup>th</sup>\*)**
- **NC P&S Syphilis**  
**3.6/100,000 (12<sup>th</sup>\*)**
- **US Chlamydia**  
**347.8/100,000**
- **US Gonorrhea**  
**120.9/100,000**
- **US P&S Syphilis**  
**3.3/100,000**

\* Among the 50 states and District of Columbia

# Chlamydia 2006

## ■ NC females

- 15-19 yr olds had the highest rate (3,653.8) followed by 20-24 yr olds (3,585.5)

## ■ NC males

- 20-24 yr olds had the highest rate (823.9) followed by 15-19 yr olds (426.3)

## ■ US females

- 15-19 yr olds had the highest rate (2,862.7) followed by 20-24 yr olds (2,797.0)

## ■ US males

- 20-24 yr olds had the highest rate (856.9) followed by 15-19 yr olds (545.1)

# Chlamydia 2006

- NC males
  - The rate for blacks (449.2) was 10 times higher than the rate for whites (45.9)
- NC females
  - The rate for blacks (1,578.2) was almost 7 times higher than the rate for whites (230.7)
- US males
  - The rate for blacks (741.2) was 11 times higher than the rate for whites (66.0)
- US females
  - The rate for blacks (1,760.9) was over 7 times higher than the rate for whites (237.0)

# Gonorrhea 2006

## ■ NC females

- 20-24 yr olds had the highest rate (1,077.6) followed by 15-19 yr olds (973.9)

## ■ NC males

- 20-24 yr olds had the highest rate (826.1) followed by 25-29 yr olds (569.0)

## ■ US females

- 15-19 yr olds had the highest rate (647.9) followed by 20-24 yr olds (605.7)

## ■ US males

- 20-24 yr olds had the highest rate (454.1) followed by 25-29 yr olds (320.9)

# Gonorrhea 2006

- NC males
  - The rate for blacks (762.5) was 23 times higher than the rate for whites (33.1)
- NC females
  - The rate for blacks (594.2) was 10 times higher than the rate for whites (59.0)
- US males
  - The rate for blacks (702.7) was 25 times higher than the rate for whites (28.3)
- US females
  - The rate for blacks (618.1) was 14 times higher than the rate for whites (44.4)

# Primary & Secondary Syphilis 2006

## ■ NC females

- 20-24 yr olds had the highest rate (4.2)  
followed by 40-44 yr olds (3.2)

## ■ NC males

- 35-39 yr olds had the highest rate (13.4)  
followed by 25-29 yr olds (12.9)

## ■ US females

- 20-24 yr olds had the highest rate (2.9)  
followed by 25-29 yr olds (2.5)

## ■ US males

- 35-39 yr olds had the highest rate (13.5)  
followed by 25-29 yr olds (13.0)

# Primary & Secondary Syphilis 2006

- NC males
  - The rate for blacks (16.3) was almost 6 times higher than the rate for whites (2.9)
- NC females
  - The rate for blacks (5.5) was over 18 times higher than the rate for whites (0.3)
- US males
  - The rate for blacks (18.3) was 5 times higher than the rate for whites (3.5)
- US females
  - The rate for blacks (4.9) was 16 times higher than the rate for whites (0.3)

# STD Treatment costs\*

- In 1997, estimated annual direct medical costs\* for *all* STDs (including viral STDs and HIV)  
US \$8,396.8 million - NC \$228.4 million
- Estimated treatment cost for early syphilis was \$1,386/case (1998), 309 cases (2006);  
estimated cost \$428,000
- Estimated treatment cost for gonorrhea and chlamydia \$80/case (1994), 51,000 cases (2006);  
estimated cost \$4,080,000

\* Women's Health Policy Program ,1998, publication no. 1447

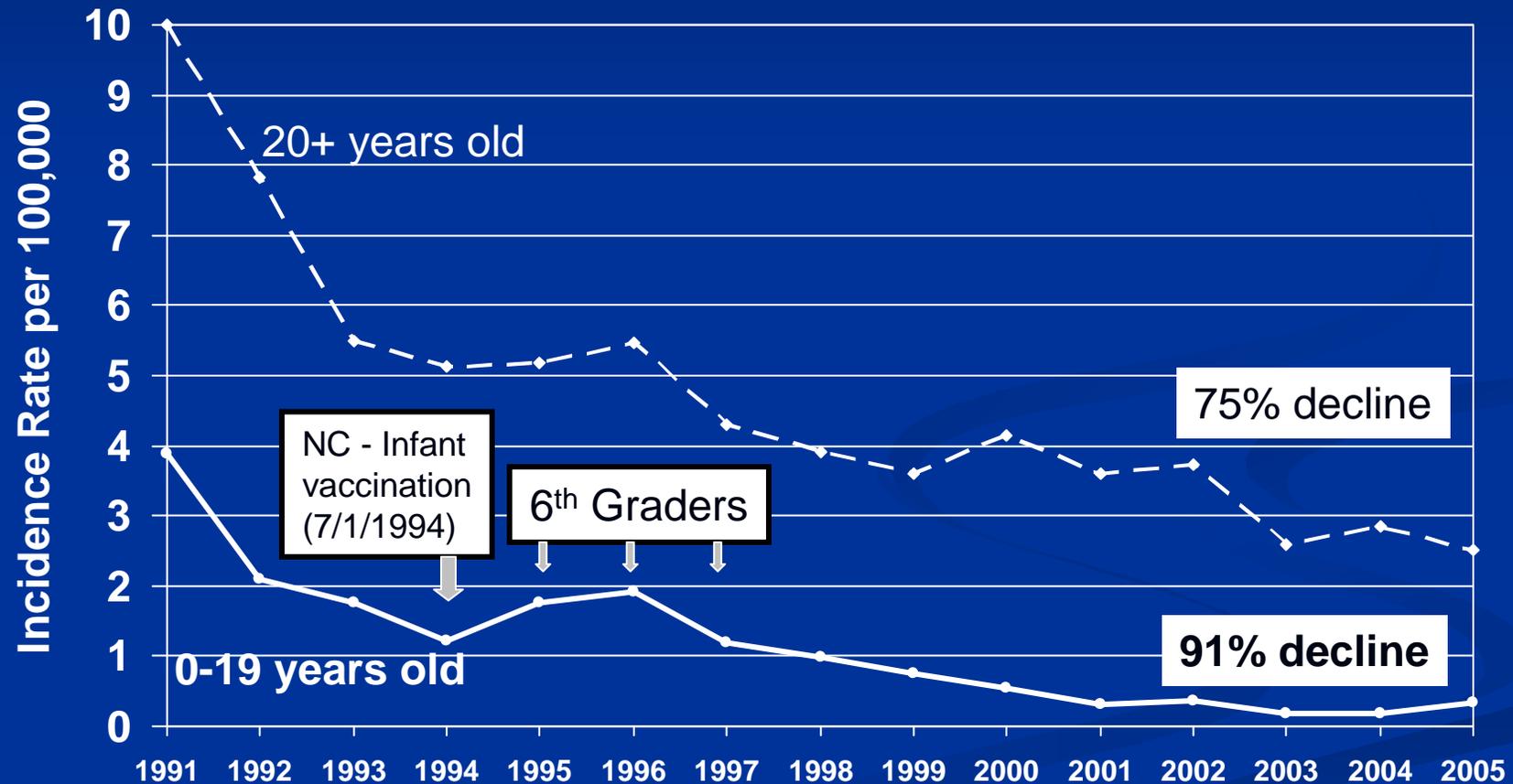


# Vaccine Preventable STDs

- Human Papillomavirus
  - The most common STD
  - Over 100 genotypes, about a dozen strongly associated with malignancy
  - New tetravalent HPV vaccine for women will reduce cervical cancer, but not overall genital HPV infections
- Hepatitis B Success Story

# Hepatitis B, acute – North Carolina, 1991-2005

## Incidence rate by Age Group



# UNINTENDED PREGNANCY

- About one-half of all pregnancies are unintended
- Result in major health, social, and economic consequences for women, families, and communities
  - Including higher risk of infant mortality and morbidity
- Significant disparities exist by age and SES
  - Most pregnancies in teens are unintended, but 75% of unintended pregnancies occur in adults

# “Unintended pregnancy” means:

- Mistimed or unwanted at the time of *conception*, and does not reflect parental perception of the child at the time of *birth*.

# INTENDED PREGNANCY by State

**TABLE 3. Prevalence\* of intended pregnancies among women who had a live birth, by state — 19 states, Pregnancy Risk Assessment Monitoring System (PRAMS), 2000–2003**

State	2000 (%)	2001 (%)	2002 (%)	2003 (%)
Alabama	51.9	51.1	52.2	50.6
Alaska	56.8	54.6	54.7	54.6
Arkansas	46.6	47.8	50.0	48.2
Colorado	60.2	60.4	61.1	59.0
Florida	53.6	53.3	53.7	53.5
Hawaii	56.7	54.4	56.8	56.2
Illinois	57.1	53.7	57.0	56.2
Louisiana	48.5	45.2	45.7	48.1
Maine	65.1	63.3	66.7	66.5
Nebraska <sup>†</sup>	61.0	61.8	57.2	57.9
New Mexico	56.4	57.7	55.8	56.1
New York <sup>§</sup>	61.6	66.2	65.3	63.7
North Carolina	54.7	57.4	59.4	57.8
Ohio	57.5	59.3	56.2	53.9
Oklahoma	53.1	47.9	48.5	51.6
South Carolina	52.7	51.8	52.5	50.0
Utah	68.4	65.5	67.5	66.4
Washington	62.1	60.8	60.3	61.4
West Virginia	58.2	53.5	58.3	56.2

\* *Healthy People 2010* objective: 70%.

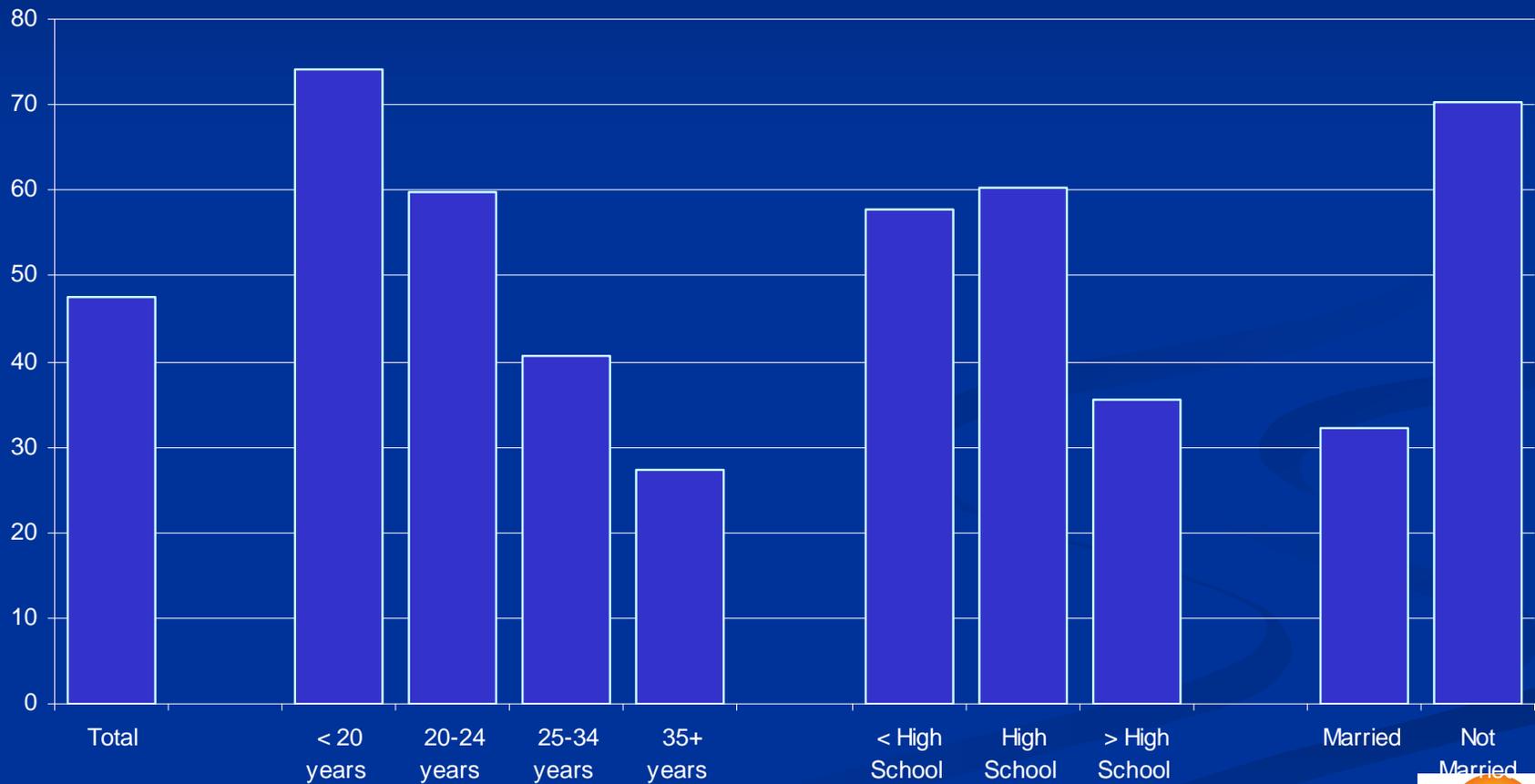
<sup>†</sup> Statistically significant difference ( $p \leq 0.05$ ).

<sup>§</sup> Data do not include New York City.

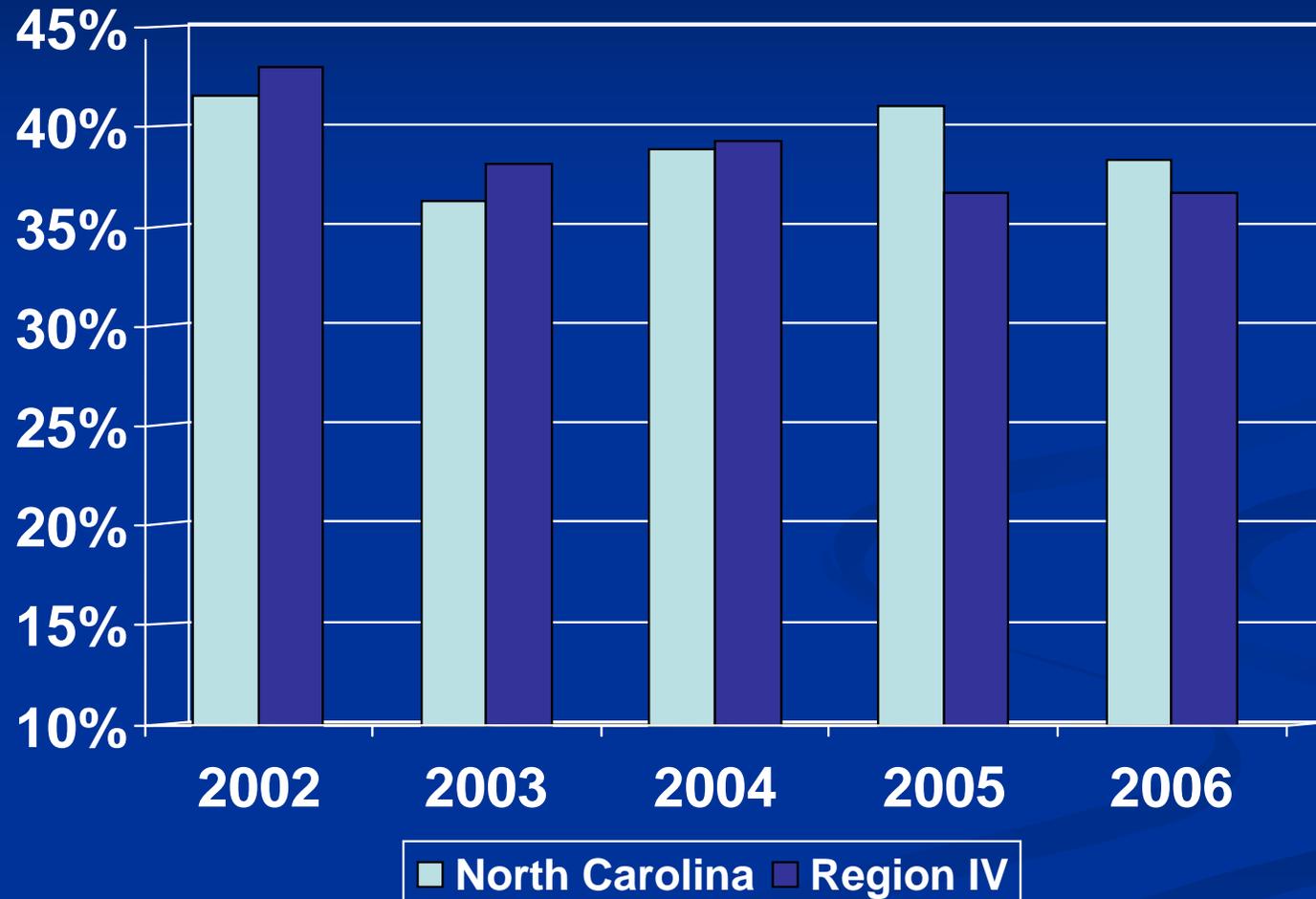
**Prevalence of Women with Unintended Pregnancies  
(wanted to be pregnant later  
or did not want to be pregnant then or at any time in the future)  
NC PRAMS**



**Characteristics of Women with Unintended Pregnancies  
(wanted to be pregnant later  
or did not want to be pregnant then or at any time in the future)  
2006 NC PRAMS**



## Ratio of Females Served by the Title X Program to the Total Population In-Need of Family Planning Services



# Cost of Unintended Pregnancy Medicaid Population NC-2006

- Medicaid births 2006: 61,190
- Average Medicaid cost/live birth (pregnancy and infant up to 1 year of age): \$12,874
- NC PRAMS: 65.5% of all Medicaid deliveries were from unintended pregnancies
- Estimate \$516,000,000 preventable costs
- (\$413,000,000 if 11,000 women on emergency Medicaid excluded)

# Personal Responsibility Cost to Society

- Gluttony
- Lust
- Greed
- Sloth
- Wrath
- Envy
- Pride
- Obesity
- STD, Unintended Pregnancy
- \$700,000,000,000 Bail-out