IMPROVING POPULATION-BASED MEASURES OF PREGNANCY MOTIVATIONS AND REPRODUCTIVE PLANS

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Healthy People 2020

Family Planning Goal

- Improve pregnancy planning and spacing, and prevent unintended pregnancy.

Pregnancy Intendedness

- **Intendedness is a key indicator of family planning** but what do we have data wise at the population level?

- Can we track changes in this indicator over time?

- Point-in-time & special surveys provide us in-depth knowledge but how can we track progress over time?

How are we measuring unintended pregnancy?

Population-Based Surveillance Systems

- National Survey of Family Growth (NSFG)

- Behavioral Risk Factor Surveillance System (BRFSS)

- Pregnancy Risk Assessment & Monitoring System (PRAMS)

Behavioral Risk Factor Surveillance System (BRFSS)

- BRFSS is an ongoing, state-based, random–digit–dialed telephone survey of the non-institutionalized U.S. population aged 18 or older.

- Used to monitor health behaviors associated with the leading causes of morbidity and mortality.

Pregnancy Risk Assessment and Monitoring System (PRAMS)

- Collects information on health-related behaviors and experiences during pregnancy from women who recently delivered a live-born infant

- The PRAMS system uses a standardized mail and telephone methodology for data collection.

COMPARISON

BRFSS

- Phone –Landline & Cell, mail/web follow-up
- BRFSS asks women about pregnancies within the last 5 years, Nationwide
- Both Males & Females
- Several Risk Factors other than related to pregnancy

PRAMS

- Mail Survey and Phone follow-up
- PRAMS is administered within 6 months of delivery.
- 40 states and NY city
- Only Females

Comparing Measures of Intendedness: BRFSS and PRAMS

Pregnancy intention of currently or previously pregnant women participating in BRFSS and PRAMS surveys, 2000

	Pregnancy intended			
Survey	Overall % (95% CI)	White % (95% CI)	Black % (95% CI)	Hispanic % (95% CI)
BRFSS (NE, HI, NC, OH)				
Pregnant at the time of survey (n = 167)	56.9 (41.9–71.9)	61.7 (44.6–78.8	[a]	[a]
PRAMS				
Pregnancy in the recent past (2–6 months prior to the survey) (n = 7761)	58.5 (56.5–60.5)	65.3 (62.7–67.7)	35.2 (31.4–39.3)	49.9 (44.1–55.7)
BRFSS[b]				
Previous pregnancy within the last 5 years (n = 1347)	60.6 (55.9–65.3)	63.6 (57.9–69.2)	43.2 (29.3–57.0)	49.4 (30.4–68.4)
[a]Due to small sample sizes the estimates are not presented.				
[b]does not include women who were pregnant at the time of the survey.				

Ahluwalia IB, Whitehead N, Bensyl D. Pregnancy Intention and Contraceptive Use Among Adult Women. *Matern Child Health J* (2007) 11:347–351

Strengths of BRFSS

- Each of these variables including intendedness of pregnancy, contraceptive use and contraceptive method choices, and direct and indirect measures of access to health care can be examined according to variations in sex, race and ethnicity, income, age, educational attainment, geography, and preferred language.

- Additional risk factors for poor health can also be included, such as use of tobacco, alcohol, and other substances, obesity, presence of other chronic health conditions, and disability status.

Massachusetts BRFSS 1998–2008

- Statewide survey
- Males and Females
- Included FP since 1998

- FP state- added topic, even # years
- In 2006, 12,726 interviews
- In 2008, 20,559 interviews

Split Modules
- Three versions (or "splits")
- Allows increased # questions asked
- Without increasing survey length
- FP questions asked in one "split"
- In 2006 = 6,250 respondents
- In 2008 = 6,812 respondents

A Profile of Family Planning
Among Massachusetts Adults
2006–2008

Results from the Behavioral Risk Factor Surveillance
System

HEALTH SURVEY PROGRAM
DIVISION OF RESEARCH AND EPIDEMIOLOGY
BUREAU FOR HEALTH INFORMATION,
STATISTICS, RESEARCH, AND EVALUATION
MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

July 2010

Definition Used in BRFSS

Unintended pregnancy:

- All women ages 18–44 who were currently pregnant or had been pregnant in the past five years were asked if they had wanted to be pregnant sooner, later, or not at all.

- **Unintended pregnancy** was defined as wanting to be pregnant later or not at all.

Question about Pregnancy Intention

Thinking back to *just before* you got pregnant with your most recent pregnancy, how did you feel about becoming pregnant? Check only ONE answer.

- You wanted to be pregnant sooner
- You wanted to be pregnant later
- You wanted to be pregnant then
- You didn't want to be pregnant then or any time in the future

Unintended Pregnancy in Massachusetts 1998–2008
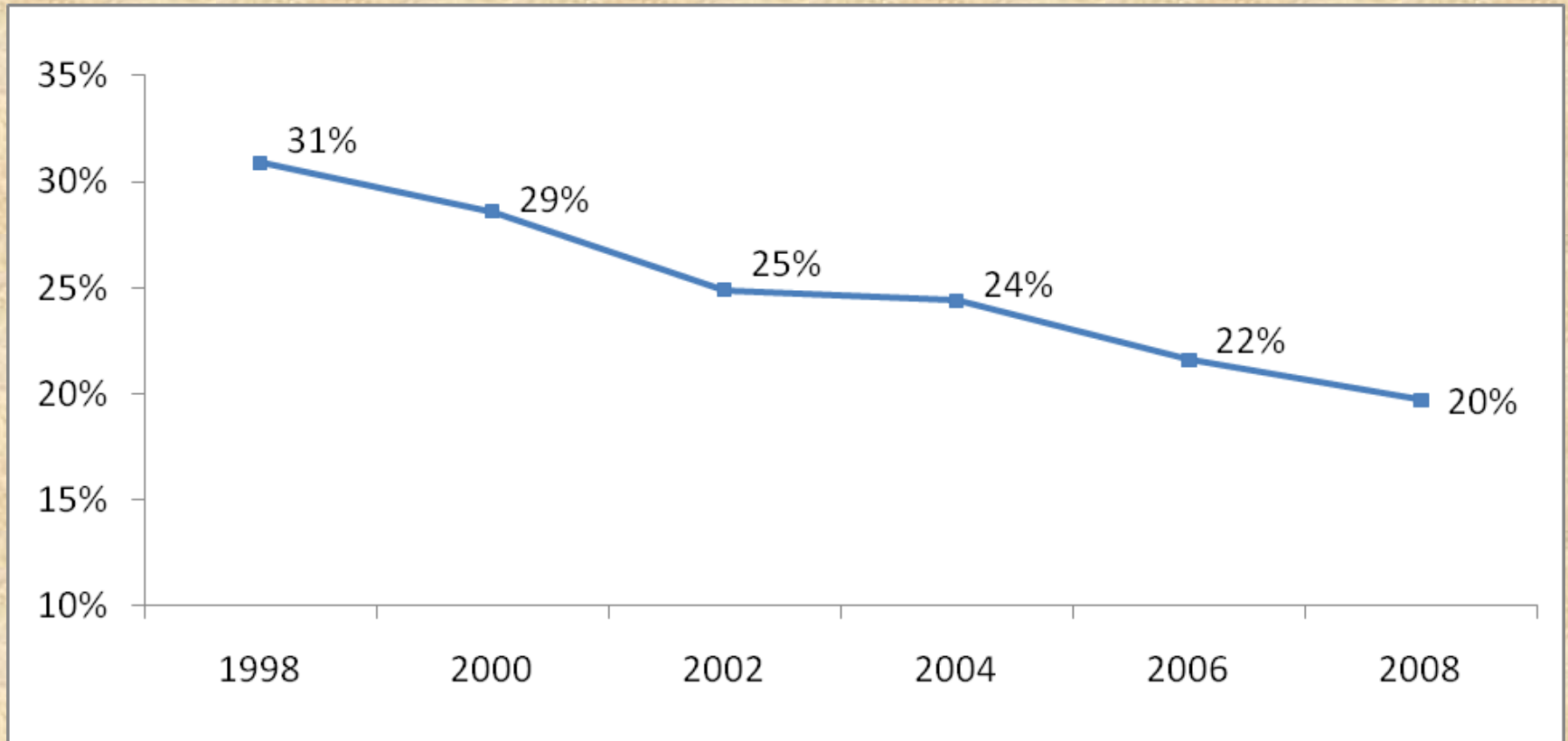
Most Common Preconception Health Issues for Women in Florida, 2008
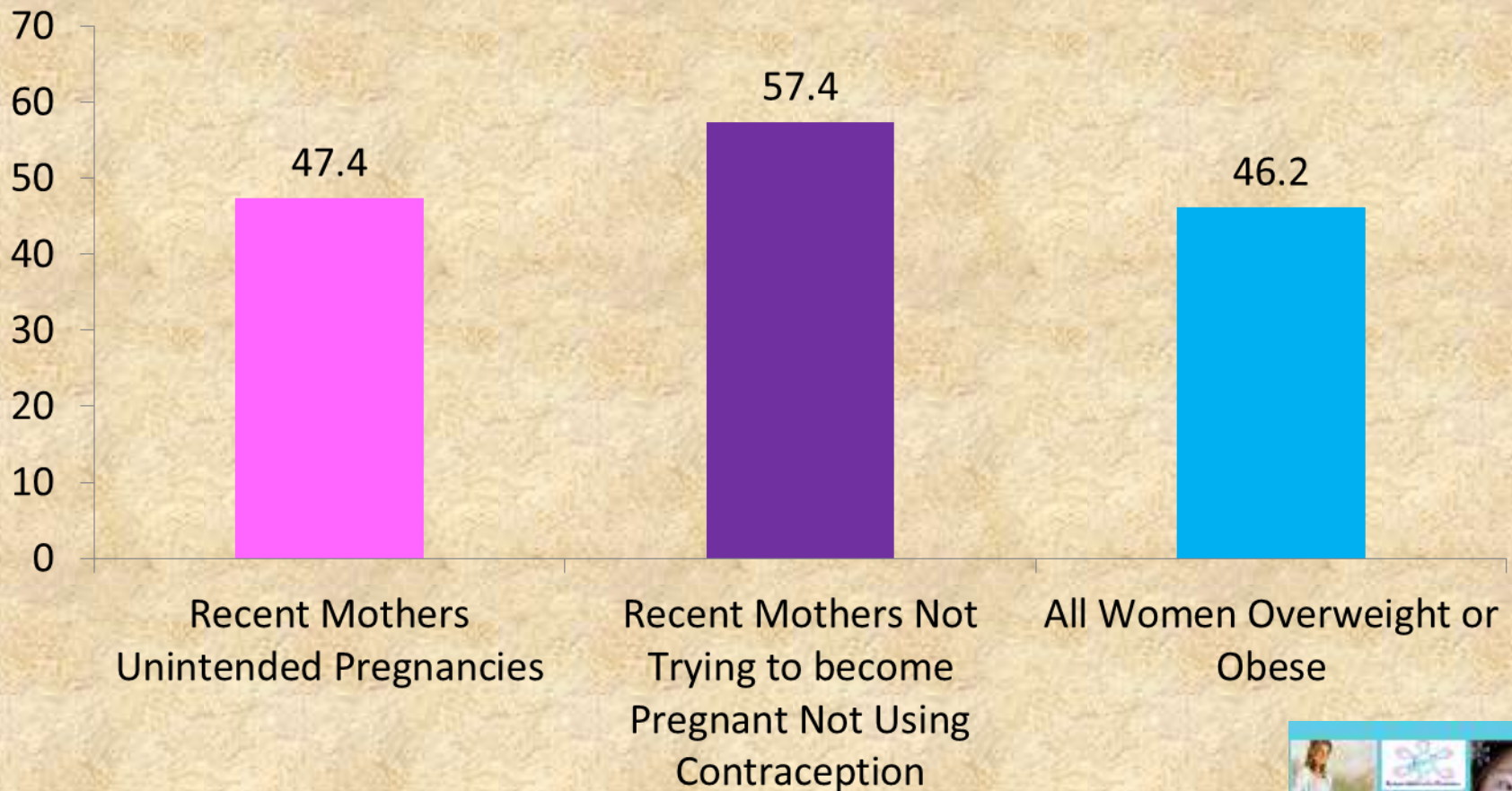
WHAT HAS KENTUCKY DONE?

- Assessed the preconception health of women in Kentucky using the core state preconception health and health care indicators (PCHI) developed by the seven state work group
- Using MA profile as a guideline analyzed rates of Unintended Pregnancy using BRFSS data

Methods

- KY Behavioral Risk Factor Surveillance System (BRFSS) 2000-2009

- Seventeen core state preconception health indicators (PCHI) were analyzed

- Target population: non-pregnant female respondents aged 18-44 years (n=15,695)

- Three subpopulations were created based on the Rural-Urban Continuum Codes provided by the US Department of Agriculture

Urban, Semi-Rural and Rural Counties in Kentucky

Kentucky Percent of Persons Living in Poverty 2007 US Census Estimate

US 13%   KY 17.2%

Percent of Persons in Poverty

- 6.0 - 14.2
- 14.3 - 20.8
- 20.9 - 30.0
- 30.1 - 44.4

Sample Size for KY BRFSS Data

YEAR	N
2000	1,612
2001	1,981
2002	1,749
2003	1,841
2004	1,544
2005	1,488
2006	1,241
2007	1,336
2008	1,401
2009	1,511

Methods

- For measuring unintended pregnancy data from the KY Behavioral Risk Factor Surveillance System (BRFSS) was taken for years when the questions were asked

- Data from 2005 and 2008 were combined and analyzed for measuring pregnancy intention

- Target population: non-pregnant female respondents aged 18-44 years (n=850)

Sample Size for KY BRFSS Data for Unintended Pregnancy

Year	N	Type of Question
1999	589	Optional Module
2000	471	Optional Module
2003	500	State Added
2005	407	State Added
2008	443	State Added

Core State Preconception Health Indicators by Domain and Sub-Domain for Women Aged 18-44 Years

Domain	Sub-Domain	BRFSS Data Source (Y/N)
General Health Status & Life Satisfaction	Self-rated Health	Y
Social Determinants of Health	Education	Y
	Poverty	Y
Health Care	Access to and Utilization of Health Care	Y
	Access to Dental Care	N
	Reproductive Health Care	Y
	Content and Quality of Care	N
Reproductive Health & Family Planning	Previous Preterm Birth	N
	Previous Fetal Death, Miscarriage, or Stillbirth	N
	Inter-pregnancy Interval/Birth Spacing	N
	Pregnancy Intention/Wantedness (from Optional Module)	Y
	Contraception (Access, Availability, and Use)	N
	Use of Assisted Reproductive Technology	N
Tobacco, Alcohol & Substance Use	Smoking	Y
	Alcohol Consumption	Y
	Secondhand Smoke Exposure	N

Core State Preconception Health Indicators by Domain and Sub-Domain for Women Aged 18-44 Years

Domain	Sub-Domain	BRFSS Data Source (Y/N)
Nutrition & Physical Activity	Fruit & Vegetable Consumption	Y
	Obesity and Overweight	Y
	Folic Acid Supplementation	N
	Exercise/Physical Activity	Y
Mental Health	General Mental Distress	Y
	Anxiety and Depression	N
	Postpartum Depression	N
Emotional & Social Support	Domestic Abuse	N
	Adequacy of Support	Y
Chronic Conditions	Diabetes	Y
	Hypertension	Y
	Asthma	Y
Infections	HIV	N
	Sexually Transmitted Infections	N
	Immunizations	Y

Methods

- The indicators from NVSS were analyzed from 2004 - 2009

- Also analyzed some indicators using PRAMS

  - KY does not have PRAMS but used information from pilot test for PRAMS conducted in 2009

  - Sample size very small in the first pilot test hence used information from the second pilot test

TRENDS OF SOME PRECONCEPTION INDICATORS FROM KY BRFSS

Percentage of women who currently have no health care coverage
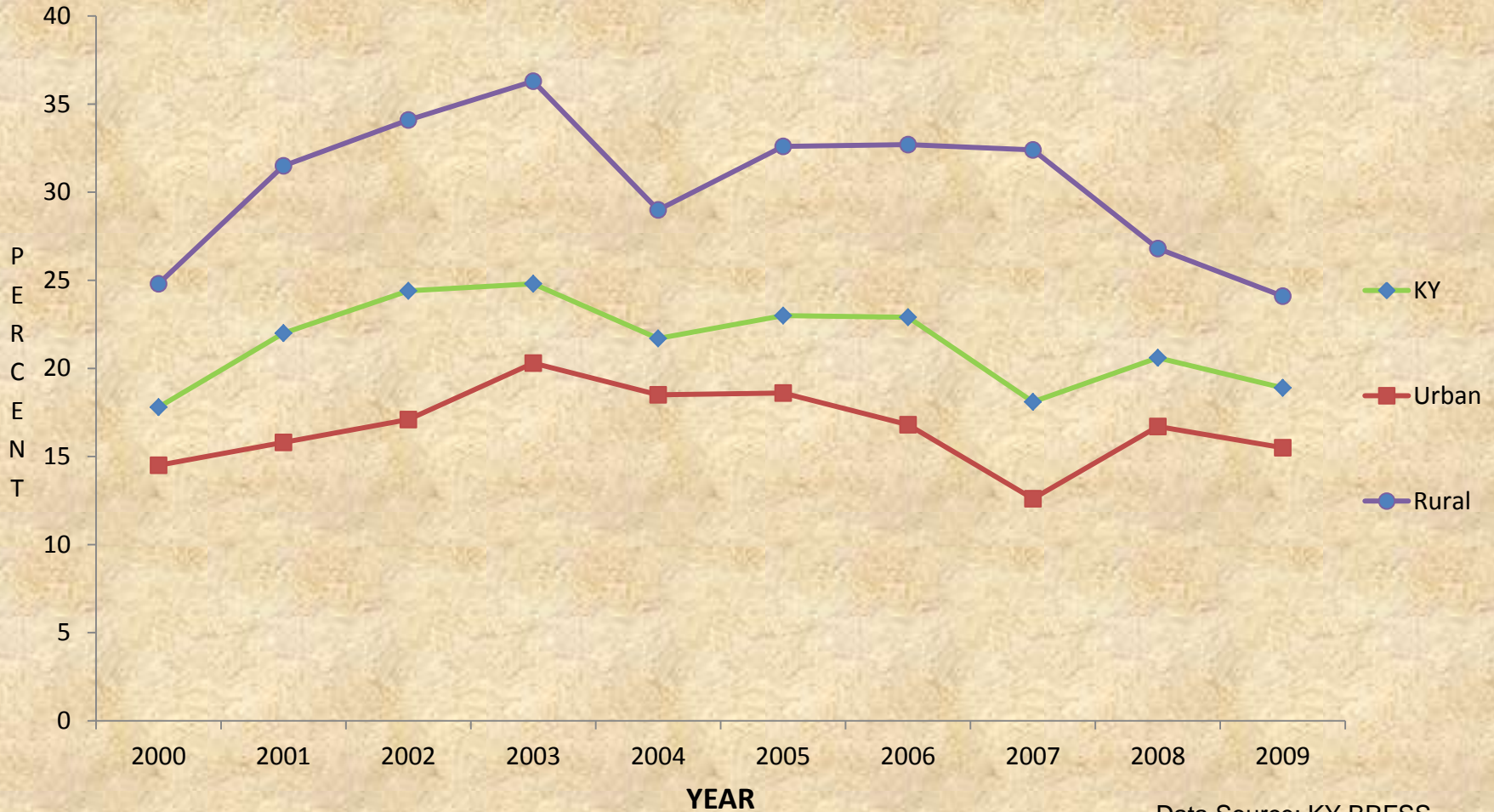
Data Source: KY BRFSS

Percentage of women who currently smoke everyday or some days
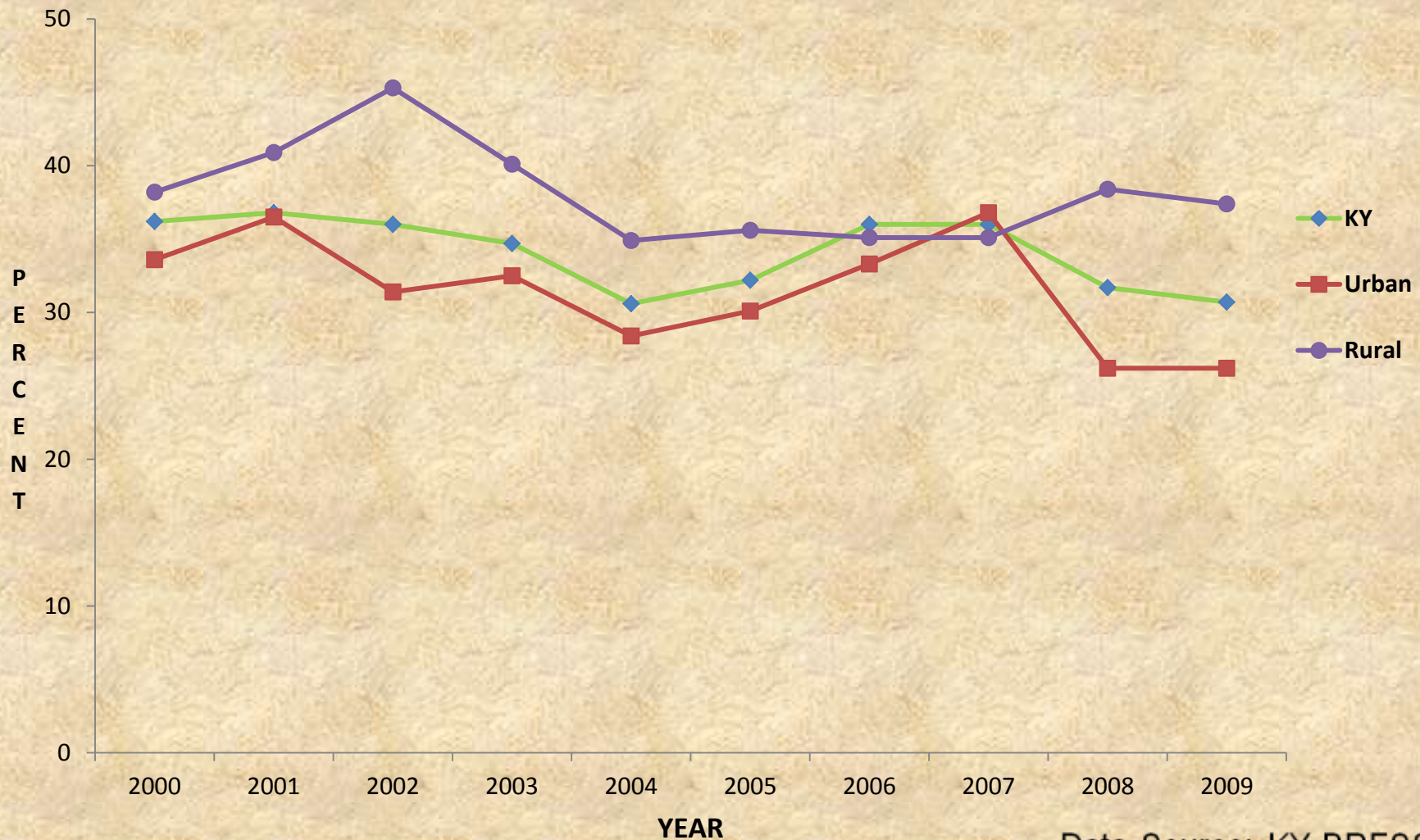
Data Source: KY BRFSS

Percentage of women who are overweight or obese based on body mass index (BMI ≥ 30 kg/m^2)

Data Source: KY BRFSS
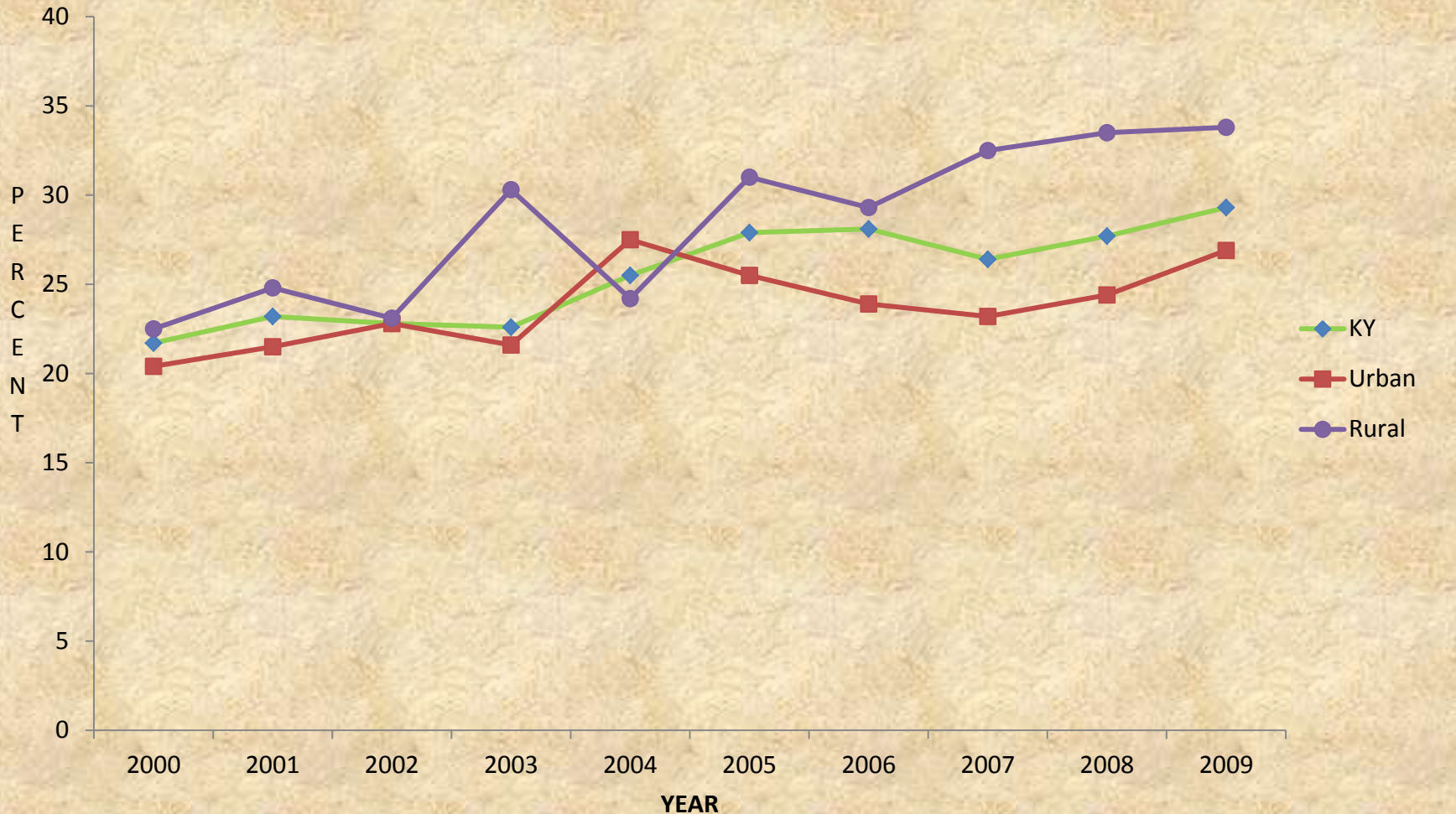
Percentage of women who have ever been told by a health care provider that they had diabetes including gestational diabetes

Data Source: KY BRFSS
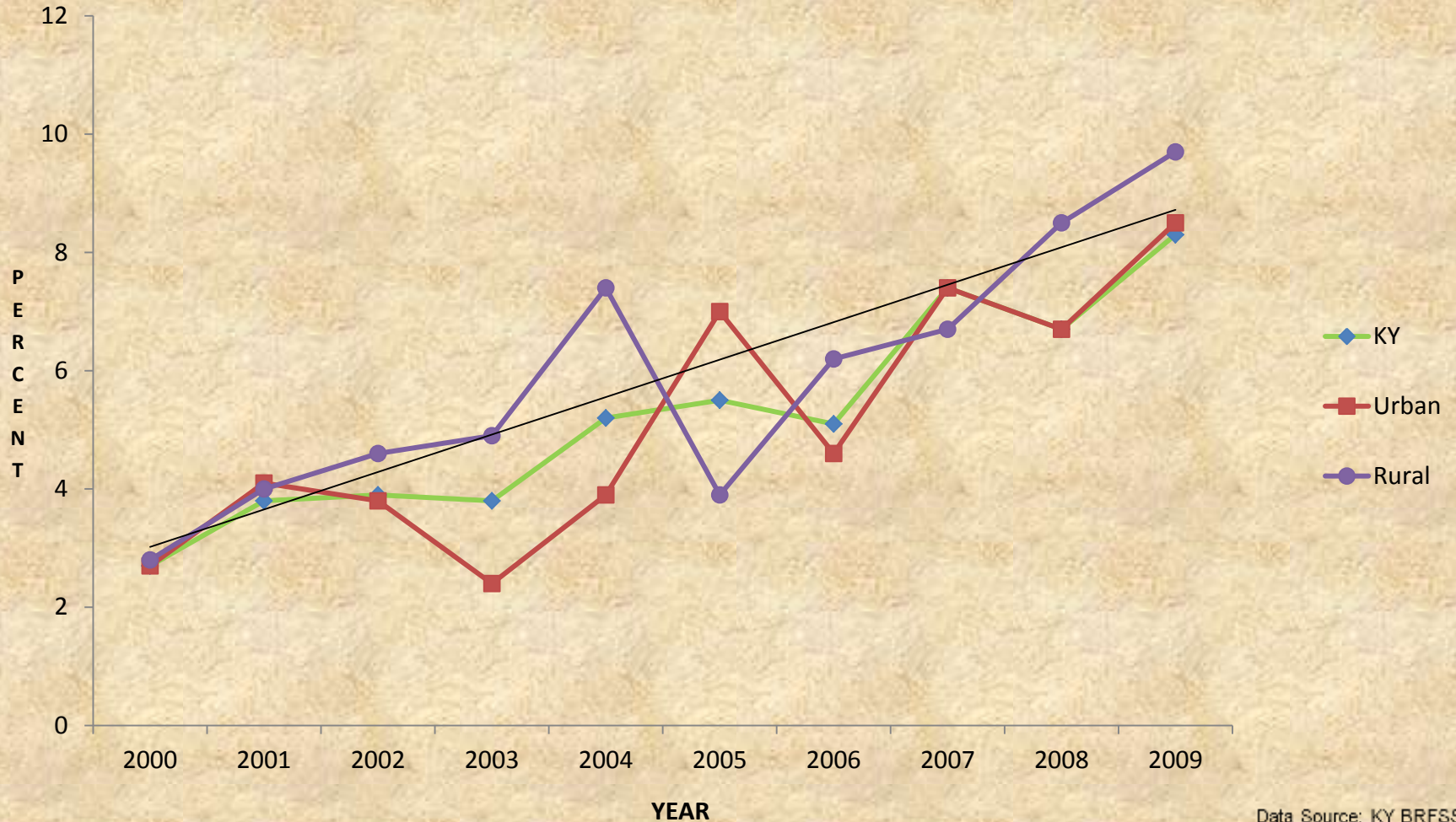
Percentage of women who report that their mental health was not good for at least 14 out of the past 30 days

Data Source: KY BRFSS
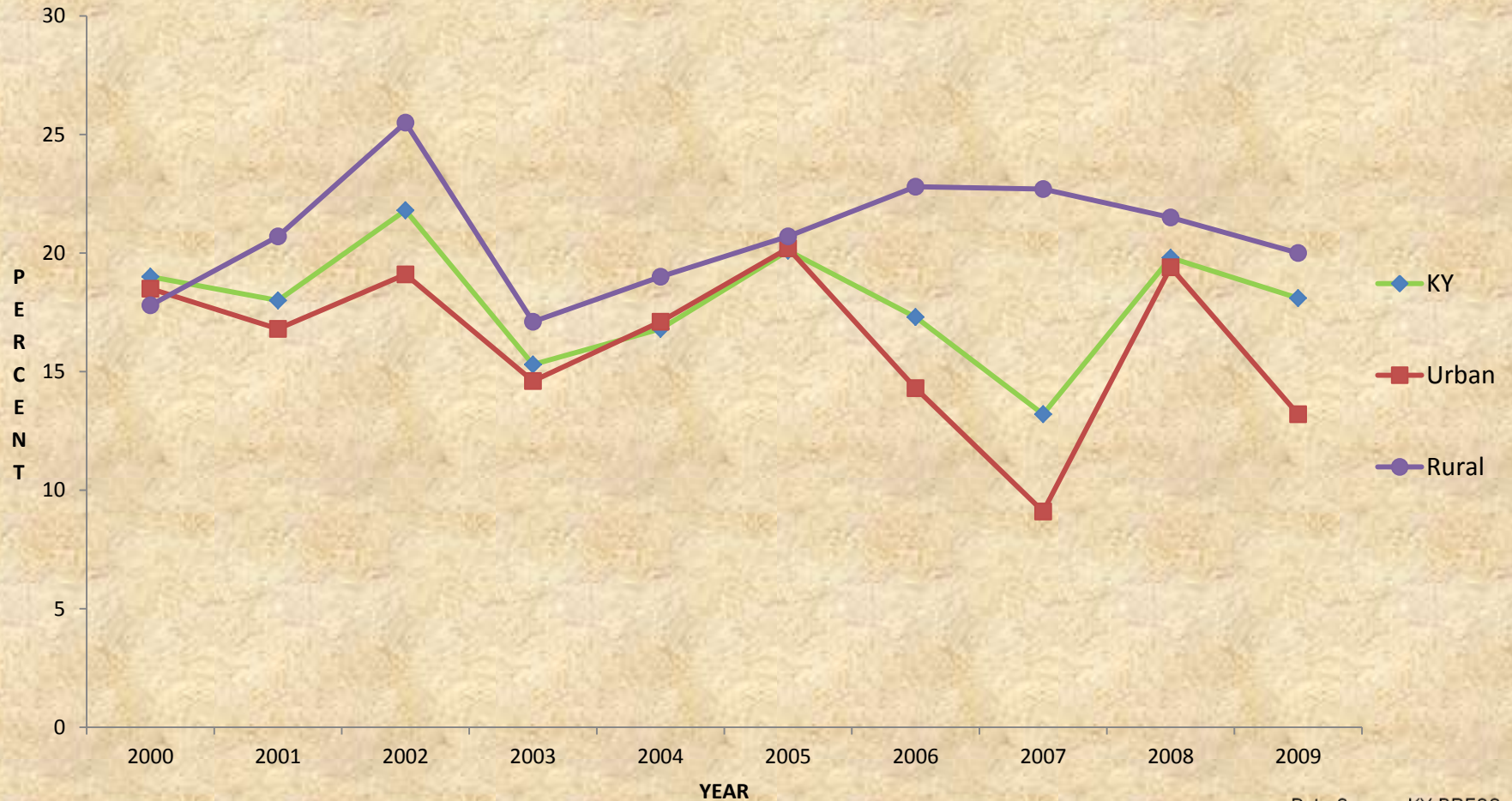
Percentage of women who did not have a PAP test within the past three years

Data Source: KY BRFSS
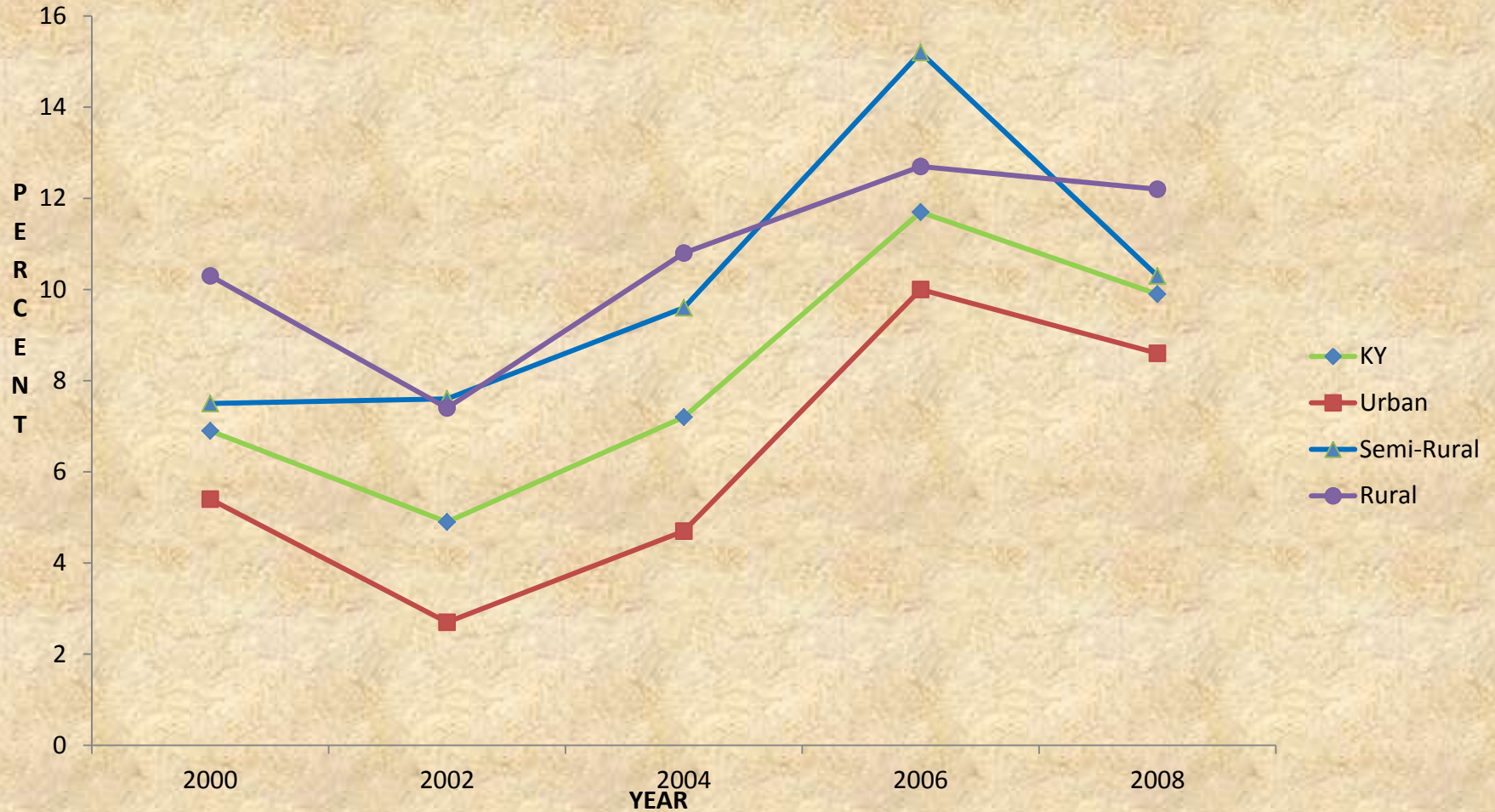
PREVALENCE OF CORE INDICATORS USING KY PRAMS PILOT DATA

Core Indicators from KY-PRAMS

Core Indicator	Weighted Frequency (95% CI)			
	Kentucky N=844	Urban Counties N=542	Semi-Rural Counties N=169	Rural Counties N=132
No Health Care Insurance	40.0 (36.3-43.8)	35.1 (30.4-39.8)	52.4 (44.3-60.4)	40.6 (31.3-49.9)
Had Previous Live Birth More Than 3 Weeks Due	15.4 (11.7-19.1)	15.6 (10.9-20.3)	12.0 (5.3-18.8)	19.9 (9.2-30.6)
Prior Poor Birth Outcome	12.6 (10.1-15.1)	13.5 (10.2-16.7)	9.8 (5.0-14.5)	13.7 (7.4-19.9)
Unintended Pregnancy	44.8 (41.0-48.6)	45.7 (40.8-50.6)	44.6 (36.5-52.7)	41.6 (32.4-50.8)
Currently Using Birth Control	84.1 (81.2-86.9)	83.7 (80.0-87.4)	81.2 (74.8-87.6)	88.8 (82.9-94.7)

Core Indicators from KY-PRAMS

Core Indicator	Weighted Frequency (95% CI)			
	Kentucky N=844	Urban Counties N=542	Semi-Rural Counties N=169	Rural Counties N=132
Had Depressive Symptoms After Pregnancy	10.8 (7.5-14.1)	11.0 (6.7-15.2)	9.1 (2.8-15.4)	12.6 (3.8-21.5)
Were Physically Abused	3.6 (2.2-5.1)	4.2 (2.2-6.1)	3.5 (0.5-6.5)	1.2 (0.0-3.2)
Had Diabetes Before Pregnancy	7.2 (5.2-9.1)	5.0 (3.0-7.0)	10.4 (5.5-15.3)	10.2 (4.7-15.8)
Had Hypertension Before Pregnancy	13.7 (11.1-16.3)	12.2 (9.2-15.2)	15.3 (9.6-21.0)	15.7 (8.8-22.5)

UNINTENDED PREGNANCY

Unintended Pregnancy in Kentucky 1999–2008
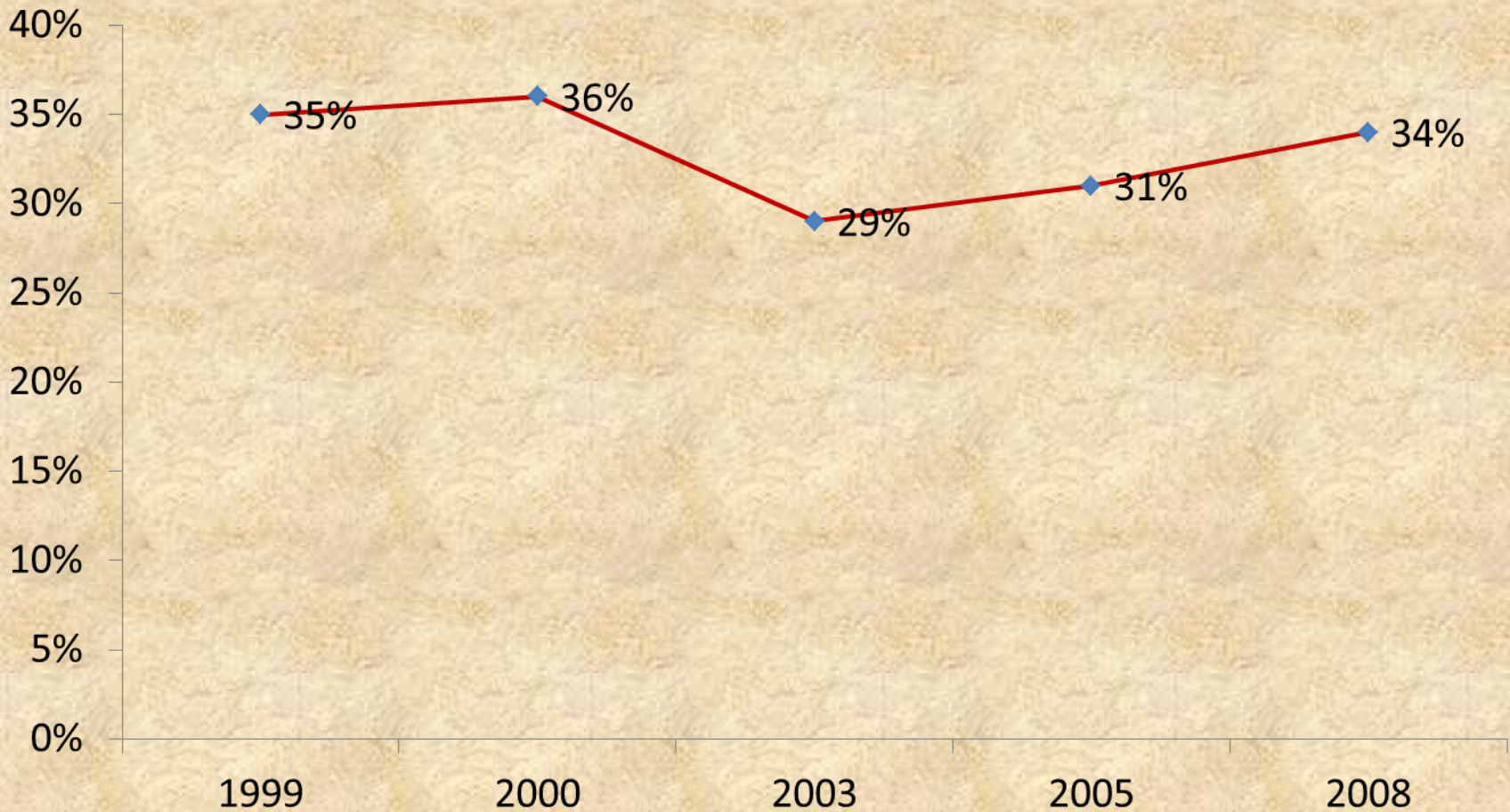
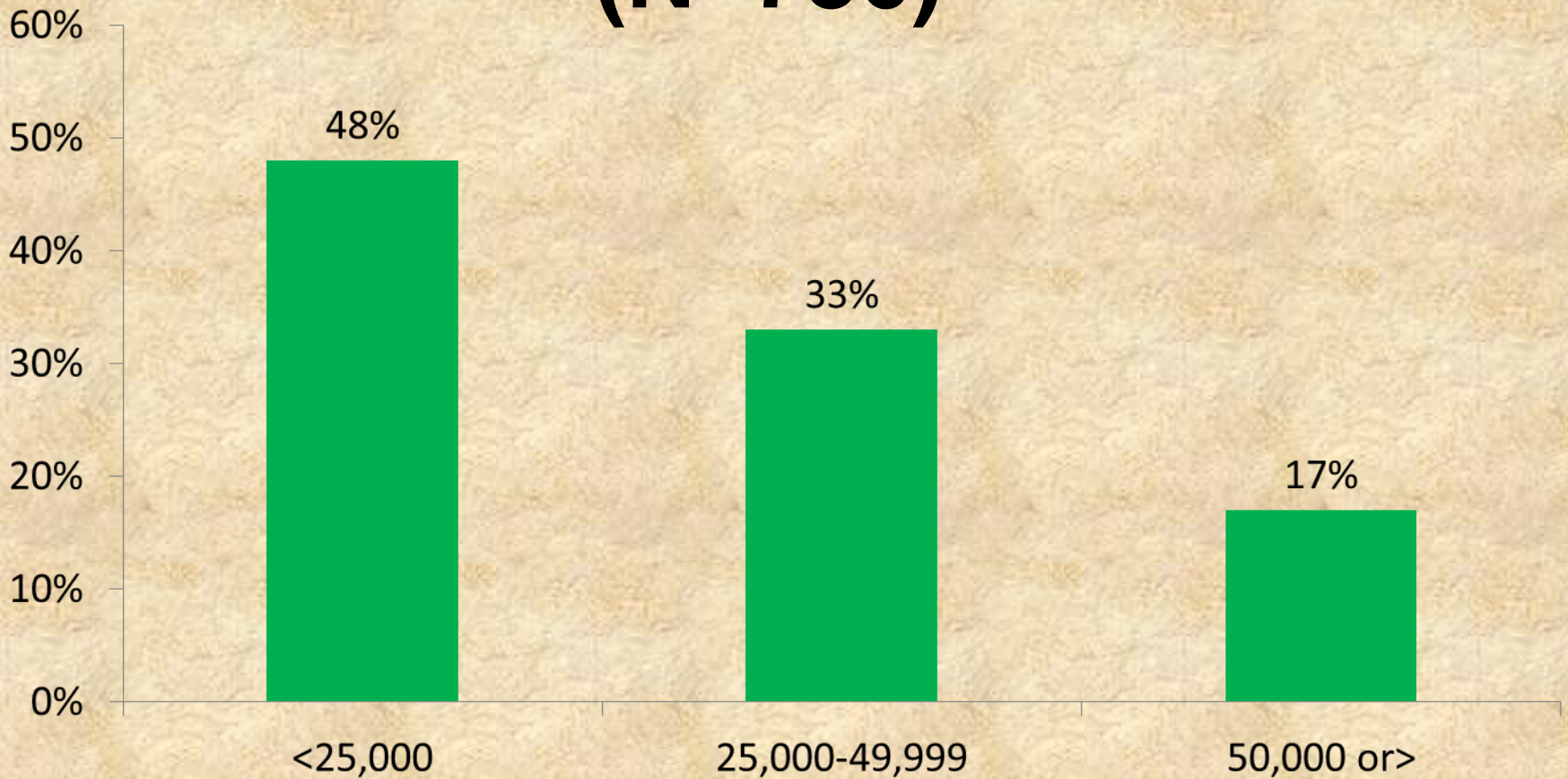# Unintended Pregnancy by Age, Women ages 18–44 (N=850)
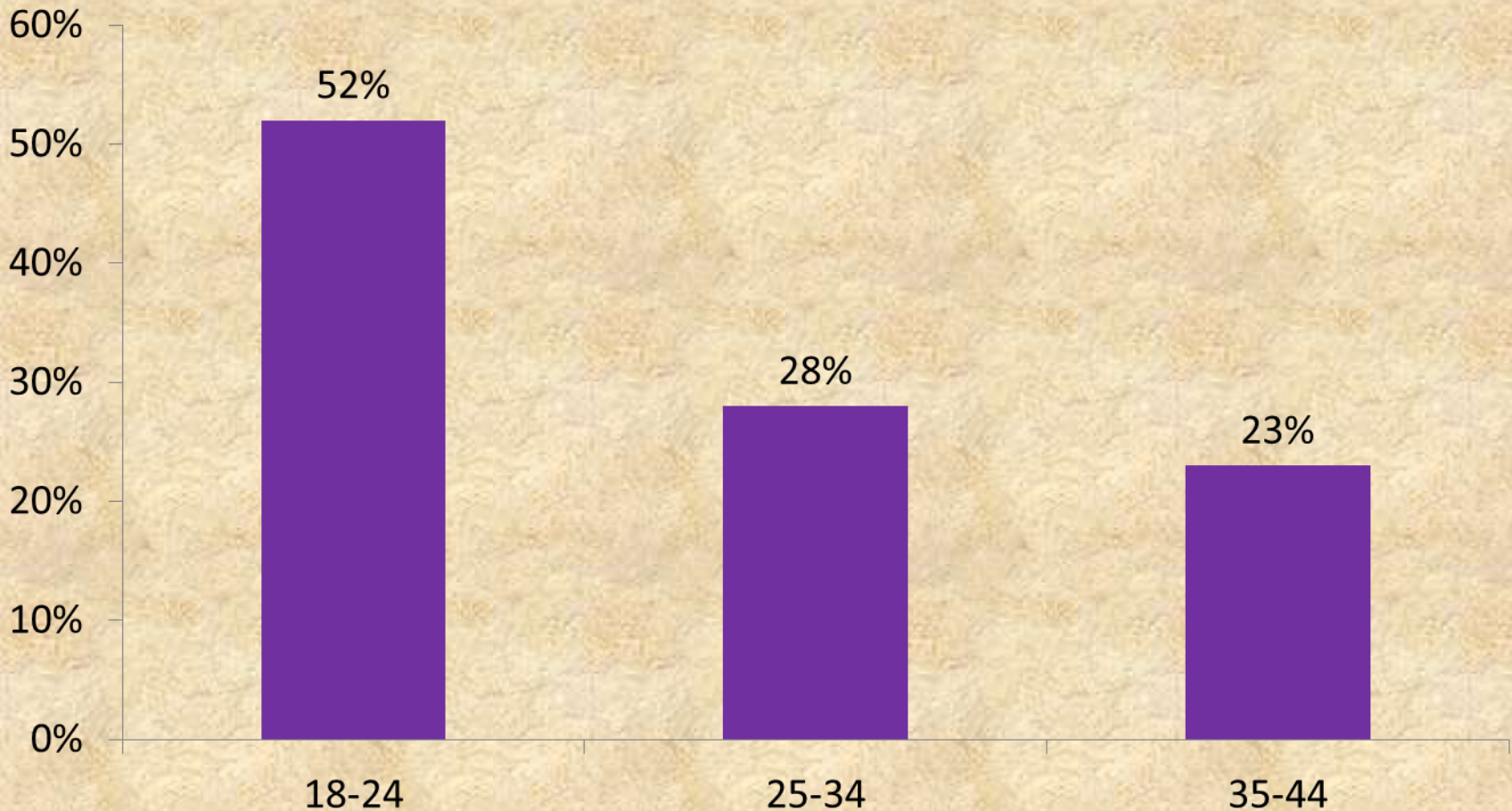
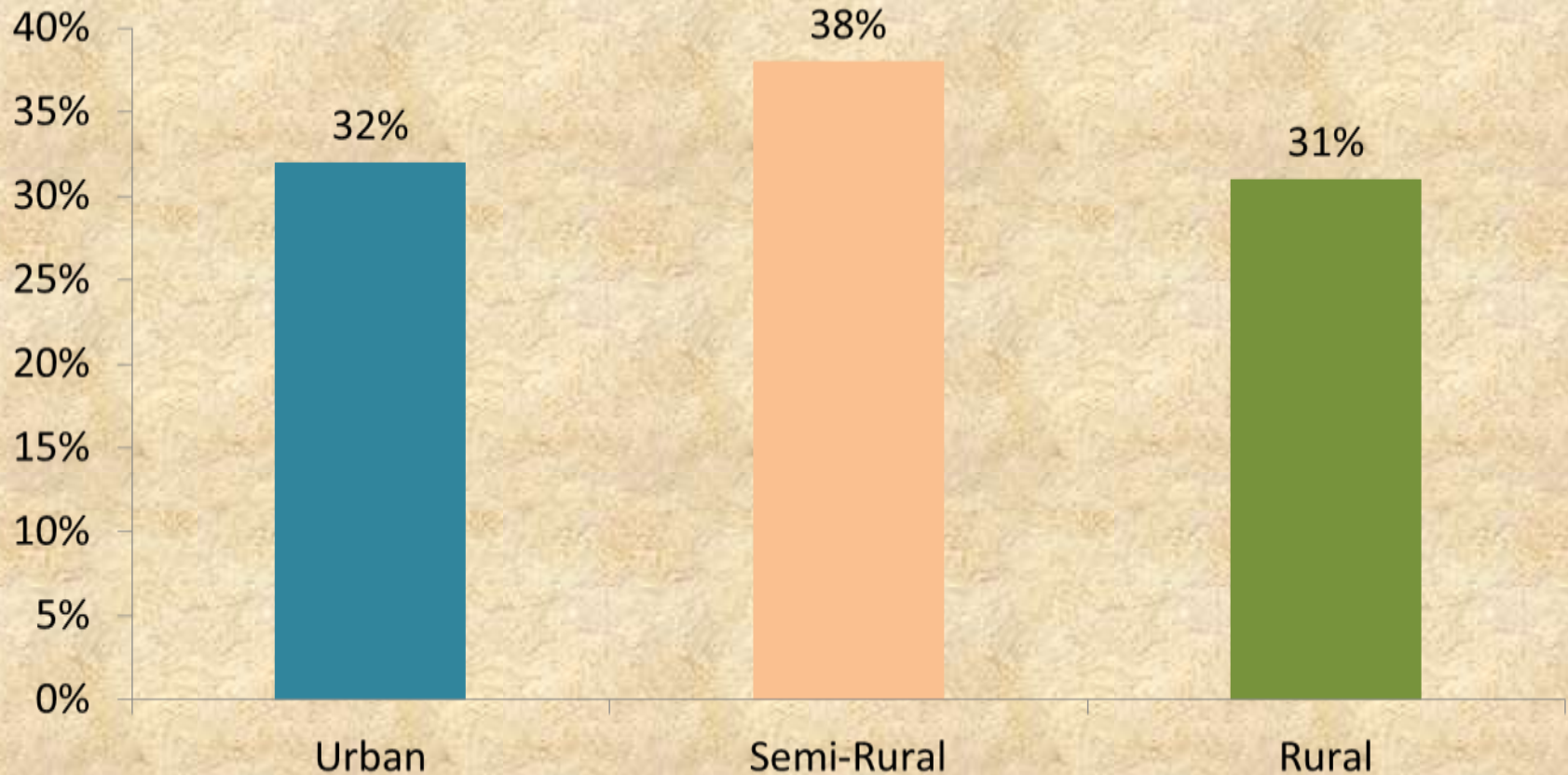# Unintended Pregnancy by Race, Women ages 18–44 (N=829)
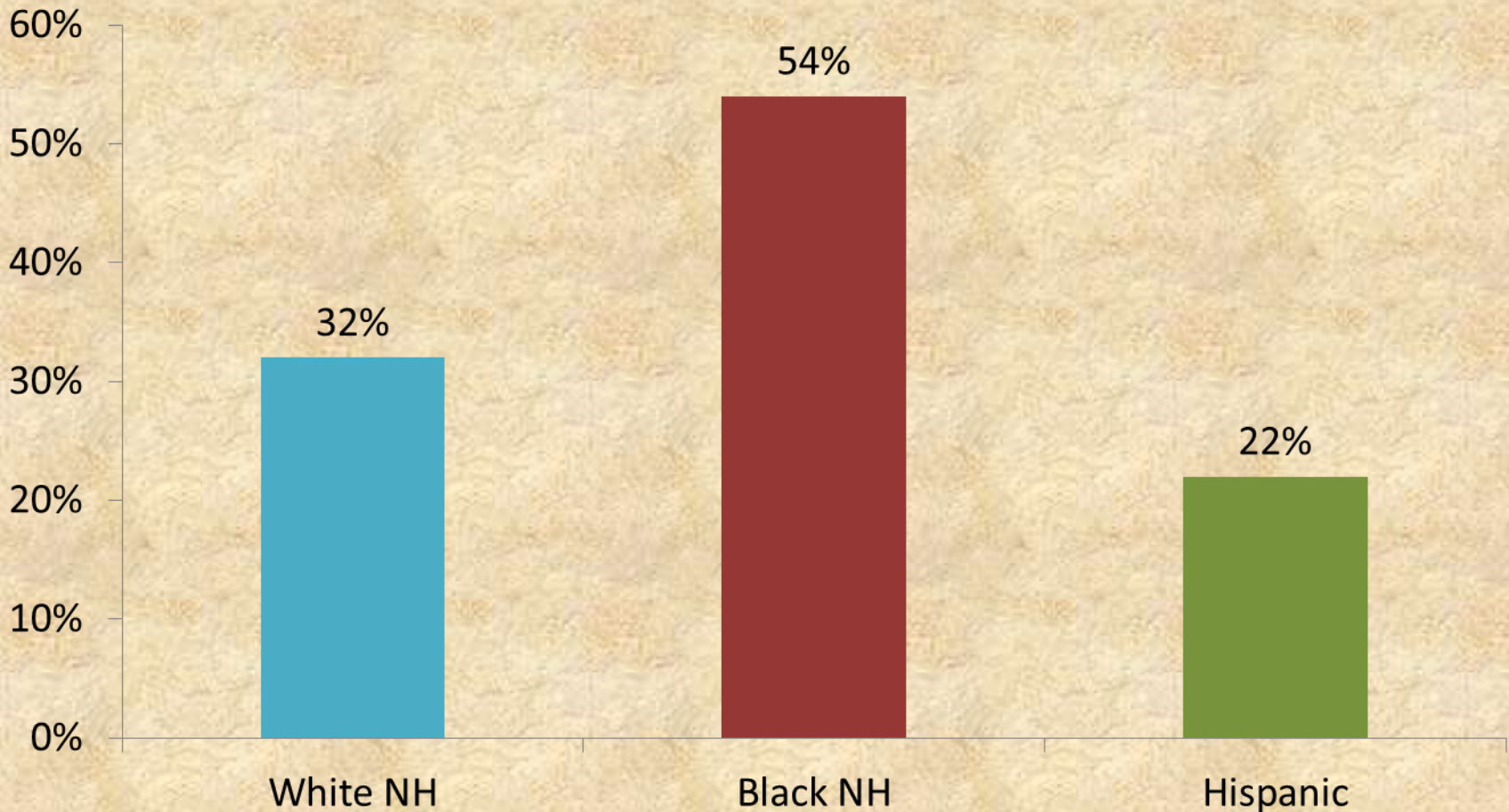
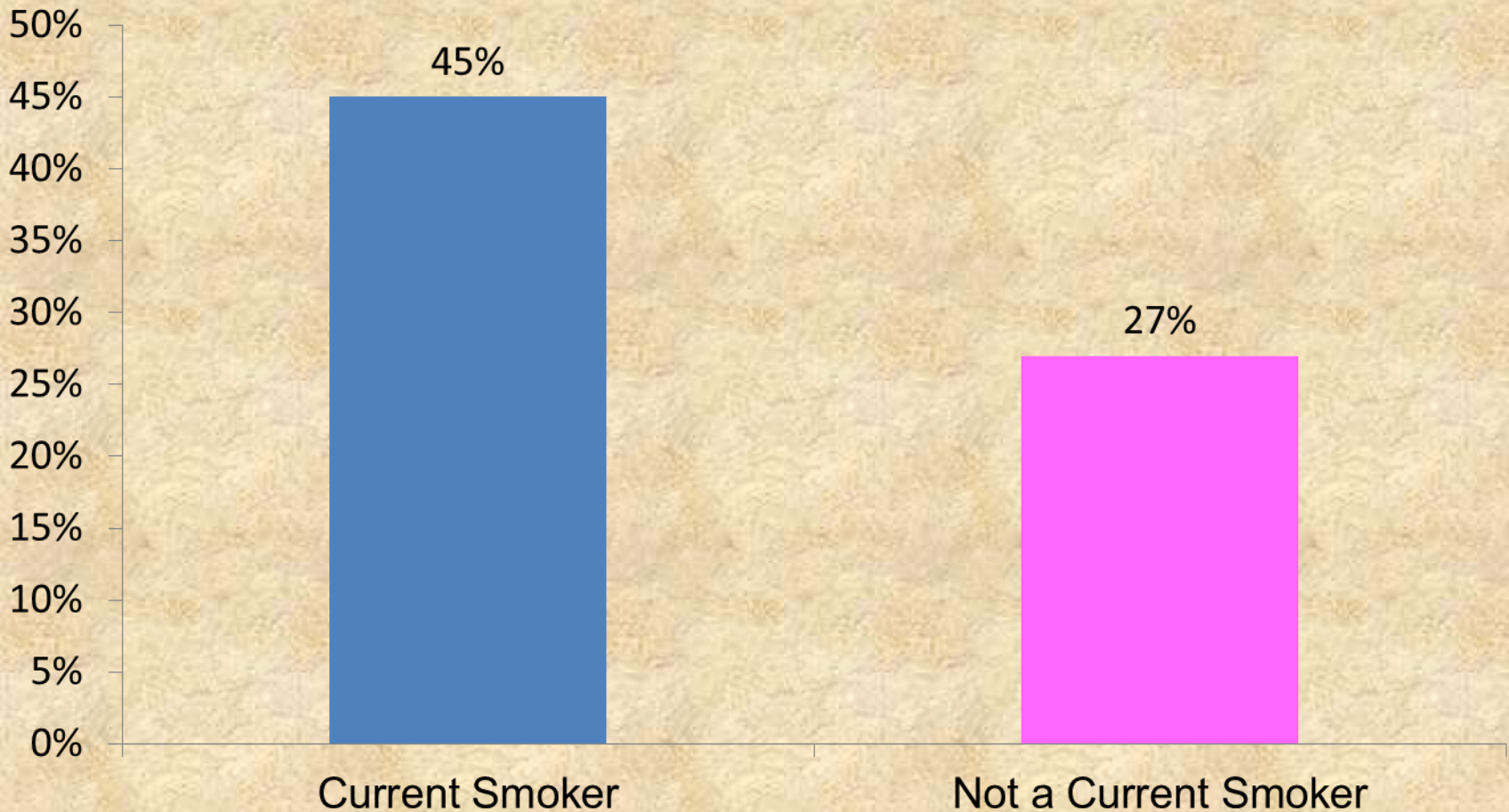Unintended Pregnancy by Education, Women ages 18–44 (N=850)
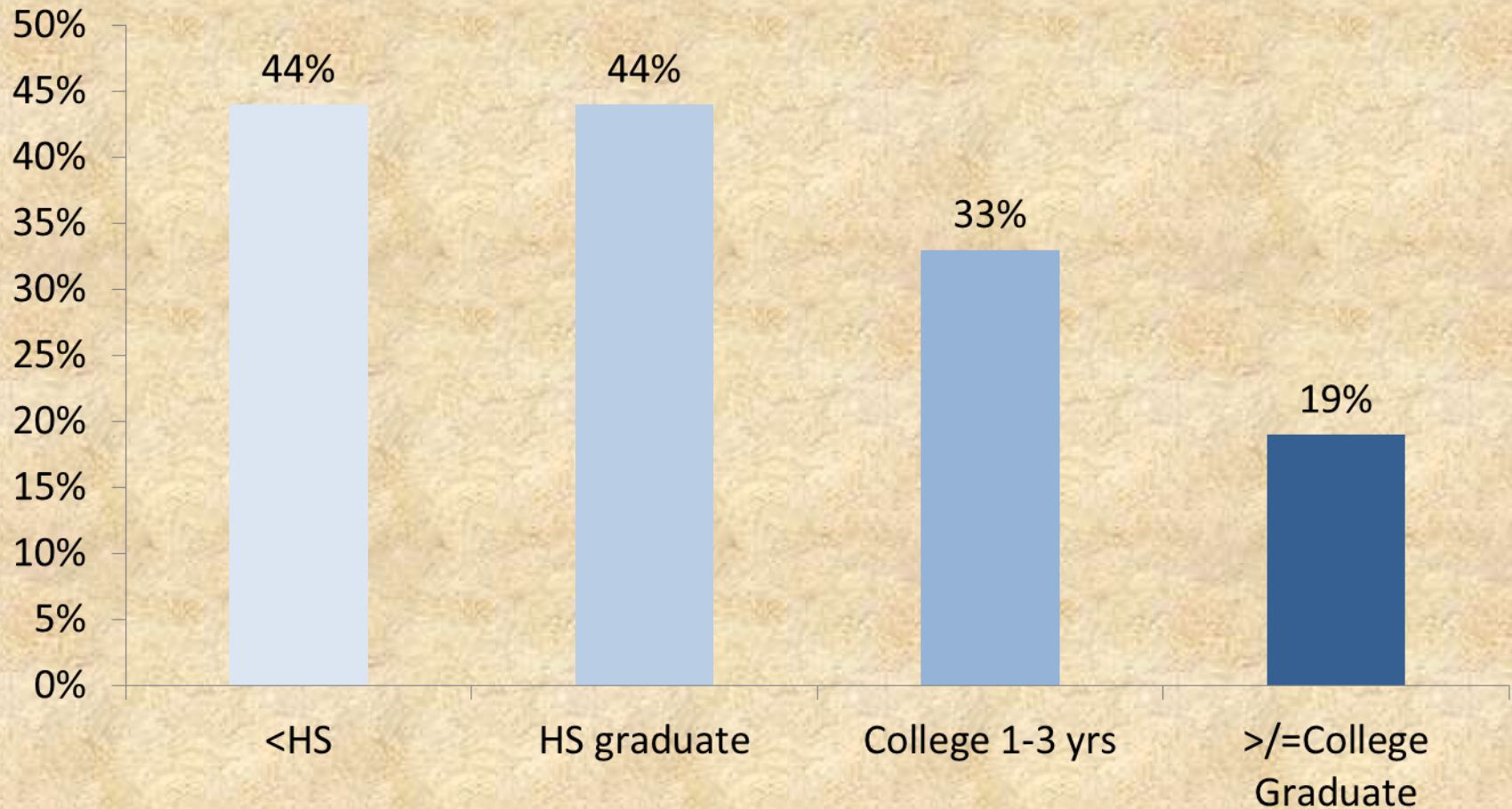
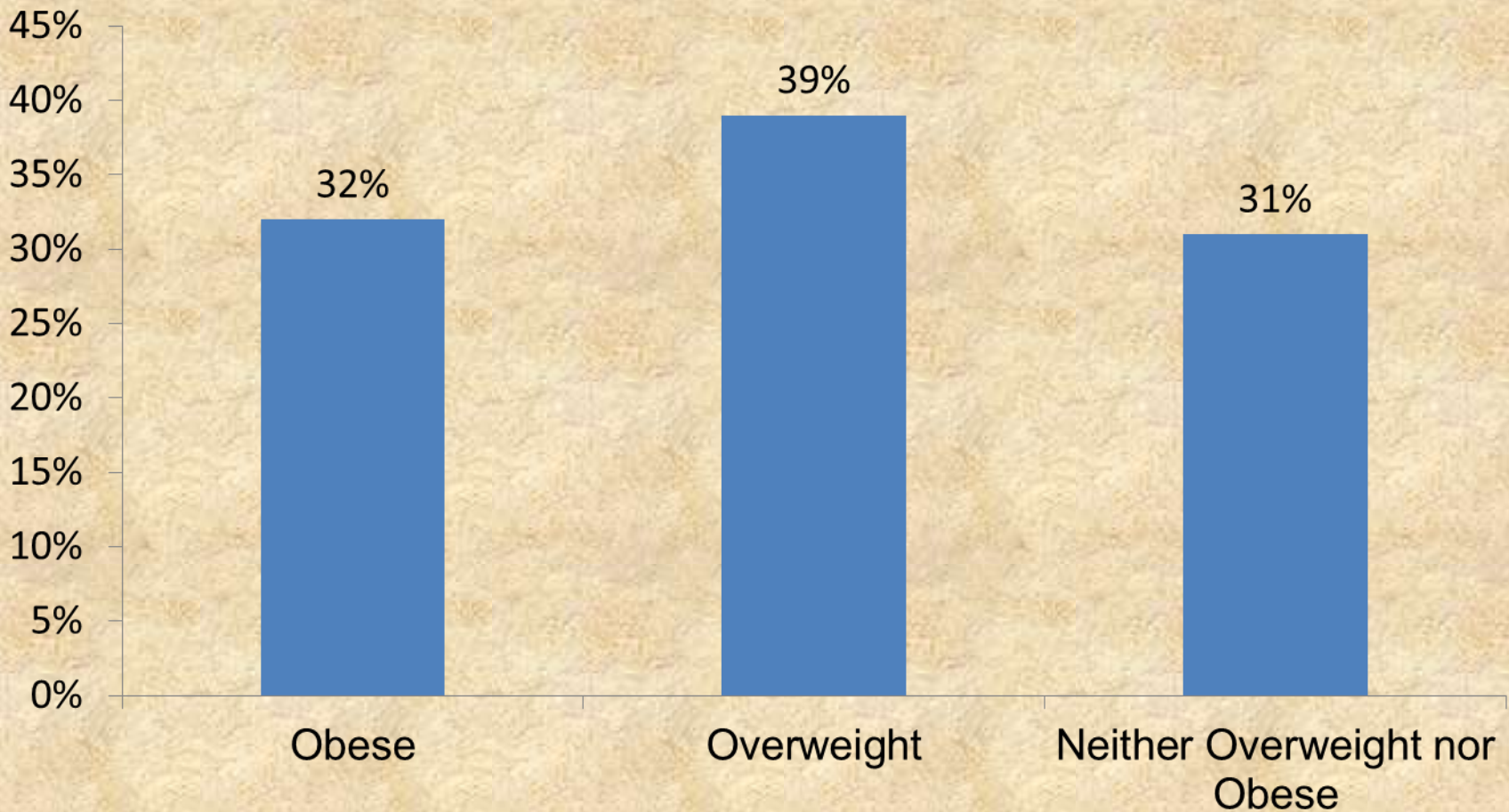Unintended Pregnancy by Income, Women ages 18–44 (N=786)

Unintended Pregnancy by Region, Women ages 18–44 (N=850)

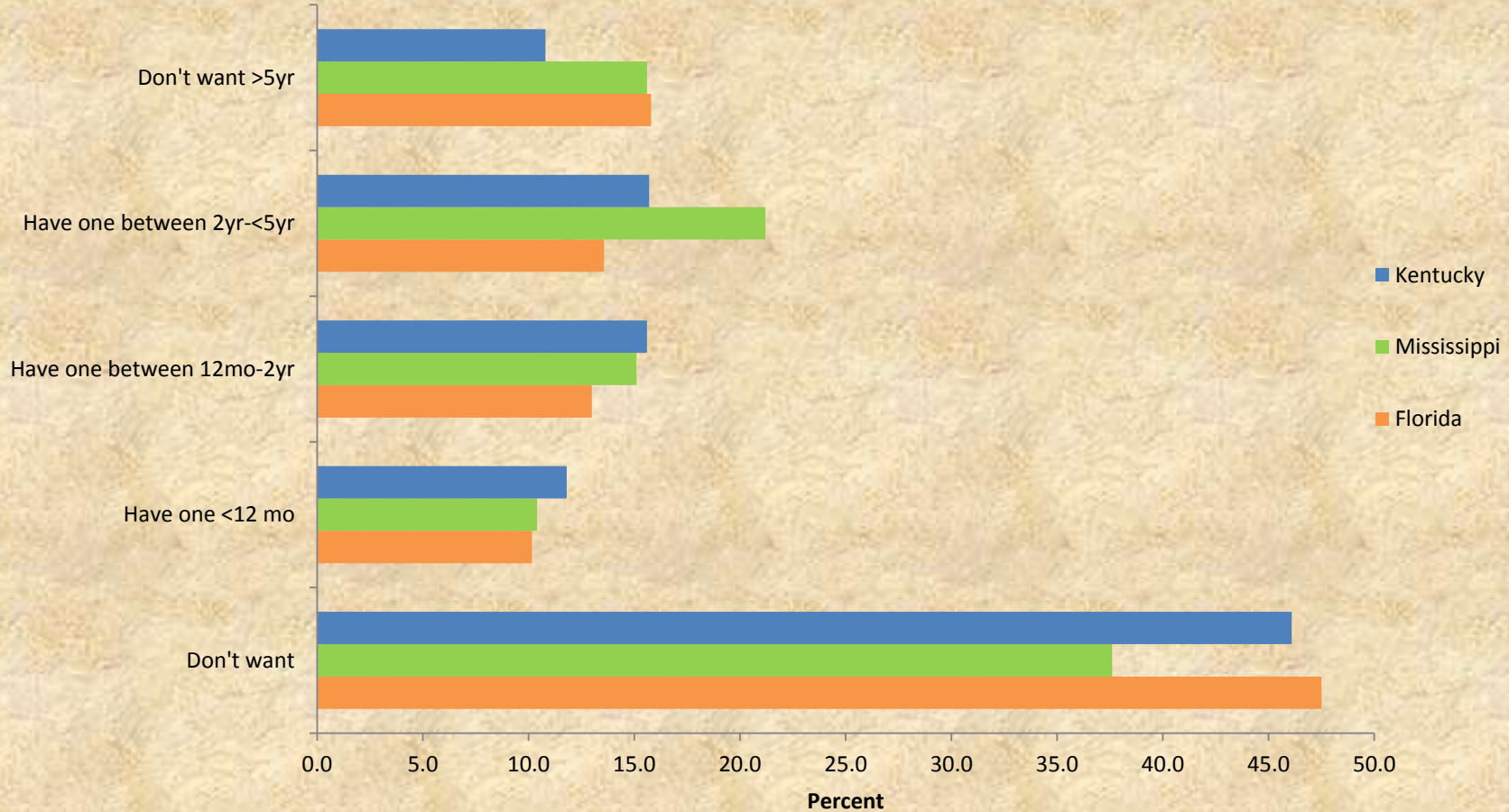# Unintended Pregnancy by Smoking Status, Women ages 18–44 (N=850)

Unintended Pregnancy by Obesity Status, Women ages 18–44 (N=850)

How do you feel about having a child sometime in the future? (BRFSS 2010)

LIMITATIONS

- The source of majority of this data is a national telephone survey so individuals with no landline telephones are excluded, selection bias.

- All information is self-reported, recall bias

- KY does not have PRAMS

- Some questions in BRFSS are asked only in odd years

CAVEATS

- Currently the pregnancy intention data collection is not uniform in BRFSS
- It varies by state's needs
- It varies by year
- Questions change
- The question requires recalling intentions retrospectively

Importance of this Data to KY

- Create Kentucky's first preconception health profile

- Direct the limited resources to the population in greatest need

- Integrate the data from these indicators into use

CONCLUSION

- It is possible to track pregnancy intention using population based measures such as BRFSS and PRAMS

Recommendation

- The question about pregnancy intention be included as part of the core BRFSS
  - It will assist in getting a good sample size to track changes and make national and state-to-state comparisons.

- Reproductive Health, Family Planning and Preconception Health programs should coordinate efforts to address this issue of unintended pregnancies