

# ***Social Determinants and Maternal Perspectives on Contemporary Maternity Care***

***Prof. Gene Declercq, PhD  
Boston University SPH***

***[www.birthbythenumbers.org](http://www.birthbythenumbers.org)***

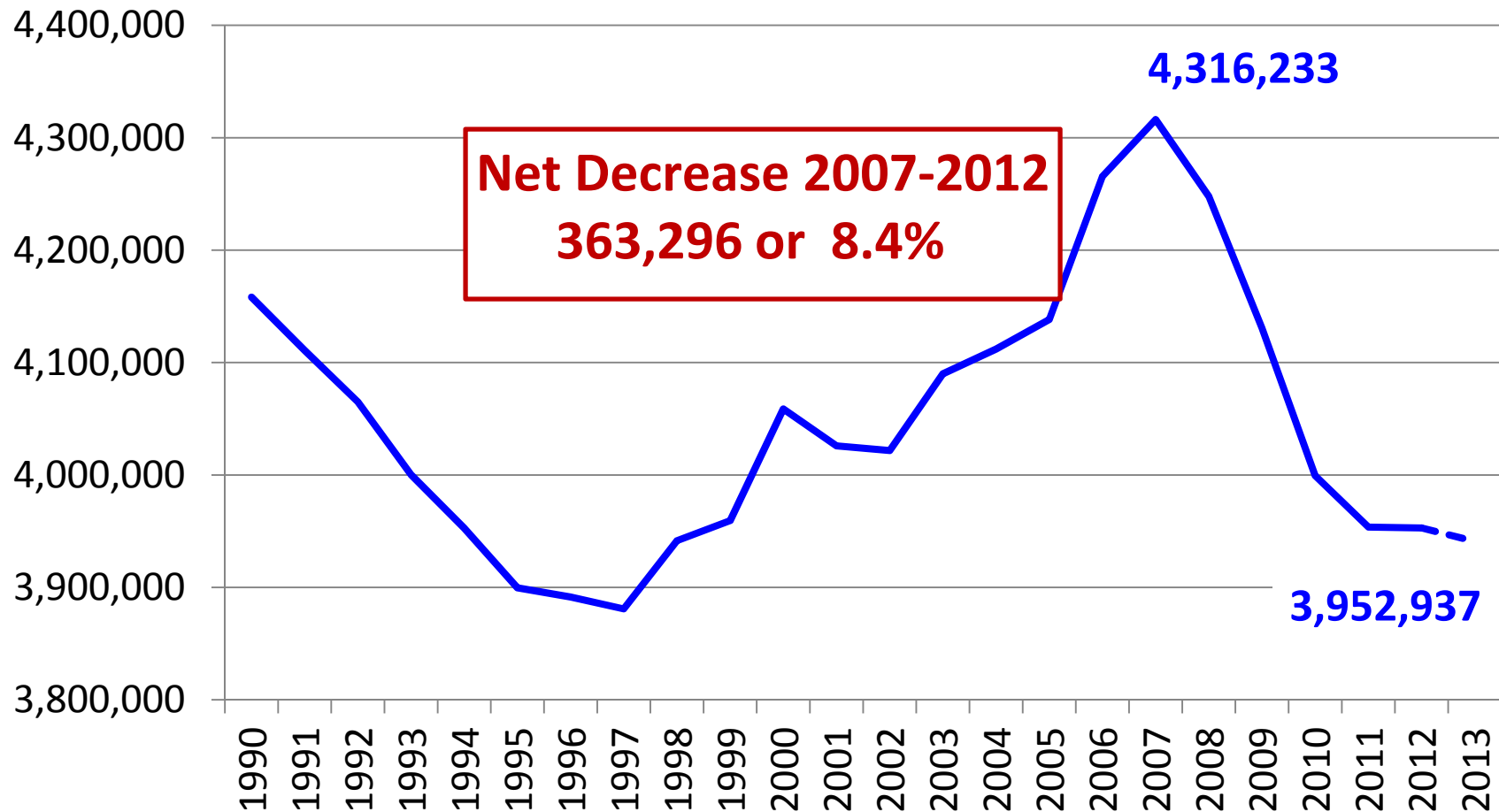
***MPQC Spring Meeting  
April 30, 2014  
Mass. Medical Society***

# Acknowledgements

- Support from Robert Wood Johnson Health Policy Investigator Awards, MCHB, NIH
- Colleagues from
  - Boston University (Belanoff, Cabral, Heffner)
  - National Center for Health Statistics (MacDorman)
  - Childbirth Connection (Sakala & Corry)
  - Other (Barger, Diop, Kotelchuck, Renfrew)

# Looking at Disparities

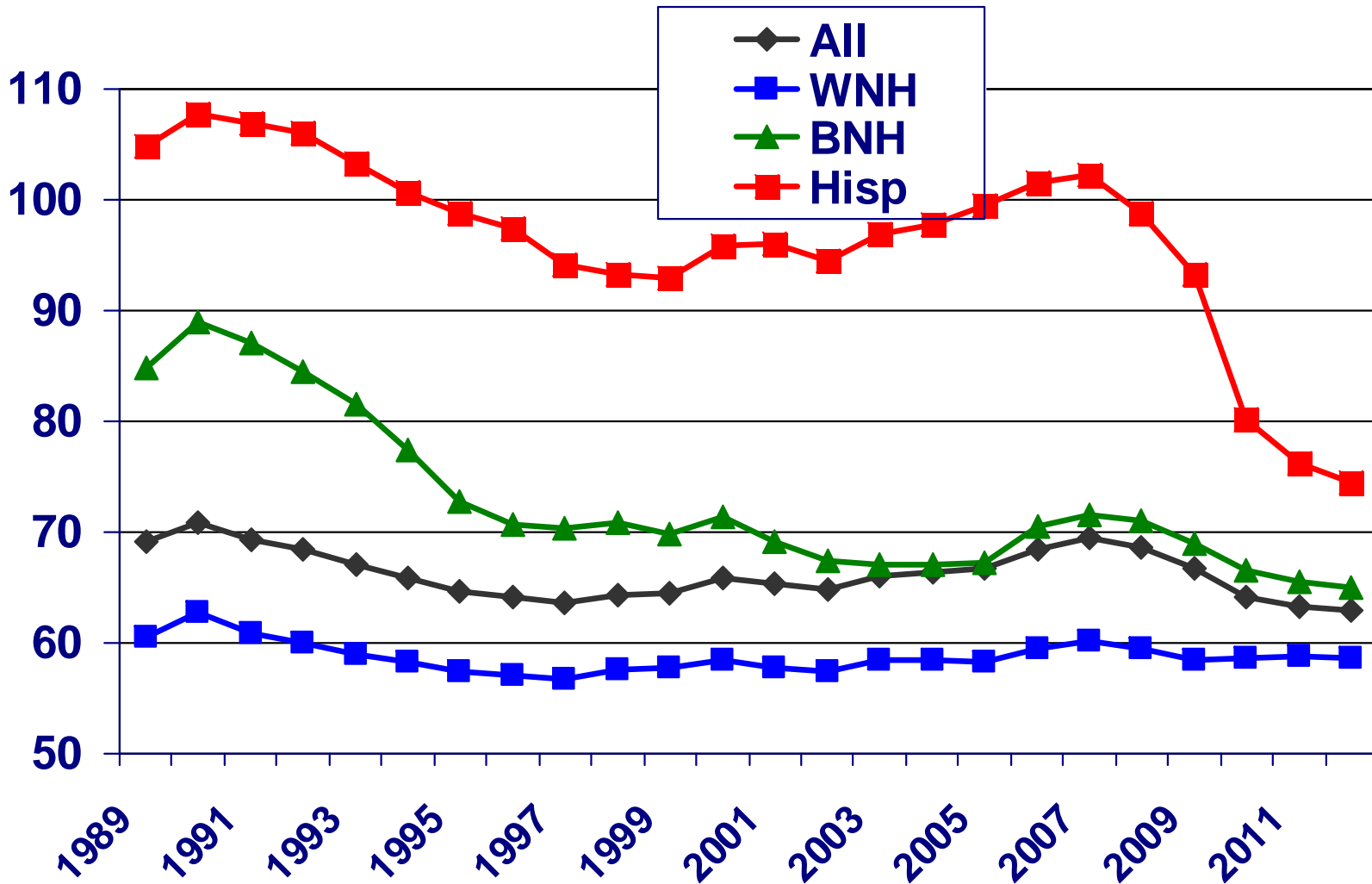
# Total U.S. Births, 1990-2012



Source: Adapted from CDC VitalSTATS. <http://www.cdc.gov/nchs/VitalStats.htm>

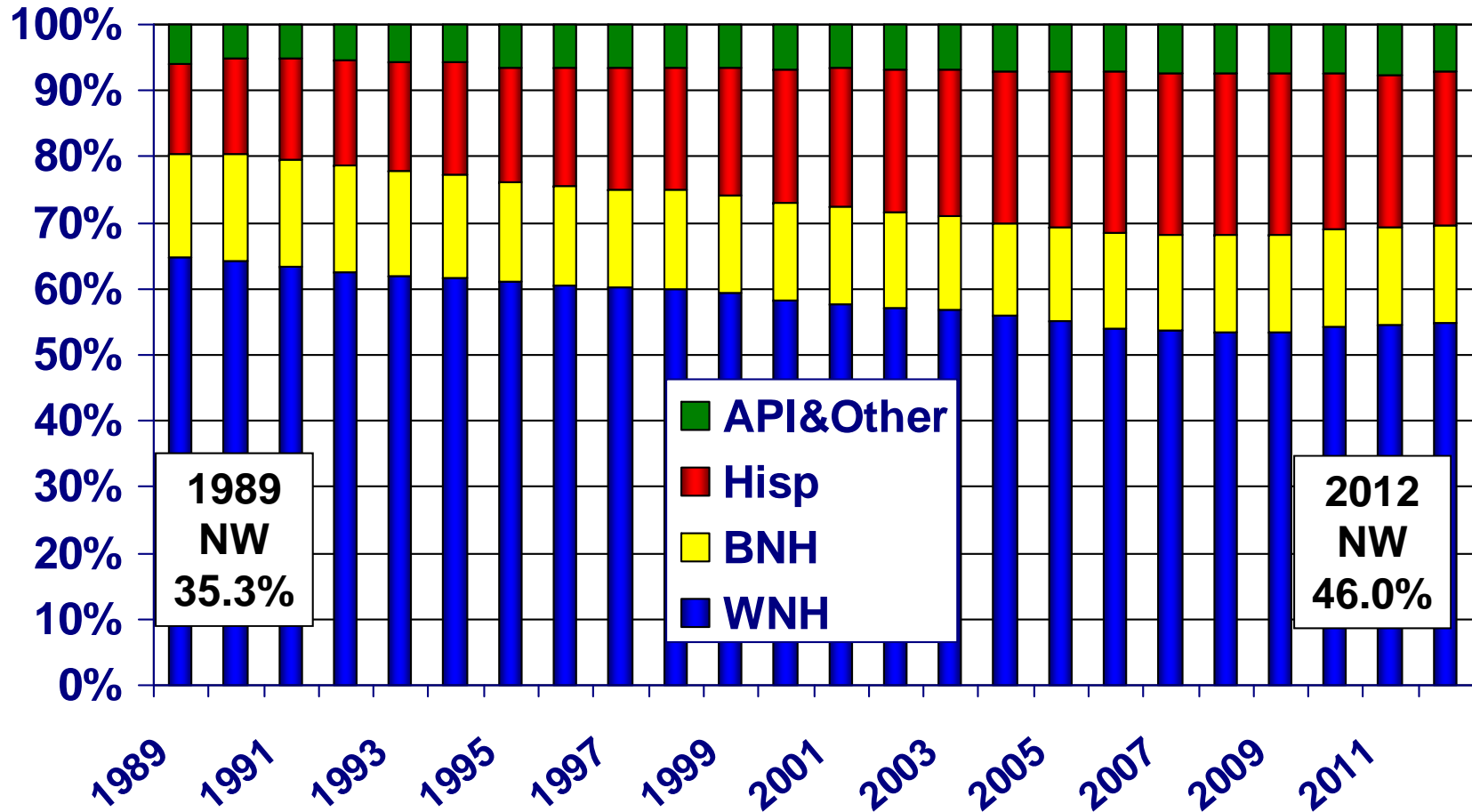
*BirthByTheNumbers.org*

# U.S. Fertility Rates (per 1,000) by Race/Ethnicity, 1989-2012

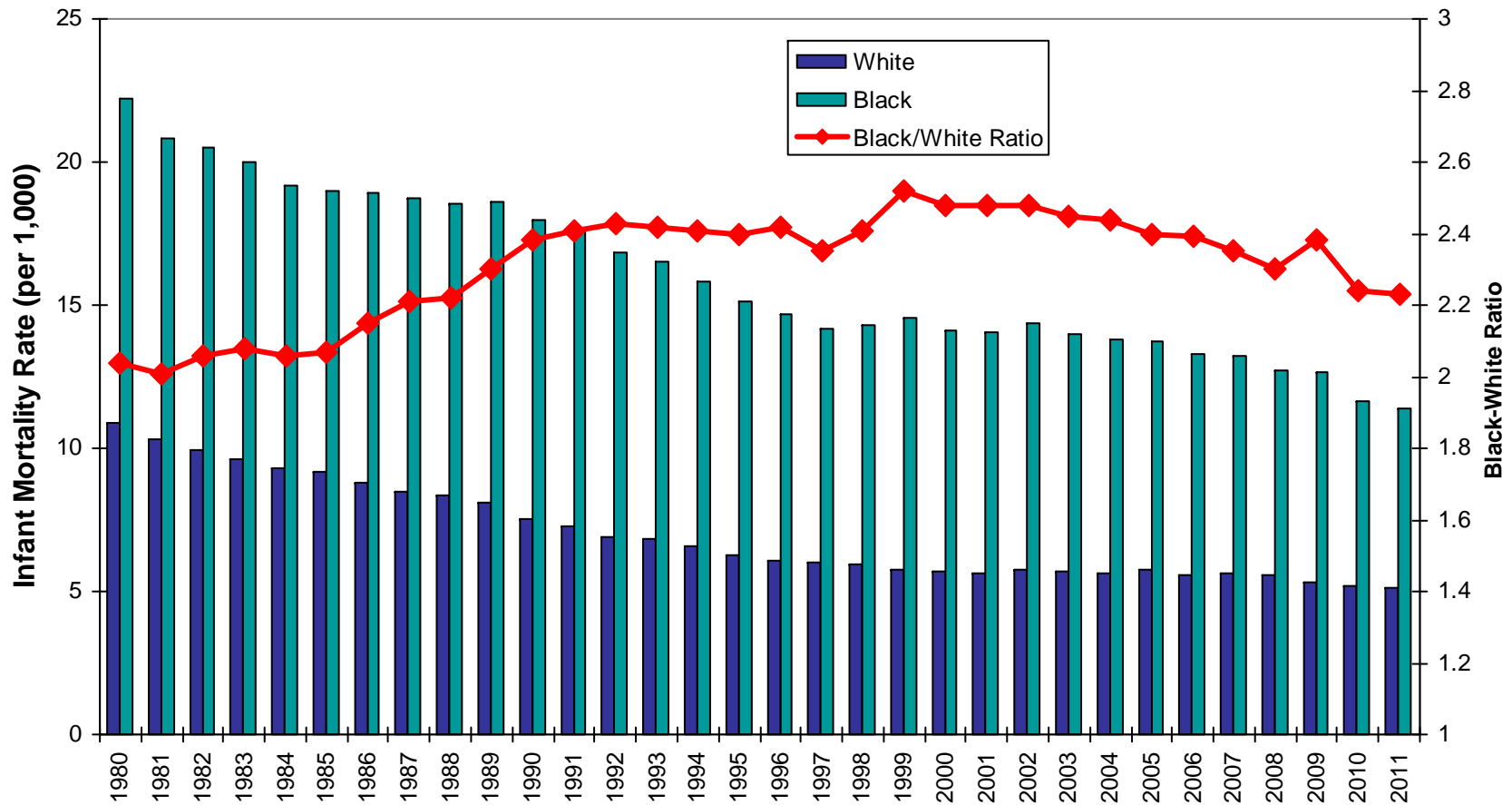


Fertility rates computed by relating total births, regardless of age of mother, to women 15-44 years.

# Proportion of U.S. Births by Race Ethnicity, 1989-2012

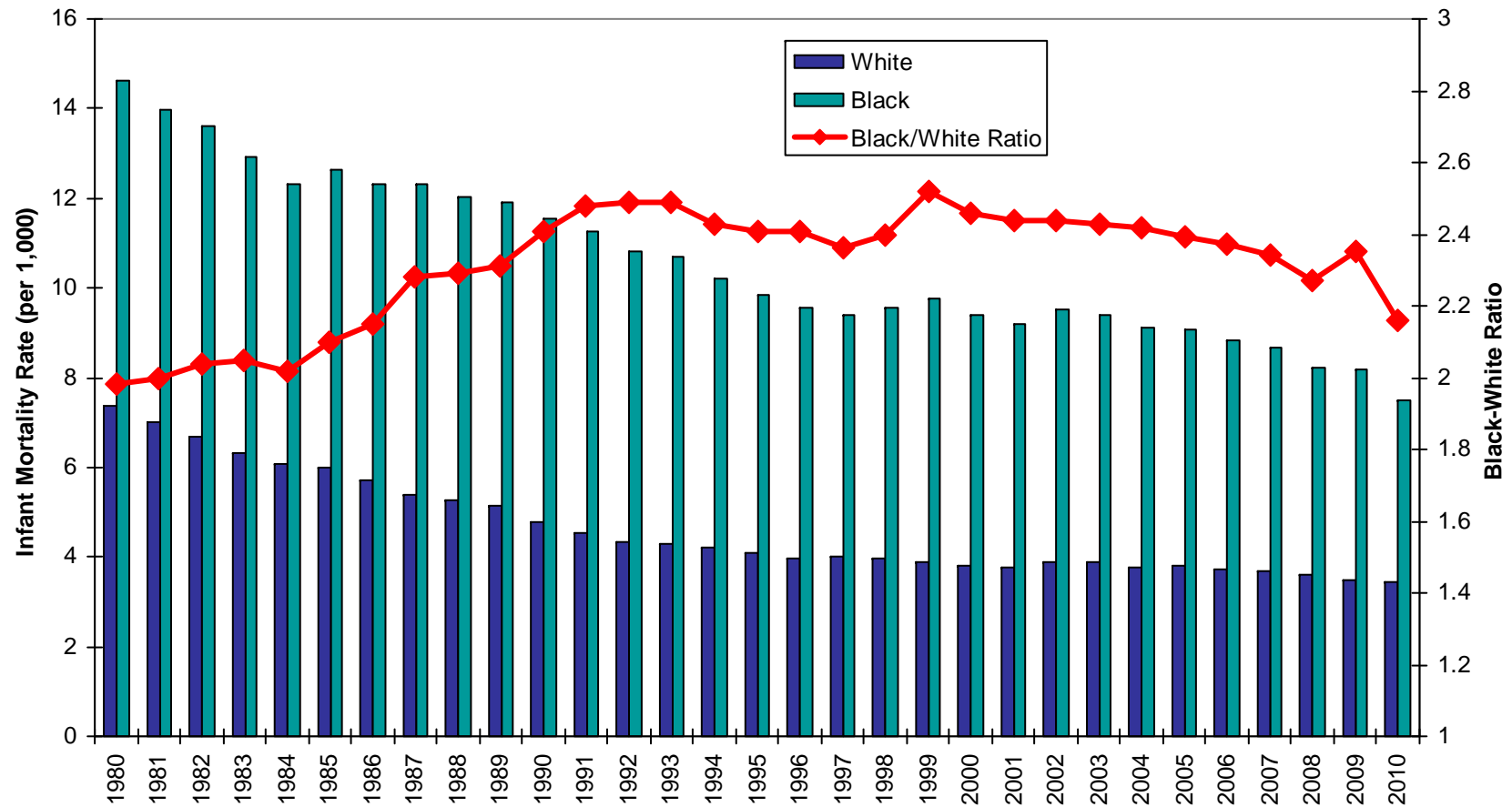


# Infant Mortality US by Race, 1980-2011



Source: NCHS

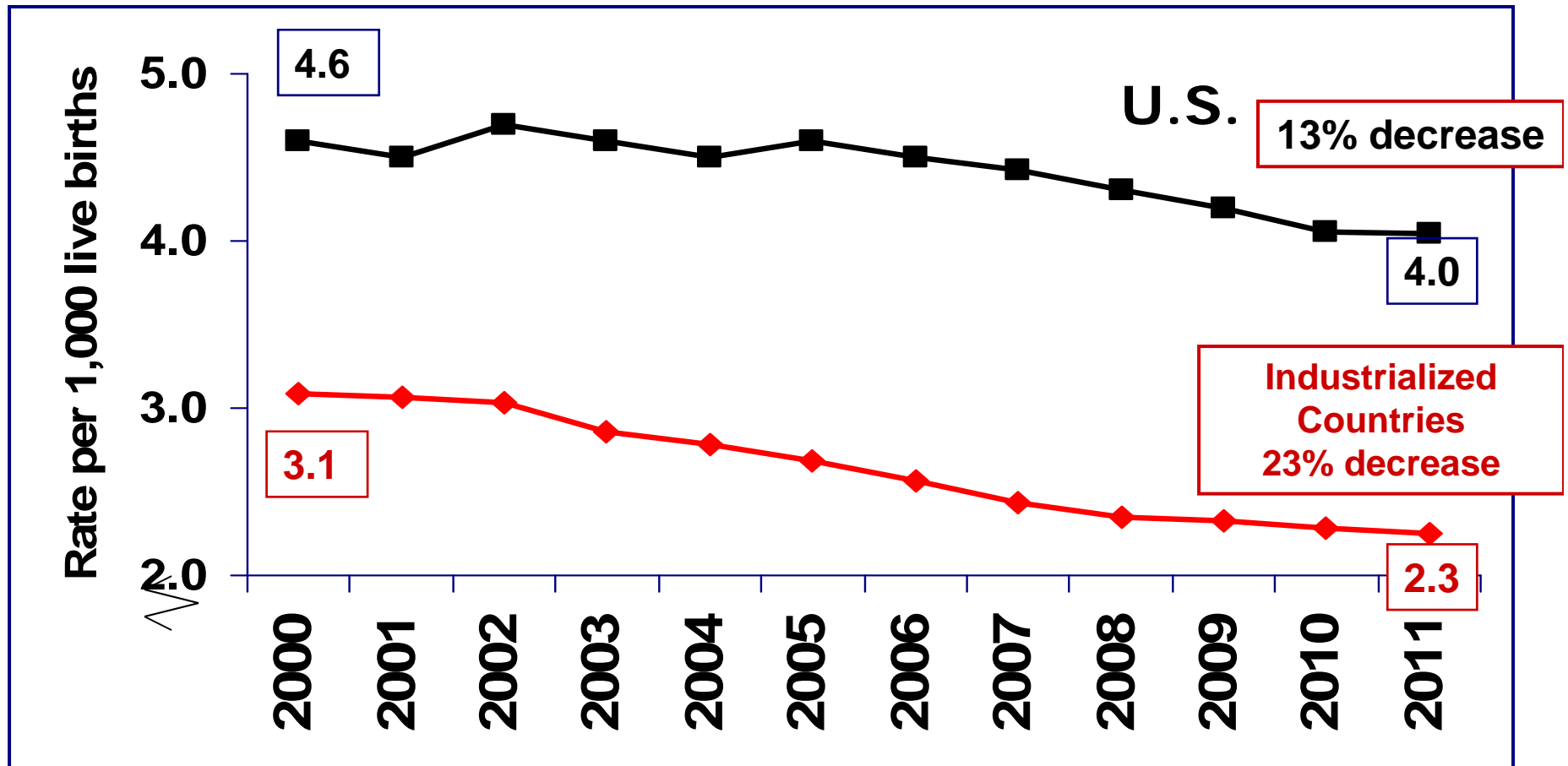
# Neonatal Mortality US by Race, 1980-2010



Source: NCHS



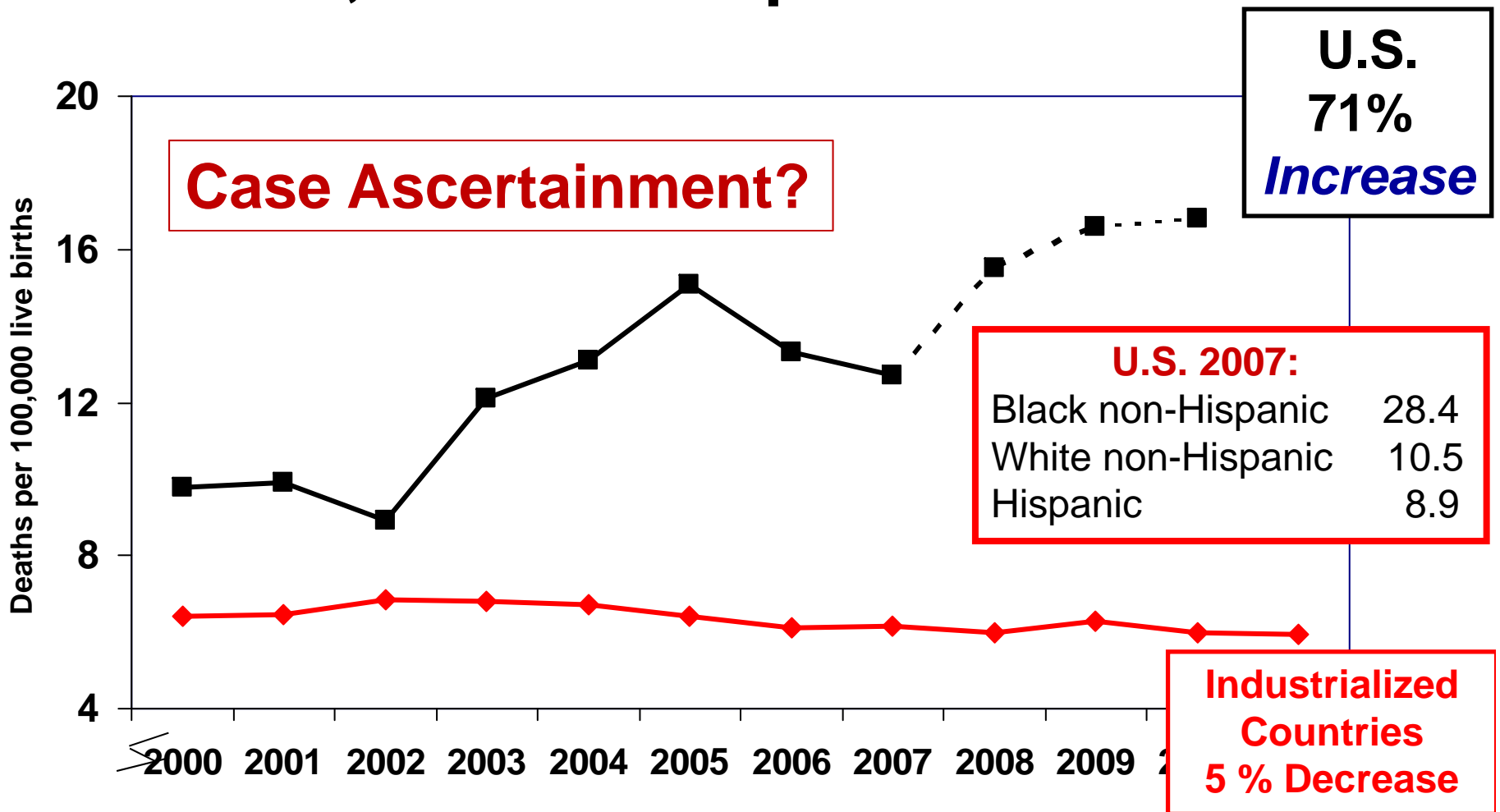
# Neonatal Mortality Rate (per 1,000 births), 2000-2011, U.S., & Ave. for Industrialized Countries\*



\* Countries with 100,000+ births (2011): Australia, Belgium, Canada, Czech Republic, France, Germany, Greece, Israel, Italy, Japan, Netherlands, Portugal, Spain, S. Korea, Sweden, U.K.

Source: OECD Health Data, 2013 & MacDorman MF, et al. Recent declines in infant mortality in the United States, 2005–2011. NCHS data brief, no 120. Hyattsville, MD: NCHS. 2013.

# Maternal Mortality Ratios (per 100K births), 2000-2011, U.S. & Comparable Countries \*

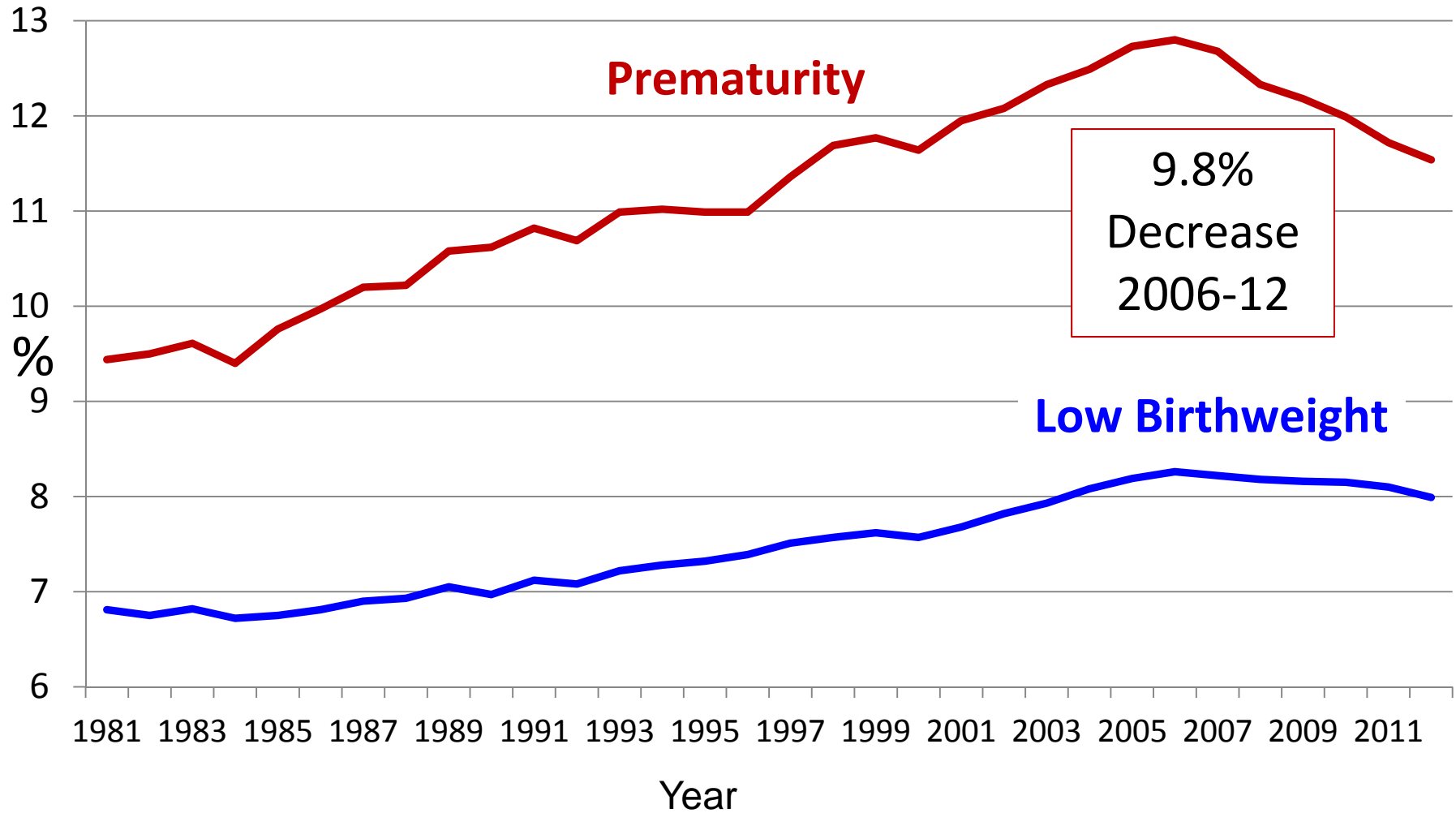


\* Countries with 300,000+ births (2011): Australia, Canada, France, Germany, Italy, Japan, S. Korea, Spain, United Kingdom

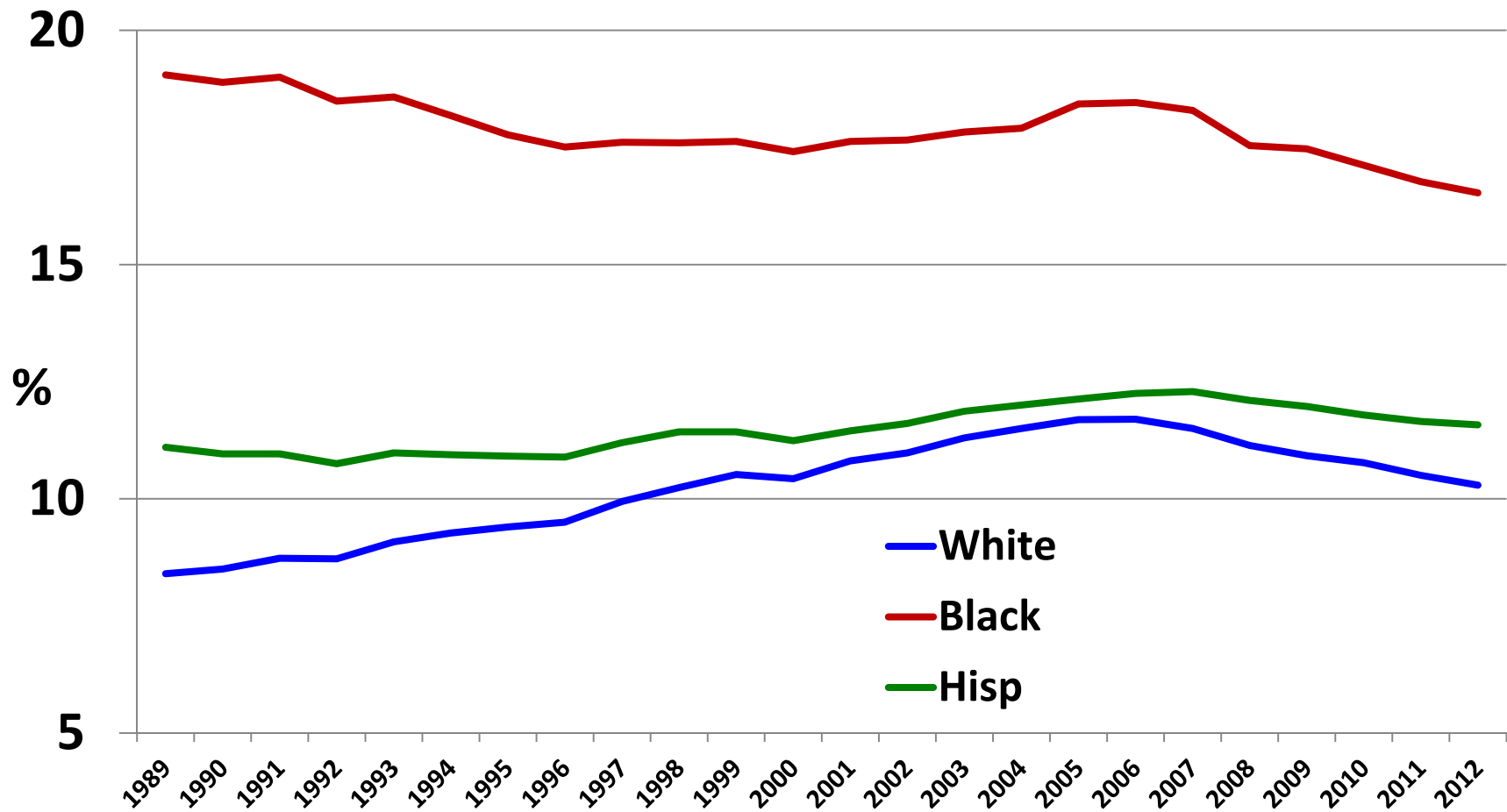
Sources: OECD Health Data 2013; ^California Maternal Quality Care Collaborative (CMQCC) 2014; NCHS. 2009. *Deaths, Final Data, 2007*.

NOTE: 2008-2010 US rates unofficial^

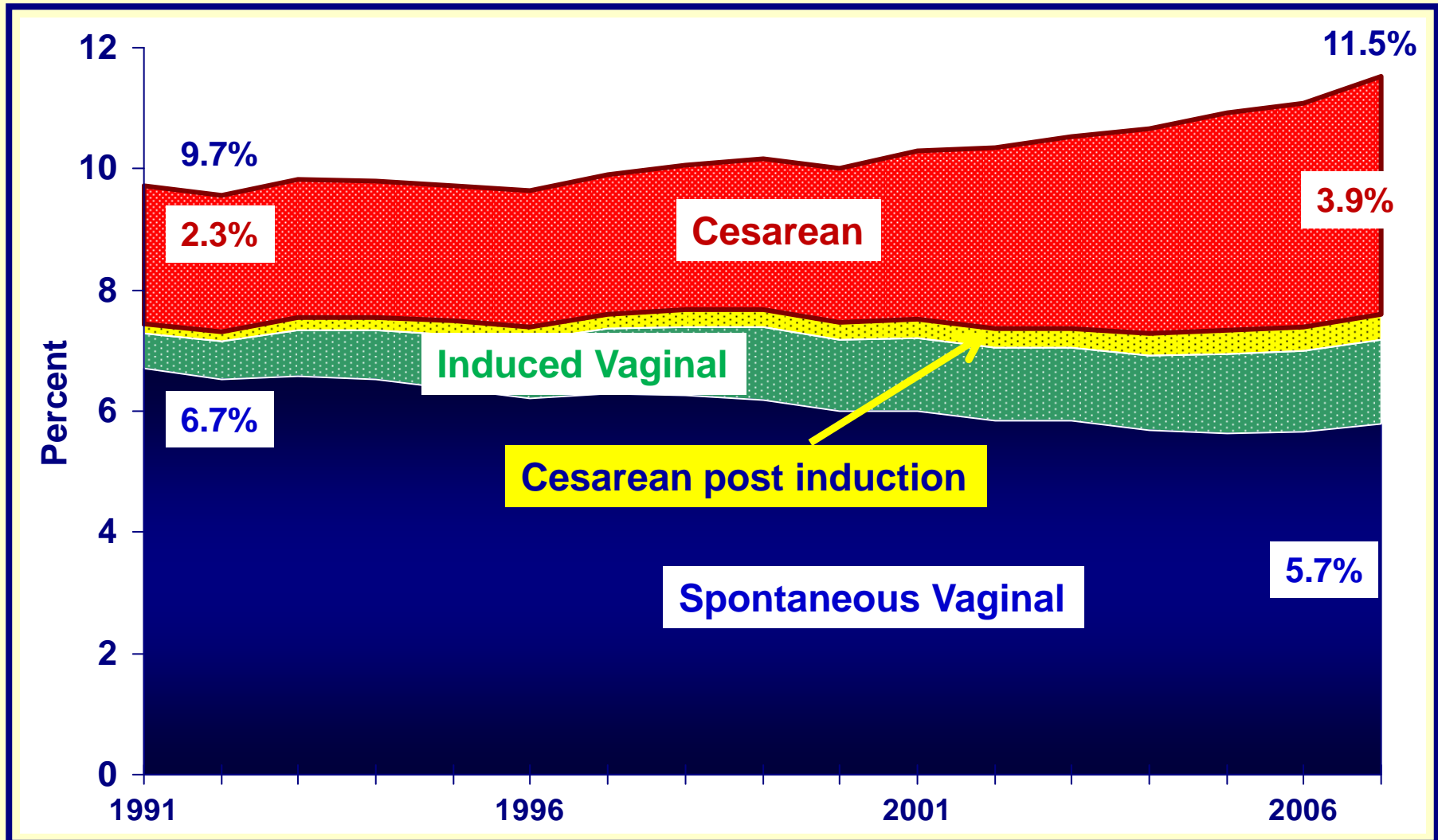
# Prematurity and Low Birthweight, U.S., 1981-2012



# Prematurity by Race/Ethnicity, U.S., 1989-2012

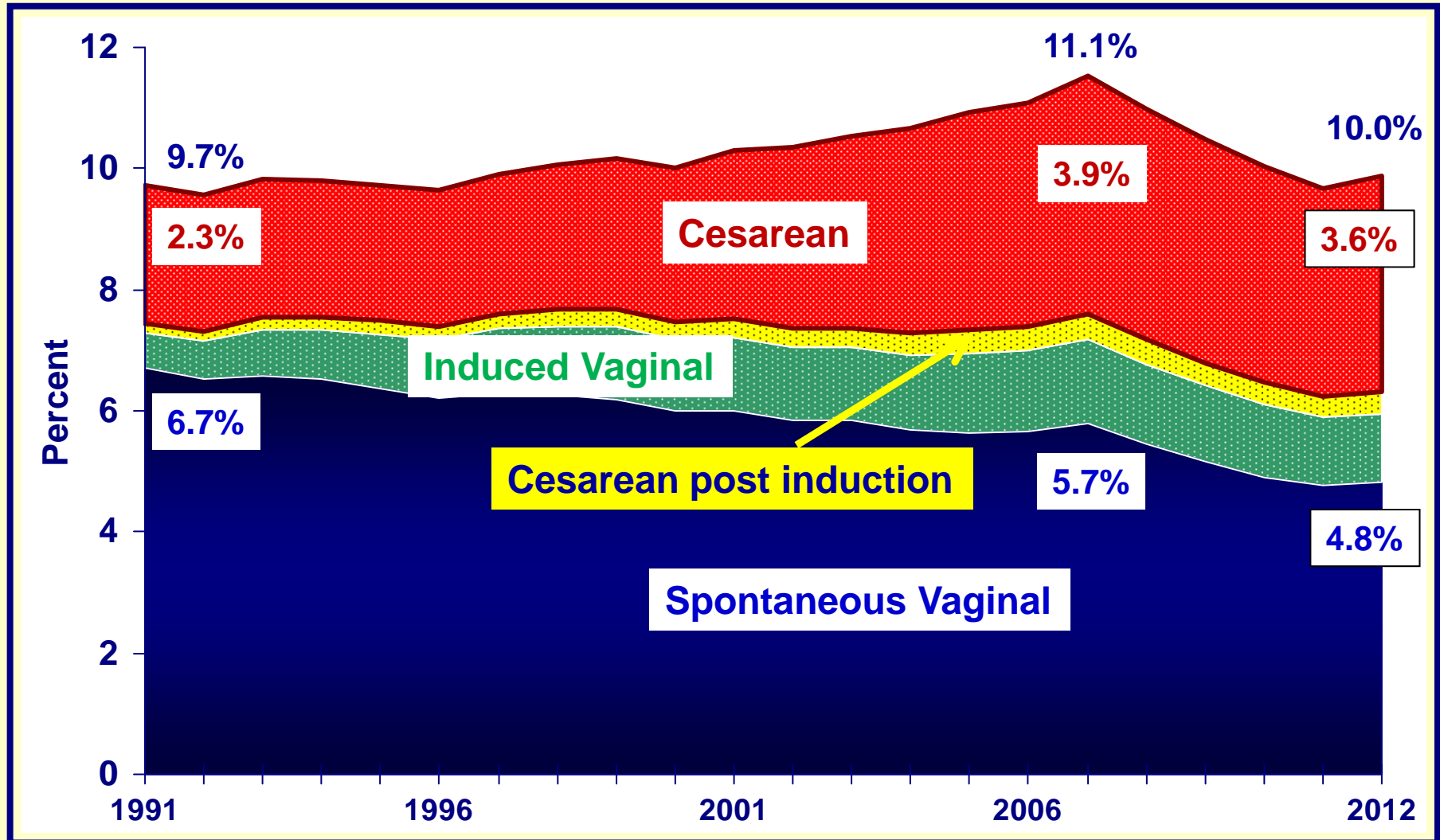


# Percent of singleton preterm (<37 weeks) births by method of delivery, United States, 1991-2007



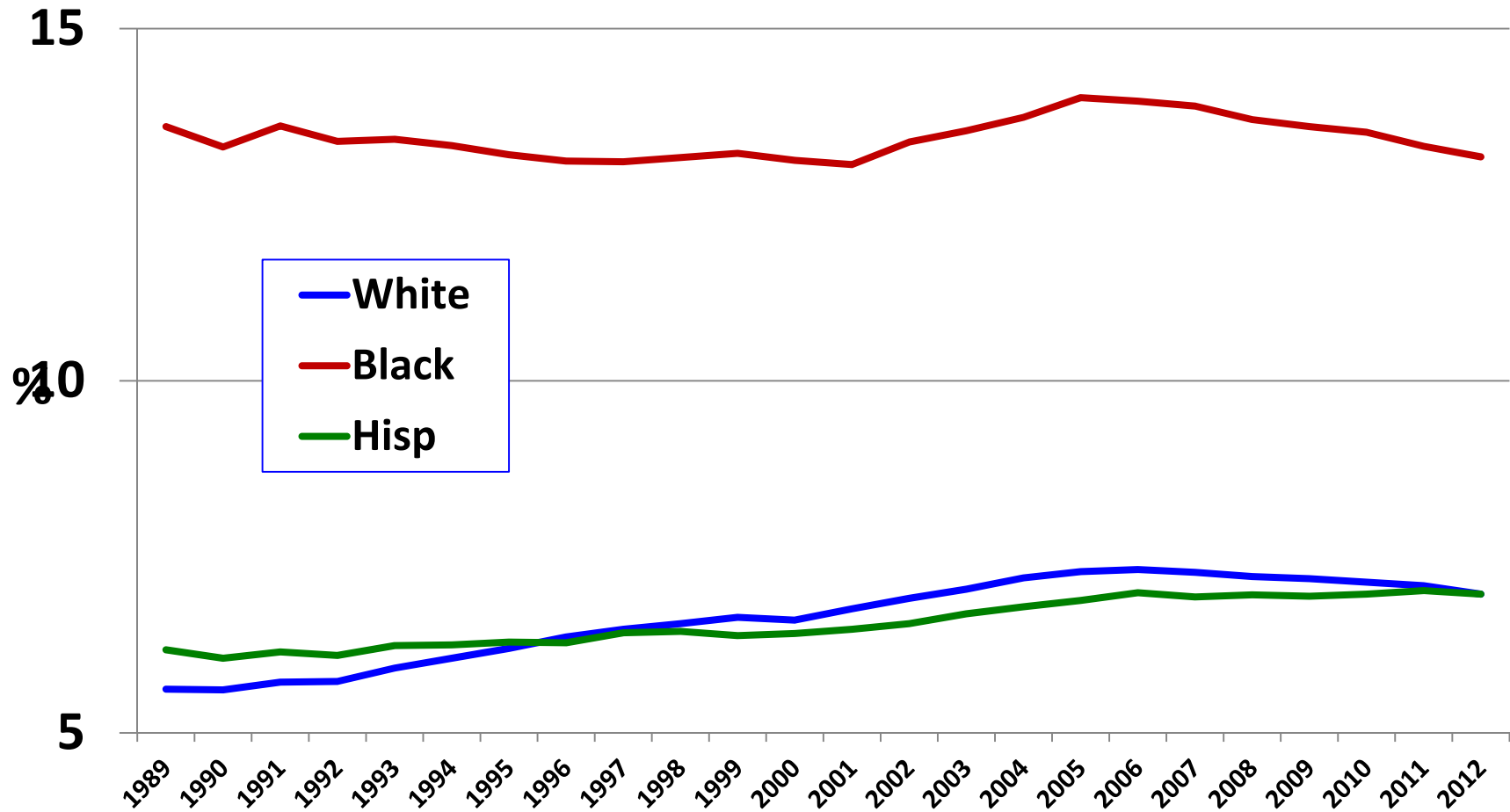
Source: Adapted from MacDorman et al. AJPH, 2011.

# Percent of singleton preterm (<37 weeks) births by method of delivery, United States, 1991-2012



Source: Adapted from MacDorman et al. AJPH, 2011.

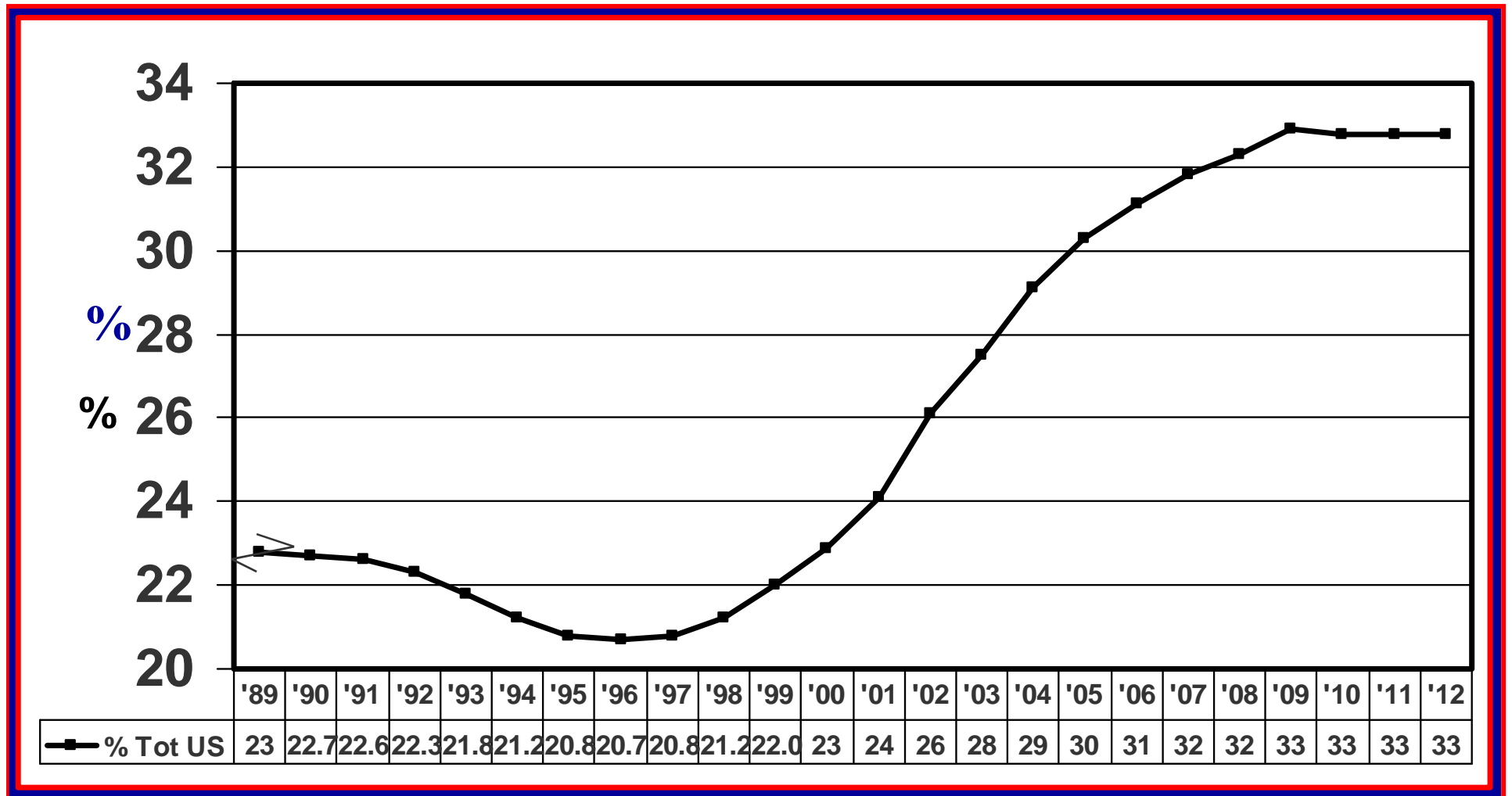
# Low Birthweight by Race/Ethnicity, U.S., 1989-2012



**What about disparities  
in process?**

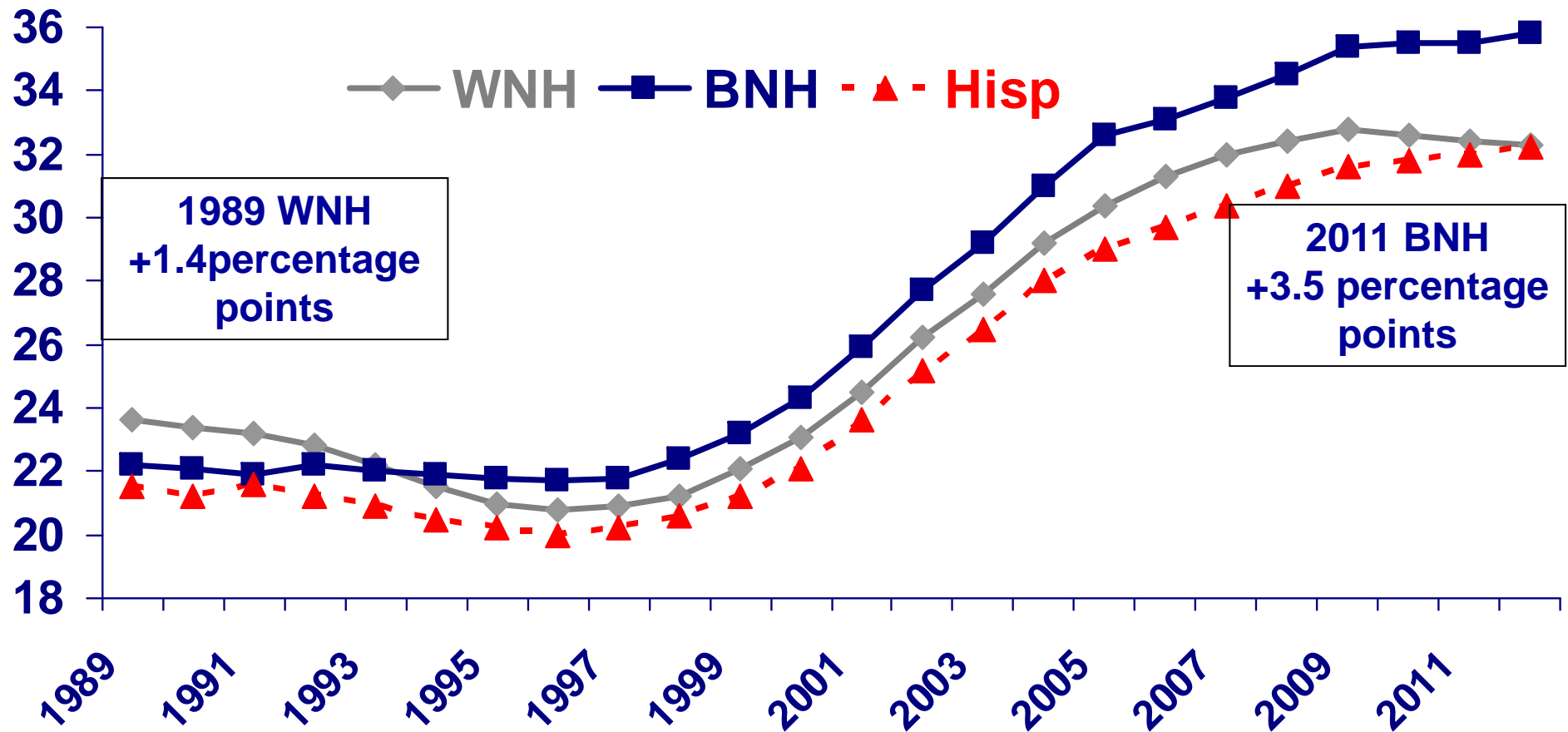


# US Cesarean Rates, 1989-2012



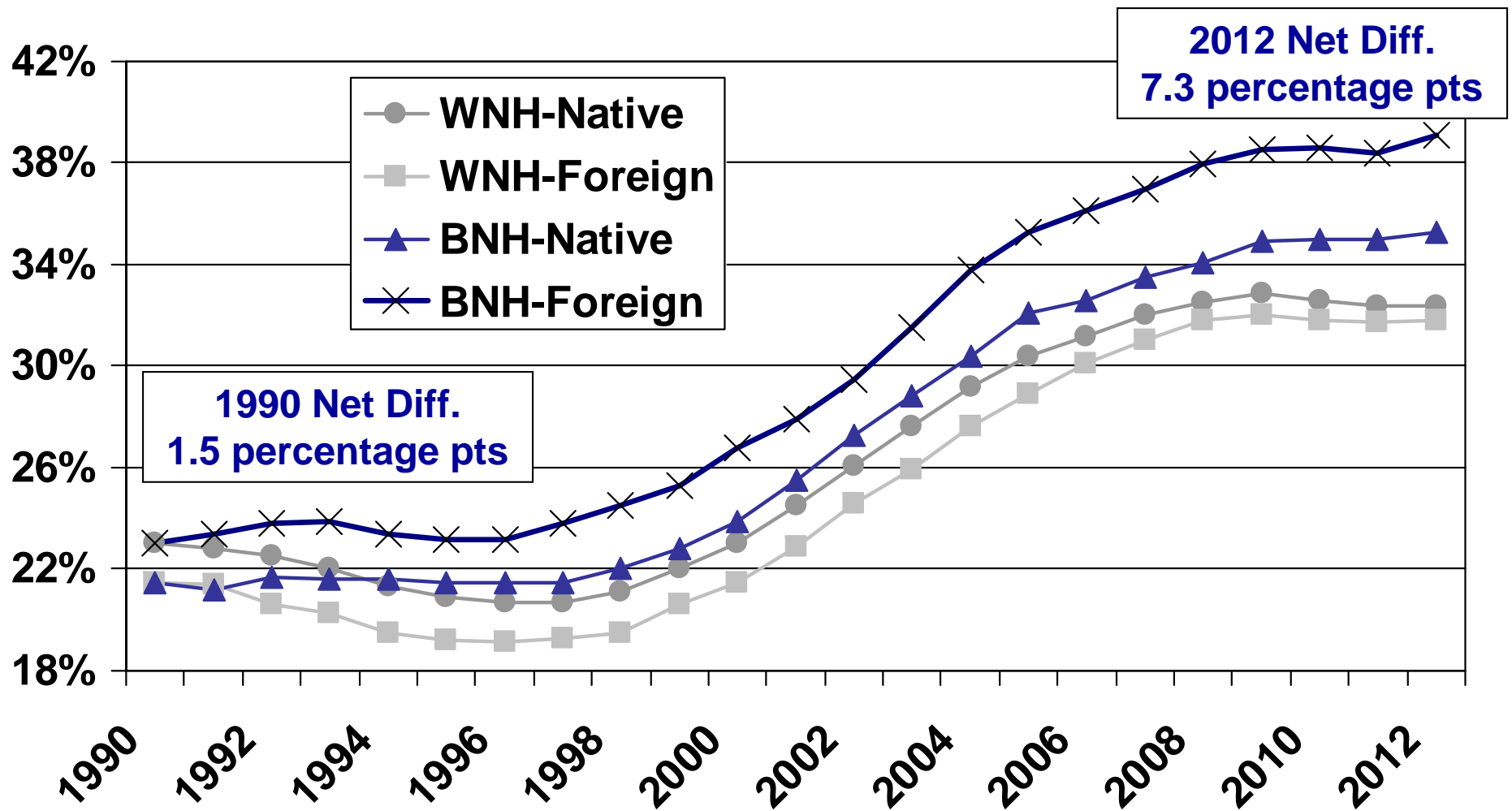
Source: National Center for Health Statistics Annual Birth Reports

# Total cesarean rates by race/ethnicity, U.S. 1989-2012

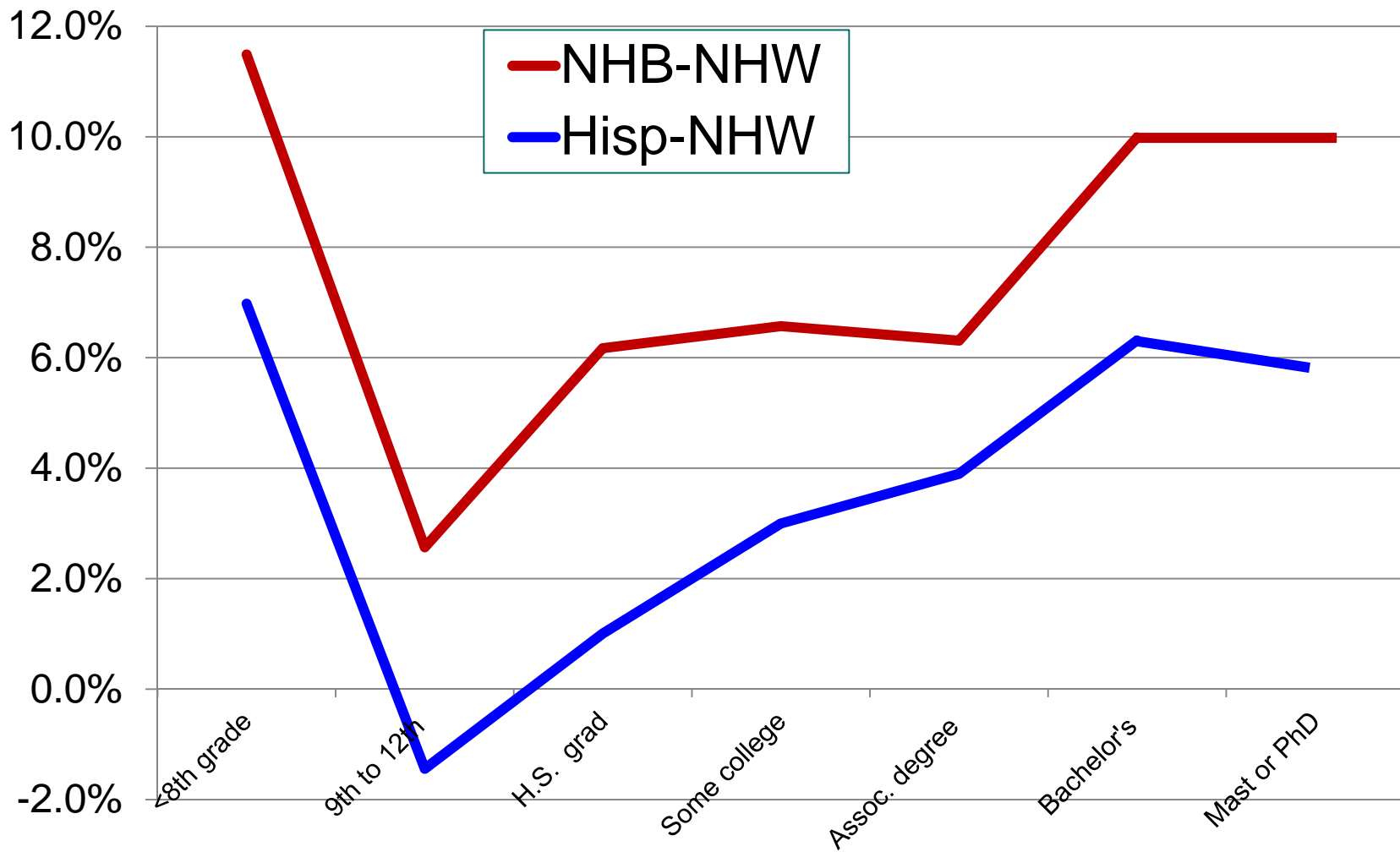


Source: National Center for Health Statistics Annual Birth Reports

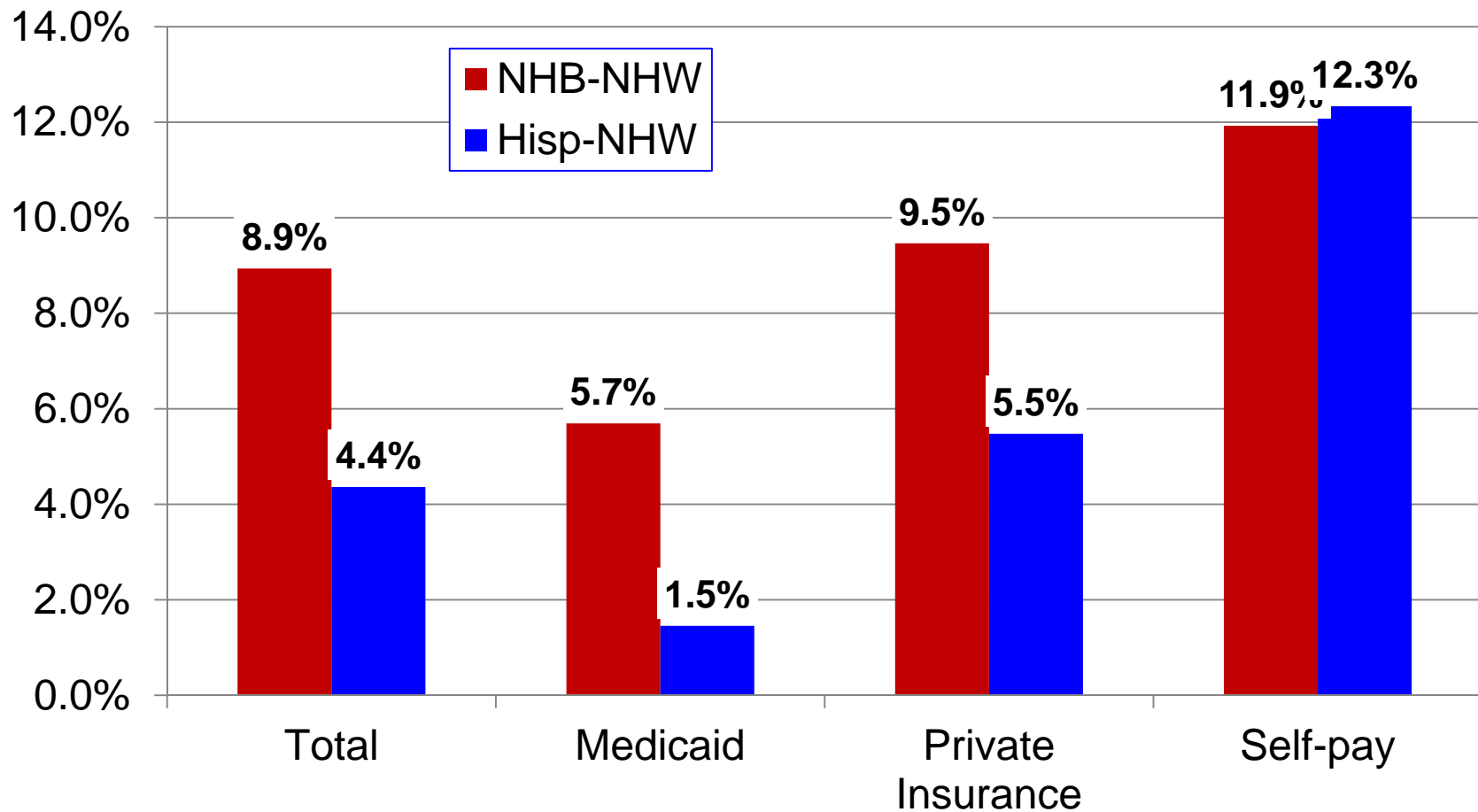
# Cesarean Rates by Race/Ethnicity & Nativity, U.S., 1990-2012



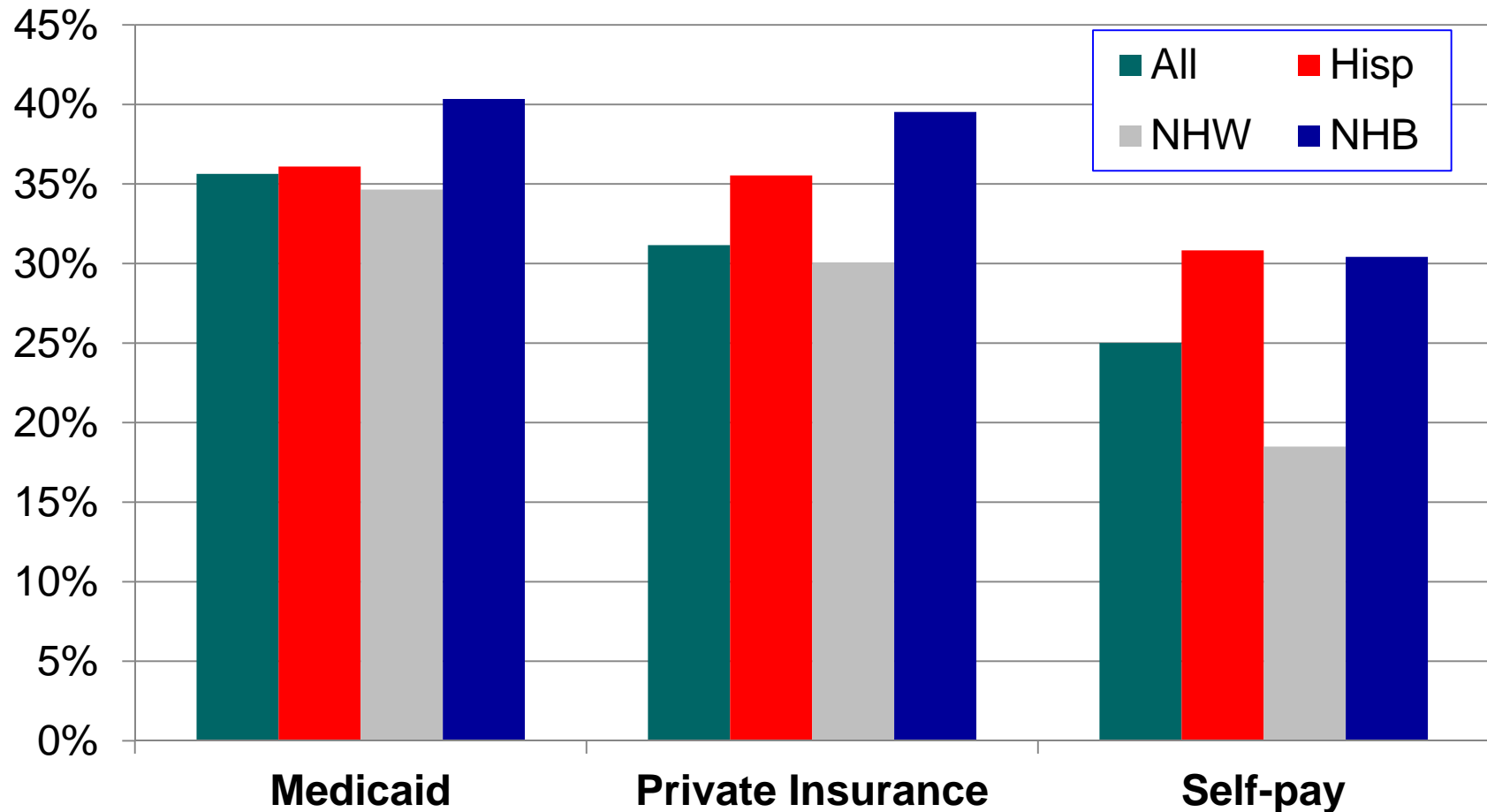
# Comparison of Cesarean Rates, 25-29 yr old primips, by Education, U.S. 2012



# Comparison of Cesarean Rates, 25-29 yr old Primips, by Payer, U.S. 2012



# Cesarean Rates, 25-29 yr old Primipis, by Payer, U.S. 2012



# Summary on Disparities

- They are persistent in both outcomes, process and geographical access

# **Listening to Mothers**



# 5 Intriguing Findings from Listening to Mothers

1. Mothers are changing
2. Feelings of Discrimination
3. Openness to Birth Centers
4. Mothers experience seeking a VBAC
5. Shared decision making and the cascade

# Mothers' needs in pregnancy for selected services, and whether the service was received

Service	% felt they needed service <i>n=2400</i>	Of those who felt they needed it, % receiving service <i>n varies</i>	% of all mothers receiving service <i>n=2400</i>
Food stamps, WIC food vouchers, or money to buy food	48%	90%	43%
Counseling for nutrition	24%	81%	20%
Treatment for depression	15%	70%	11%
Help to quit smoking	11%	60%	7%

# Electronic devices used by mothers at least once during a typical week, and ratings of devices

<b>Device</b> choose all that apply	% Using during typical week  Base: all mothers <i>n=2400</i>	Of those using, % rating as an “excellent” source For preg & CB info
<b>Laptop</b> or desktop computer with Internet access	82%	64%
<b>Smartphone</b> with Internet access	64%	43%
<b>Tablet</b> computer with Internet access	35%	46%
<b>Regular mobile phone</b> with text messaging capability & Internet access	33%	22%
<b>iPod Touch</b> with Internet access	21%	42%
Used none of the above in a typical week	1%	n.a.

# Texting as a Source of Pregnancy Information

	<b>White non-Hispanic</b>	<b>Black non-Hispanic</b>	<b>Hispanic</b>
Signed up for text messaging	20%	42%	30%
Of those above, Used Text4Baby	56%	81%	59%
Overall Text4Baby	11%	34%	18%

# Texting as a Source of Pregnancy Information

- Just over one in four (27%) mothers signed up with short message services to receive regular text messages about pregnancy and childbirth topics.
- Of those, 63% (17% of all mothers) reported that the text messages were from the **Text4baby** program.

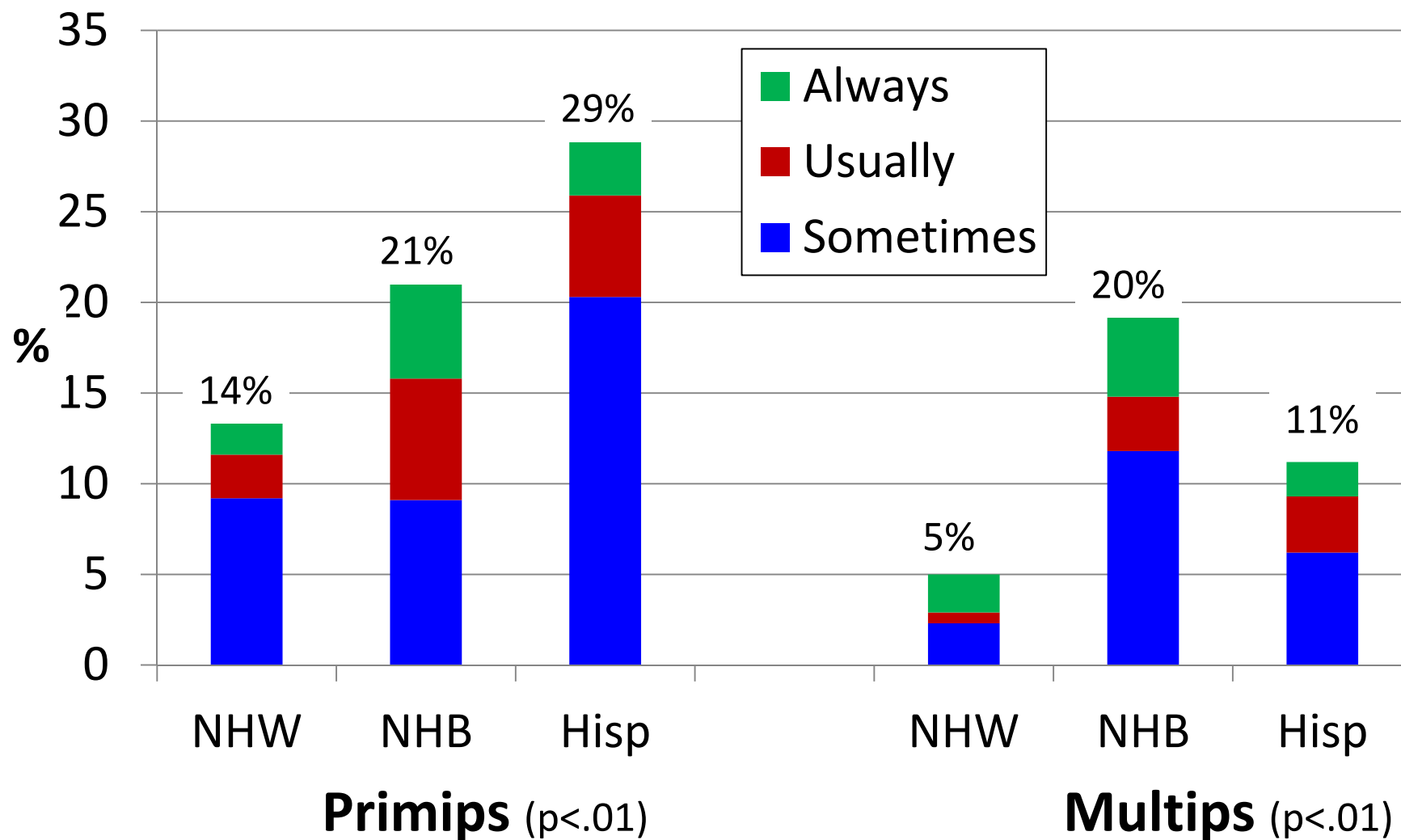
## **2. Mothers' Reported Experiences with Discrimination**

# Mothers' experience of discrimination during childbirth hospital stay

During your recent hospital stay when you had your baby, how often were you treated poorly because of...?:

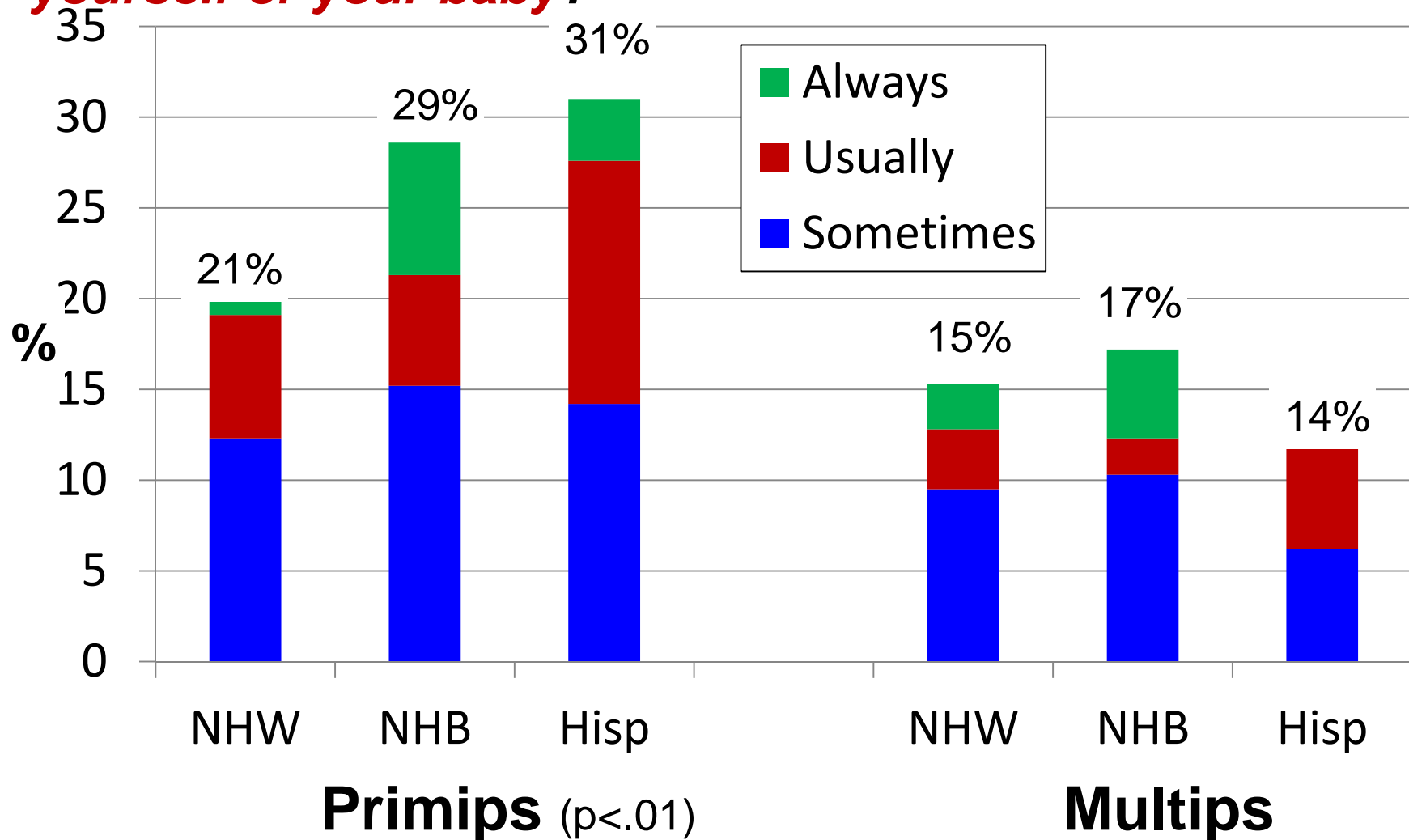
Base: all mothers <i>n=2400</i>	Never	Sometimes	Usually	Always	At Least "Some"
Your race, ethnicity, cultural background, or language	86%	8%	3%	3%	<b>14%</b>
Your health insurance situation	84%	8%	5%	4%	<b>17%</b>
A difference of opinion with your caregivers about the right care for yourself or your baby	80%	11%	6%	3%	<b>20%</b>

***During your recent hospital stay when you had your baby, how often were you treated poorly because of your race, ethnicity, cultural background or language?***





***During your recent hospital stay when you had your baby, how often were you treated poorly because of a difference of opinion with your caregivers about the right care for yourself or your baby?***

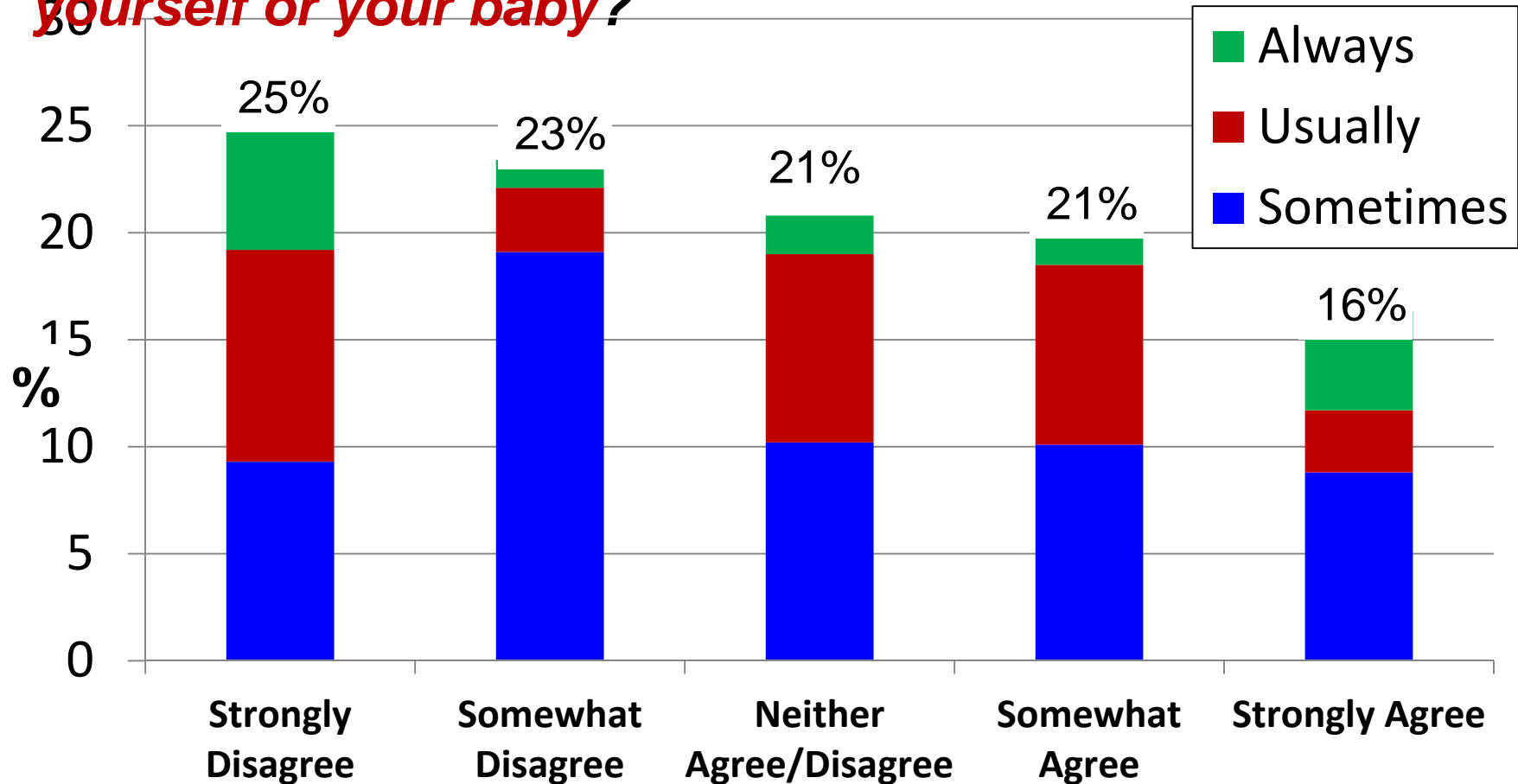


# Attitudes, choice, and decision making: trends across *Listening to Mothers* surveys

Base: all survey participants	LTM I 2000-02 <i>n</i> =1583	LTM II 2005 <i>n</i> =1573	LTM III 2011-12 <i>n</i> =2400
<b>Disagree strongly or somewhat</b> that giving birth is a process that should not be interfered with unless medically necessary	31%	24%	16%
<b>Neither agree nor disagree</b> that giving birth is a process that should not be interfered with unless medically necessary	24%	25%	26%
<b>Agree somewhat or strongly</b> that giving birth is a process that should not be interfered with unless medically necessary	<b>45%</b>	<b>50%</b>	<b>58%</b>

n.a. indicates item was not available in a previous survey, at all or through comparable data

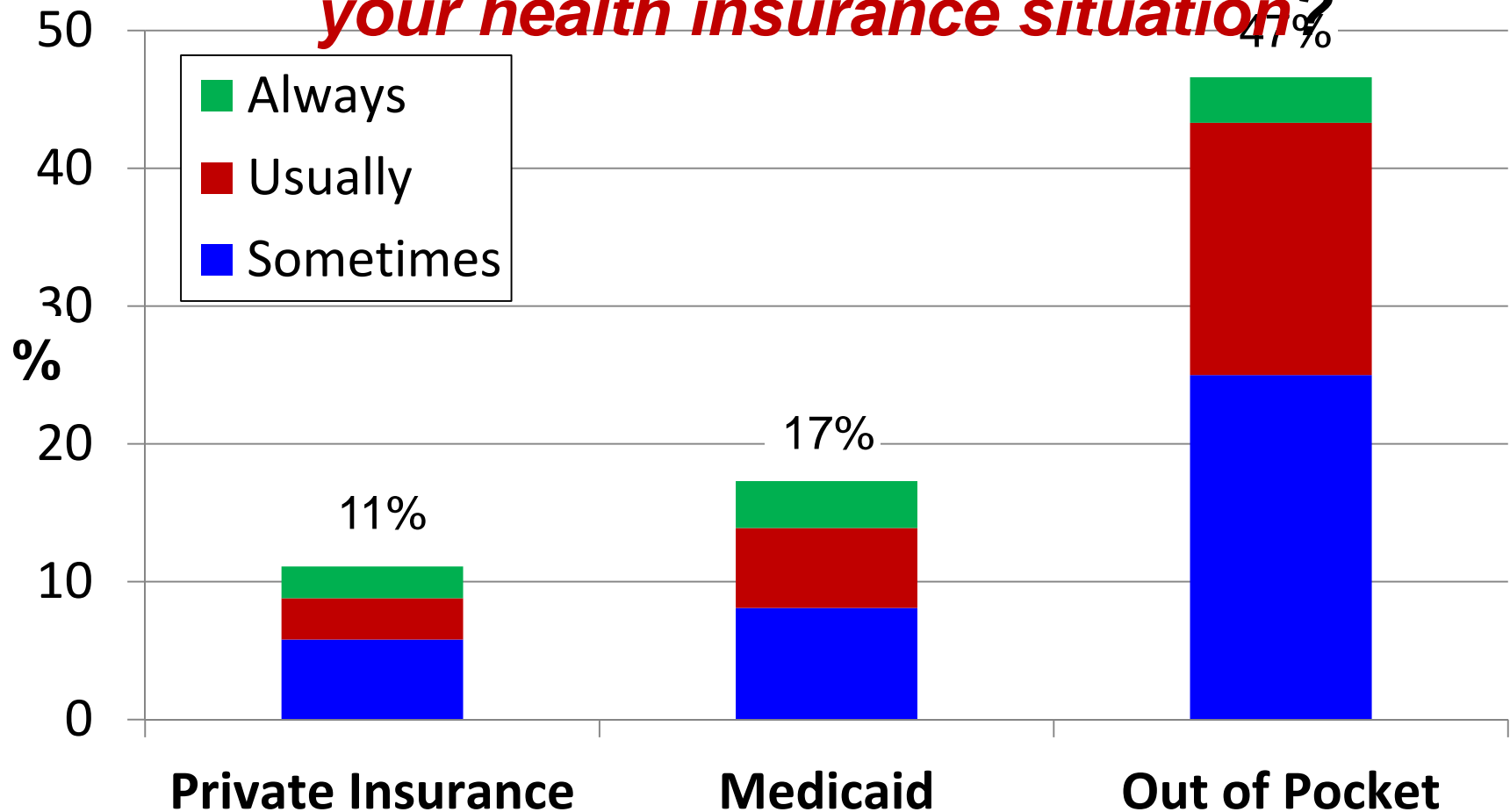
***During your recent hospital stay when you had your baby, how often were you treated poorly because of a difference of opinion with your caregivers about the right care for yourself or your baby?***



***Giving birth is a process that should not be interfered with unless medically necessary. Do***

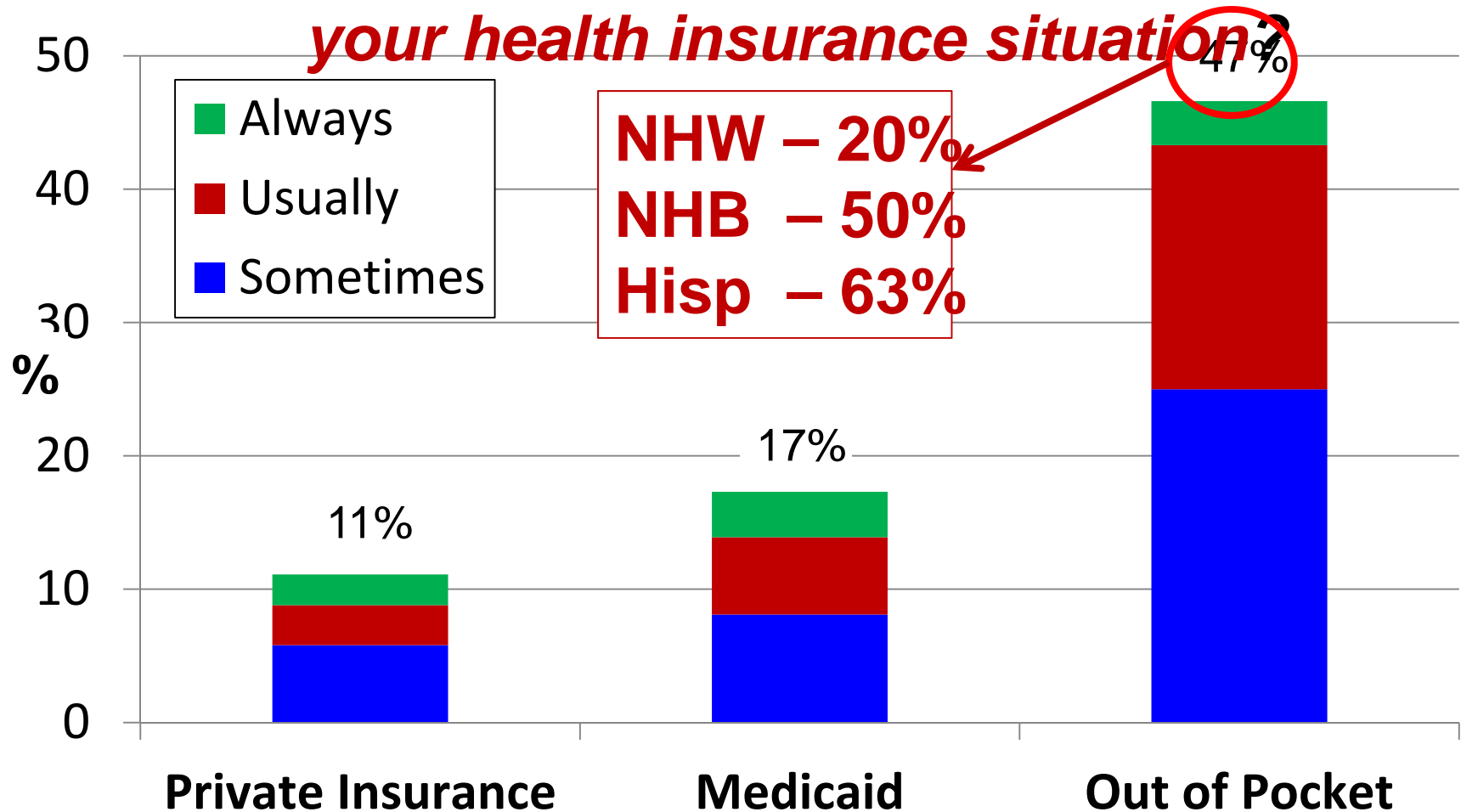
***During your recent hospital stay when you had your baby, how often were you treated poorly because of***

***your health insurance situation?***



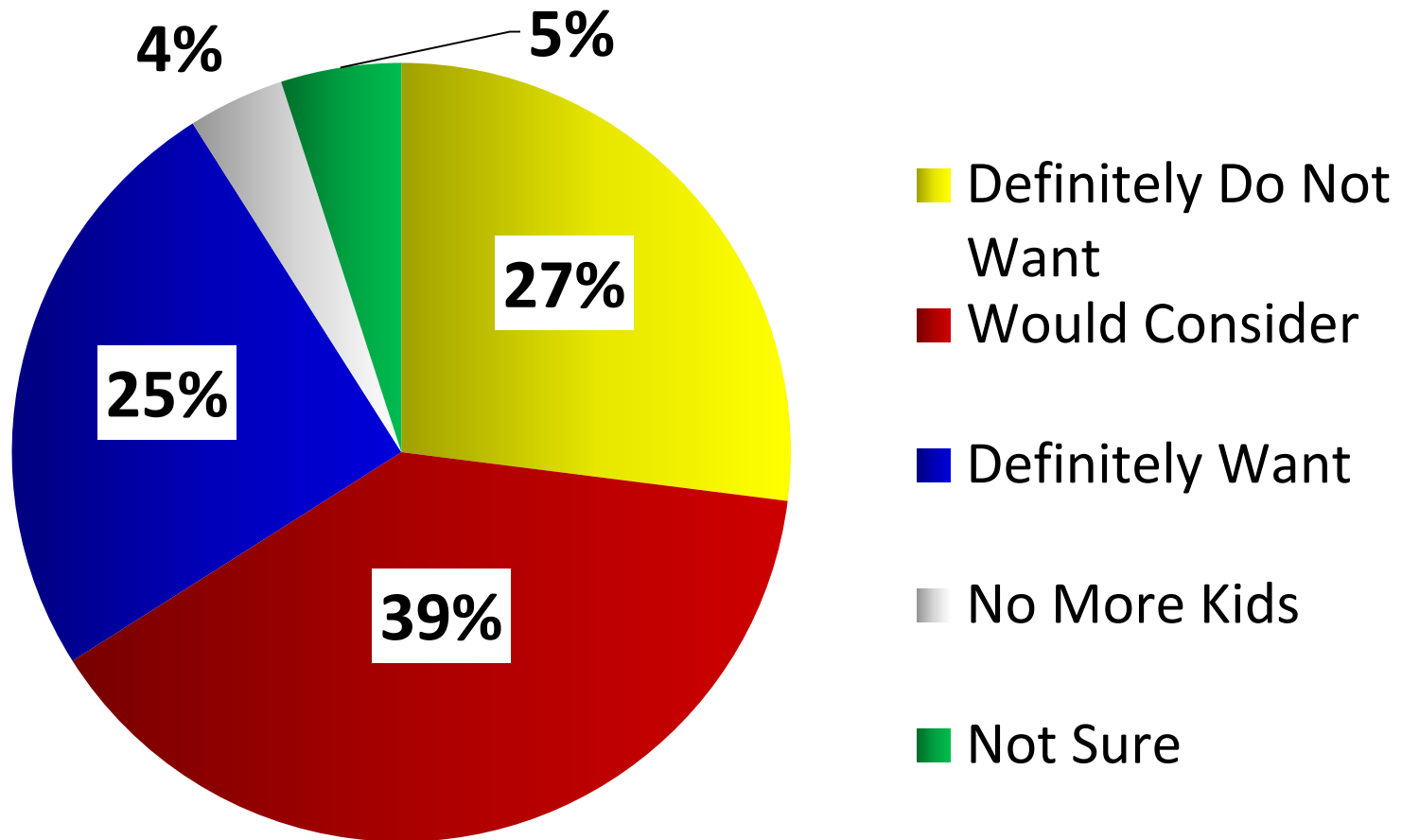
***During your recent hospital stay when you had your baby, how often were you treated poorly because of***

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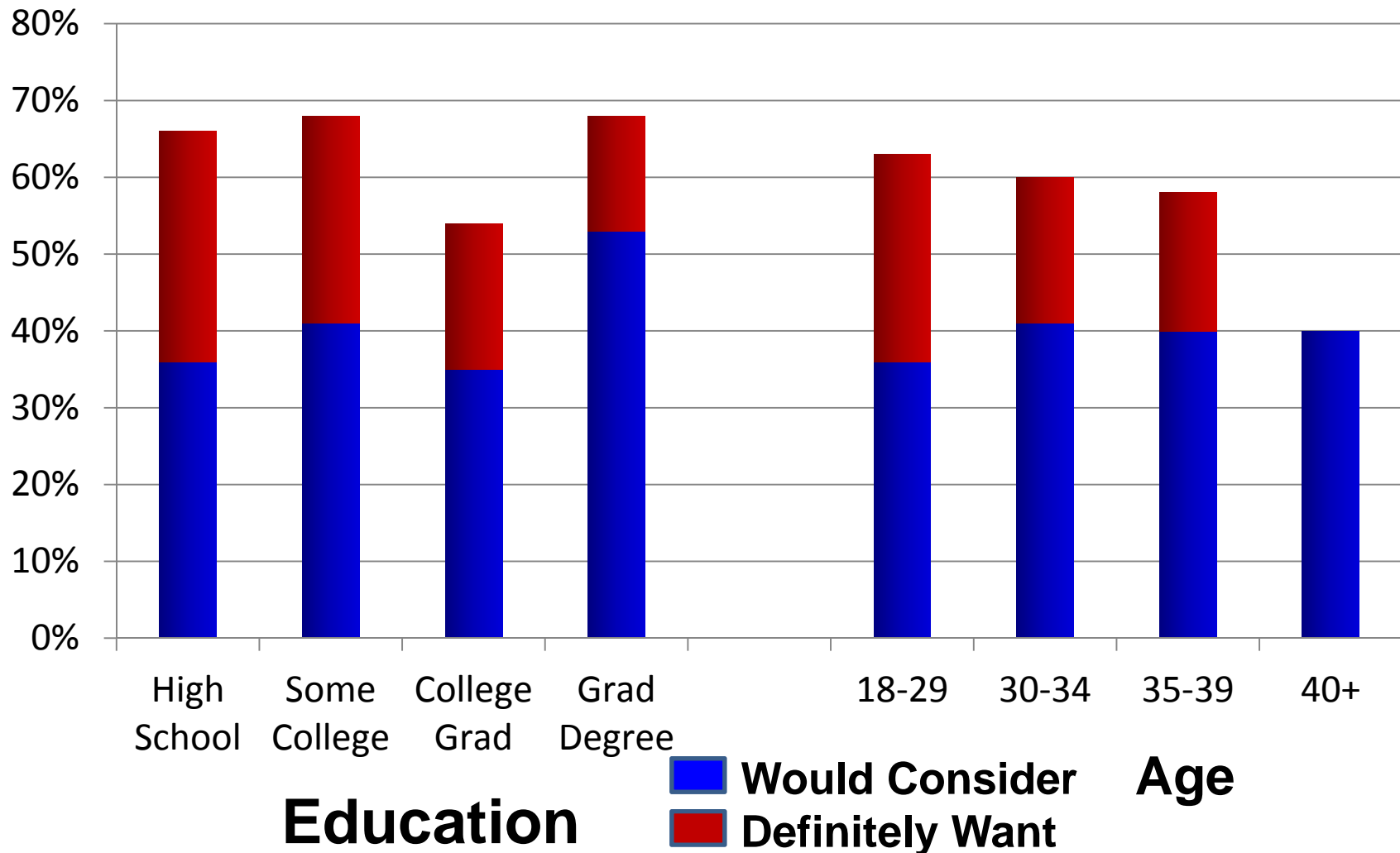


# **3. Mothers' Interest in Birthing Centers**

*For any future births, how open would you be to giving birth at a **birth center**?*

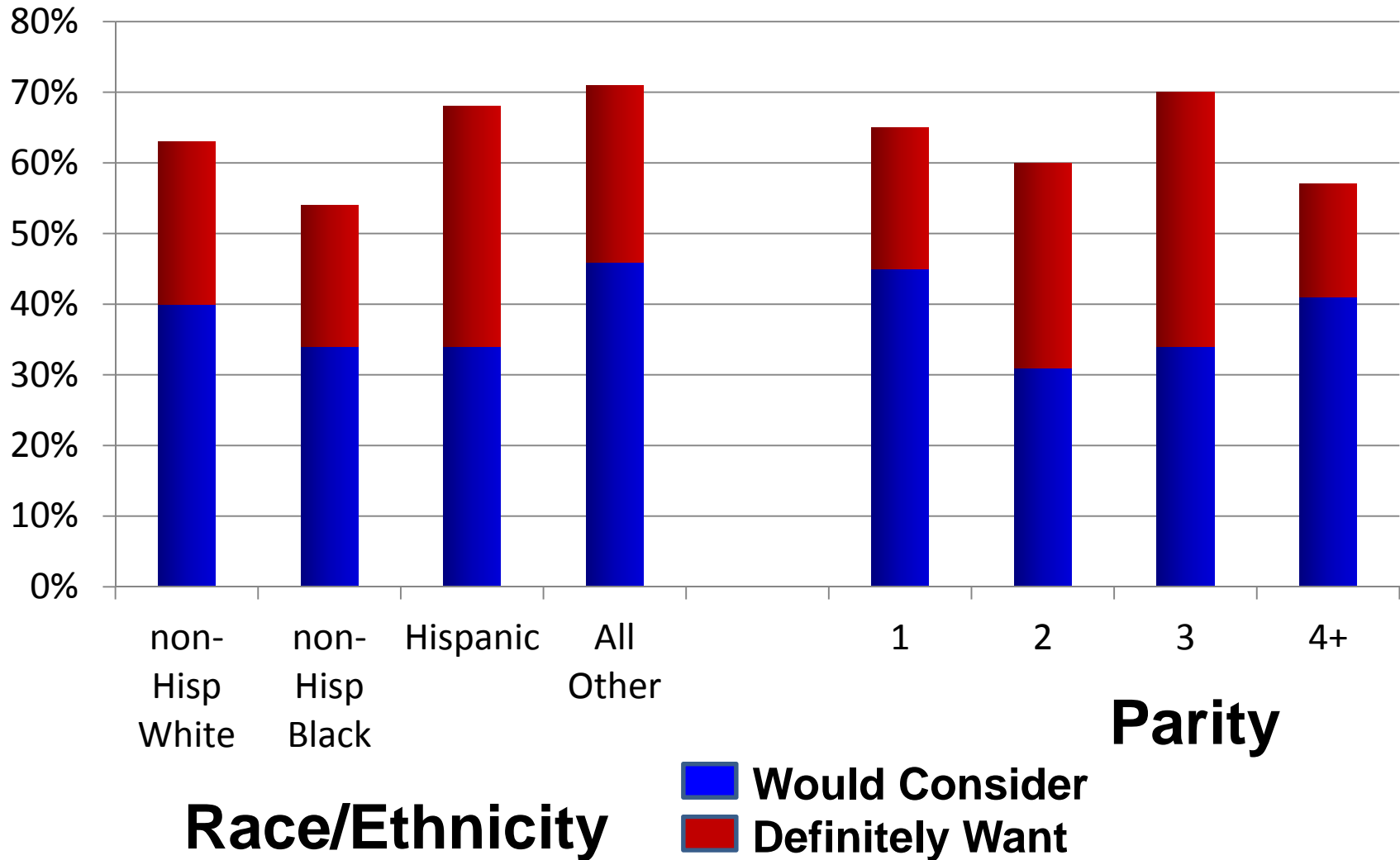


# *For any future births, how open would you be to giving birth at a **birth center**?*



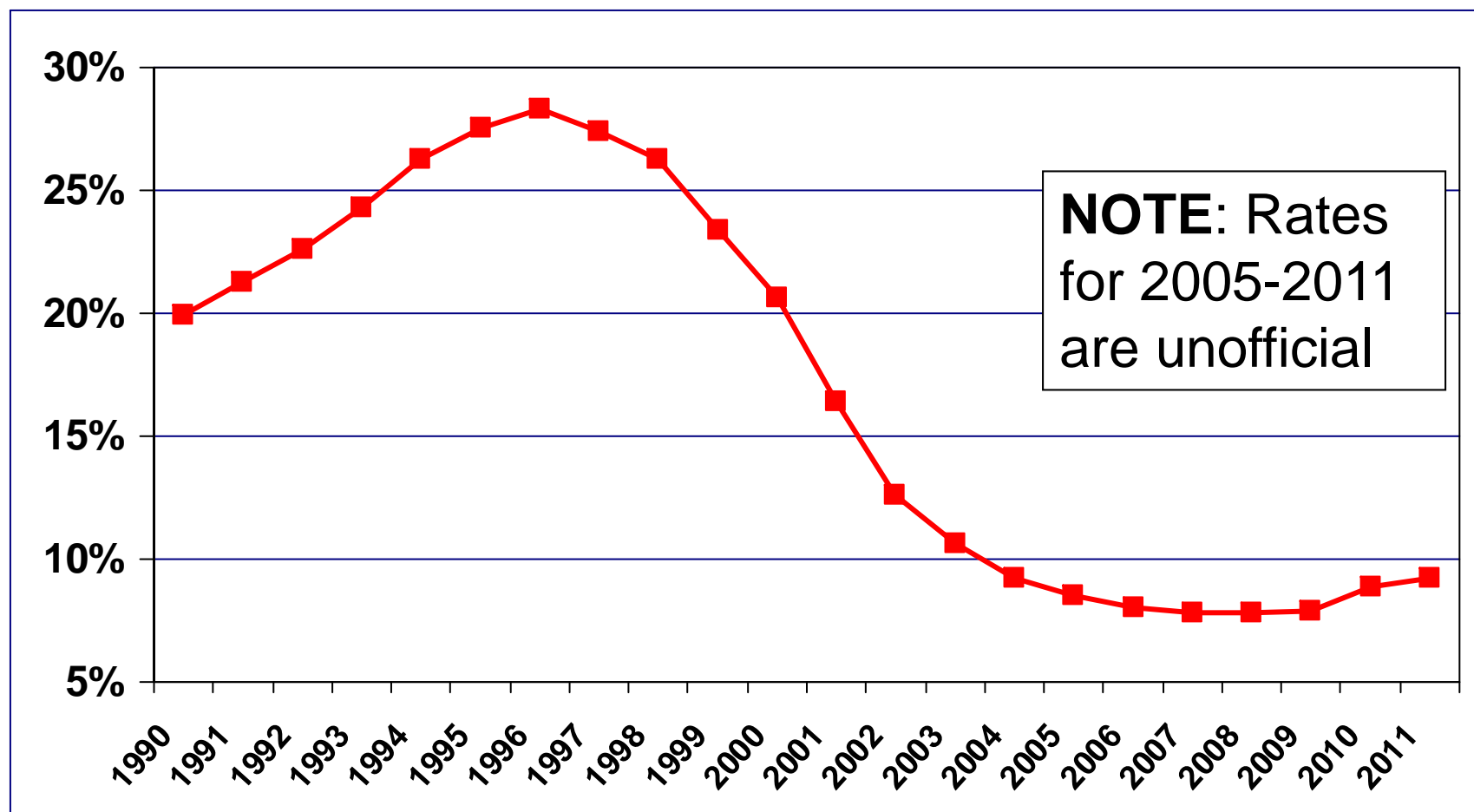


# *For any future births, how open would you be to giving birth at a **birth center**?*



***4. Mothers' Experience  
with Vaginal Birth After  
Cesarean***

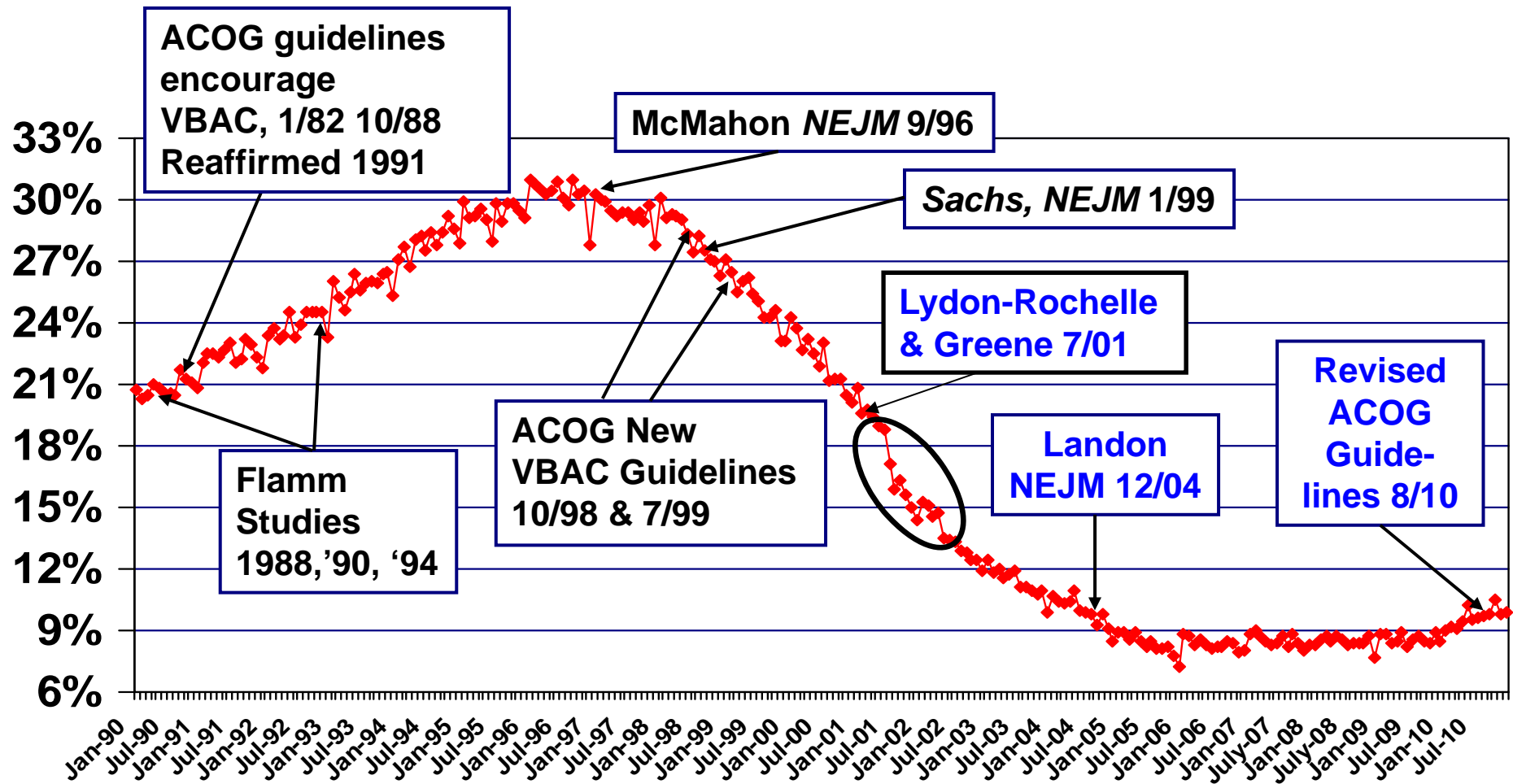
# VBAC Rates\*, U.S., 1990-2011



\* Number of VBACs among women with prior cesarean

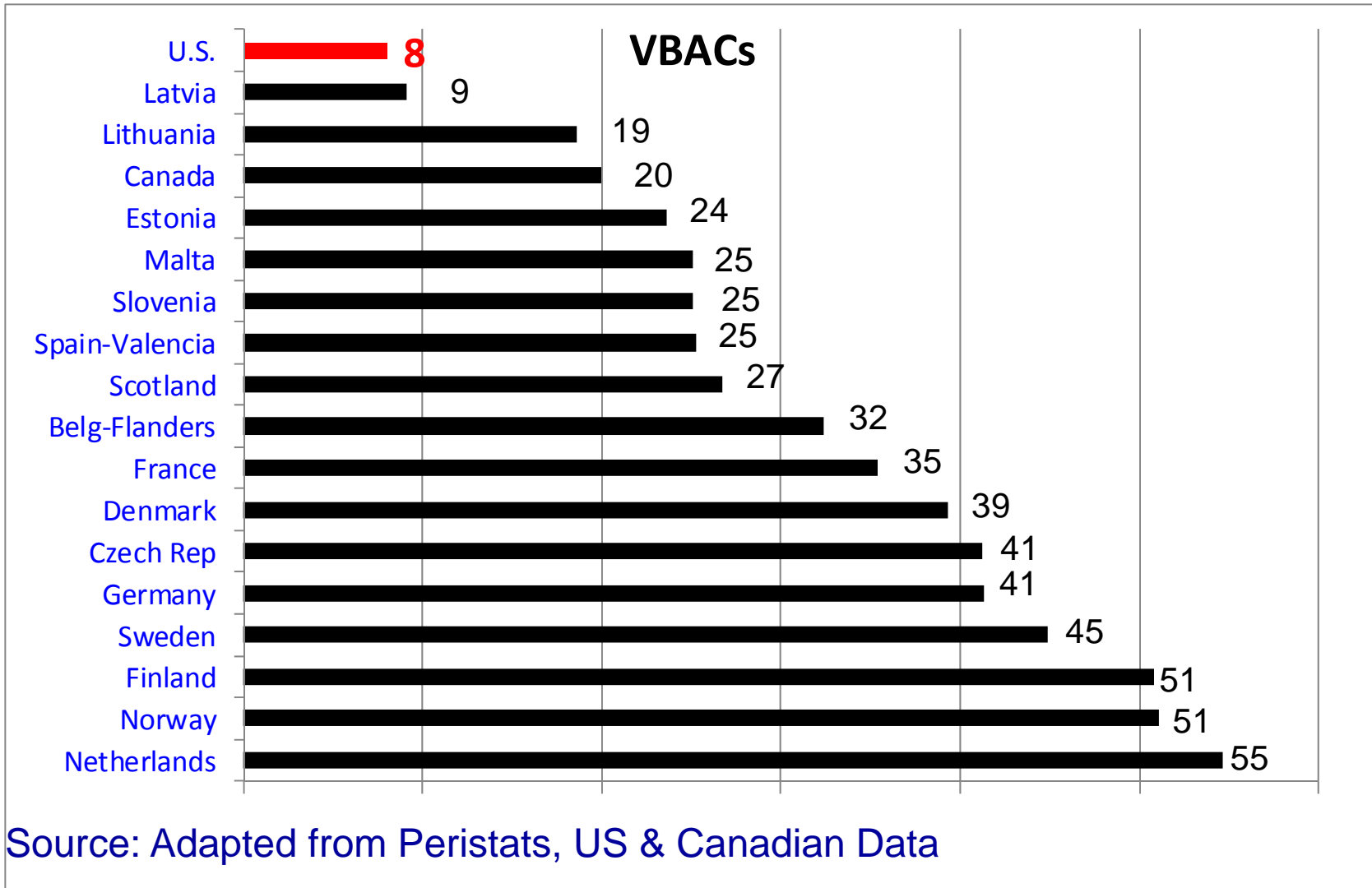
Source: NCHS Vital Stats. <http://www.cdc.gov/nchs/VitalStats.htm>

# % VBAC Lower Risk\* Mothers, U.S., Monthly Rates, 1990-2010



\* Full-gestation(37+ weeks), vertex presentation, singleton births

# VBAC Rates, Selected Countries, 2004



**August, 2010**

THE AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS  
WOMEN'S HEALTH CARE PHYSICIANS



# PRACTICE BULLETIN

## *CLINICAL MANAGEMENT GUIDELINES FOR OBSTETRICIAN—GYNECOLOGISTS*

Number 115, August 2010

(Replaces Practice Bulletin Number 54, July 2004 and Committee Opinion Number 342, August 2006), Reaffirmed 2013 Committee on Practice Bulletins—Obstetrics. This Practice Bulletin was developed by the Committee on Practice Bulletins—Obstetrics with the assistance of William Grobman, MD, and Jeffrey Ecker, MD. The information is designed to aid practitioners in making decisions about appropriate obstetric and gynecologic care. These guidelines should not be construed as dictating an exclusive course of treatment or procedure. Variations in practice may be warranted based on the needs of the individual patient, resources, and limitations unique to the institution or type of practice.

[PDF Format](#)

## Vaginal Birth After Previous Cesarean Delivery

### Summary of Recommendations

*The following recommendations are based on good and consistent scientific evidence (Level A):*

- Most women with one previous cesarean delivery with a low-transverse incision are candidates for and should be counseled about VBAC and offered TOLAC.

# Mothers' Interest in and Access to VBACs

Base: had cesarean in the past and for most recent birth	LTM I 2000-02	LTM II 2005	LTM III 2011-12
Was interested in the option of a vaginal birth after cesarean	n.a.	<b>45%</b>	<b>48%</b>
Did not have the option of a vaginal birth, or VBAC	<b>42%</b>	<b>52%</b>	<b>56%</b>

n.a. indicates item was not available in a previous survey, at all or through comparable data

# U.S. Mothers Report of Experience Seeking a VBAC, 2000, 2005, 2012

<i>Mother had cesarean in the past, and did not have the option of a VBAC for recent birth.</i>	LTFMI 2000-02	LTFMII 2005	LTFMIII 2011-12
<i>Did not have the option because caregiver was unwilling to do a VBAC</i>	36%	45%	24%
<i>Did not have the option because hospital was unwilling to allow a VBAC</i>	12%	23%	15%
<i>Medical reason unrelated to prior cesarean</i>	<b>38%</b>	<b>20%</b>	<b>45%</b>

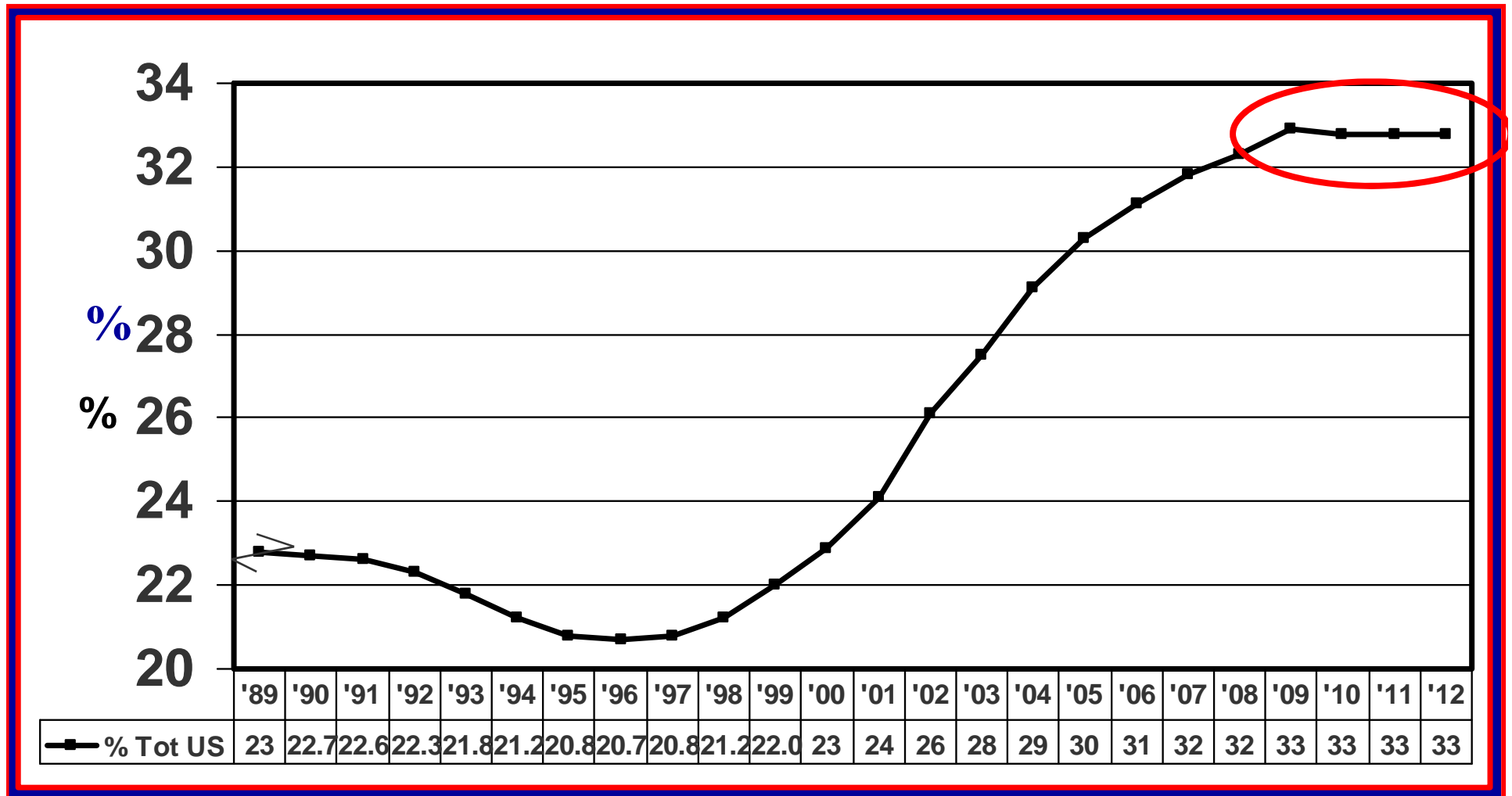
Source: *Listening to Mothers 3*.

**New VBAC Guidelines**



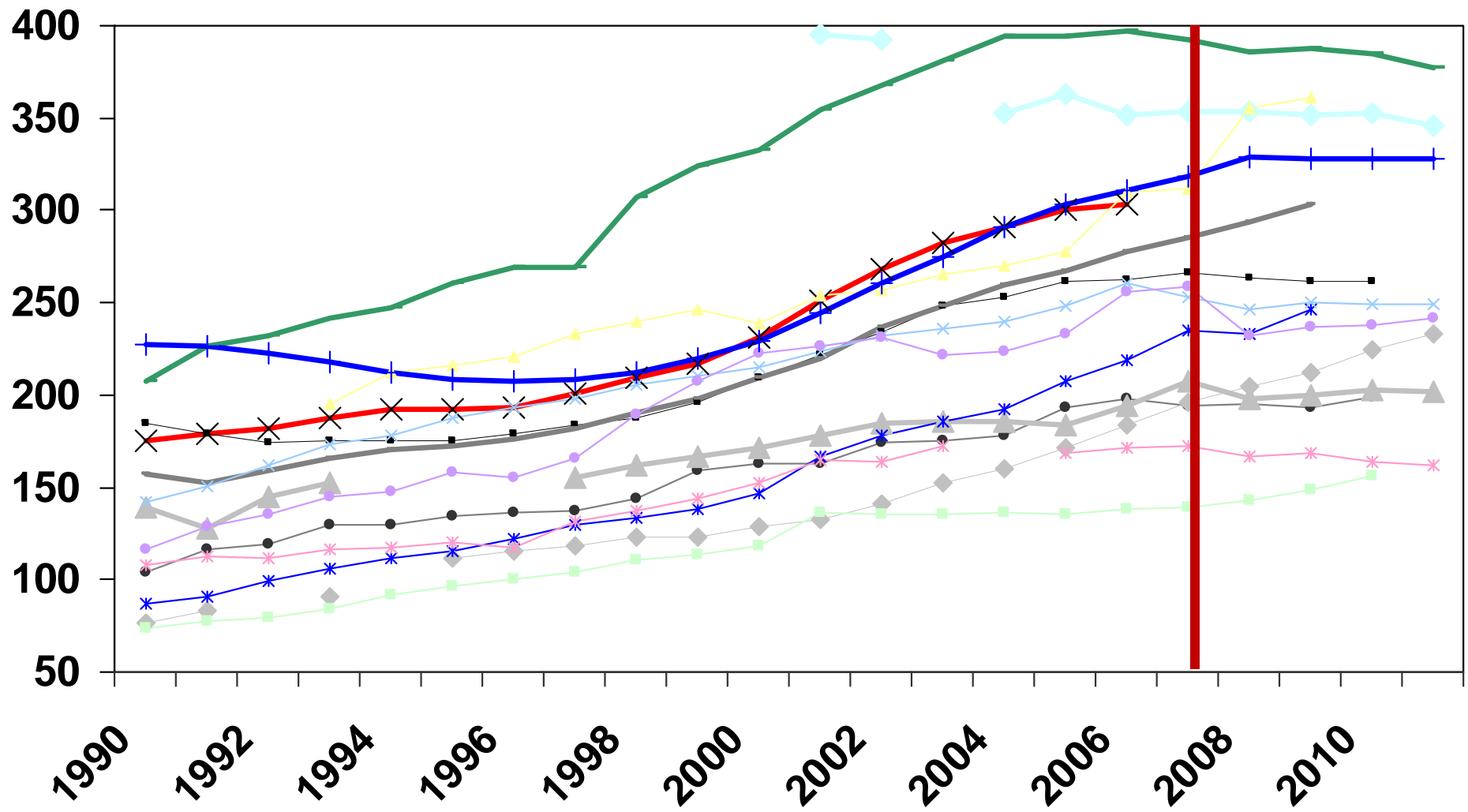
***So is a rising cesarean  
rate inevitable?***

# US Cesarean Rates, 1989-2012



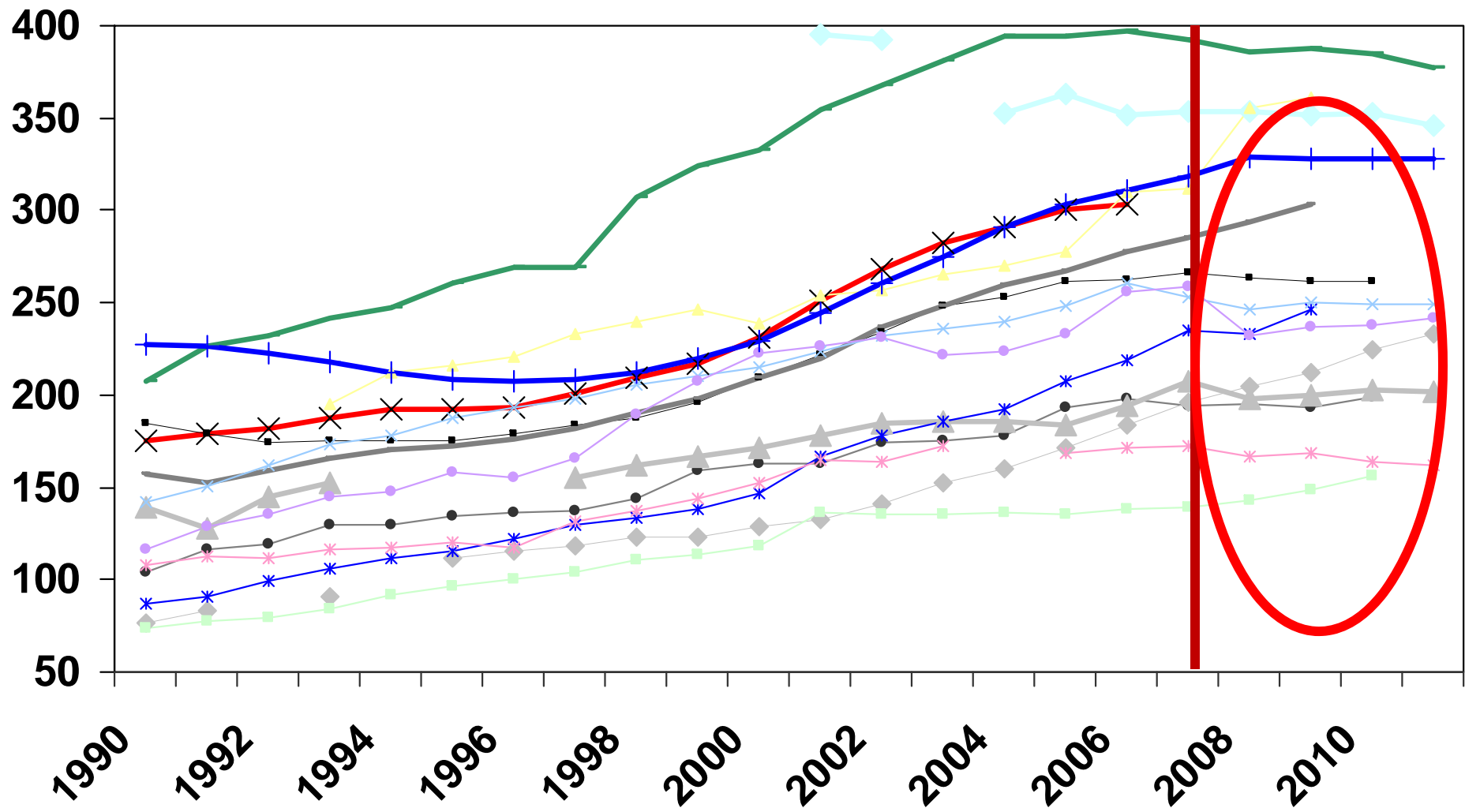
Source: National Center for Health Statistics Annual Birth Reports

# Trends in Caesarean Rates (per 1000 births), Comparison Countries, 1990-2011



Sources: OECD Health Data 2013; WHO Health for All Database, 2014.

# Trends in Caesarean Rates (per 1000 births), Comparison Countries, 1990-2011



Sources: OECD Health Data 2013; WHO Health for All Database, 2014.

# **5. Shared Decision Making**

# Reasons why mothers experienced medical induction

(choose all that apply)

<b>Base: care provider tried to induce labor <i>n=991</i></b>	
Baby was full term/close to due date	<b>44%</b>
Mother wanted to get pregnancy over with	<b>19%</b>
Care provider was concerned that mother was “overdue”	<b>18%</b>
Maternal health problem that required quick delivery	<b>18%</b>
<b>Care provider was concerned about the size of the baby</b>	<b>16%</b>
Water had broken and there was a concern about infection	<b>12%</b>
Mother wanted to control timing of birth for work or other personal reasons	<b>11%</b>
Care provider was concerned that amniotic fluid around the baby was low	<b>11%</b>
Care provider was concerned that baby was not doing well	<b>10%</b>
Mother wanted to give birth with a specific provider	<b>10%</b>
Some other reason	<b>10%</b>

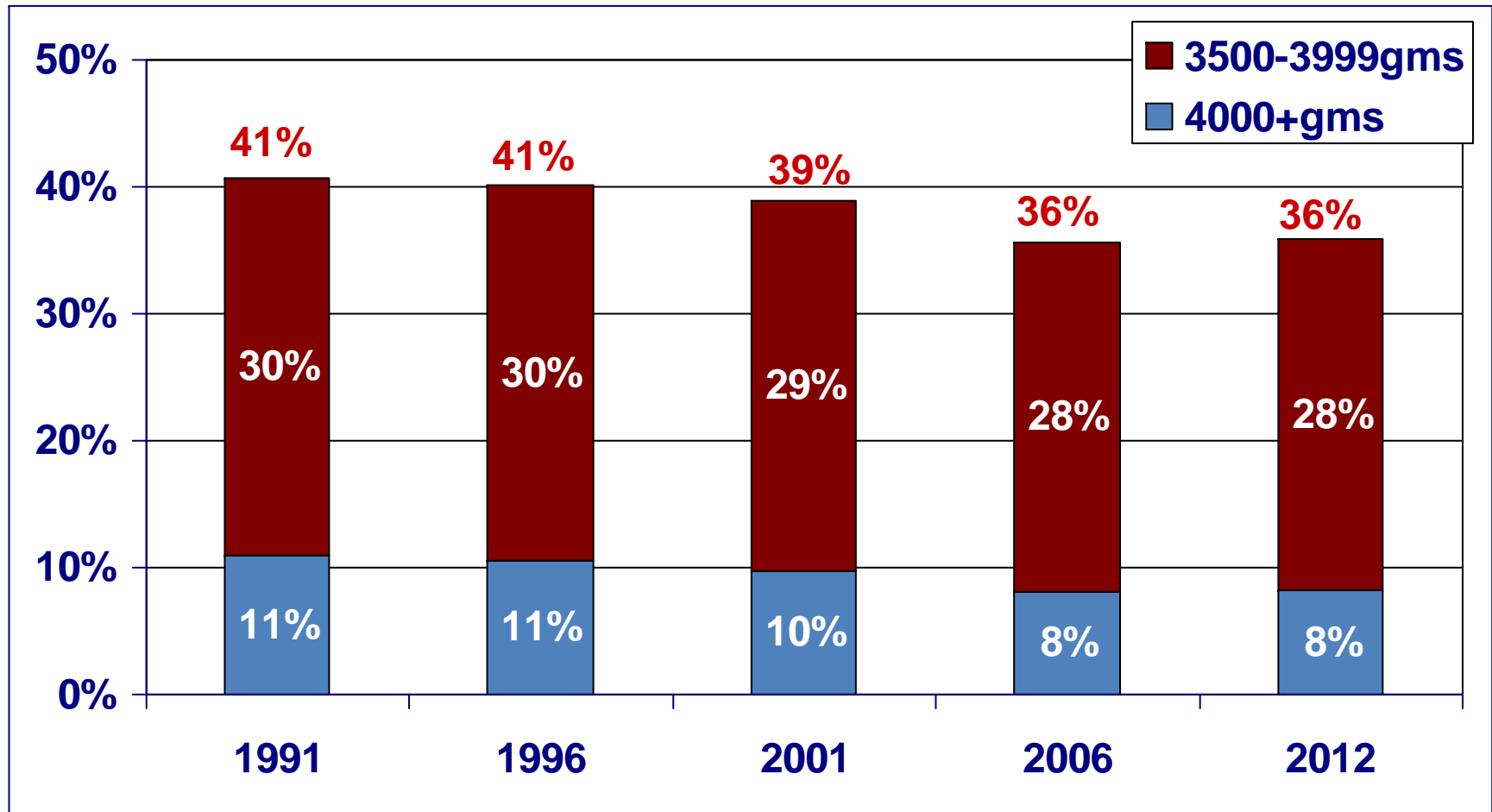
# Reasons for primary and repeat cesarean birth

(choose reason that best applies)

Base: had cesarean <i>n</i> =744	Primary cesarean <i>n</i> =368	Repeat cesarean <i>n</i> =376
I had had a prior cesarean ( <i>asked of prior cesarean only</i> )	n.a.	61%
Baby was in the wrong position	16%	3%
Fetal monitor showed the baby was having problems during labor	11%	3%
I had a health condition that called for procedure	10%	13%
Baby was having trouble fitting through	10%	2%
<b>Maternity care provider worried the baby was too big</b>	<b>9%</b>	2%
Provider tried to induce labor but it didn't work	8%	3%
Problem with the placenta	8%	2%
Labor was taking too long	7%	2%
Past my due date	3%	-
Afraid to labor and have baby vaginally	3%	-
No medical reason	4%	3%

# Are Babies Getting Bigger?

*% Singleton Babies by Birthweight, U. S., 1991-2012*





# What's with these Big Babies?

*Near the end of your pregnancy, did your maternity care provider tell you that your baby might be getting quite large?*

<b>32.3% YES</b>	<b>ALL</b>	<b>Yes</b>	<b>No</b>
<b><i>Actual Weight</i></b>	7 lbs 5 ounces	7 lbs 14 ounces	7 lbs 1 ounce
<b>Baby Actually Macrosomic <i>(8lb 13ounces)</i></b>	10.5%	20.6%	5.6%

# Mothers' experiences of making three labor and birth decisions

<b>Induction mentioned because baby might be getting quite large*</b> <i>n=163</i>	
How much did you and your maternity care provider talk about the reasons you <i>might want</i> to have an induction (% “some” or “a lot”)?	61
How much did you and your maternity care provider talk about the reasons you <i>might not want</i> to have an induction (% “some” or “a lot”)?	38
Did your maternity care provider explain that there were choices (% yes)?	82
How much did you and your maternity care provider talk about waiting for labor to begin (% “some” or “a lot”)?	51
Did your maternity care provider express an opinion about whether or not you should have... (% yes)?	81
Did your maternity care provider think you should or should <u>not</u> have (% should have induction among those who expressed opinion)?	80
Did your maternity care provider ask you whether or not you <u>wanted</u> to have... (% yes)?	77
Who made the final decision whether or not to have ... (% mother’s decision/% providers/%shared decision)?	46/20/34
If you knew then what you know now, do you think you would make the same decision about having ... (% definitely yes”)?	64

# Mothers' experiences of making three labor and birth decisions

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If you knew then what you know now, do you think you would make the same decision about having ... (% definitely yes“)?	64
Percent of mothers in each group who experienced the intervention in question	<b>67</b>

# Pressure to have major interventions

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**Mothers' experience of pressure to have three interventions, by whether mothers had intervention**

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<b>Intervention</b>	<b>Experience of pressure among mothers who did not have intervention*</b>	<b>Experience of pressure among mothers who had intervention</b>	<b>Experience of pressure among all mothers</b>
Labor induction	8%	25%	15%
Epidural analgesia	19%	13%	15%
Cesarean section	8%	25%	13%
Primary cesarean	7%	28%	11%
Repeat cesarean	28%**	22%	23%

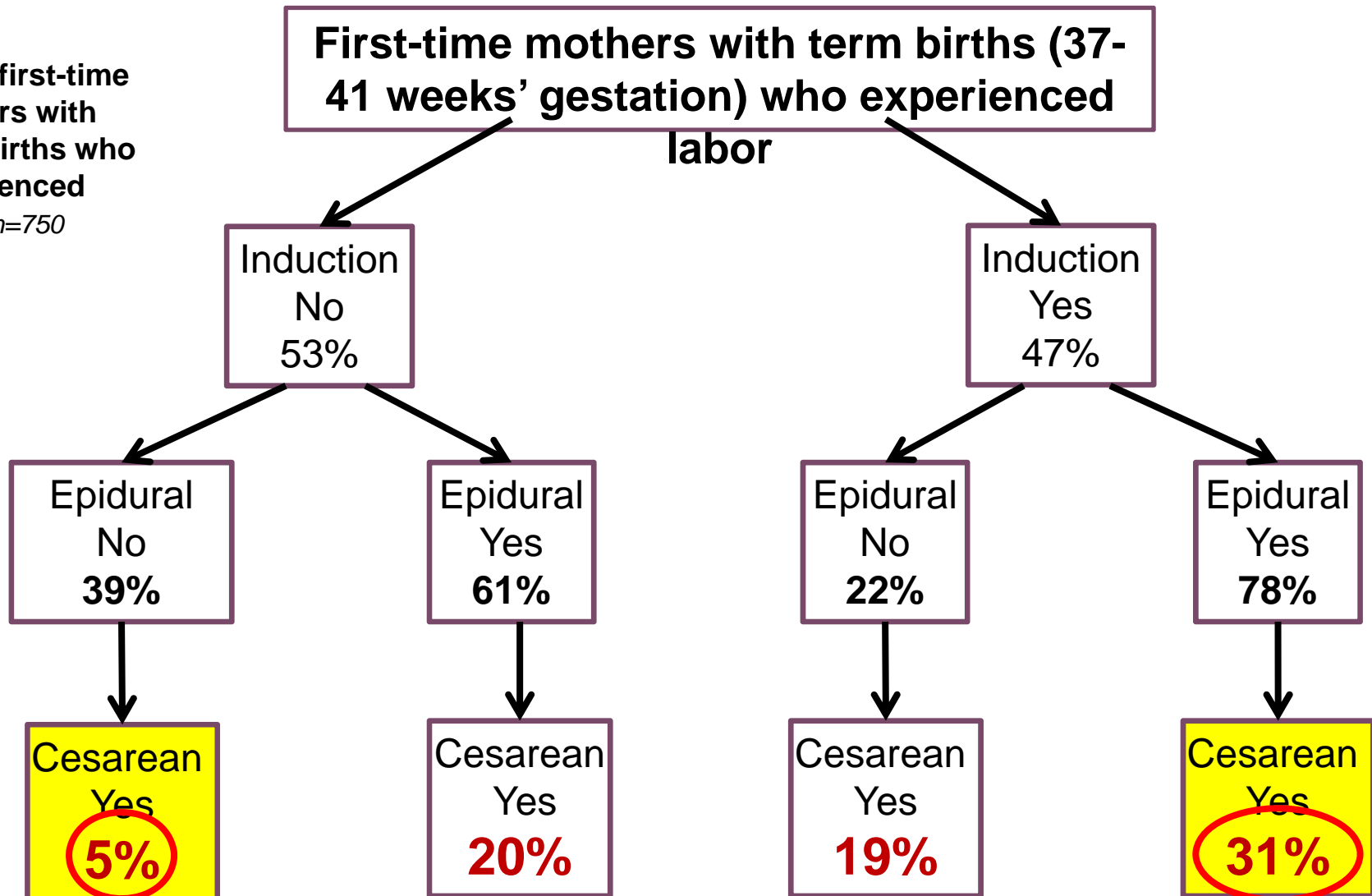
\*p < .01 for all comparisons between those receiving an intervention and those who did not

\*\*Mothers having a VBAC

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# Cascade of interventions in first-time mothers with term births who experienced labor

Base: first-time mothers with term births who experienced labor  $n=750$



In this group, which included 85% of first-time mothers, the overall epidural rate was 69% and overall cesarean rate was 21%.

# Rethinking the Evidence



The American College of  
Obstetricians and Gynecologists  
WOMEN'S HEALTH CARE PHYSICIANS



Society for  
Maternal-Fetal  
Medicine

## OBSTETRIC CARE CONSENSUS

Number 1, March 2014

### Safe Prevention of Primary Cesarean Delivery

[www.acog.org/Resources\\_And\\_Publications/Obstetric\\_Care\\_Consensus\\_Series/Safe\\_Prevention\\_of\\_the\\_Primary\\_Cesarean\\_Delivery](http://www.acog.org/Resources_And_Publications/Obstetric_Care_Consensus_Series/Safe_Prevention_of_the_Primary_Cesarean_Delivery)

*BirthByTheNumbers.org*

# ***For More on Listening to Mothers***

<https://www.childbirthconnection.org/>

# ***Student Led Website with Resources (Geeky Data)***

*For more information and additional  
resources regularly check:*

***[www.BirthByTheNumbers.org](http://www.BirthByTheNumbers.org)***

*The site is regularly updated as additional  
data becomes available.*