

# Breastfeeding in Low-Income Women

Ada Fenick, MD  
Yale School of Medicine



# Disclosures

- No financial relationships to disclose.
- I am a member of the CT AAP and the Medical Advisor for the state of CT WIC program.
- I have been collecting Fortune Cookie fortunes for years, and will be subjecting you to the ones most relevant to breastfeeding.

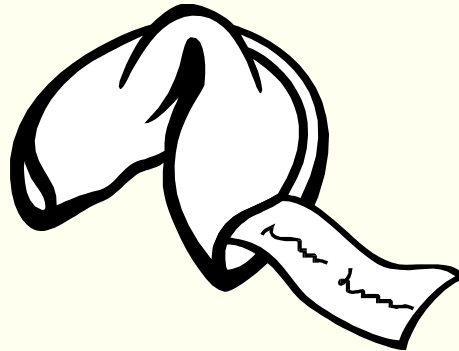
# Goals

- Describe the epidemiology of breastfeeding nationally and in Connecticut.
- Explain predictors of successful breastfeeding in low income women.
- Identify programs and practices that have been successful in promoting breastfeeding in low-income women, both nationally and in Connecticut.

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# COOKIE #1



Of all our human resources, the most precious is the desire to improve.

# Healthy People 2010 Goal

16-19

- Increase the proportion of mothers who breastfeed their babies.

	1998 Baseline	2010 Target
Early postpartum	64	75
At 6 months	29	50
At 1 year	16	25

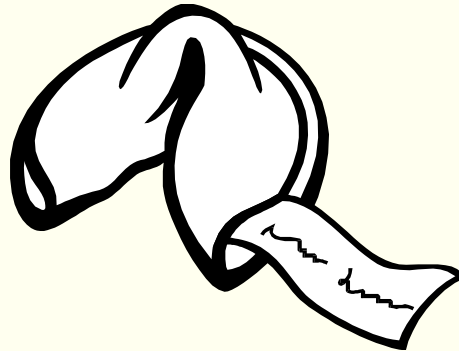
# Healthy People 2010, MidCourse corrections

	1998 Baseline	2010 Target
Early postpartum	64	75
At 6 months	29	50
At 1 year	16	25
Exclusive through 3 months	43 ('02)	60
Exclusive through 6 months	13 ('02)	25

# So, How Are We Doing?

- NHANES
  - National Health and Nutrition Examination Surveys
  - For 2005-2006 birth cohort, 434 infants in 15 counties
- NIS
  - National Immunization Survey
  - For 2005 birth cohort, 15000 infants, cross-national sample

# COOKIE #2

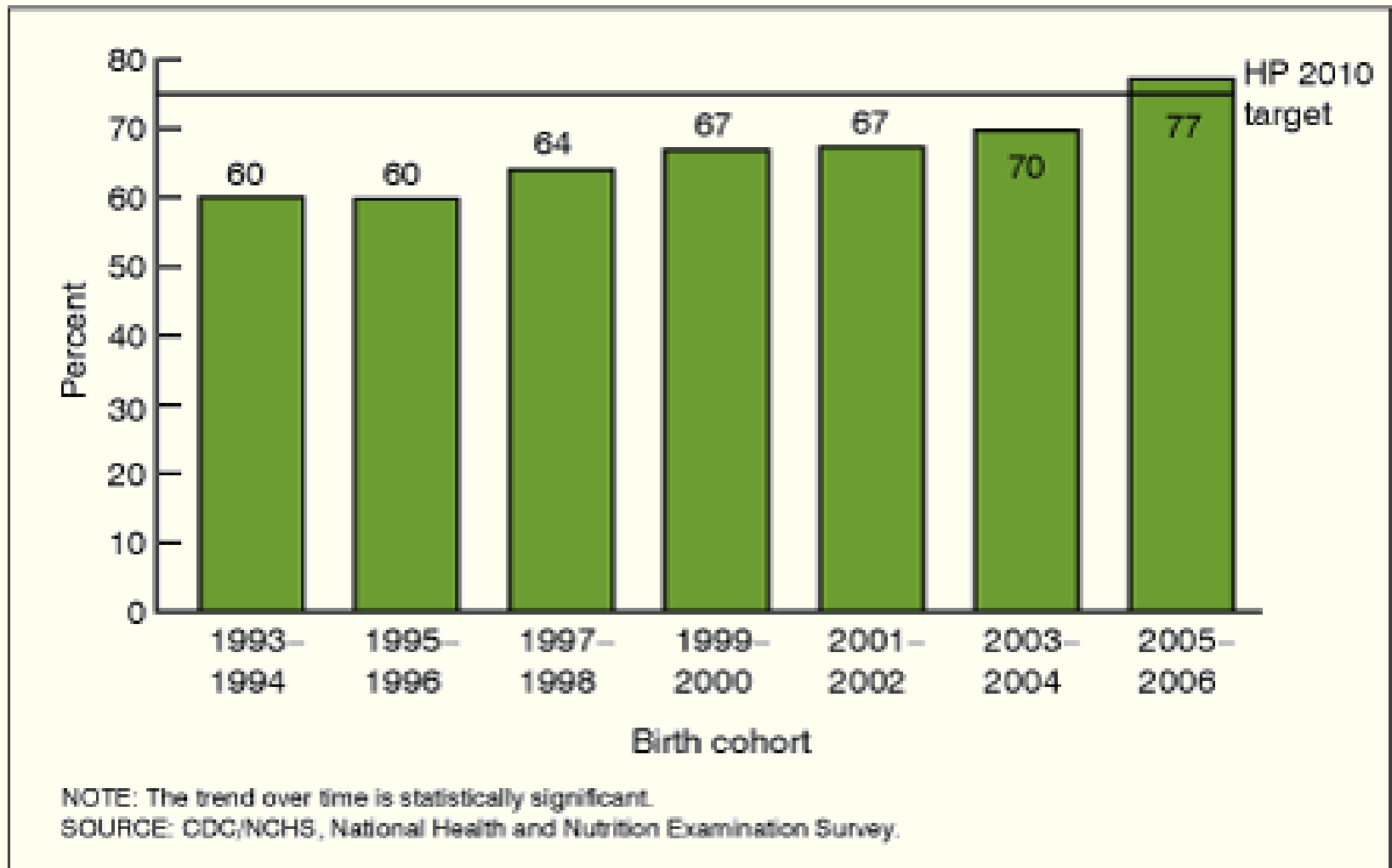


**Anyone can memorize things, but the  
important thing is to understand it.**

**(lucky numbers 6, 7, 19, 24, 26)**

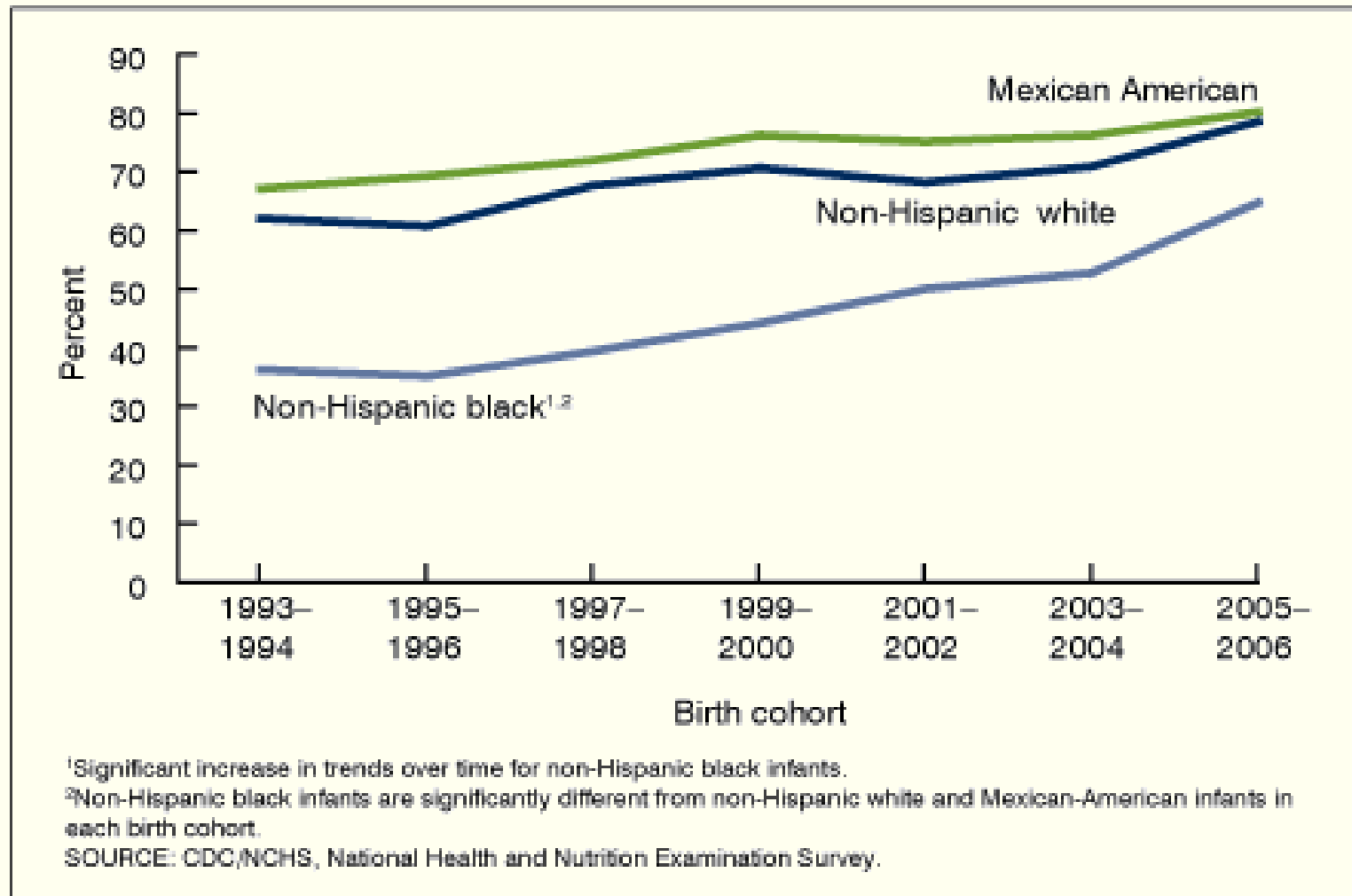
# NHANES Results

Figure 1. Percentage of infants who were ever breastfed by birth cohort: United States, 1993–2006



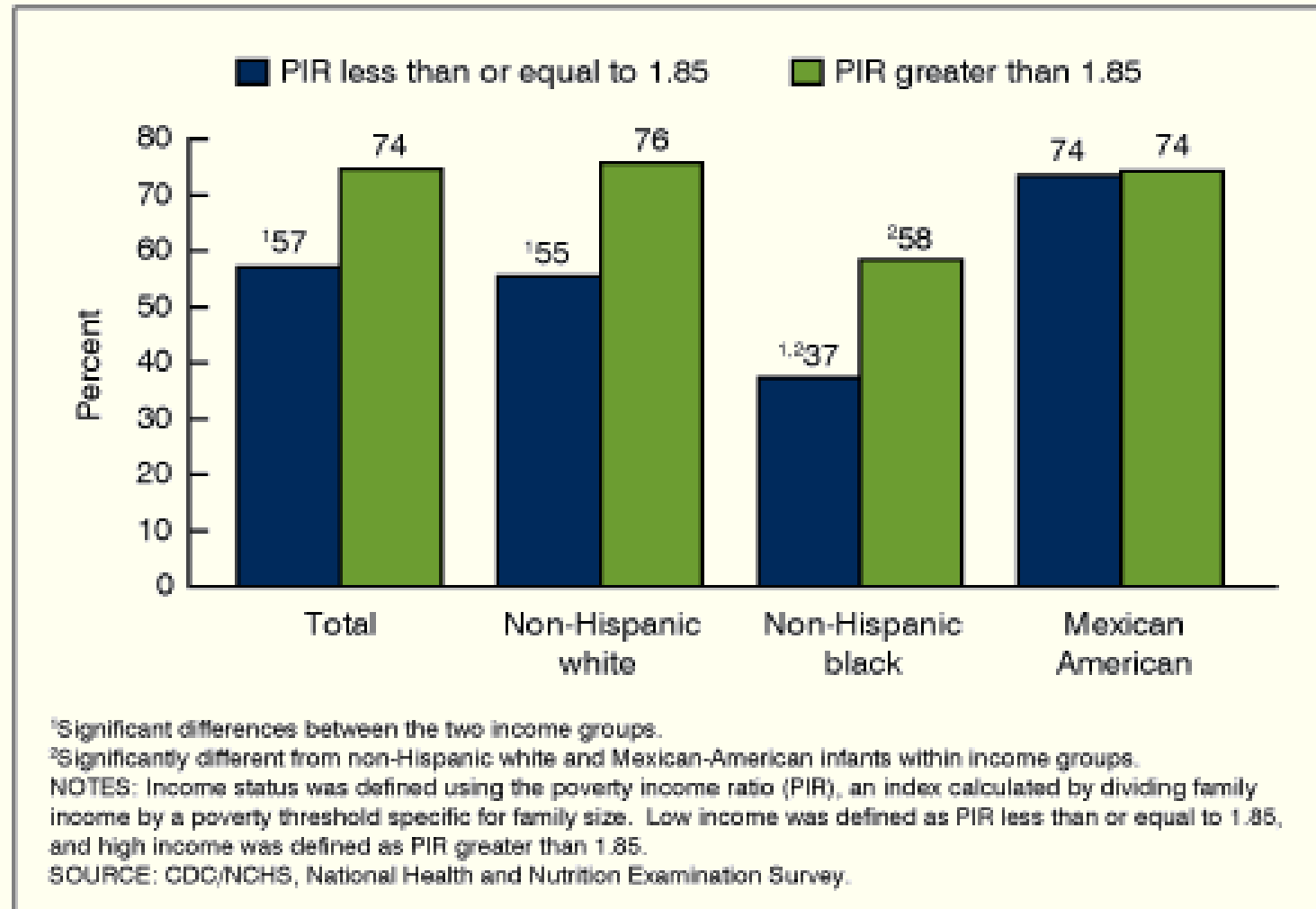
# NHANES Results

Figure 2. Percentage of infants who were ever breastfed by birth cohort and race-ethnicity: United States, 1993–2006



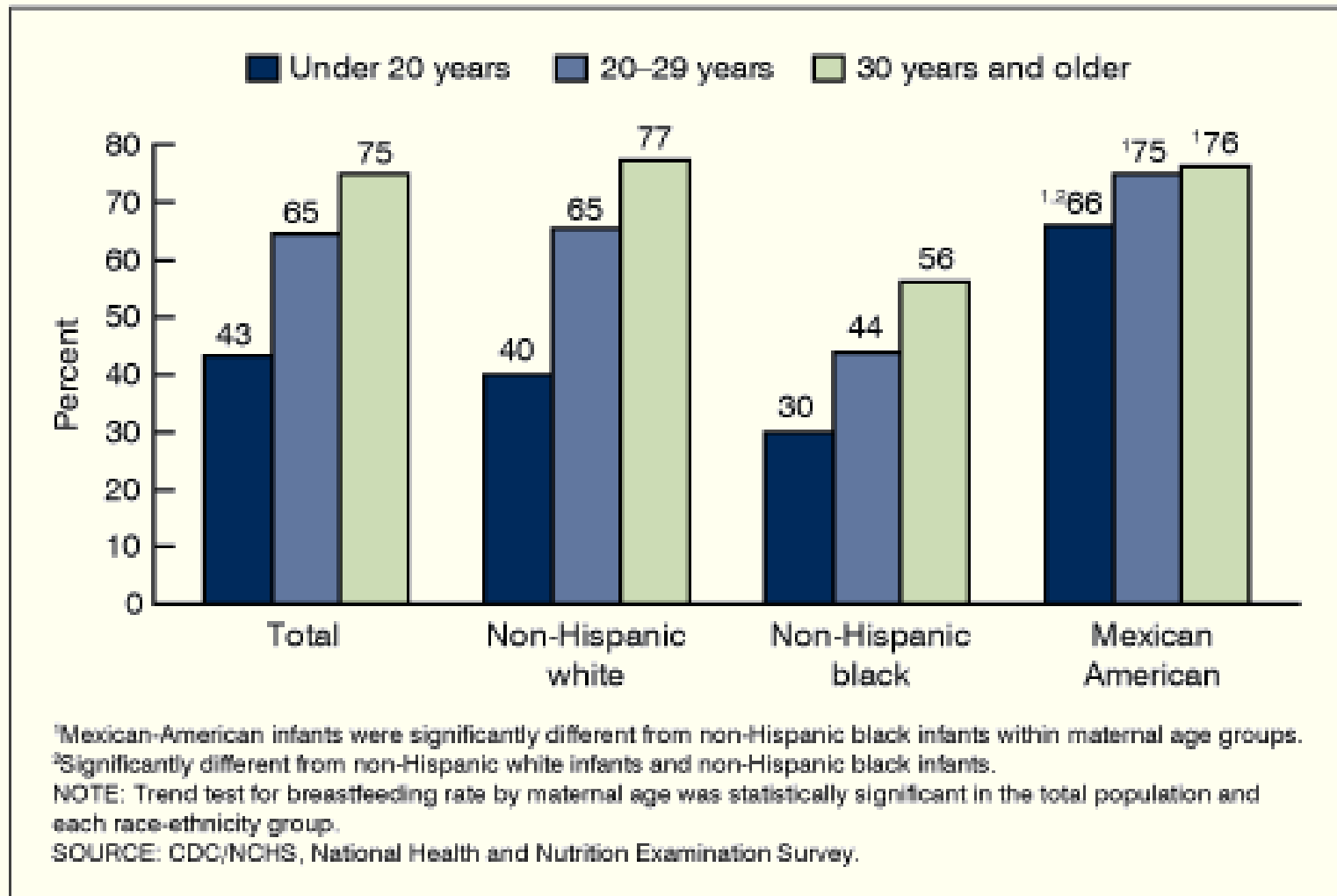
# NHANES Results

Figure 3. Percentage of infants who were ever breastfed by poverty income ratio (PIR) and race-ethnicity: United States, 1999–2006



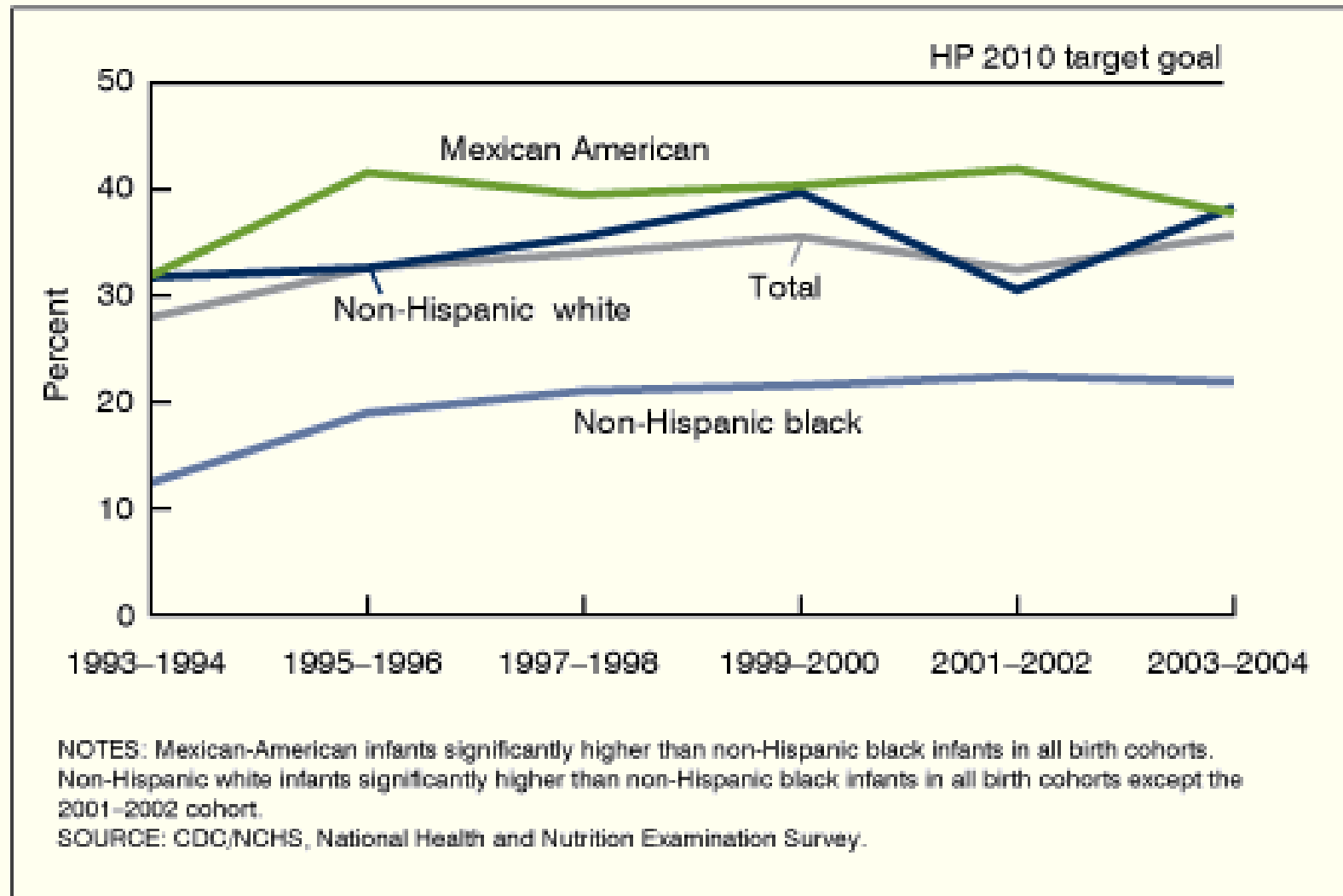
# NHANES Results

Figure 4. Percentage of infants who were ever breastfed by maternal age and race-ethnicity: United States, 1999–2006



# NHANES Results

Figure 5. Percentage of infants who were still breastfed at 6 months of age by birth cohort and race-ethnicity group: United States, 1993–2004

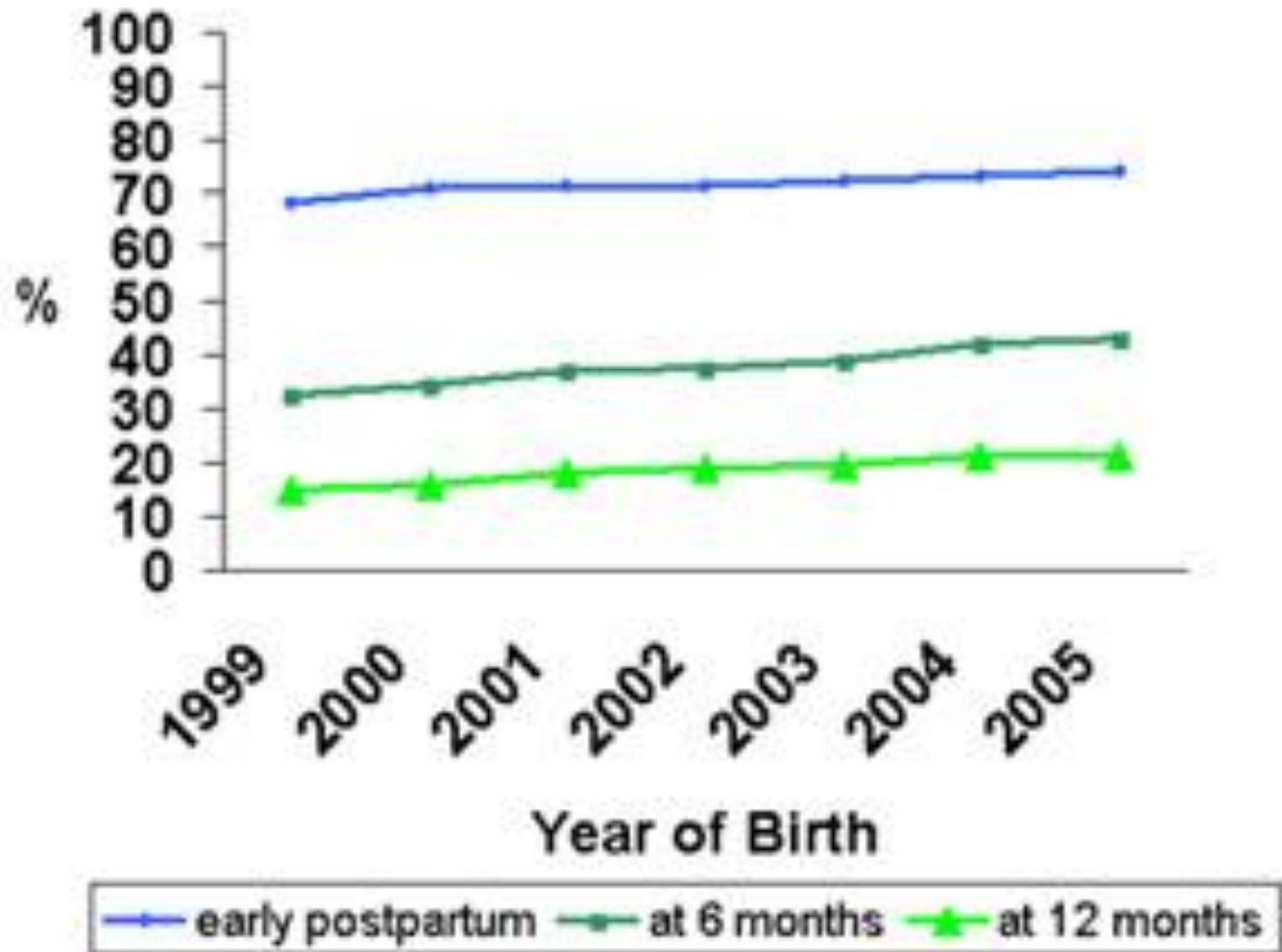


# NHANES Key Points

- Ever breastfed: increased from 60% (1993-1994) to 77% (2005-2006)
- Breastfeeding at 6 months: no change
- Initiation of breastfeeding in non-Hispanic black women nearly doubled in 12 years
- Higher income mothers breastfeed more than lower income
- Older mothers breastfeed more than younger mothers

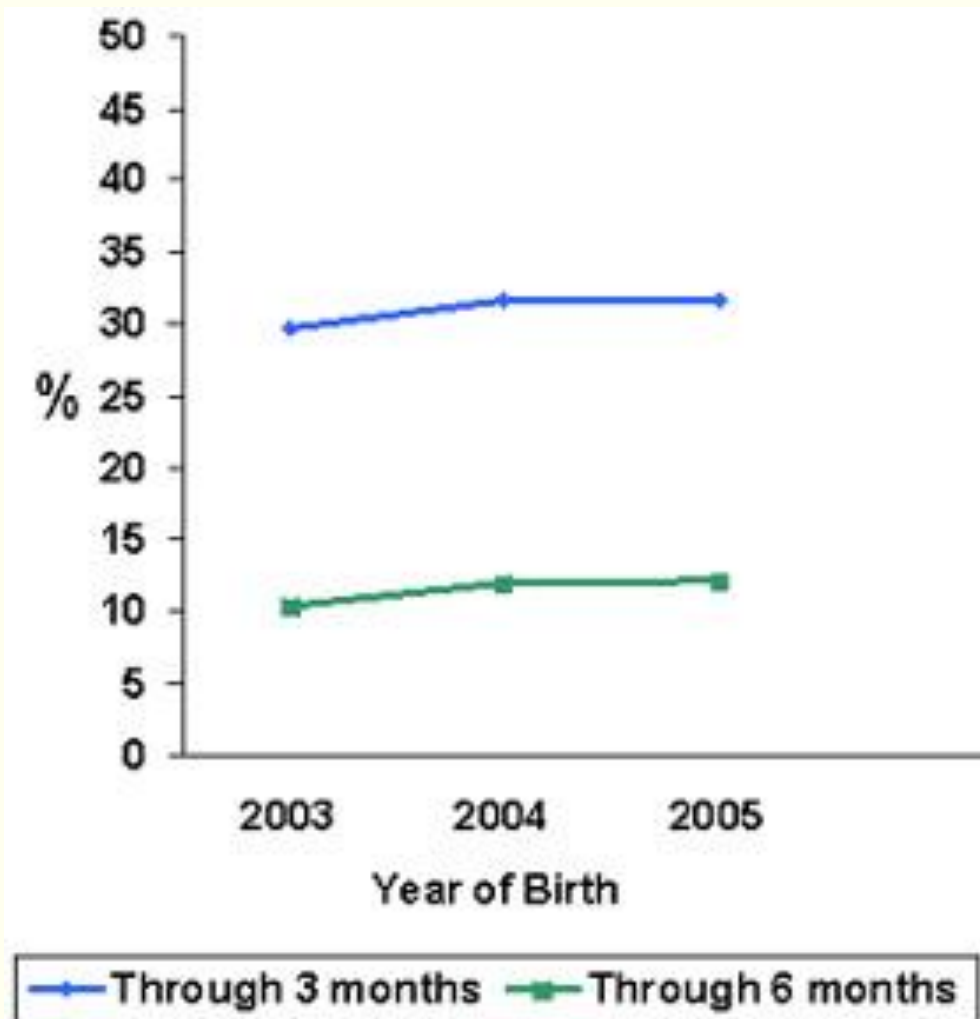
# NIS Results

Percent of U.S. children who were breastfed, by birth year



# NIS Results

**Percent of U.S. children who were exclusively breastfed, by birth year**



# NIS Results

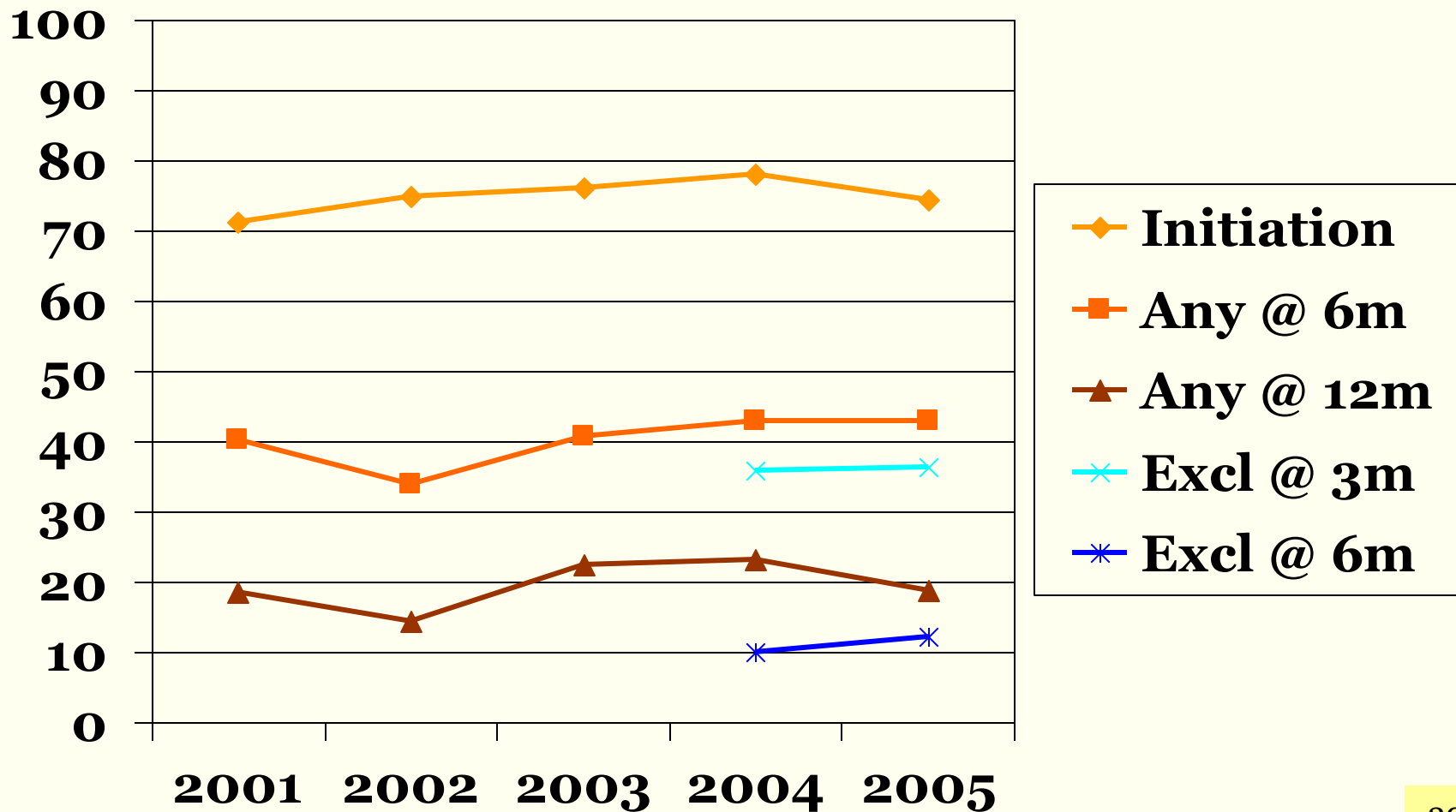
Healthy People 2010 Objectives	# States meeting
75% initiation	23
50% at 6 months	10
25% at 12 months	12
AK, CA, HI, ID, OR, UT, VT, WA – met all 3 goals for initiation and duration of breastfeeding	

# NIS Results

	HP 2010	US		CT	
# surveyed		~15000		~200	
Ever BF	75	74.2	1.2	74.5	7.4
6m BF	50	43.1	1.3	42.9	7.4
12m BF	25	21.4	1.1	18.8	5.5
3m excl. BF	60	31.5	1.3	36.4	7.1
6m excl. BF	25	11.9	0.9	12.3	4.5

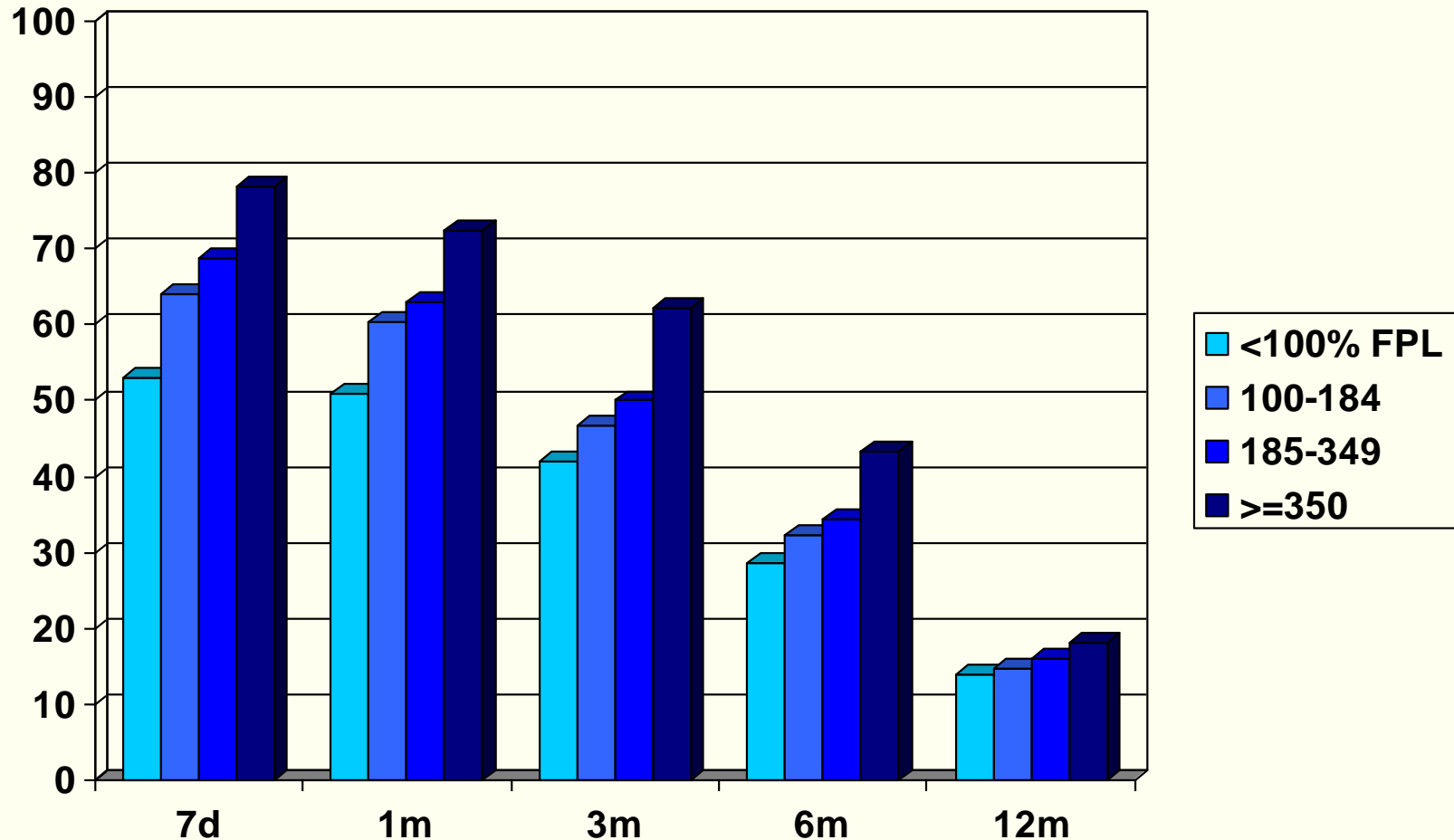
# NIS Results

## CT Breastfeeding Rates, 2001 - 2005



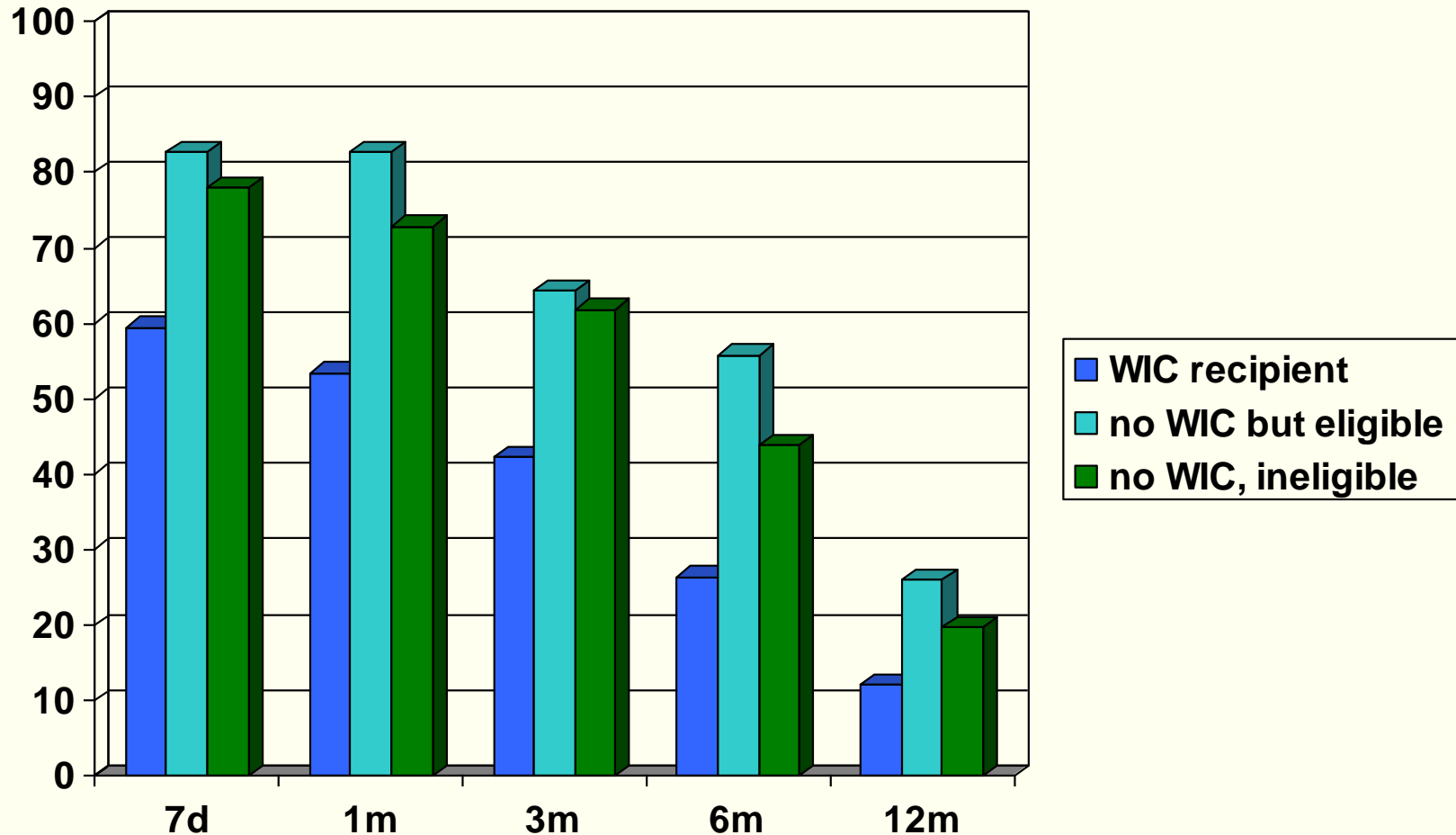
# NIS Results: by income level

## “any breastfeeding”



Li et al. Breastfeeding Rates in the US by Characteristics of the Child, Mother, or Family: The 2002 National Immunization Survey. Pediatrics 115, 1.

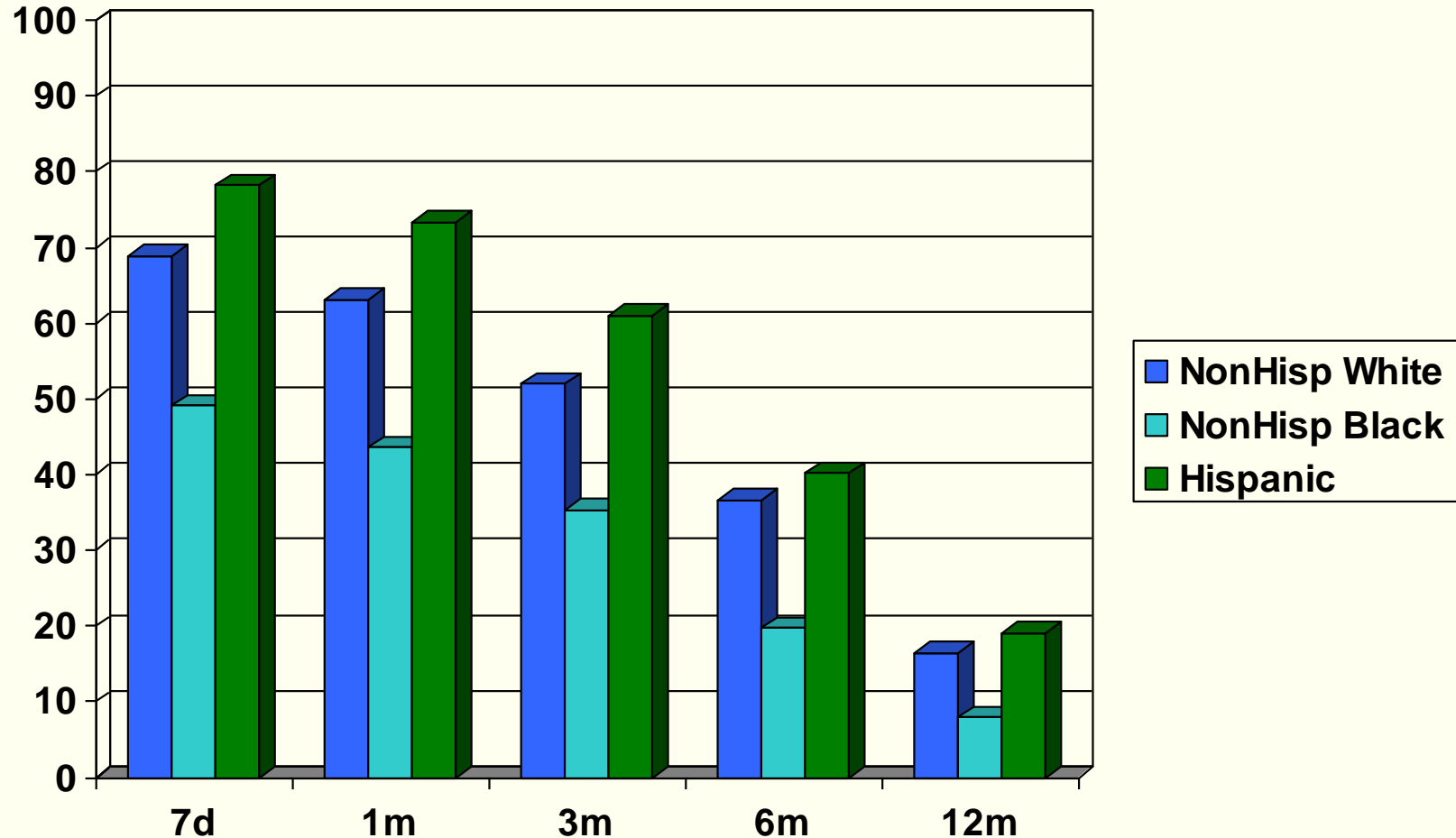
# NIS Results: by receipt of WIC “any breastfeeding”



Li et al. Breastfeeding Rates in the US by Characteristics of the Child, Mother, or Family: The 2002 National Immunization Survey. Pediatrics 115, 1.

# NIS Results: by Race/Ethnicity

## “any breastfeeding”



Li et al. Breastfeeding Rates in the US by Characteristics of the Child, Mother, or Family: The 2002 National Immunization Survey. Pediatrics 115, 1.

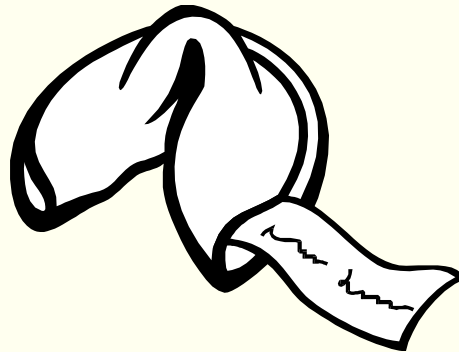
# NIS Results: Summary

- National and state rates improving.
- Continued disparities having to do with poverty, racial/ethnic background.

# Goals

- Describe the epidemiology of breastfeeding nationally and in Connecticut.
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- Identify programs and practices that have been successful in promoting breastfeeding in low-income women, both nationally and in Connecticut.

# COOKIE #3



Do not seek so much to find the answer  
as to understand the question better.

# Breast-feeding promoters

## Maryland

Validated promoters:

- MD's opinion (OR: 2.74)
- Opinion of the Father of the baby (3.33)
- Breastfeeding experience (4.27)

# Breast-feeding promoters Mississippi

## Knowledge / Attitudes

- BF healthier (OR:4.72)
- BF has health benefits (1.92)
- BF enjoyable (3.18)
- BF not embarrassing (2.86)

## Health Care / Social Support

- Doctor encouraged BF (1.69)
- Hospital nurse enc. BF (2.44)
- Lactation specialist / peer counselor enc. BF (2.62)
- Family did not encourage formula (2.00)

Khoury AJ et al. Breast-feeding initiation in low-income women: Role of attitudes, support, and perceived control. *Women's Health Issues*, 15(2); 64-72.

# Breast-feeding promoters

## Alabama

Putative promoters:

- Mother was breastfed as an infant
- Relatives and friends breastfed
- Had seen others breastfeed
- Had breastfed children in the past
- Received infant feeding education

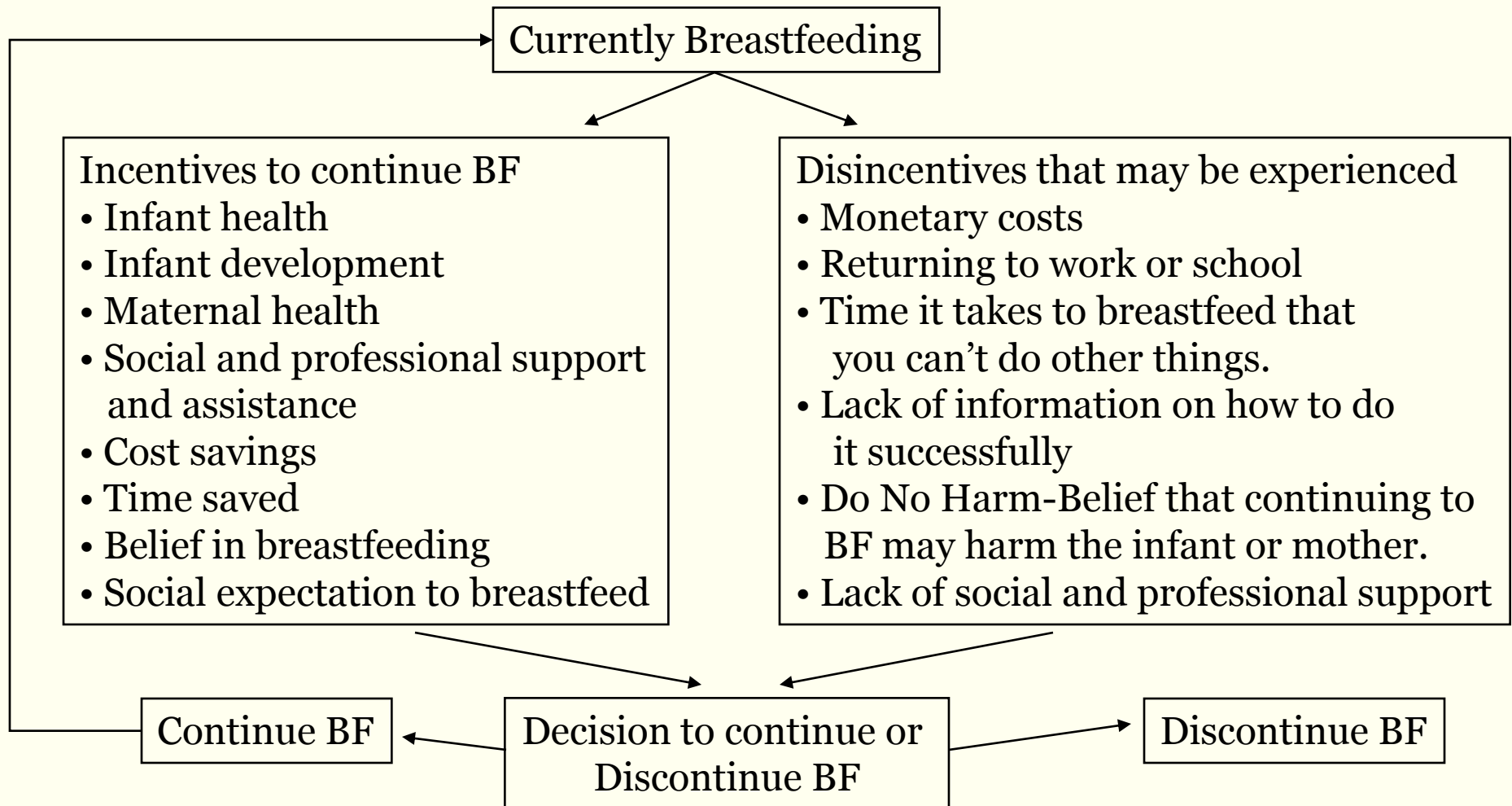
# Breast-feeding promoters

## Alabama

### Validated promoters:

- **Initiation:**
  - Mother was breastfed as an infant (OR 6.88)
  - Mother BF previous child (10.9)
  - Infant was not premature (11.1)
- **Breastfeeding past 1 month:**
  - Mother was breastfed as an infant (6 weeks more)
  - Mother BF previous child (7 weeks more)

# Another Theoretical Framework: Individual net benefit maximization model



# Motivation for Breastfeeding

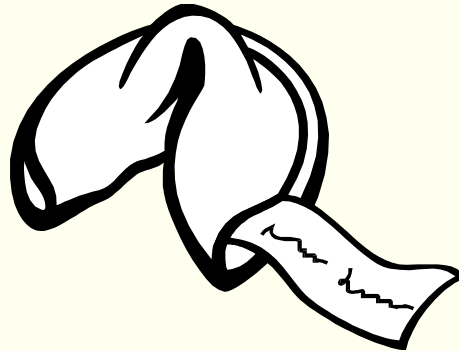
- Questions:
  - Why are you going to breastfeed?
  - Have you successfully breastfed in the past?
  - Have family members breastfed?
- Answers:
  - Intrinsic motivation: will try BF because it is best for their or child's health, never breastfed in past.
  - Extrinsic motivation: will try BF because someone told her she should
  - Experienced: has breastfed in past/family has breastfed in past

# Results: Motivational Analysis

	Extrinsic	Intrinsic	Experienced
>6 mos	1 (7.1)	14 (56.0)	3 (60.0)
3-6 mos	5 (35.7)	5 (20.0)	2 (40.0)
<3 mos	8 (57.1)	6 (24.0)	0 (0.0)

P = 0.008 by fisher's exact test

# COOKIES #4 & 5



You will be fortunate in everything you  
put your hands to.

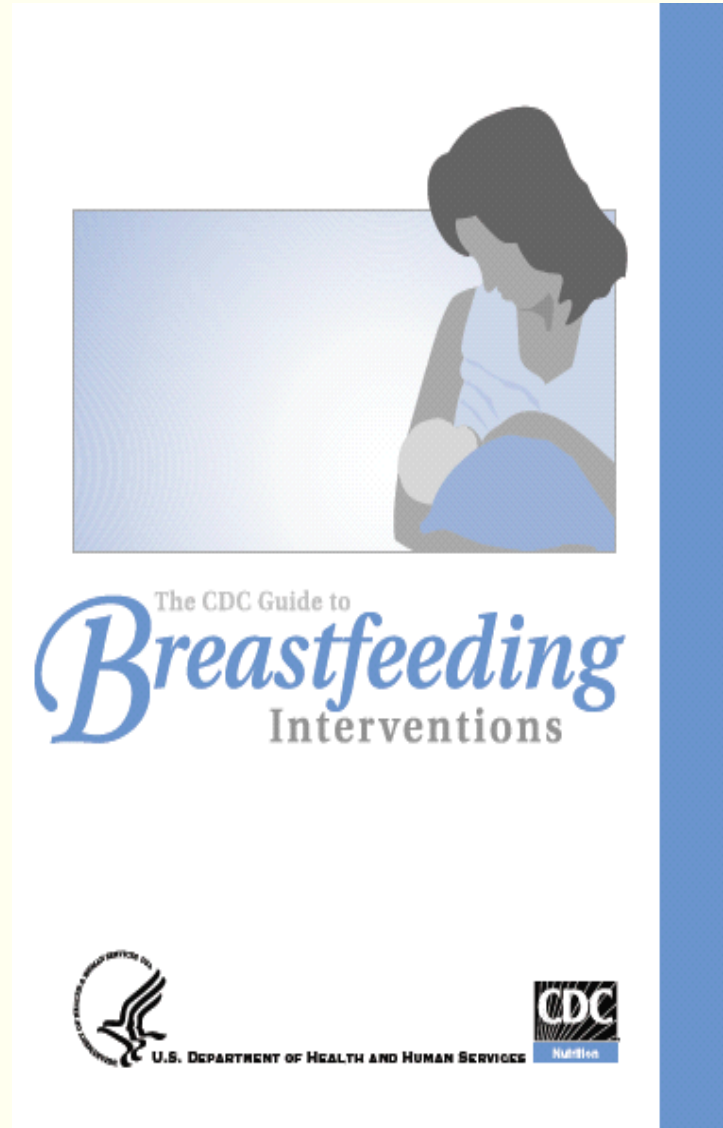
It's the crying baby that gets the milk.

(lucky numbers 22, 17, 38, 5, 41, 6)

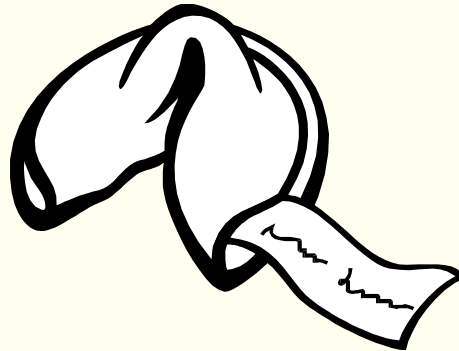
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# Kudos to:



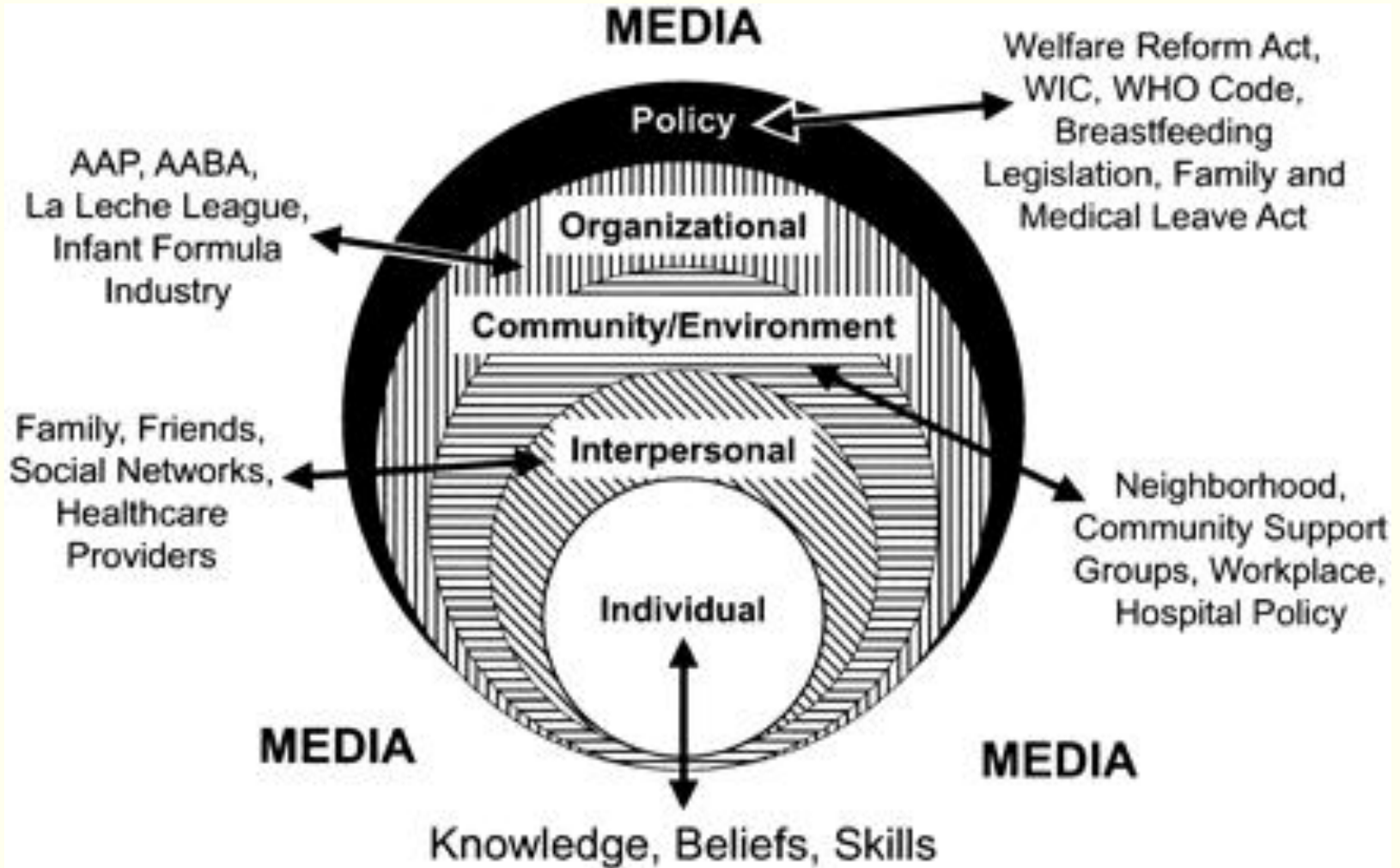
# COOKIE #6



**Good luck is the result of  
good planning.**

(lucky numbers 57, 58, 59, 48, 12, 7)

# Social-Ecological Framework



Bentley ME et al. Breastfeeding among low income, African-American women: power, beliefs, and decision making . JNutr 133; 305S-309S.

# Media



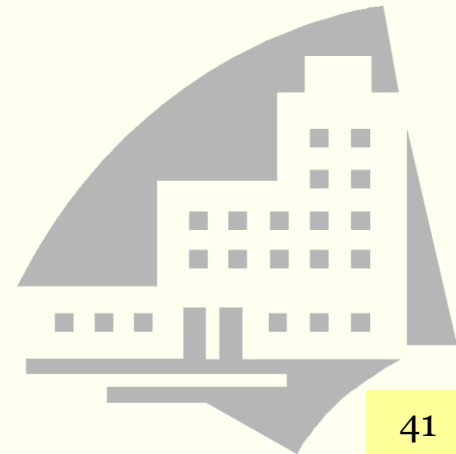
# Legal Initiatives



- Conn. Gen. Stat. 31-40w requires employers to provide a reasonable amount of time each day to an employee who needs to express breast milk for her infant child and to provide accommodations where an employee can express her milk in private.
- Conn. Gen. Stat. 46a-64 prohibits places of public accommodation, resort or amusement from restricting or limiting the right of a mother to breastfeed her child.
- Conn. Gen. Stat. 53-34b provides that no person may restrict or limit the right of a mother to breastfeed her child

# Hospital Interventions

- Encouragement from hospital doctor or nurse:  
4x more likely to initiate
- Women giving birth in hospitals that meet 5/10 of Baby-Friendly Hospital Initiative:  
8x less likely to stop breastfeeding before 6 weeks after birth.



# Workplace initiatives

- Corporate policies
- Teaching employees
- Providing designated private space
- Allowing flexible scheduling
- Giving options for returning to work
- Providing high-quality breast pumps
- Offering professional lactation management services and support.



# Peer Support

- Emotional support
- Encouragement
- Education about breastfeeding
- Help with problem-solving



# Breastfeeding: Heritage & Pride

## Setting

- Hartford Hospital – BFH since 2000
- Clinic serves low-income, predominantly Latina population

## Model

- Home & hospital based services
- Targets primarily Latina population
- Hands-on

# Breastfeeding: Heritage & Pride

## Personnel

- 2 codirectors (total 0.3 FTE)
- Program coordinator (1.0 FTE)
  - IBCLC
- Staff peer counselors (2.3 FTE)
  - High school
  - Breastfed for minimum of 6 months
  - Training in breastfeeding management

# Breastfeeding: Heritage & Pride

## Prenatal Home Visit x1

- Benefits of breastfeeding
- Screening for inverted nipples
- Written materials
- Common breastfeeding myths
- Positioning
- Anticipatory Guidance

## Postpartum hospitalization, daily

- Hands-on assistance
- Infant cues
- Expected BF frequency
- Signs of adequate BF
- Management of BF problems

## Postpartum home visits x3

- Assistance with positioning and latch-on
- Verbal support and encouragement
- Mini-electric breast pumps
- Pager-available counselor

# Breastfeeding: Heritage & Pride

## Risk of Not Breastfeeding

Time	BHP Intervention	Usual Care	Relative Risk
Birth	8.9%	22.7%	0.39 (0.18-0.86)
1 mo	35.7%	49.3%	0.72 (0.50-1.05)
3 mo	55.6%	70.8%	0.78 (0.61-1.00)

6 mo duration rates and 1 month exclusivity rates not impacted by intervention.

# Individual education

## Goals

- Increase knowledge and skills
- Influence attitudes toward breastfeeding

## Timing

- Prenatal
- Intrapartum
- Newborn

# Professional Support

## Health professionals

- Lactation Consultants
- Physicians
- Nurses
- Other allied health professionals

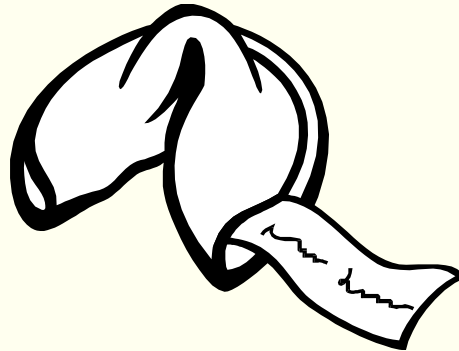
## Methods

- Counseling
- Encouragement
- Managing Lactation Crises

# Summary

- Breastfeeding rates are improving nationally; some of the biggest gains have been made in non-Hispanic black women, but there are still disparities based on income, race, and age.
- Low-income women are more likely to breastfeed if they have positive attitudes about breastfeeding, if they have previously breastfed successfully, if they themselves were breastfed, and if they receive support from the father of the baby and family members, and advice to breastfeed from health care providers.
- A multilevel approach is likely to be successful in improving breastfeeding rates among low-income women, encompassing everything from individual knowledge gains to community level interventions to laws and media.

# COOKIES #7 & 8



**To love what you do and feel that it matters  
– how could anything be more fun?**

(lucky numbers 7, 35, 8, 11, 23, 49)

Your wisdom will  
influence others.

Thank you for your attention

