

Debunking Folic Acid Myths Webcast

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Debunking Folic Acid Myths

National Council on Folic Acid



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Health Resources and Services Administration (HRSA)
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National Council on Folic Acid



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How Common are Neural Tube Defects (NTDs)?

- Approximately 3,000 pregnancies affected every year in the US
- Over 300,000 NTDs globally



Anencephaly



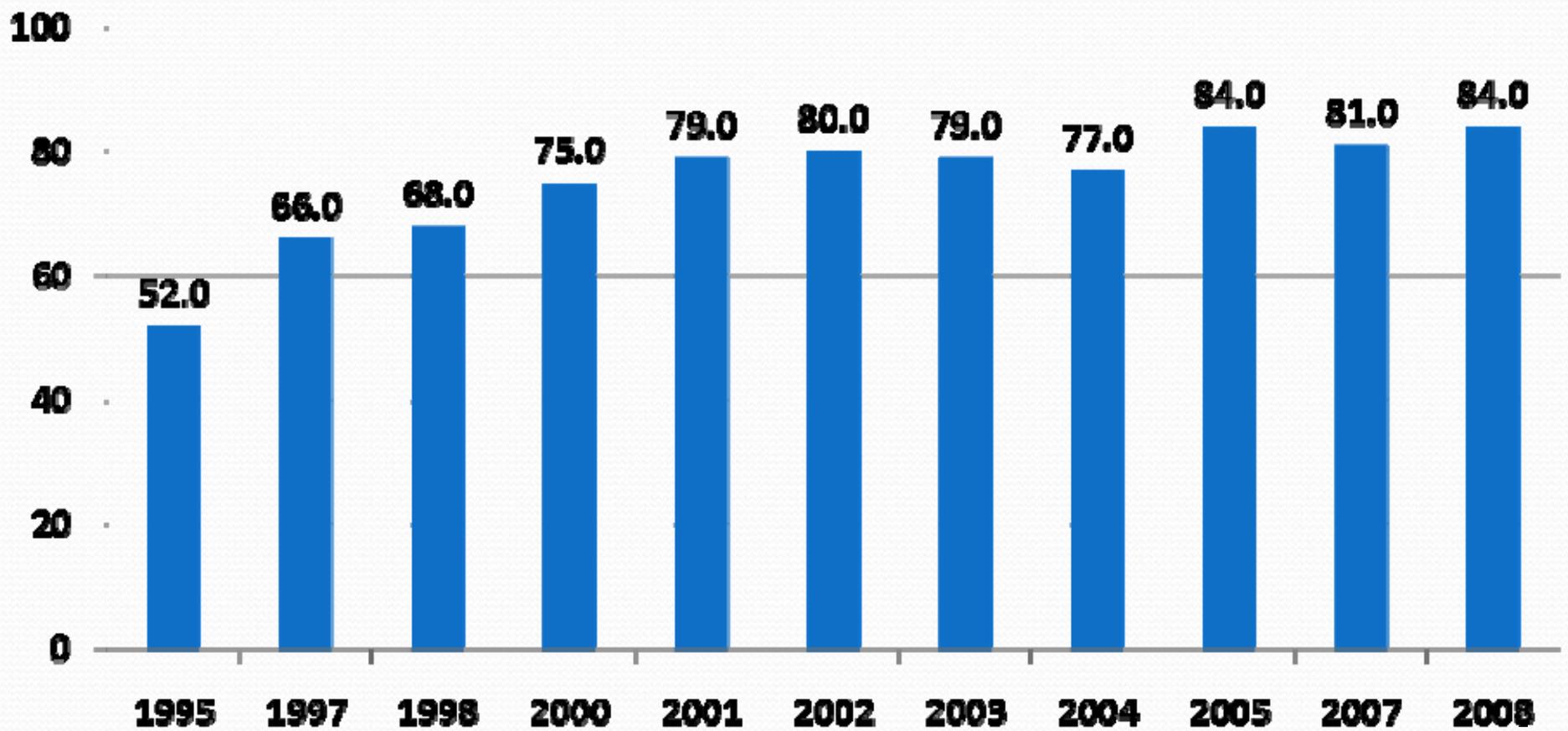
Spina Bifida

Folic Acid Recommendation

- 400 mcg folic acid daily
 - For prevention of spina bifida and other neural tube defects
 - For All women capable of becoming pregnant
 - Women who have had a pregnancy affected by an NTD like spina bifida should consult a physician about a higher folic acid dosage

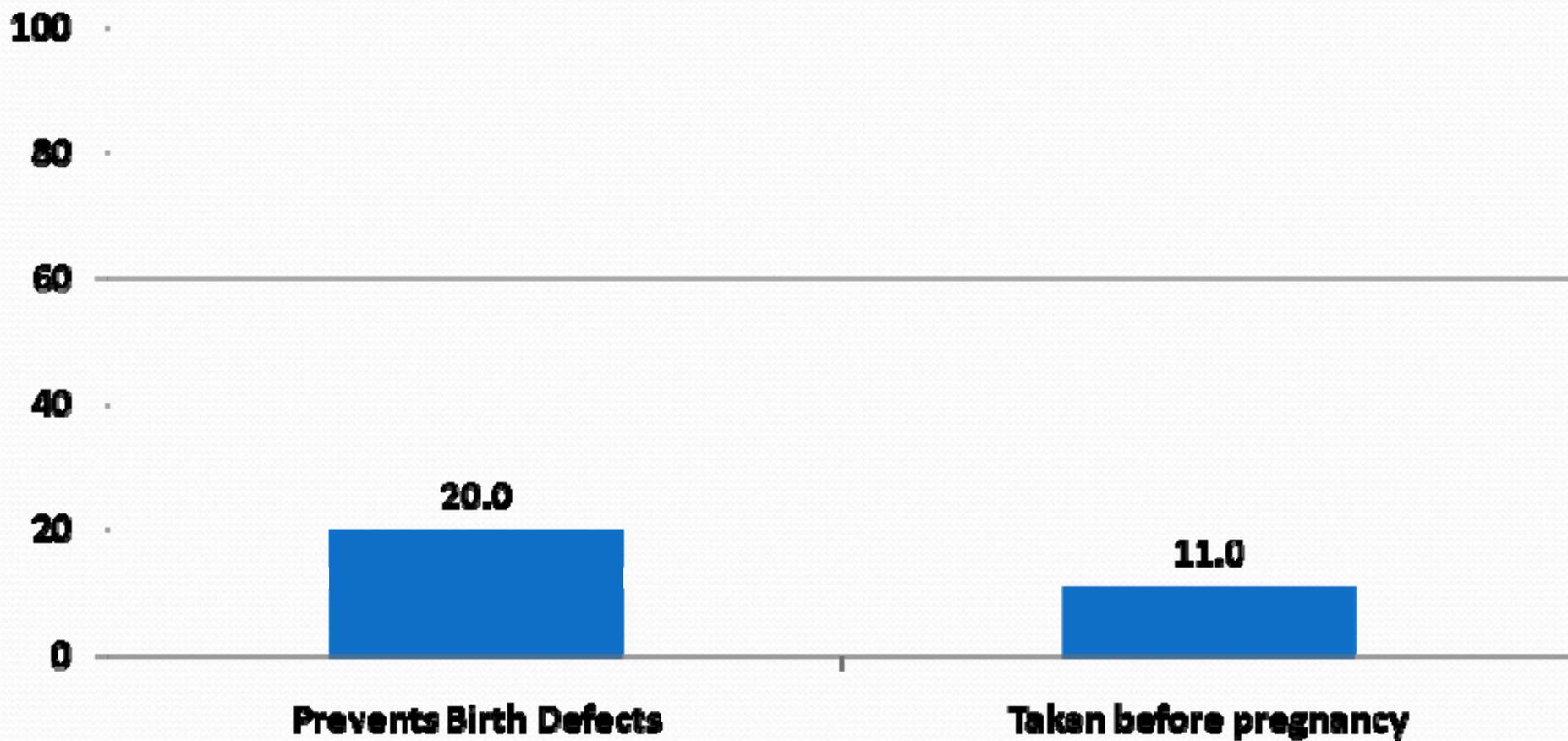


Folic acid awareness: US, 1995-2008



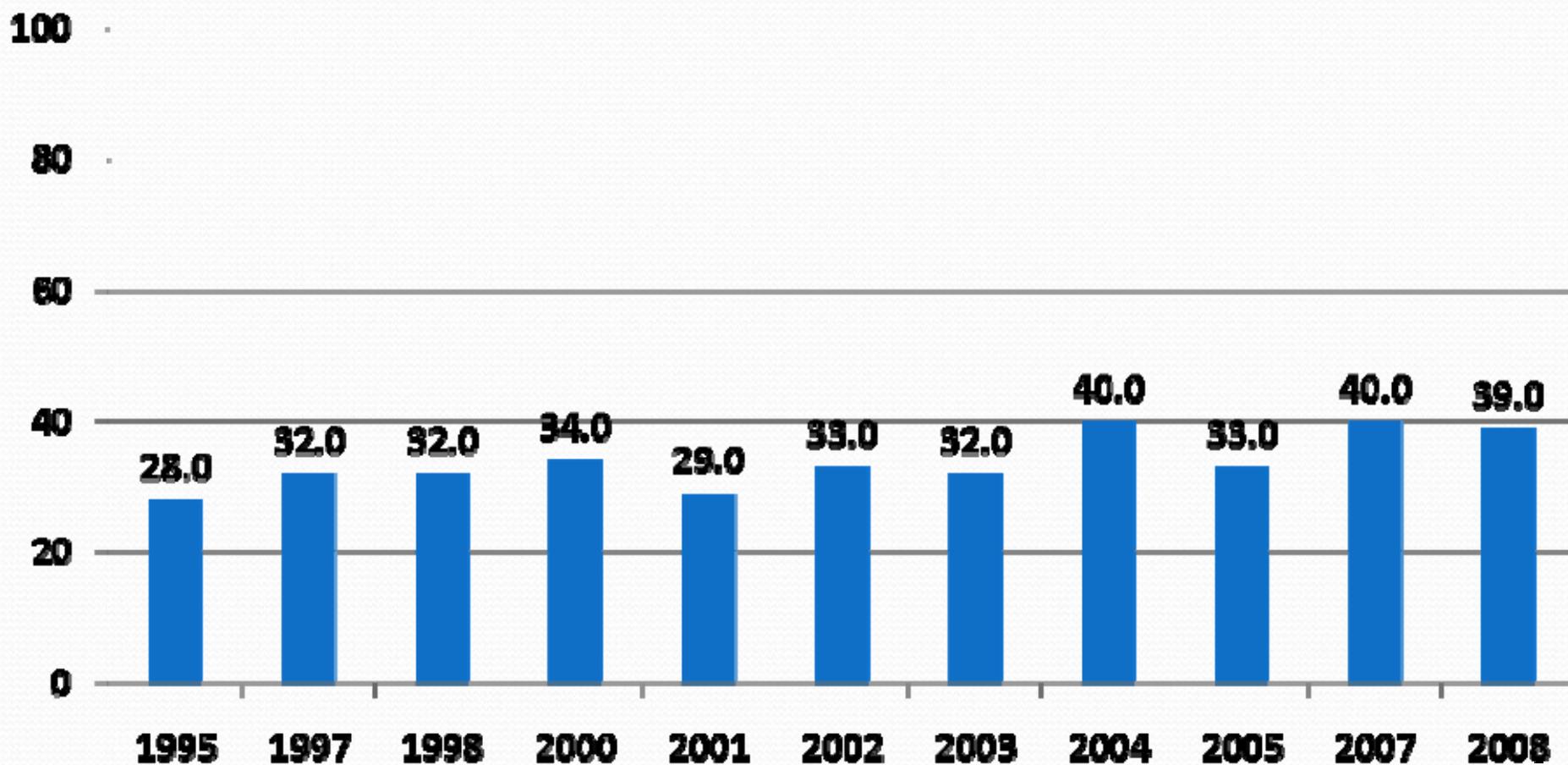
Percent of women ages 18-45

Folic acid specific knowledge: US, 2008



Percent of women aware of folic acid

Daily use of folic acid among women 18-45 years: US, 1995-2008



Percent of women ages 18-45

The US began mandatory fortification of cereal grain products with 140 mcg/100 g of cereal grain in 1998.

- This is equivalent to 100 mcg per day of folic acid



Questions and Concerns Related to Folic Acid Raised in the Literature include :

- Does folic acid reduce the risk for cardiovascular disease by lowering homocysteine levels? ¹
- Does folic acid increase the risk for overall cancer incidence and mortality? ²
- Does folic acid cause colorectal cancer? ³
- Does folic acid cause breast cancer?⁴

¹ J Nutr 2002; 132(8)(Suppl): 2350s – 2355s.
2126.

² J Natl Cancer Inst 2007; 99(1): 64-76.

³ JAMA 2009; 302(19): 2119 -

⁴ Am J Clin Nutr 2005; 82(4):



Robert Clarke, et al.* conducted a meta-analysis of 8 large randomized trials of folic acid–based B vitamin supplementation intended to lower plasma homocysteine levels for the prevention of cardiovascular disease.

Included in the trial:

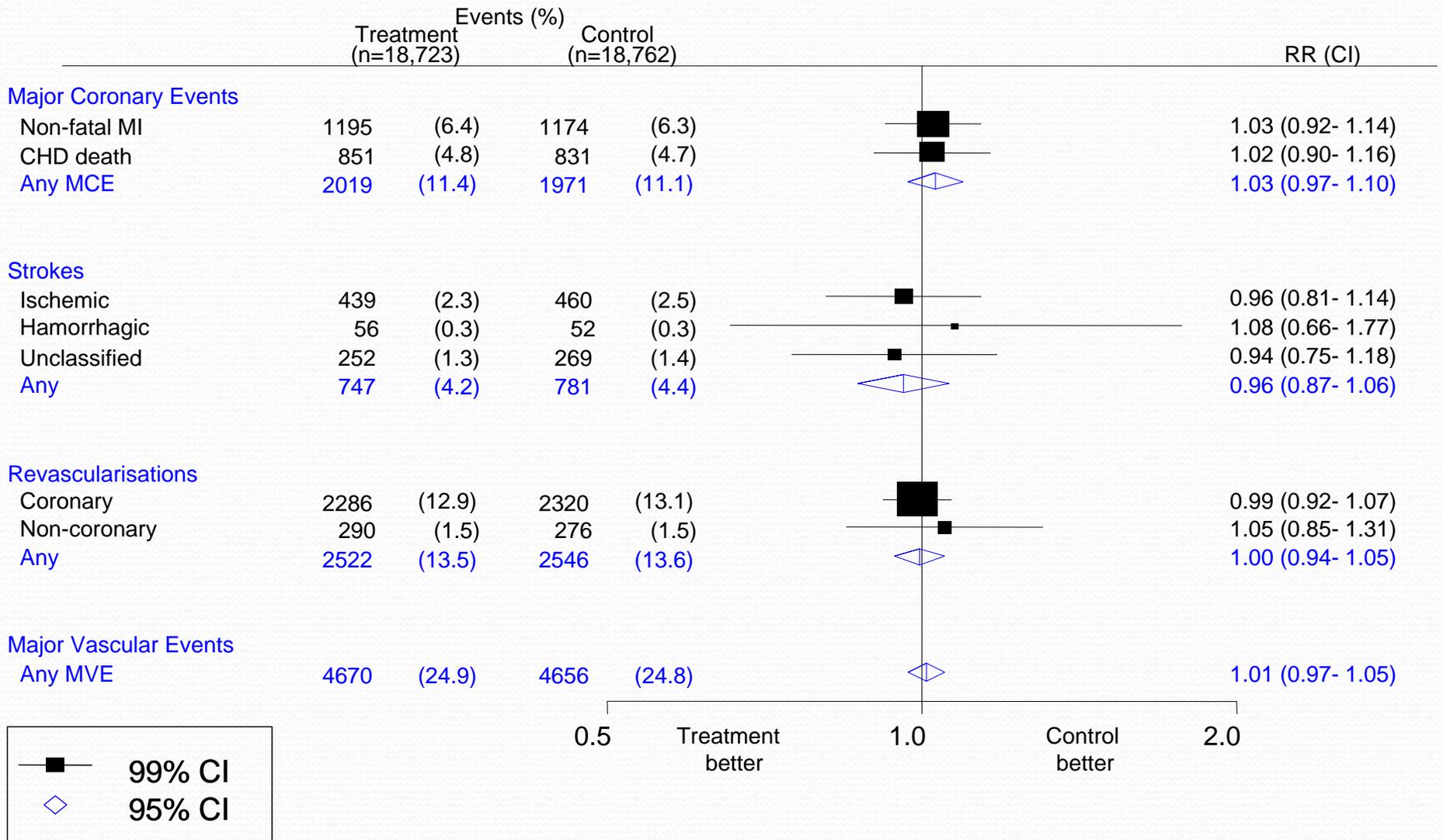
- Double-blind randomized comparison of B-vitamin supplements containing folic acid vs. placebo for the prevention of the recurrence of vascular disease.
- The treatment groups only differed in the intervention to lower homocysteine levels (no confounders).
- Each trial had at least 1,000 participants and lasted at least 1 year.

*Arch Intern Med 170(18): 1622-1631.

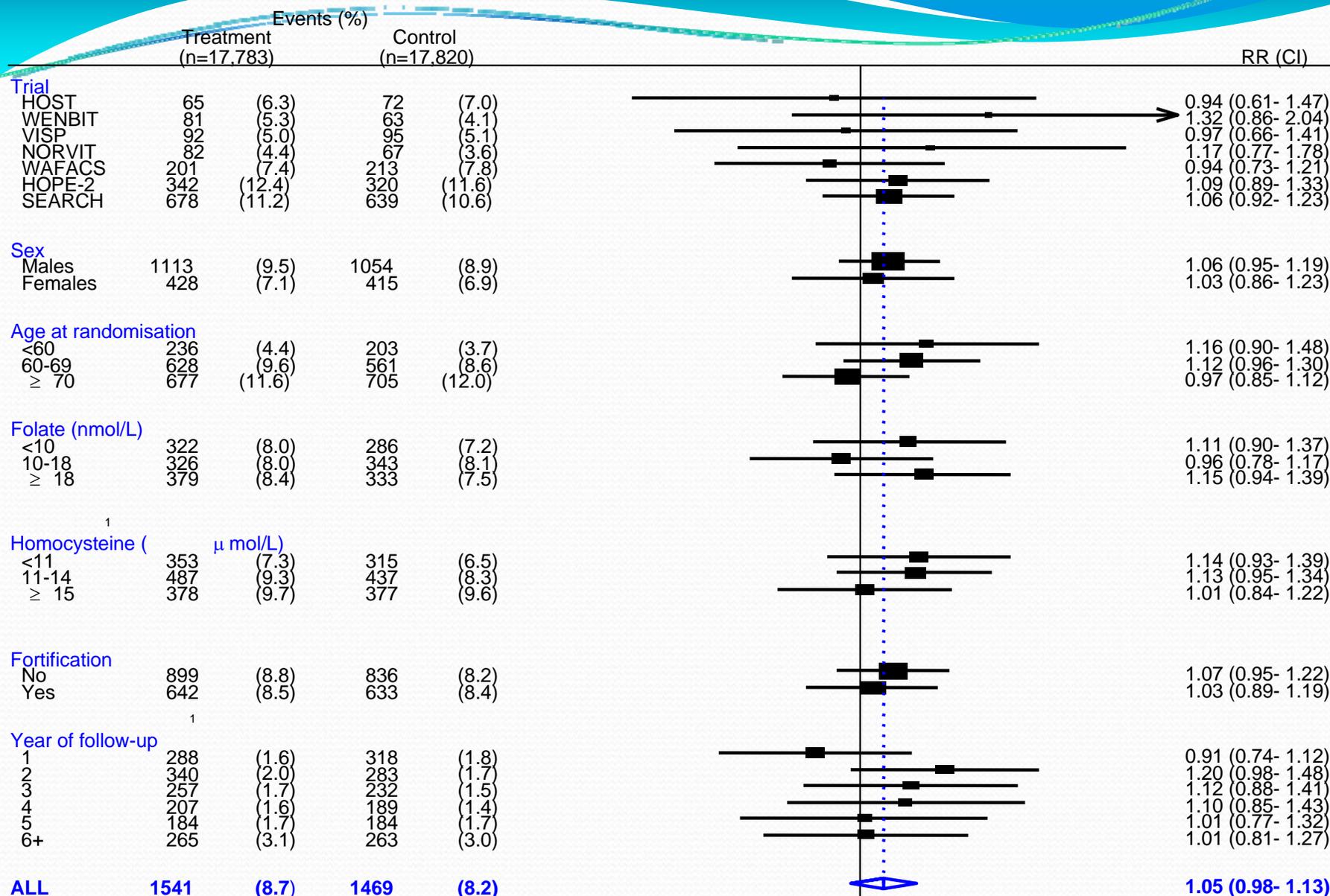
Table 1. Overview of Trials

Trial	Prior Disease	Median Yrs Treatment	Folic Acid mg	Vit B12 mg	Vit B6 mg
Cambridge Heart Antioxidant Study 2 (CHAOS-2)	CHD	2.0	5.0	0	0
Homocysteinemia in Kidney & End Stage Renal Disease (HOST)	Renal	3.2	40.0	2.0	100
Western Norway B Vit Intervention Trial (WENBIT)	CHD	3.2	0.8	0.4	40
Vitamin Intervention for Stroke Prevention (VISP)	Stroke	2.0	2.5	0.4	25
Norwegian Vitamin Trial (NORVIT)	CHD	3.4	0.8	0.4	40
Women's Antioxidant & FA Cardiovascular Study (WAFACS)	CVD	7.3	2.5	1.0	50
Heart Outcomes Prevention Evaluation 2 (HOPE – 2)	CVD	5.0	2.5	1.0	50
Study of the Effectiveness of Additional Reduction in Cholesterol & Homocysteine	CHD	7.0	2.0	1.0	0

Effects of Folic Acid on Major Vascular Events



Effects of Folic Acid on Cancer Incidence, in subgroups



 99% CI
 95% CI

0.5

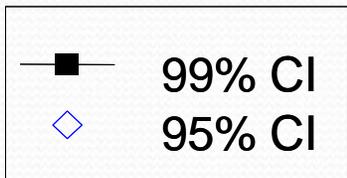
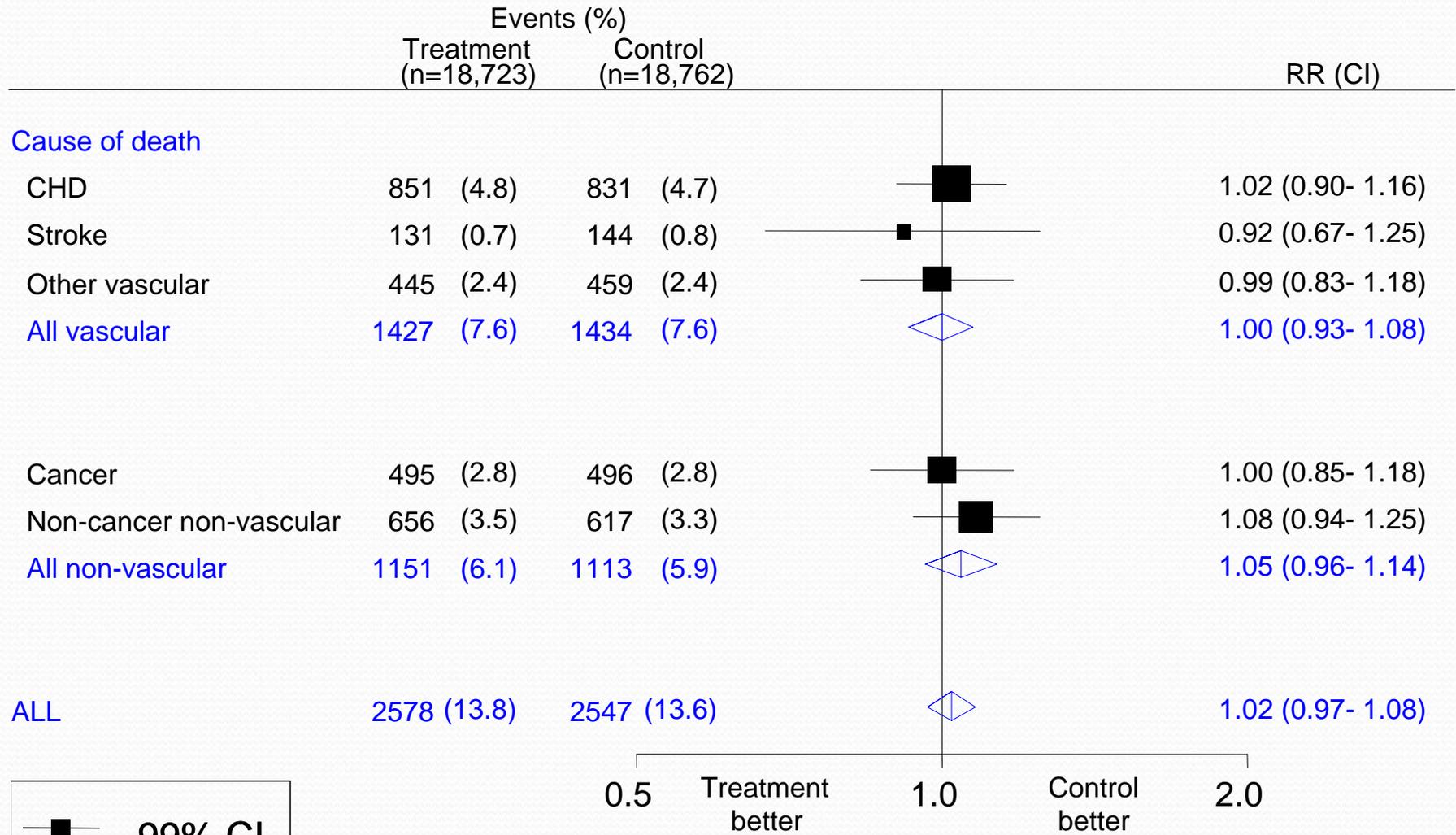
1.0

2.0

Treatment better

Control better

Effects of Folic Acid on Cause-specific Mortality



Study Findings

- There was a 25% reduction in homocysteine levels, maintained for an average of 5 years.
- Even with the reduction in homocysteine levels, folic acid treatment had no significant effect on major vascular events (myocardial infarction, strokes, revascularizations).
- Folic acid treatment had no statistically significant association with the increased incidence of cancer: 8.7% in the folic acid treatment groups vs. 8.2% in the placebo groups.
- Folic acid treatment was not associated with total mortality: 13.8% folic acid treatment vs. 13.6% placebo.

Questions and Concerns Related to Folic Acid Raised in the Literature:

- Does folic acid reduce the risk for cardiovascular disease by lowering homocysteine levels? ¹ *NO*
- Does folic acid increase the risk for overall cancer incidence and mortality? ² *NO*
- Does folic acid cause colorectal cancer? ³ *NO*
- Does folic acid cause breast cancer?⁴ *NO*

¹ J Nutr 2002; 132(8)(Suppl): 2350s – 2355s.
2126.

² J Natl Cancer Inst 2007; 99(1): 64-76.
806-812.

³ JAMA 2009; 302(19): 2119 -

⁴ Am J Clin Nutr 2005; 82(4):

Overall Conclusion

- The lack of adverse effects of folic acid on recurrence of vascular events, cancer incidence, cancer mortality and overall mortality provides reassurance regarding the safety of folic acid fortification.

DEBUNKING MYTHS ABOUT FOLIC ACID CONSUMPTION AMONG LATINAS

Vicky Cardoza, MPH
Project Coordinator
National Council of La Raza
Institute for Hispanic Health

January 4, 2011

Overview

- National Council of La Raza, Institute for Hispanic Health
- The Latino community
- Prenatal care in the Latino community
- Myths about birth defects of the brain and spine and folic acid consumption
- Debunking the myths



National Council of La Raza

- The largest national Hispanic civil rights and advocacy organization in the U.S.
- Applied research, policy analysis, and advocacy
- NCLR provides capacity-building assistance to nearly 300 Affiliates

Institute for Hispanic Health

- Promote quality, science-based, culturally competent interventions
- Reduce health-related problems among Hispanics and promote their well-being
- Partner with NCLR Affiliates, agencies, private funders, and other organization

THE LATINO COMMUNITY

The Latino Community

- The Latino^a community is the largest, fastest growing, and youngest minority group in the U.S., representing 16% of the total U.S. population, excluding Puerto Rico in 2009.¹
- Latinos represent approximately 20 different countries and all racial groups.
- The median age for Latinos in the U.S. is 27.4 years, compared to 36.8 years for the country as a whole.¹
- Hispanic women ages 15-44 compose almost half of the total population of Hispanic women.

^a The terms "Hispanic" and "Latino" are used interchangeably by the U.S. Census Bureau and throughout this document to refer to persons of Mexican, Puerto Rican, Cuban, Central and South American, Dominican, Spanish, and other Hispanic descent; they may be of any race.

Latinas



- Hispanic women have a higher fertility rate than non-Hispanic White women. In 2009, fertility rates were 93.3 vs. 58.6 per 1,000.²
- Fifty four percent (54%) of pregnancies among Latinas are unplanned.³
- Fifty three percent (53%) of Latina teens get pregnant at least once before the age 20.⁴

Latinas (cont'd)

- Latinas may differ in terms of:
 - National origin
 - Race
 - Geographical areas of residence
 - Educational and literacy levels
 - Immigration status
 - Acculturation level
 - Religion



PRENATAL CARE IN THE LATINO COMMUNITY

Prenatal Care in the Latino Community

- Child-bearing capability is a major concern for Latinas⁵
- Generally, responsibility for child care lies on the mother
- Stigma associated with sexual health related topics, including sexual health knowledge, and gynecological medical examinations, among others
- More than 20% of Latina immigrant women do not begin prenatal care in the first trimester.⁶

Folic Acid Intake

- Latina women have lower blood folate levels, and are less likely to consume foods fortified with folic acid.⁷
- A 2009 national survey by the March of Dimes⁸ found that nationally,
 - 17 percent (17%) of Spanish-speaking women take a daily vitamin
 - 40 percent (40%) of all women of childbearing age take a multivitamin with folic acid
 - Just 11 percent (11%) know to take folic acid before pregnancy.

Folic Acid Intake (cont'd)

- Hispanic/Latina women are less likely to have heard about folic acid, to know it can prevent birth defects, or take vitamins containing folic acid before pregnancy.⁹
- While pasta, bread and cereal are fortified with folic acid, staples of the Hispanic diet — such as corn tortillas — are not.¹⁰
- Hispanic women have a risk 1.5 to 3 times higher than non-Hispanic white women for having a child affected by birth defects of the brain and spine.⁷

MYTHS AND TRUTHS ABOUT BIRTH DEFECTS AND FOLIC ACID CONSUMPTION

Myths and Truths ¹¹

- **Myth 1:**

As long as you have a good diet and exercise while you are pregnant, your child will be born healthy.

- **Truth 1:**

Some women do everything right during pregnancy, but due to other things like genetics or environmental factors, may still have a child with a birth defect.

- **Myth 2:**

There is no history of spina bifida in my family, so I do not have to take folic acid.

- **Truth 2:**

Most (95%) spina bifida cases happen in families without a history, so it is good to plan ahead and take folic acid daily.

Myth and Truth (cont'd)

- **Myth 3:**

Spina bifida can be cured.

- **Truth 3:**

Spina bifida is a life-long disability, which affects each individual differently. There is no cure.

- **Myth 4:**

I don't plan on getting pregnant any time soon, so I do not have to take folic acid.

- **Truth 4:**

Half of all pregnancies in the US are not planned, so it is important to take folic acid everyday.

Myth and Truth(cont'd)

- **Myth 5:**

Foods that have folate, like orange juice, also have folic acid. So, having a cup of orange juice will give me the folic acid I need.

- **Truth 5:**

Our bodies actually absorb a man-made form of folic acid found in vitamins most easily. The best way to get the folic acid you need is by taking a vitamin with folic acid everyday, in addition to a healthy diet with foods that contain folic acid and fortified foods like breakfast cereals.



DEBUNKING THE MYTHS



Social Ecological Approach

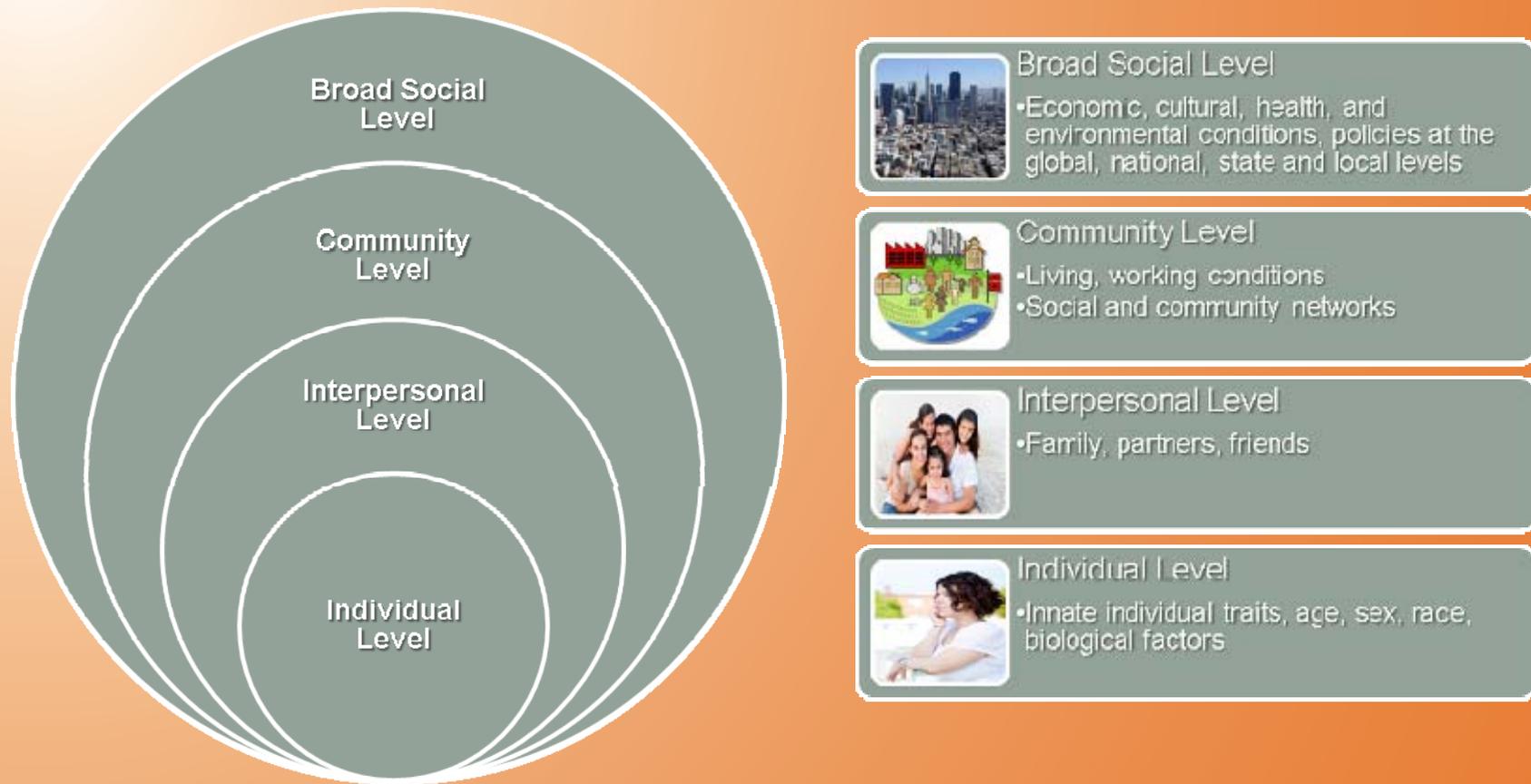


Fig. 1. Social Ecologic Model of Health. (Adapted from <http://www.publichealthreviews.eu/show/f/25>)

Institute for Hispanic Health – Community-based Participatory Research Model

Phase 6

Dissemination

Phase 5

Evaluation and
Follow-up

Phase 4

Field Testing

Phase 3

Materials
Development

Phase 2

Formative
Research

Phase 1

Planning



Summary

- Neural tube defects are conditions that affect Hispanic women's children disproportionately.
- Consumption of folic acid can decrease rates of children neural tube defects.
- The Latino community needs increased support through efforts that:
 1. Are multi-level, sustainable and address the problem from root cause
 2. Are culturally competent and linguistically appropriate to the targeted population
 3. Increase knowledge about folic acid consumption, spina bifida, and anencephaly
 4. Increase peer support groups (e.g., *promotores de salud* model)
 5. Increase access to quality care (e.g., facilitating patient-centered medical homes for Latinas)

References

- ¹ U.S. Census Bureau. Retrieved from <http://www.infoplease.com/spot/hhmcensus1.html>
- ² National Vital Statistics Report. Births: Preliminary Data for 2009. Retrieved from: http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59_03.pdf
- ³ Source: Special Tabulations, commissioned by the National Campaign to Prevent Teen and Unplanned Pregnancy, of data from Finer, LB and Henshaw, SK (2006). Disparities in Rates of Unintended Pregnancy in the United States, 1994 and 2001. *Perspectives on Sexual and Reproductive Health*, 38 (2):90-96.
- ⁴ National Campaign analysis of Martin. J.A., Hamilton, B.E., Sutton, P.D., Ventura, S.J., Menacker, F., and Kirmeyer (2006). Births: Final data for 2004. *National Vital Statistics Reports*, 55 (1); Ventura, S.J., Abma, J.A., Mosher, W.D., and Henshaw, S.K. (2008). Estimated Pregnancy Rates by Outcome for the United States, 1990-2004. *National Vital Statistics Reports*, 56(15).
- ⁵ National Council of La Raza Institute for Hispanic Health. Cervical cancer in the Latino community: A situational analysis. 2009.
- ⁶ National Latina Institute for Reproductive Health (NLIRH), *Prenatal Care Access Among Immigrant Latinas* (New York: NLIRH, 2006)
- ⁷ Office of Minority Health. Hispanic Health Program. Folic Acid Knowledge and Use Among Hispanic Women. Retrieved from <http://www.cdc.gov/omhd/populations/HL/HHP/Folic.htm>
- ⁸ March of Dimes. Improving Preconception Health: Women's Knowledge and Use of Folic Acid. Retrieved from http://www.marchofdimes.com/peristats/pdfdocs/HispanicFolicAcid_Public_21009.pdf
- ⁹ Centers for Disease Control and Prevention. Are Women with Recent Live Births Aware of the Benefits of Folic Acid? Retrieved from <http://www.cdc.gov/ncbddd/folicacid/data.html>
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- ¹¹ Spina Bifida Association. Debunking the Myths: The Truth About Spina Bifida and Folic Acid. Retrieved from <http://www.sbaa.org/atf/cf/%7B99DD789C-904D-467E-A2E4-DF1D36E381C0%7D/sbmyths.pdf>



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Questions and Answers

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