

Preventing Birth Defects: Community-Wide Campaigns to Promote the Use of Folic Acid Supplements

Summary Evidence Table

Study	Intervention and Comparison	Population and Sample	Effect measure	Reported baseline	Reported effect	Value used in summary	Follow up time										
<p>Author (Year): Amitai et al. (2008)</p> <p>Name of Intervention: Community-wide Education Campaign</p> <p>Study Period: 2000-2002</p> <p>Design Suitability: Least</p> <p>Study Design: Before-after</p> <p>Quality of Execution (No of Limitations): Fair (4)</p> <p>Outcome Measurement: report</p>	<p>Location: Israel</p> <p>Components: Community-wide education (recommendation + provider education + client education)</p> <p>Comparison: Before-after</p>	<p>Pregnant women and mothers of newborn infants followed by the Public Health Service at the Maternal Child Health Clinics (MCHC)</p> <p>Pre: N= 1719 Post: N= 1860</p>	Retrospective self-reported use of folic acid on a regular basis for 2 months preceding the current pregnancy	5.2%	34%	<p>Abs Δ = 28.8</p> <p>Rel %Δ = 553.8</p> <p>P<0.001</p>	5 years										
<p>Author (Year): Bower et al. (1997)</p> <p>Name of Intervention: The Folate and Neural Tube Defects Prevention Project-Western Australia Campaign</p> <p>Study Period: 1992-1995</p> <p>Design Suitability: Moderate</p> <p>Study Design: Time Series</p> <p>Quality of Execution (No of Limitations): Fair (4)</p>	<p>Location: Australia; western region (Perth)</p> <p>Components: Community-wide education + provider education + mass media + other promotion</p> <p>Comparison: Before-after</p>	<p>All women attending the public antenatal clinic, who spoke English, were of 20 weeks or less gestation, and scheduled for blood draw.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>N</th> </tr> </thead> <tbody> <tr> <td>1992 (pre)</td> <td>103</td> </tr> <tr> <td>1993</td> <td>71</td> </tr> <tr> <td>1994</td> <td>99</td> </tr> <tr> <td>1995</td> <td>72</td> </tr> </tbody> </table>	Year	N	1992 (pre)	103	1993	71	1994	99	1995	72	<p>1. Median serum blood folate measurements</p> <p>2. Median red blood cell (RBC) folate measurements</p> <p>3. Self-reported use of supplements containing folic acid in the month before pregnancy (1994 & 1995 measurements-BL not reported)</p>	12.0 671.9 10.1	33.2 1452 15.3	<p>Abs Δ = 21.2 nmol/L</p> <p>Rel %Δ = 176.0</p> <p>P<0.0001</p> <p>Abs Δ = 780.1 nmol/L</p> <p>Rel %Δ = 116.1</p> <p>P<0.0001</p> <p>Abs Δ = 5.2</p> <p>Rel %Δ = 51.5</p> <p>P=0.43</p>	3 years
Year	N																
1992 (pre)	103																
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Study	Intervention and Comparison	Population and Sample	Effect measure	Reported baseline	Reported effect	Value used in summary	Follow up time
<p>Outcome Measurement: Self report and Folate measures</p>							
<p>Author (Year): Bower et al. (2004)</p> <p>Name of Intervention: The Folate and Neural Tube Defects Prevention Project-Western Australia Campaign</p> <p>Study Period: 1992-1995</p> <p>Design Suitability: Moderate</p> <p>Study Design: Time Series</p> <p>Quality of Execution (No of Limitations): Fair (4)</p> <p>Outcome Measurement: NTD prevalence rates</p>	<p>Location: Australia; western region (Perth)</p> <p>Components: Community education campaign + birth defects registry data 1980-2000</p> <p>Comparison: Time series</p>	<p>Pregnancies in Western Australia captured in surveillance efforts 1980-2000</p> <p>Pregnancies affected by Neural Tube Birth defects captured in surveillance efforts 1980-2000</p>	<p>NTD prevalence 1980-92 vs. 1993-95 (before and after health education campaign) Per 10,000:</p> <p>-Indegenous population 25.5</p> <p>-Non-Indegenous population 17.9</p>	<p>31.9</p> <p>18.9</p>	<p>Abs Δ = 6.4 Rel %Δ = 25.1</p> <p>Abs Δ = 1.0 Rel %Δ = 5.6</p>	<p>15 years</p>	
<p>Author (Year): Busby et al. (2005)</p> <p>Name of Intervention: Eurocat surveillance</p> <p>Study Period: 1980-2002</p> <p>Design Suitability: Moderate</p> <p>Study Design: Time Series</p> <p>Quality of Execution (No of Limitations): Fair (3)</p>	<p>Location: European Union</p> <p>Components: Official government recommendations and/or policy</p> <p>Comparison: Time series</p>	<p>EUROCAT surveillance trends of total prevalence of NTDs in Europe after official recommendations for the use of folic acid supplements among women. Included 24 registries in the study time period.</p>	<p>NTD prevalence rates 1989-1991 (pre) vs. 2000-2002 (post) Per 10,000:</p> <p>- UK & Ireland 15.4</p> <p>- Europe excluding UK & Ireland 8.3</p>	<p>10.7</p> <p>8.4</p>	<p>Abs Δ = -4.7 Rel %Δ = -30.4</p> <p>Abs Δ = 0.2 Rel %Δ = 1.9</p>	<p>13 years</p>	

Study	Intervention and Comparison	Population and Sample	Effect measure	Reported baseline	Reported effect	Value used in summary	Follow up time
Outcome Measurement: NTD prevalence rates							
<p>Author (Year): Chan et al. (2001)</p> <p>Name of Intervention: Folate before pregnancy campaign</p> <p>Study Period: 1994-1995</p> <p>Design Suitability: Moderate</p> <p>Study Design: Time Series</p> <p>Quality of Execution (No of Limitations): Fair (3)</p> <p>Outcome Measurement: Self report</p>	<p>Location: South Australia; Adelaide</p> <p>Components: Community education + provider education + mass media + folic acid fortification (voluntary)</p> <p>Comparison: Time series</p>	<p>Women 15-44 surveyed by phone (random dial); women who delivered a baby at study hospital in August 1995 and November 1996; and systematic sample of MDs (one in five) in South Australia with survey of identified GPs.</p> <p>1994 (pre) n=400 1995 (post) n=400 1996 (f/u) n=400 1998 (f/u) n=2079 including 167 mothers from 1997-98.</p>	<p>Women (postnatal) self-reporting daily consumption of folic acid before and in first 3 months of pregnancy</p>	10.1	26.7	<p>Abs Δ = 16.6 Rel %Δ = 164.4 P<0.001</p>	1 year
<p>Author (Year): Daltveit et al. (2004)</p> <p>Name of Intervention: Community-wide Education Campaign (national)</p> <p>Study Period: 1998-2000</p> <p>Design Suitability: Least</p> <p>Study Design: Before-after</p> <p>Quality of Execution (No of Limitations): Fair (4)</p> <p>Outcome Measurement: Self-report</p>	<p>Location: Norway</p> <p>Components: Community-wide education campaign + Recommendations</p> <p>Comparison: Before-after</p>	<p>Women 18-45 yrs surveyed by phone.</p> <p>Pre: N= 1146 Post: N= 1218</p>	<p>Self-reported use of supplements containing folic acid.</p> <p>Current use and use during the first 2-3months and/or before the most recent pregnancy.</p>	28.7	31.0	<p>Abs Δ = 2.3 Rel %Δ = 8.0 P= 0.23</p>	2 years
<p>Author (Year): deWalle et al. (2002)</p>	<p>Location: Netherlands</p>	<p>Pregnant women presenting for antenatal visit to study</p>	<p>Pregnant women self-reporting the use of folic</p>	4.8	36.0	<p>Abs Δ = 31.2 Rel %Δ = 650</p>	5 years

Study	Intervention and Comparison	Population and Sample	Effect measure	Reported baseline	Reported effect	Value used in summary	Follow up time
<p>Name of Intervention: National Awareness Campaign</p> <p>Study Period: 1994-2000</p> <p>Design Suitability: Moderate</p> <p>Study Design: Time Series</p> <p>Quality of Execution (No of Limitations): Fair (4)</p> <p>Outcome Measurement: Self-report</p>	<p>Components: Community-wide education (mass media campaign focused on women of lower SES + other)</p> <p>Comparison: Time series</p>	<p>hospital or practice were asked to fill out questionnaire (in clinic).</p> <p>Pre: N= 453 Post: N= 461 3 hospitals 7 practices</p>	<p>acid during the entire advised period.</p>				
<p>Author (Year): de Weerd et al. (2002)</p> <p>Name of Intervention: Client education & background community-wide education</p> <p>Study Period: 1997-1999</p> <p>Design Suitability: Least</p> <p>Study Design: Before-after</p> <p>Quality of Execution (No of Limitations): Fair (4)</p> <p>Outcome Measurement: Folate measures</p>	<p>Location: Netherlands</p> <p>Components: Client education (counseling) + Folic acid supplements + background community-wide education + recommendations</p> <p>Comparison: Before-after</p>	<p>Couples with scheduled appointment at the fertility clinic.</p> <p>N invited: 193 couples N enrolled: 186 couples Excluded pregnancies</p> <p>N start: 168 (87%) women N analyses: 111 (58%)</p>	<p>1. Serum blood folate measure by baseline self-reported use of FA supplements.</p> <p>2. Red blood cell (RBC) measure by baseline self-reported use of FA supplements.</p>	<p>18.5</p> <p>540</p>	<p>22.2</p> <p>680</p>	<p>Abs Δ = 3.7 nmol/L Rel %Δ = 20 NS</p> <p>Abs Δ = 140 nmol/L Rel %Δ = 25.9 P<0.01</p>	<p>1 year</p> <p>4 months</p>
<p>Author (Year): Egen et al. (2003)</p> <p>Name of Intervention: Information campaign to</p>	<p>Location: Germany</p> <p>Components: Community</p>	<p>All women giving birth in a specified 2-week period at one ward in each of 3 major hospitals in Munich.</p>	<p>Percent of women (in childbed) self-reporting use of folic acid 4 weeks before pregnancy, or earlier, and continued</p>	<p>3.8</p>	<p>9.3</p>	<p>Abs Δ = 5.5 Rel %Δ = 144.7 p=0.077</p>	<p>16 months</p>

Study	Intervention and Comparison	Population and Sample	Effect measure	Reported baseline	Reported effect	Value used in summary	Follow up time												
<p>promote official recommendatons</p> <p>Study Period: 1996-1998</p> <p>Design Suitability: Least</p> <p>Study Design: Before-after</p> <p>Quality of Execution (No of Limitations): Fair (4)</p> <p>Outcome Measurement: Self-report</p>	<p>education + provider education</p> <p>Comparison: Before-after</p>	<p>Pre: N = 131 (85%) of 154 Post: N = 118 (78%) of 152</p>	<p>until 4 weeks after pregnancy.</p>																
<p>Author (Year): Flores et al. (2007)</p> <p>Name of Intervention: Community-wide education campaign</p> <p>Study Period: 2001-2002</p> <p>Design Suitability: Greatest</p> <p>Study Design: Other design with concurrent comparison group</p> <p>Quality of Execution (No of Limitations): Fair (4)</p> <p>Outcome Measurement: Self-report</p>	<p>Location: USA; 8 Spanish-speaking markets. 2001-02 campaign focus on Miami, FL and San Antonio, TX.</p> <p>Components: Community-wide education campaign (mass media + community education)</p> <p>Comparison: Before-After</p>	<p>Sampled media markets (Hispanic population of at least 10%)</p> <table border="1" data-bbox="653 792 1010 909"> <thead> <tr> <th>Year</th> <th># Markets</th> <th>N survey</th> </tr> </thead> <tbody> <tr> <td>2002</td> <td>8</td> <td>1027</td> </tr> <tr> <td>Inter</td> <td>2</td> <td>515</td> </tr> <tr> <td>Comp</td> <td>6</td> <td>512</td> </tr> </tbody> </table> <p>Response rate 76.8%</p>	Year	# Markets	N survey	2002	8	1027	Inter	2	515	Comp	6	512	<p>Percent of women self-reporting use of a vitamin containing folic acid daily.</p> <p>Intervention</p> <p>Comparison</p>		<p>21.2</p> <p>15.6</p>	<p>Abs Δ = 5.6 Rel %Δ = 36 NS</p>	<p>1 year</p>
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Study	Intervention and Comparison	Population and Sample	Effect measure	Reported baseline	Reported effect	Value used in summary	Follow up time
<p>Author (Year): Kadir et al. (1999)</p> <p>Name of Intervention: Official recommendations and community education</p> <p>Study Period: 1992-1996</p> <p>Design Suitability: Moderate</p> <p>Study Design: Time Series</p> <p>Quality of Execution (No of Limitations): Fair (4)</p> <p>Outcome Measurement: NTD prevalence rates</p>	<p>Location: England and Wales</p> <p>Components: Official Recommendation + (Community education)</p> <p>Comparison: Time series</p>	<p>Incidence rates for pregnancies affected by identified neural tube defects in England and Wales 1992-1996.</p>	<p>Incidence rates per 100,000 events of pregnancies affected by neural tube defects</p>	<p>76</p>	<p>76</p>	<p>Abs Δ = 0 Rel $\% \Delta$ = 0 NS</p>	<p>4 years</p>
<p>Author (Year): Knudsen et al. (2004)</p> <p>Name of Intervention: Community-wide (national) education campaign</p> <p>Study Period: 2000-2002</p> <p>Design Suitability: Moderate</p> <p>Study Design: Time Series</p> <p>Quality of Execution (No of Limitations): Fair (4)</p> <p>Outcome Measurement: Self-report</p>	<p>Location: Denmark</p> <p>Components: Community-wide (national) education campaign</p> <p>Comparison: Time series</p>	<p>Pregnant women recruited during first antenatal visit to provider (gestation weeks 5-10) During the Nov 2000 – Feb 2002 enrollment periods.</p> <p>N=22,291 N=18294 (82%) with complete information included in analysis</p>	<p>Percent of women self-reporting use of a supplement containing folic acid as recommended (supplement of at least 80% of the RDA (i.e. 320 ug/day) from 4 weeks prior to date of last menstrual period until gestation week 6).</p>	<p>14</p>	<p>22.6</p>	<p>Abs Δ = 8.6 Rel $\% \Delta$ = 61.4</p>	<p>2 years</p>

Study	Intervention and Comparison	Population and Sample	Effect measure	Reported baseline	Reported effect	Value used in summary	Follow up time																									
<p>Author (Year): Lawrence et al. (2003)</p> <p>Name of Intervention: Kaiser Foundation Health Plan supplement promotion</p> <p>Study Period: 1998-1999</p> <p>Design Suitability: Greatest</p> <p>Study Design: Group nonrandomized trial</p> <p>Quality of Execution (No of Limitations): Fair (3)</p> <p>Outcome Measurement: Self-report</p>	<p>Location: USA; southern California</p> <p>Components: Arm 1: Provider education + Provider Reminders + Patient Education Arm 2: Patient Incentives + Patient Education + Provider Education</p> <p>Comparison: Usual care (passive education about FA and NTDs)</p>	<p>Female members of Kaiser Health Plan ages 18 to 39</p> <p>N=6300 selected N=3438 (57.3%) completed</p> <p>Repeated random samples:</p> <table border="0"> <tr> <td>Provider</td> <td>1188</td> </tr> <tr> <td>Patient</td> <td>1118</td> </tr> <tr> <td>Comparison</td> <td>1132</td> </tr> </table>	Provider	1188	Patient	1118	Comparison	1132	<p>Percent of women self-reporting regular (at least 4 times per week) use of multivitamins</p> <table border="0"> <tr> <td>Arm 1:</td> <td></td> </tr> <tr> <td>Intervention</td> <td>35.5</td> </tr> <tr> <td>Comparison</td> <td>37.5</td> </tr> <tr> <td>Arm 2:</td> <td></td> </tr> <tr> <td>Intervention</td> <td>39.3</td> </tr> <tr> <td>Comparison</td> <td>37.5</td> </tr> </table>	Arm 1:		Intervention	35.5	Comparison	37.5	Arm 2:		Intervention	39.3	Comparison	37.5	<table border="0"> <tr> <td></td> <td>40.3</td> </tr> <tr> <td></td> <td>41</td> </tr> <tr> <td></td> <td>43</td> </tr> <tr> <td></td> <td>41</td> </tr> </table>		40.3		41		43		41	<p>Abs Δ = 1.3 Rel %Δ = 3.8</p> <p>Abs Δ = 0.2 Rel %Δ = .07</p>	<p>2 years</p>
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<p>Author (Year): Martinez de Villarreal et al. (2002)</p> <p>Name of Intervention: Community-wide Education Campaign</p> <p>Study Period: 1999-2001</p> <p>Design Suitability: Moderate</p> <p>Study Design: Time Series</p> <p>Quality of Execution (No of Limitations): Fair (4)</p> <p>Outcome Measurement: NTD prevalence rates</p>	<p>Location: Mexico; state of Nuevo Leon</p> <p>Components: Community-wide education (media, provider education) + Recurrence Prevention + Folic Acid supplement distribution (free)</p> <p>Comparison: Time Series (before-after)</p>	<p>NTD cases in State of Nuevo Leon detected by surveillance efforts</p> <p>No baseline rates available except for 1999</p>	<p>NTD cases per year per 10,000 live births</p>	<p>10.4</p>	<p>5.8</p>	<p>Abs Δ = -4.6 Rel %Δ = -44.2 P<0.001</p>	<p>2 years</p>																									

Study	Intervention and Comparison	Population and Sample	Effect measure	Reported baseline	Reported effect	Value used in summary	Follow up time												
<p>Author (Year): Mathews et al. (1998)</p> <p>Name of Intervention: Official recommendations</p> <p>Study Period: 1994-1996</p> <p>Design Suitability: Moderate</p> <p>Study Design: Time Series</p> <p>Quality of Execution (No of Limitations): Fair (2)</p> <p>Outcome Measurement: Self-report</p>	<p>Location: England; southern region</p> <p>Components: Official recommendation + (community education)</p> <p>Comparison: Post-only</p>	<p>Study hospital: St. Mary's, Portsmouth and annexes</p> <p>Pregnant nulliparous Caucasian women at the antenatal clinic booking (excluded prior miscarriage/termination or family history due to NTDs)</p> <p>N=1002 invited N=963 (96%) consented</p>	<p>Percent of pregnant women self-reporting the use of folic acid supplements in the periconceptual period</p>	<p>24</p>	<p>39.5</p>	<p>Abs Δ = 15.5 Rel %Δ = 64.6</p>	<p>2 years</p>												
<p>Author (Year): McDonnell et al. (2001)</p> <p>Name of Intervention: Community-wide education</p> <p>Study Period: 1996</p> <p>Design Suitability: Least</p> <p>Study Design: Before-after</p> <p>Quality of Execution (No of Limitations): Fair (4)</p> <p>Outcome Measurement: Self-report</p>	<p>Location: Dublin, Ireland</p> <p>Components: Community education + official recommendation</p> <p>Comparison: Official recommendations</p>	<p>Public ante-natal service patients in Dublin. One hundred consecutive women attending their first ante-natal booking appointment in each of the three main Dublin maternity hospitals.</p> <table border="1" data-bbox="653 1052 1010 1170"> <thead> <tr> <th>Period</th> <th>N</th> <th>Response rate</th> </tr> </thead> <tbody> <tr> <td>Pre 1996</td> <td>295</td> <td>98.3%</td> </tr> <tr> <td>F/u 1997</td> <td>299</td> <td>99.7%</td> </tr> <tr> <td>F/u 2000</td> <td>288</td> <td>96%</td> </tr> </tbody> </table>	Period	N	Response rate	Pre 1996	295	98.3%	F/u 1997	299	99.7%	F/u 2000	288	96%	<p>Percent of pregnant women self-reporting periconceptual use of folic acid.</p>	<p>6</p>	<p>18</p>	<p>Abs Δ = 12 Rel %Δ = 18</p>	<p>4 years</p>
Period	N	Response rate																	
Pre 1996	295	98.3%																	
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<p>Author (Year): Nilsen et al. (2006)</p> <p>Name of Intervention: Official recommendations</p> <p>Study Period: 2000-2003</p> <p>Design Suitability: Moderate</p> <p>Study Design: Time Series</p> <p>Quality of Execution (No of Limitations): Fair (4)</p> <p>Outcome Measurement: Self-report</p>	<p>Location: Norway</p> <p>Components: Official recommendations + Community-wide education</p> <p>Comparison: Time Series (before-after)</p>	<p>Recruited pregnant women in Norway (prospective cohort study of pregnant women /infants)</p> <p>Postal invitation of women who had signed up for routine ultrasound exam (17-18 wks)</p> <p>N=22,500 participants in the period 2000-2003 (about 12% of the total pregnant population in Norway)</p> <table border="1" data-bbox="653 711 1010 865"> <thead> <tr> <th>Year</th> <th>N</th> </tr> </thead> <tbody> <tr> <td>2000</td> <td>1075</td> </tr> <tr> <td>2001</td> <td>3361</td> </tr> <tr> <td>2002</td> <td>7287</td> </tr> <tr> <td>2003</td> <td>10777</td> </tr> </tbody> </table>	Year	N	2000	1075	2001	3361	2002	7287	2003	10777	<p>Percent of women self-reporting periconceptional use of folic acid.</p>	<p>6.8</p>	<p>13</p>	<p>Abs Δ = 6.2 Rel %Δ = 91.2 P< 0.001</p>	<p>3 years</p>		
Year	N																		
2000	1075																		
2001	3361																		
2002	7287																		
2003	10777																		
<p>Author (Year): O'Rourke et al. (2007)</p> <p>Name of Intervention: Multivitamin Supplementation targeting postpartum Hispanic women</p> <p>Study Period: NR</p> <p>Design Suitability: Greatest</p> <p>Study Design: Other design with concurrent comparison group</p> <p>Quality of Execution (No of Limitations): Fair (3)</p>	<p>Location: USA; El Paso, TX</p> <p>Components: Arm 1: Client education (folate encouragement) + Multivitamin (MVI) tablets</p> <p>Arm 2: Client education alone (without MVI tablets)</p> <p>Comparison: Usual care (standard WIC educational messages) alone</p>	<p>Two selected WIC clinics in El Paso, Texas. Intervention clinic: N=1 Comparison clinic: N=1</p> <p>Women of Mexican ethnicity recruited through the study clinics within the first 6 weeks postpartum (participation rate NR)</p> <table border="1" data-bbox="653 1198 1010 1317"> <thead> <tr> <th></th> <th>Recruited</th> <th>12 mo F/U</th> </tr> </thead> <tbody> <tr> <td>Arm 1:</td> <td>107</td> <td>70</td> </tr> <tr> <td>Arm 2:</td> <td>112</td> <td>56</td> </tr> <tr> <td>Comp:</td> <td>54</td> <td>35</td> </tr> </tbody> </table>		Recruited	12 mo F/U	Arm 1:	107	70	Arm 2:	112	56	Comp:	54	35	<p>Percent women self-reporting current use of MVI > 4 times per week (postpartum Hispanic women).</p> <p>Arm 1: Intervention Comparison</p> <p>Arm 2: Intervention Comparison</p>	<p></p> <p></p> <p></p> <p></p> <p></p> <p></p>	<p></p> <p>47.1</p> <p>8.6</p> <p>30.4</p> <p>8.6</p>	<p></p> <p>Abs Δ = 38.5 Rel %Δ = 447.7 P= 0.001</p> <p>Abs Δ = 21.8 Rel %Δ = 253.5 P=.001</p>	<p>1 year</p>
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Study	Intervention and Comparison	Population and Sample	Effect measure	Reported baseline	Reported effect	Value used in summary	Follow up time
Outcome Measurement: Self-report							
<p>Author (Year): Robbins et al. (2005)</p> <p>Name of Intervention: Provider-directed intervention</p> <p>Study Period: NR</p> <p>Design Suitability: Greatest</p> <p>Study Design: Individual randomized trial</p> <p>Quality of Execution (No of Limitations): Fair (3)</p> <p>Outcome Measurement: Self-report</p>	<p>Location: USA; Arkansas</p> <p>Components: Provider counseling (brief) + (Provider reminder) + Client Education + Folic Acid supplement (free) + Telephone booster call</p> <p>Comparison: Client education + (potential provider counseling on folic acid) + Coupon for folic acid</p>	<p>Selected study clinics: N=4 2 clinics (medical school) 2 clinics (private practice)</p> <p>Eligible women 18-45 years seen for routine gynecologic visit: N eligible= NR N enrolled = 322</p> <p>Randomized to condition after enrollment: <u>Group</u> <u>Pre</u> <u>2 mo F/u (%)</u> Inter 160 139 (87%) Comp 162 140 (86%)</p>	<p>Percent women self-reporting daily use of folic acid.</p> <p>Intervention: 23.7</p> <p>Comparison: 23.6</p>	23.7	39.6	Abs Δ = 3.1 Rel %Δ = 8.3 p=0.549	2 months
<p>Author (Year): Stevenson et al. (2000)</p> <p>Name of Intervention: Statewide NTD program</p> <p>Study Period: 1992-1998</p> <p>Design Suitability: Moderate</p> <p>Study Design: Time Series</p> <p>Quality of Execution (No of Limitations): Fair (2)</p> <p>Outcome Measurement: Self-report & NTD Prevalence Rates</p>	<p>Location: USA; South Carolina</p> <p>Components: Recurrence program + Community education ± Folic Acid Fortification</p> <p>Comparison: Time series</p>	<p>NTD prevalence rates in South Carolina 1992-1998. -Cases as detected by surveillance system; N=360 over study period Live births and fetal deaths during study period N=278, 122</p> <p>Use of folic acid by women in two samples Telephone surveys of women: 1996: n=178 1997: n=501 1998: n=603</p>	<p>Annual prevalence rates for all types of NTDs during the study period (per 10,000 live births + fetal deaths)</p> <p>Percent women self-reporting use of folic acid during the study period</p>	18.9	9.5	Abs Δ = -9.4 Rel %Δ = -49.7 p=0.02	6 years
				25.2	35	Abs Δ = 9.8 Rel %Δ = 38.9 NR	2 years

Study	Intervention and Comparison	Population and Sample	Effect measure	Reported baseline	Reported effect	Value used in summary	Follow up time
<p>Author (Year): Stoll et al. (2006)</p> <p>Name of Intervention: National & regional recommendations</p> <p>Study Period: 1988-2002</p> <p>Design Suitability: Moderate</p> <p>Study Design: Time Series</p> <p>Quality of Execution (No of Limitations): Fair (3)</p> <p>Outcome Measurement: NTD prevalence rates</p>	<p>Location: France</p> <p>Components: Recommendations (alone) + Health Education Campaign (minimal)</p> <p>Comparison: Time series</p>	<p>Births in this region of France over the period of study</p> <p>Birth registry 1988-2002 N=202,670 consecutive births of known outcome</p>	<p>NTD cases per year per 10,000 live births</p>	<p>9.1</p>	<p>10.6</p>	<p>Abs Δ = 1.6 Rel %Δ = 17.1 NR</p>	<p>14 years</p>
<p>Author (Year): Van der Pal-de Bruin et al. (2003)</p> <p>Name of Intervention: National education campaign</p> <p>Study Period: 1988-1998</p> <p>Design Suitability: Moderate</p> <p>Study Design: Time Series</p> <p>Quality of Execution (No of Limitations): Fair (3)</p> <p>Outcome Measurement: NTD prevalence rates</p>	<p>Location: Netherlands</p> <p>Components: Community-wide education campaign (national) to increase the consumption of folic acid by women planning to become pregnant</p> <p>Comparison: Before-After (Time Series)</p>	<p>The Population of the Netherlands</p> <p>Pre: N=117,341 Post: N= 127,672</p>	<p>Estimated prevalence of NTD in the Netherlands using capture-recapture analysis 1988-1998 (per 10,000 live and stillbirths)</p>	<p>17.3</p>	<p>15.9</p>	<p>Abs Δ = -1.4 Rel %Δ = -8.9 NR</p>	<p>4 years</p>

Study	Intervention and Comparison	Population and Sample	Effect measure	Reported baseline	Reported effect	Value used in summary	Follow up time
<p>Author (Year): Ward et al. (2004)</p> <p>Name of Intervention: Community-wide education campaign</p> <p>Study Period: 1996-2002</p> <p>Design Suitability: Moderate</p> <p>Study Design: Time Series</p> <p>Quality of Execution (No of Limitations): Fair (4)</p> <p>Outcome Measurement: Self-report</p>	<p>Location: Ireland; Eastern region</p> <p>Components: Official recommendations + Community-wide education campaign</p> <p>Comparison: Time series trend (before-after)</p>	<p>-Three selected maternity hospitals in Dublin were the site for annual patient surveys</p> <p>-Women attending their first antenatal appointment (and resided in region for 2yrs)</p> <p>-Consecutive samples in July-September of each year</p> <p>N=300 (100 per study hospital)</p> <p>Response rates 89-99%</p>	<p>Percent of antenatal women self-reporting periconceptional use of folic acid</p>	<p>18</p>	<p>23</p>	<p>Abs Δ = 5 Rel %Δ = 27.8</p>	<p>2 years</p>
<p>Author (Year): Zlotogora et al. (2006)</p> <p>Name of Intervention: Community-wide education campaign</p> <p>Study Period: 2001-2004</p> <p>Design Suitability: Moderate</p> <p>Study Design: Time Series</p> <p>Quality of Execution (No of Limitations): Fair (4)</p> <p>Outcome Measurement: NTD Prevalence rates</p>	<p>Location: Israel</p> <p>Components: Community-wide education (recommendations with dissemination to providers and the public)</p> <p>Comparison: Time series</p>	<p>National population of Israel classified by major religious group</p> <p>-Jews (81%)</p> <p>-Muslim Arabs (15%)</p> <p>-Christian Arabs (2%)</p> <p>Druze (2%)</p> <p>Newborn population by major religious groups 1999-2000</p> <p>-Jews (69.1%)</p> <p>-Muslim Arabs (26%)</p> <p>-Christian Arabs (2.1%)</p> <p>Druze (2%)</p>	<p>Rates of all NTDs per 10,000 live births</p>	<p>14.7</p>	<p>10.5</p>	<p>Abs Δ = -4.2 Rel %Δ = -28.6</p>	<p>5 years</p>