# *Fetal Alcohol Syndrome Survey: 2003*

## Post-Media Campaign Analysis

North Dakota State Data Center at
North Dakota State University
Fargo, North Dakota

## FORWARD

The *Fetal Alcohol Syndrome Survey: 2003, Post-Media Campaign Analysis* is part two of a two-phase project aimed at learning about perceptions of Fetal Alcohol Syndrome (FAS) among residents of Clay County, Minnesota, before and after an educational media campaign. The survey was sponsored by Clay County Public Health of Minnesota.


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### North Dakota State Data Center Contributors

Dr. Richard Rathge, Director
Ramona Danielson


North Dakota State Data Center
Department of Agribusiness and Applied Economics
North Dakota State University
IACC Building, Room 424
Fargo, North Dakota 58105-5636
Phone: (701) 231-7980
URL: http://www.ndsu.edu/sdc



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## EXECUTIVE SUMMARY

### Introduction

Clay County Public Health was interested in assessing the success of an educational campaign aimed at broadening the public's knowledge of Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effect (FAE). A four-year evaluation study was designed with the assistance of staff at the North Dakota State Data Center. The evaluation consisted of two phases. Phase 1, a baseline study of public perceptions and knowledge of Fetal Alcohol Syndrome, was conducted in 2001. Phase 2, in progress, included the educational campaign which followed the baseline study and three years of follow-up studies measuring the public's knowledge of FAS to determine the effectiveness of the campaign. The results of the second follow-up in Phase 2 are the subject of this report.

### Results

Success of the campaign was measured in two ways. First, an overall assessment was made by evaluating if responses between year one and year three were significantly different. The data indicated that the campaign was successful in one primary area, regarding alcohol consumption during pregnancy. Residents better recognized that a father cannot directly cause FAS. Though residents' recognition that FAS and FAE cannot be cured did not improve, residents better recognized that FAS and FAE can be prevented. Second, overall success was measured based on respondents' perception that the media campaign increased their knowledge of FAS and FAE. More than one in three residents who were exposed to information about FAS through media indicated that the information increased their understanding of FAS and FAE.

*Knowledge of FAS/FAE*

- The large majority of 2001 and 2003 respondents had heard of Fetal Alcohol Syndrome (FAS) or Fetal Alcohol Effect (FAE).

- Of 2003 respondents, more than two-thirds of respondents had not seen, read, or heard information about FAS in the past three months. Of the one-third who had been exposed to information about FAS in the past three months, more than half had seen information through television ads or stories. Though more than half of the respondents who had been exposed said their level of knowledge stayed about the same, more than one-third said their level of knowledge increased.

*Alcohol Consumption During Pregnancy*

- The large majority of 2001 and 2003 respondents believed that drinking alcohol during pregnancy increases the risk of mental retardation for the fetus, the risk of a miscarriage, the risk of having a low birth weight baby, and the risk of both internal and external birth defects.

- Nearly three-fourths of 2001 and 2003 respondents said the placenta does not serve as a filter, removing impurities such as alcohol from the mother's bloodstream before reaching the developing fetus. Three-fourths of respondents also said a pregnant woman can never safely have a drink containing alcohol.

- While more than one-third of 2001 and 2003 respondents did not know whether a father can cause FAS, more than one-third said a father cannot cause FAS.

- Though more than one-third did not know, more than half of 2001 and 2003 respondents believed FAS/FAE to be the leading cause of mental retardation.

- Two-thirds of respondents did not know the nationwide annual cost of treating infants, children, and adults with FAS (FAE not included), though approximately one in five respondents estimated the nationwide annual cost to be more than $50,000,000.

- The majority of 2001 and 2003 respondents said that FAS and FAE cannot be cured, however, an even larger proportion believed FAS and FAE can be prevented.

*Non-Alcohol Related Issues*

- At least two-thirds of 2001 and 2003 respondents said that low birth weight, learning problems, heart and brain defects, premature birth, behavioral problems, withdrawal, miscarriage, problems with sleeping, and problems with eating were all birth outcomes that could result from the use of street drugs during pregnancy.

- The large majority of 2001 and 2003 respondents said smoking during pregnancy increases the risk of giving birth to a low birth weight baby.

- The large majority of 2001 and 2003 respondents believed drugs and alcohol can be transferred to a baby through breast milk.

## Comparisons Between the 2001 and 2003 Surveys

- The number of respondents totaled 614 in 2001 and 246 in 2003.

- Significant differences were found between the 2001 and 2003 surveys with respect to issues relating to *Alcohol Consumption During Pregnancy*. Percentages provided in the following statements relate to the two studies as follows: (2001 results/2003 results).

- Respondents **differed** significantly over time in response to:

  . . . whether they thought a father can cause FAS. In 2003, a *larger* proportion of respondents said a father cannot cause FAS (38.1 percent/45.5 percent) (Table 11).

  . . . whether they thought FAS or FAE can be cured. In 2003, a *smaller* proportion of respondents said FAS/FAE cannot be cured (78.0 percent/68.7 percent) and a *larger* proportion said they “don’t know” if FAS/FAE can be cured (16.8 percent/25.6 percent) (Table 14).

  . . . whether they thought FAS or FAE can be prevented. In 2003, a *larger* proportion of respondents said FAS/FAE can be prevented (95.3 percent/98.4 percent) and a *smaller* proportion said they “don’t know” if FAS/FAE can be prevented (3.4 percent/0.4 percent) (Table 15).

### Recommendations

The campaign to improve knowledge of FAS and FAE in Clay County, Minnesota, had only limited success. Two main factors appear to be largely responsible. First, the penetration of the media and educational materials was very limited. The data indicate that only 29 percent of residents in the county were exposed to the educational material either through the media campaign or through associated information. The media outlet that was most successful was television; nearly two-thirds of those who indicated they had heard or read about FAS/FAE were exposed through television viewing. In contrast, magazine and newspaper penetration was only 43 percent and 33 percent, respectively. It is noteworthy that only 16 percent of the residents who said they heard or read about FAS/FAE got the information through materials at physician offices. This low percentage may reflect the limited amount of time residents spend in health facilities or the lack of sufficient materials made available in physician offices. More attention may need to be given to exploring ways to better display educational materials at health facilities.

Second, the effects of the educational material and the overall media campaign were limited. The results of the evaluation indicate that the message relayed through the campaign was not effectively incorporated into residents' knowledge base. Greater effort should be given to understanding what approaches best attract residents' attention regarding health issues and how these can be incorporated into a media campaign. Particular attention should be given to the effectiveness of a common, generalized message. Focused messages targeted at specific audiences (e.g., based on age, gender, ethnicity) may offer improved results. This approach is more expensive, but an improvement in the results may be worth the added expense. A ceiling effect may also account for some of the limited success of the media campaign. Residents' understanding of some issues related to FAS and FAE was already very high, making it difficult to improve.

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# INTRODUCTION

## Study Objectives

This study is part of the second phase of an assessment aimed at evaluating baseline knowledge and attitudes pertaining to Fetal Alcohol Syndrome (FAS) or Fetal Alcohol Effect (FAE). In the second phase, the goal was to evaluate respondents' perceptions and attitudes about FAS and FAE following a media campaign. Data were collected from a random sample of households in Clay County, Minnesota. This report reflects the results of the second of three follow-up studies.

## Methodology

### *Phase 1*

The baseline study of public perceptions and knowledge of Fetal Alcohol Syndrome, Phase 1, was conducted in the spring of 2001. A random sample of 2,000 households in Clay County, Minnesota, was drawn from local telephone directories. Scannable surveys, accompanied by a cover letter explaining the study, were mailed to all households in the sample. A total of 573 useable surveys (29 percent) was returned and the results are reported in the first of a series of technical reports (see the baseline report *Fetal Alcohol Syndrome Survey: 2001*). An additional 41 surveys were returned after the cutoff date for the first phase. Tests of significance were run on the late surveys to determine if they differed significantly from those returned prior to the cutoff. There were no significant differences in the late surveys, thus they were included in the analysis of the 2001 data for the second phase of the project. The total number of 2001 surveys was 614 (31 percent).

### *Phase 2*

Following immediately after the baseline survey, the second phase of the project began. Clay County Public Health conducted a media campaign in the fall of 2001 that included news releases, educational materials, and public service announcements broadcast via television, radio, and print outlets (e.g., magazines, newspapers). A follow-up survey was mailed in January 2002 to the 614 respondents who returned the original baseline survey. In addition to the questions asked in the first survey, the follow-up survey included three questions that asked respondents if they had encountered media exposure, what the media exposure was, and if their knowledge of FAS had changed as a result of media exposure. A total of 318 useable surveys (52 percent) was returned for analysis. The results of this first of three follow-up studies in Phase 2 of the project can be found in the report, *Fetal Alcohol Syndrome Survey: 2002, Post-Media Campaign Analysis*. A second follow-up survey was mailed in April 2003 to 1,000 households in Clay County, Minnesota, selected at random through local telephone directories. A total of 246 useable surveys (25 percent) was returned and the results are the subject of this report. Frequencies were run on all questions. Significance tests (Chi Square) were run on all questions to see if there were significant differences between year one and year three.

# SURVEY RESULTS

## KNOWLEDGE OF FAS/FAE

- The large majority of respondents in 2001 and 2003 had heard of Fetal Alcohol Syndrome (FAS) or Fetal Alcohol Effect (FAE). A slightly larger proportion of 2003 respondents (98.0 percent) than 2001 respondents (94.8 percent) indicated they had heard of FAS or FAE (Table 1).

**Table 1. Whether Respondent Had Ever Heard of Fetal Alcohol Syndrome or Fetal Alcohol Effect**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent | Number | Percent | |
| Yes | 582 | 94.8 | 241 | 98.0 | 3.2 |
| No | 15 | 2.4 | 5 | 2.0 | -0.4 |
| Missing | 17 | 2.8 | 0 | 0.0 | -2.8 |
| Total | 614 | 100.0 | 246 | 100.0 | |

- Respondents in 2003 were asked if they had seen, read, or heard any information about FAS in the past three months. More than two-thirds of respondents said they had not (69.5 percent) (Table 2).

**Table 2. Whether Respondent Saw, Read, or Heard Any Information About Fetal Alcohol Syndrome During the Past Three Months**

| Response | 2003 Respondents* | |
|---|---|---|
| | Number | Percent |
| Yes | 70 | 28.5 |
| No | 171 | 69.5 |
| Missing | 5 | 2.0 |
| Total | 246 | 100.0 |

*This question was not asked in the 2001 survey.

- Of 2003 respondents who had seen, read, or heard information about FAS in the past three months, more than half had seen information through television ads or stories (62.9 percent). Magazine articles were the next most common type of media (42.9 percent), followed by newspaper articles (32.9 percent) (Table 3).

**Table 3. Of Those Who Saw Information, Where Respondent Saw, Read, or Heard Information About Fetal Alcohol Syndrome During the Past Three Months**

| Response | 2003 Respondents* (N=70) | |
|---|---|---|
| | Number | Percent** |
| Television ads or stories | 44 | 62.9 |
| Magazine articles | 30 | 42.9 |
| Newspaper articles | 23 | 32.9 |
| Doctor's office or clinic | 11 | 15.7 |
| Other: | 12 | 17.1 |
| *School* | *2* | |
| *Word of mouth* | *1* | |
| *ARC newsletter* | *1* | |
| *Professional articles* | *1* | |
| *Work* | *1* | |
| *Bathroom stall ad* | *1* | |
| *Lectures at work* | *1* | |
| *Person with [Fetal Alcohol] Syndrome* | *1* | |
| *Missing* | *3* | |

*This question was not asked in the 2001 survey.
**Percentages do not total 100.0 due to multiple responses; N=70.

- Of 2003 respondents who had seen, read, or heard information about FAS in the past three months, more than one-third said their level of knowledge increased as a result of the information (37.1 percent). More than half said their level of knowledge based on that information stayed about the same (55.7 percent) (Table 4).

**Table 4. Of Those Who Saw Information, Respondent's Level of Knowledge About Fetal Alcohol Syndrome Based on the Information They Saw, Read, or Heard During the Past Three Months**

| Response | 2003 Respondents* | |
|---|---|---|
| | Number | Percent |
| Decrease | 1 | 1.4 |
| Stay about the same | 39 | 55.7 |
| Increase | 26 | 37.1 |
| Don't know | 2 | 2.9 |
| Missing | 2 | 2.9 |
| Total | 70 | 100.0 |

*This question was not asked in the 2001 survey.

- The large majority of respondents in 2001 and 2003 indicated that drinking alcohol during pregnancy increases the risk of mental retardation for the fetus, though a slightly larger proportion of respondents in 2003 (90.2 percent) than 2001 (86.8 percent) said this (Table 5).

**Table 5. Perceptions of Whether Drinking Alcohol During Pregnancy Increases the Risk of Mental Retardation for the Fetus**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent | Number | Percent | |
| Yes | 533 | 86.8 | 222 | 90.2 | 3.4 |
| No | 7 | 1.1 | 3 | 1.2 | 0.1 |
| Don't know | 30 | 4.9 | 12 | 4.9 | 0.0 |
| Missing | 44 | 7.2 | 9 | 3.7 | -3.5 |
| Total | 614 | 100.0 | 246 | 100.0 | |

- Three-fourths of respondents in 2001 and 2003 indicated that drinking alcohol during pregnancy increases the risk of a miscarriage (75.2 percent and 74.8 percent, respectively) (Table 6).

- Though a slightly larger proportion of 2003 respondents answered the question, a larger proportion of respondents in 2003 also indicated they "don't know" if drinking alcohol during pregnancy increases the risk of a miscarriage.

**Table 6. Perceptions of Whether Drinking Alcohol During Pregnancy Increases the Risk of a Miscarriage**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent* | Number | Percent* | |
| Yes | 462 | 75.2 | 184 | 74.8 | -0.4 |
| No | 5 | 0.8 | 2 | 0.8 | 0.0 |
| Don't know | 70 | 11.4 | 38 | 15.4 | 4.0 |
| Missing | 77 | 12.5 | 22 | 8.9 | -3.6 |
| Total | 614 | 99.9 | 246 | 99.9 | |

*Percentages do not total 100.0 due to rounding.

- The large majority of 2001 and 2003 respondents believed drinking alcohol during pregnancy increases the risk of a low birth weight baby, though a slightly larger proportion of respondents in 2003 (86.6 percent) than 2001 (80.6 percent) said this (Table 7).

**Table 7. Perceptions of Whether Drinking Alcohol During Pregnancy Increases the Risk of a Low Birth Weight Baby**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent | Number | Percent | |
| Yes | 495 | 80.6 | 213 | 86.6 | 6.0 |
| No | 3 | 0.5 | 1 | 0.4 | -0.1 |
| Don't know | 42 | 6.8 | 14 | 5.7 | -1.1 |
| Missing | 74 | 12.1 | 18 | 7.3 | -4.8 |
| Total | 614 | 100.0 | 246 | 100.0 | |

- The large majority of 2001 and 2003 respondents said drinking alcohol during pregnancy increases the risk of both internal and external birth defects (81.1 percent and 80.9 percent, respectively) (Table 8).

- Though a slightly larger proportion of 2003 respondents answered the question, a slightly larger proportion of 2003 respondents also said they "don't know" if drinking during pregnancy increases the risk of birth defects.

**Table 8. Perceptions of Whether Drinking Alcohol During Pregnancy Increases the Risk of Both Internal and External Birth Defects**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent* | Number | Percent | |
| Yes | 498 | 81.1 | 199 | 80.9 | -0.2 |
| No | 4 | 0.7 | 4 | 1.6 | 0.9 |
| Don't know | 47 | 7.7 | 28 | 11.4 | 3.7 |
| Missing | 65 | 10.6 | 15 | 6.1 | -4.5 |
| Total | 614 | 100.1 | 246 | 100.0 | |

*Percentages do not total 100.0 due to rounding.

- Nearly three-fourths of 2001 and 2003 respondents said the placenta does not serve as a filter for removing impurities from the mother's bloodstream before reaching the developing fetus (73.8 percent and 72.4 percent, respectively) (Table 9).

- Though a slightly larger proportion of 2003 respondents answered the question, a larger proportion of 2003 respondents also said they "don't know" if the placenta serves as a filter (17.9 percent).

**Table 9. Perceptions of Whether the Placenta Serves as a Filter and Removes Impurities Such as Alcohol From the Mother's Bloodstream Before Reaching the Developing Fetus**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent* | Number | Percent* | |
| True | 45 | 7.3 | 24 | 9.8 | 2.5 |
| False | 453 | 73.8 | 178 | 72.4 | -1.4 |
| Don't know | 85 | 13.8 | 44 | 17.9 | 4.1 |
| Missing | 31 | 5.0 | 0 | 0.0 | -5.0 |
| Total | 614 | 99.9 | 246 | 100.1 | |

*Percentages do not total 100.0 due to rounding.

- Approximately three-fourths of respondents in 2001 and 2003 said that a pregnant woman could never safely have a drink containing alcohol (74.9 percent and 78.0 percent, respectively). Nearly equal proportions of respondents in 2001 and 2003 indicated a pregnant woman could safely drink once a month or less (7.7 percent and 8.5 percent, respectively) (Table 10).

**Table 10. Perceptions of How Often a Pregnant Woman Can Safely Have a Drink Containing Alcohol**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent | Number | Percent* | |
| Never, no amount of alcohol is safe | 460 | 74.9 | 192 | 78.0 | 3.1 |
| Once a month or less | 47 | 7.7 | 21 | 8.5 | 0.8 |
| 2 to 4 times per month | 34 | 5.5 | 9 | 3.7 | -1.8 |
| 2 to 3 times per week | 4 | 0.7 | 4 | 1.6 | 0.9 |
| More than 3 times per week | 2 | 0.3 | 1 | 0.4 | 0.1 |
| Don't know | 42 | 6.8 | 15 | 6.1 | -0.7 |
| Missing | 25 | 4.1 | 4 | 1.6 | -2.5 |
| Total | 614 | 100.0 | 246 | 99.9 | |

*Percentages do not total 100.0 due to rounding.

- The majority of 2001 respondents (61.9 percent) and 2003 respondents (54.5 percent) believe a father can or may be able to cause FAS. Approximately one in ten respondents in 2001 and 2003 believed a father can cause FAS if "he is an alcoholic" or if "he drinks alcohol at conception." More than one-third of 2001 and 2003 respondents did not know if a father can cause fetal alcohol syndrome (37.0 percent and 35.8 percent, respectively) (Table 11).

- A significant difference was found between 2001 and 2003 respondents' perceptions of a father's role in causing FAS. While more than one-third of respondents in 2001 and 2003 said a father cannot cause FAS, the proportion of respondents who said a father cannot cause FAS was significantly larger in 2003 (45.5 percent) compared to 2001 (38.1 percent).

**Table 11. Perceptions of When a Father Can Cause Fetal Alcohol Syndrome**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 (N=614) | | 2003 (N=246) | | |
| | Number | Percent* | Number | Percent* | |
| He can't cause Fetal Alcohol Syndrome** | 234 | 38.1 | 112 | 45.5 | 7.4 |
| He is an alcoholic | 74 | 12.1 | 24 | 9.8 | -2.3 |
| He drinks alcohol at conception | 65 | 10.6 | 25 | 10.2 | -0.4 |
| He has Fetal Alcohol Syndrome | 18 | 2.9 | 9 | 3.7 | 0.8 |
| He is on drugs | 31 | 5.0 | 7 | 2.8 | -2.2 |
| Don't know | 227 | 37.0 | 88 | 35.8 | -1.2 |

*Percentages do not total 100.0 due to multiple responses; 2001: N=614; 2003: N=246.
**Significance at $p < .05$ for overall difference between 2001 and 2003.

- More than half of 2001 and 2003 respondents said the leading cause of mental retardation was FAS/FAE (56.2 percent and 54.5 percent, respectively). A slightly larger proportion of 2003 respondents (39.4 percent) compared to 2001 respondents (34.5 percent) said they "don't know" the leading cause of mental retardation (Table 12).

**Table 12. Perceptions of the Leading Cause of Mental Retardation**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent | Number | Percent | |
| Fetal Alcohol Syndrome/ Fetal Alcohol Effect | 345 | 56.2 | 134 | 54.5 | -1.7 |
| Cerebral Palsy | 4 | 0.7 | 0 | 0.0 | -0.7 |
| Spina Bifida | 2 | 0.3 | 1 | 0.4 | 0.1 |
| Down Syndrome | 31 | 5.0 | 14 | 5.7 | 0.7 |
| Don't know | 212 | 34.5 | 97 | 39.4 | 4.9 |
| Missing | 20 | 3.3 | 0 | 0.0 | -3.3 |
| Total | 614 | 100.0 | 246 | 100.0 | |

- Respondents' perceptions of the nationwide annual cost of treating infants, children, and adults with FAS remained relatively unchanged between 2001 and 2003. Approximately one in five respondents in 2001 and 2003 estimated the nationwide annual cost was more than $50,000,000 (21.0 percent and 22.7 percent, respectively). More than two-thirds of 2001 and 2003 respondents could not estimate the nationwide annual cost (69.7 percent and 67.5 percent, respectively) (Table 13).

**Table 13. Perceptions of the Nationwide Annual Cost of Treating Infants, Children, and Adults With Fetal Alcohol Syndrome (Fetal Alcohol Effect Not Included)**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent | Number | Percent* | |
| 0 to $500,000 | 0 | 0.0 | 0 | 0.0 | 0.0 |
| $500,001 to $1,000,000 | 3 | 0.5 | 5 | 2.0 | 1.5 |
| $1,000,001 to $10,000,000 | 14 | 2.3 | 4 | 1.6 | -0.7 |
| $10,000,001 to $50,000,000 | 30 | 4.9 | 13 | 5.3 | 0.4 |
| $50,000,001 to $100,000,000 | 38 | 6.2 | 18 | 7.3 | 1.1 |
| More than $100,000,000 | 91 | 14.8 | 38 | 15.4 | 0.6 |
| Don't know | 428 | 69.7 | 166 | 67.5 | -2.2 |
| Missing | 10 | 1.6 | 2 | 0.8 | -0.8 |
| Total | 614 | 100.0 | 246 | 99.9 | |

*Percentages do not total 100.0 due to rounding.

- The majority of 2001 and 2003 respondents said FAS and FAE cannot be cured (78.0 percent and 68.7 percent, respectively) (Table 14).

- A significant difference was found between 2001 and 2003 respondents' perceptions of whether FAS or FAE can be cured. The proportion of 2003 respondents who said FAS and FAE cannot be cured was significantly smaller than 2001 respondents. In addition, a larger proportion of 2003 respondents (25.6 percent) compared to 2001 respondents (16.8 percent) said they did not know if FAS and FAE could be cured.

**Table 14. Perceptions of Whether Fetal Alcohol Syndrome or Fetal Alcohol Effect Can be Cured**

| Response | Respondents | | | | Proportional Change* |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent | Number | Percent | |
| Yes | 26 | 4.2 | 12 | 4.9 | 0.7 |
| No | 479 | 78.0 | 169 | 68.7 | -9.3 |
| Don't know | 103 | 16.8 | 63 | 25.6 | 8.8 |
| Missing | 6 | 1.0 | 2 | 0.8 | -0.2 |
| Total | 614 | 100.0 | 246 | 100.0 | |

*Significance at $p < .05$ for overall difference between 2001 and 2003.

- The vast majority of 2001 and 2003 respondents said that FAS and FAE can be prevented (95.3 percent and 98.4 percent, respectively) (Table 15).

- A significant difference was found between 2001 and 2003 respondents' perceptions of whether FAS or FAE can be prevented. The proportion of 2003 respondents who said FAS and FAE can be prevented was significantly larger than 2001 respondents. In addition, a smaller proportion of 2003 respondents (0.4 percent) compared to 2001 respondents (3.4 percent) said they did not know if FAS and FAE could be prevented.

**Table 15. Perceptions of Whether Fetal Alcohol Syndrome or Fetal Alcohol Effect Can be Prevented**

| Response | Respondents | | | | Proportional Change* |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent | Number | Percent | |
| Yes | 585 | 95.3 | 242 | 98.4 | 3.1 |
| No | 3 | 0.5 | 0 | 0.0 | -0.5 |
| Don't know | 21 | 3.4 | 1 | 0.4 | -3.0 |
| Missing | 5 | 0.8 | 3 | 1.2 | 0.4 |
| Total | 614 | 100.0 | 246 | 100.0 | |

*Significance at $p < .05$ for overall difference between 2001 and 2003.

At least two-thirds of 2001 and 2003 respondents perceived that all of the listed negative birth outcomes could result from the use of street drugs during pregnancy. Respondents' perceptions of the consequences of using street drugs during pregnancy remained relatively unchanged between 2001 and 2003. However, a slightly larger proportion of 2003 respondents (84.6 percent) than 2001 respondents (80.5 percent) thought withdrawal from the street drug was a potential birth outcome (Table 16).

**Table 16. Perceived Birth Outcomes Resulting From Street Drugs Such as Cocaine, Heroin, Marijuana, Ecstacy, LSD, etc., Used During Pregnancy**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 (N=614) | | 2003 (N=246) | | |
| | Number | Percent* | Number | Percent* | |
| Low birth weight | 546 | 88.9 | 221 | 89.8 | 0.9 |
| Learning problems | 546 | 88.9 | 220 | 89.4 | 0.5 |
| Heart and brain defects | 547 | 89.1 | 220 | 89.4 | 0.3 |
| Premature birth | 544 | 88.6 | 217 | 88.2 | -0.4 |
| Behavioral problems | 529 | 86.2 | 213 | 86.6 | 0.4 |
| Withdrawal from the drug | 494 | 80.5 | 208 | 84.6 | 4.1 |
| Miscarriage | 527 | 85.8 | 207 | 84.1 | -1.7 |
| Problems with sleeping | 432 | 70.4 | 177 | 72.0 | 1.6 |
| Problems with eating | 411 | 66.9 | 165 | 67.1 | 0.2 |
| None of the above | 6 | 1.0 | 1 | 0.4 | -0.6 |
| Don't know | 36 | 5.9 | 13 | 5.3 | -0.6 |

*Percentages do not total 100.0 due to multiple responses; 2001: N=614; 2003: N=246.

- Respondents' perceptions of the risk of giving birth to a low birth weight baby from smoking during pregnancy remained relatively unchanged between 2001 and 2003. The vast majority of 2001 and 2003 respondents said smoking during pregnancy increases the risk of giving birth to a low birth weight baby (94.0 percent and 95.9 percent, respectively) (Table 17).

**Table 17. Perceptions of Whether Smoking During Pregnancy Increases the Risk of Giving Birth to a Low Birth Weight Baby**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent* | Number | Percent | |
| Yes | 577 | 94.0 | 236 | 95.9 | 1.9 |
| No | 3 | 0.5 | 2 | 0.8 | 0.3 |
| Don't know | 25 | 4.1 | 8 | 3.3 | -0.8 |
| Missing | 9 | 1.5 | 0 | 0.0 | -1.5 |
| Total | 614 | 100.1 | 246 | 100.0 | |

*Percentages do not total 100.0 due to rounding.

- Respondents' perceptions of whether drugs and alcohol can be transferred to a baby through breast milk remained relatively unchanged between 2001 and 2003. The large majority of 2001 and 2003 respondents said they can be transferred to a baby through breast milk (87.1 percent and 87.0 percent, respectively) (Table 18).

**Table 18. Perceptions of Whether Drugs or Alcohol Can be Transferred to a Baby Through Breast Milk**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent* | Number | Percent | |
| Yes | 535 | 87.1 | 214 | 87.0 | -0.1 |
| No | 7 | 1.1 | 0 | 0.0 | -1.1 |
| Don't know | 65 | 10.6 | 28 | 11.4 | 0.8 |
| Missing | 7 | 1.1 | 4 | 1.6 | 0.5 |
| Total | 614 | 99.9 | 246 | 100.0 | |

*Percentages do not total 100.0 due to rounding.

- More females than males responded to the survey in 2001 and in 2003. However, the proportions of males and females in 2003 were more evenly distributed (Table 19).

**Table 19. Respondent's Gender**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent | Number | Percent | |
| Male | 177 | 28.8 | 100 | 40.7 | 11.9 |
| Female | 433 | 70.5 | 144 | 58.5 | -12.0 |
| Missing | 4 | 0.7 | 2 | 0.8 | 0.1 |
| Total | 614 | 100.0 | 246 | 100.0 | |

- A larger proportion of respondents in 2003 (62.6 percent) were age 45 or older than in 2001 (51.0 percent). The proportion of respondents under the age of 35 decreased from 27.1 percent in 2001 to 15.9 percent in 2003 (Table 20).

**Table 20. Respondent's Age**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent* | Number | Percent | |
| 15-24 | 63 | 10.3 | 8 | 3.3 | -7.0 |
| 25-34 | 103 | 16.8 | 31 | 12.6 | -4.2 |
| 35-44 | 126 | 20.5 | 52 | 21.1 | 0.6 |
| 45-54 | 129 | 21.0 | 61 | 24.8 | 3.8 |
| 55-64 | 78 | 12.7 | 38 | 15.4 | 2.7 |
| 65 or older | 106 | 17.3 | 55 | 22.4 | 5.1 |
| Missing | 9 | 1.5 | 1 | 0.4 | -1.1 |
| Total | 614 | 100.1 | 246 | 100.0 | |

*Percentages do not total 100.0 due to rounding.

- The majority of 2001 and 2003 respondents lived in a city with a population of more than 5,000 (69.1 percent and 65.0 percent, respectively). The proportion of respondents in a rural area increased from 12.5 percent in 2001 to 16.3 percent in 2003 (Table 21).

**Table 21. Respondent's Area of Residence**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent | Number | Percent* | |
| Rural area | 77 | 12.5 | 40 | 16.3 | 3.8 |
| City with 500 or less population | 9 | 1.5 | 5 | 2.0 | 0.5 |
| City with 501 to 1,000 population | 10 | 1.6 | 5 | 2.0 | 0.4 |
| City with 1,001 to 5,000 population | 85 | 13.8 | 32 | 13.0 | -0.8 |
| City with 5,001 or greater | 424 | 69.1 | 160 | 65.0 | -4.1 |
| Missing | 9 | 1.5 | 4 | 1.6 | 0.1 |
| Total | 614 | 100.0 | 246 | 99.9 | |

*Percentages do not total 100.0 due to rounding.

- The majority of 2001 and 2003 respondents lived in the 56560 zip code, which corresponds to the city of Moorhead, Minnesota (75.4 percent and 66.7 percent, respectively) (Table 22).

**Table 22. Respondent's Zip Code**

| Response | Respondents | | | | Proportional Change |
|---|---|---|---|---|---|
| | 2001 | | 2003 | | |
| | Number | Percent* | Number | Percent* | |
| 56514 | 4 | 0.7 | 19 | 7.7 | 7.0 |
| 56525 | 2 | 0.3 | 0 | 0.0 | -0.3 |
| 56529 | 47 | 7.7 | 13 | 5.3 | -2.4 |
| 56536 | 0 | 0.0 | 3 | 1.2 | 1.2 |
| 56547 | 6 | 1.0 | 9 | 3.7 | 2.7 |
| 56549 | 65 | 10.6 | 19 | 7.7 | -2.9 |
| 56560 | 463 | 75.4 | 164 | 66.7 | -8.7 |
| 56580 | 17 | 2.8 | 1 | 0.4 | -2.4 |
| Other | 2 | 0.3 | 9 | 3.7 | 3.4 |
| Missing | 8 | 1.3 | 9 | 3.7 | 2.4 |
| Total | 614 | 100.1 | 246 | 100.1 | |

*Percentages do not total 100.0 due to rounding.

## ADDITIONAL COMMENTS

**Additional Comments, 2001 Survey**

| Survey Question | Additional Comments by Respondents |
|---|---|
| Question #2 - Effects of Drinking Alcohol During Pregnancy | That depends upon the amount consumed |
| | Heavy [drinking]. A mild drink once in a while O.K. |
| Question #3 - Whether the Placenta Serves as a Filter and Removes Impurities | Our teen girls think it does filter impurities |
| | Thought it provides nourishment |
| | I think so |
| | Does some filtering |
| Question #4 - How Often a Pregnant Woman Can Safely Have a Drink Containing Alcohol | Again, the amount must also be considered. There has been a "reign of terror" raised regarding this syndrome causing needless fear |
| | It will cross the placenta |
| | [Indicated response "2 to 4 times per month"] possible here |
| | This hasn't been determined |
| | Different [studies] show different results. If we are not sure as to the amount, then the best plan should be abstinence. Why play "Russian Roulette" |
| Question #5 - Perceptions of When a Father Can Cause FAS | He shouldn't |
| | Not sure |
| Question #6 - The Leading Cause of Mental Retardation | This could be the problem for a lot of problems |
| Question #7 - The Nationwide Annual Cost of Treating Infants, Children, and Adults With FAS | Too much |
| | But I bet it's a lot |
| | I think this question is unimportant as it applies to trying to inform mother and families of dangers involved, or is it designed to hit society where it hurts? |
| Question #9 - Whether FAS or FAE Can be Prevented | More education and proper living |
| Question #11 - Perceived Birth Outcomes Resulting From Street Drugs Such as Cocaine, Heroin, Marijuana, Ecstacy, LSD, etc., Used During Pregnancy | Possible some of the others but not as significant as many problems |
| | All (two respondents wrote this) |
| | People are dumbed down by so and use drugs–bad. Many in higher education too, so live for today, forget to teach fundamentals of life |
| | Placenta prevents |
| | [Don't know] about eating |
| Question #12 - Whether Drugs or Alcohol Can be Transferred to a Baby Through Breast Milk | Probably |
| Question #14 - Age of Respondent | 82 |
| | 92 years old |
| General Comment | Don't know how much money you get to do this but with this terrorist attacks hope it wakes up this nation [as to] how stupid they've become |

**Additional Comments, 2003 Survey**

| Survey Question | Additional Comments by Respondents |
|---|---|
| Question #3 - Whether the Placenta Serves as a Filter and Removes Impurities | It does act as somewhat of a filter but I do not believe that it can filter everything, especially alcohol and drugs. |
| | Not sure |
| Question #5 - Perceptions of When a Father Can Cause FAS | Not sure |
| Question #6 - The Leading Cause of Mental Retardation | It all sounds “so bad” to me |
| Question #7 - The Nationwide Annual Cost of Treating Infants, Children, and Adults With FAS | Am not sure - it would be high |
| Question #11 - Perceived Birth Outcomes Resulting From Street Drugs Such as Cocaine, Heroin, Marijuana, Ecstacy, LSD, etc., Used During Pregnancy | I’d say “No” to most of these! |

# SURVEY INSTRUMENTS

# IMPORTANT SURVEY

Dear Respondent,
Service providers at Clay County Public Health are interested in your perceptions of Fetal Alcohol Syndrome. Please take a few minutes and fill out this short survey. Your responses are important and will be recorded without any identifying information. The information you provide will help us determine ways to increase public awareness. If you have any questions regarding the survey, please call Clay County Public Health at 299-5220. Thank you so much.

-Select only **one** answer unless the instructions specify otherwise.
-Fill out the survey using either a **#2 pencil** or a pen (**black or blue ink**). **Fill in ovals completely.**
-Place the "survey" in the enclosed postage-paid envelope and return it as soon as possible.

**1. Have you ever heard of Fetal Alcohol Syndrome (FAS) or Fetal Alcohol Effect (FAE)?**

- ○ Yes
- ○ No

**2. Does drinking alcohol during pregnancy...**

| | Yes | No | Don't Know |
|---|---|---|---|
| 2a. Increase the risk of mental retardation for the fetus? | ○ | ○ | ○ |
| 2b. Increase the risk of a miscarriage? | ○ | ○ | ○ |
| 2c. Increase the risk of a low birth weight baby? | ○ | ○ | ○ |
| 2d. Increase the risk of birth defects [both internal (heart & lungs) and external (limbs)]? | ○ | ○ | ○ |

**3. The placenta serves as a filter and removes impurities, such as alcohol, from the mother's bloodstream before it reaches the developing fetus.**

- ○ True
- ○ False
- ○ Don't know

**4. How often can a pregnant woman safely have a drink containing alcohol?**
(A "drink" refers to a can or bottle of beer, a glass of wine, a wine cooler, or 1 cocktail or shot of hard liquor).

- ○ a. Never, no amount of alcohol is safe
- ○ b. Once a month or less
- ○ c. 2 to 4 times per month
- ○ d. 2 to 3 times per week
- ○ e. More than 3 times per week
- ○ f. Don't know

**5. A father can cause Fetal Alcohol Syndrome when:**

- ○ a. He is an alcoholic
- ○ b. He drinks alcohol at conception
- ○ c. He has Fetal Alcohol Syndrome
- ○ d. He is on drugs
- ○ e. He can't cause Fetal Alcohol Syndrome
- ○ f. Don't know

**6. What is the leading cause of mental retardation?**

- ○ a. FAE (Fetal Alcohol Effect)/FAS Fetal Alcohol Syndrome
- ○ b. Cerebral Palsy
- ○ c. Spina Bifida
- ○ d. Down Syndrome
- ○ e. Don't know

7. **What is the nationwide, annual cost of treating infants, children, and adults with Fetal Alcohol Syndrome (Fetal Alcohol Effect not included)?**

- ☐ 0 to $500,000
- ☐ $500,001 to $1,000,000
- ☐ $1,000,001 to $10,000,000
- ☐ $10,000,001 to $50,000,000
- ☐ $50,000,001 to $100,000,000
- ☐ More than $100,000,000
- ☐ Don't know

| | Yes | No | Don't know |
|---|---|---|---|
| 8. Can Fetal Alcohol Syndrome or Fetal Alcohol Effect be *cured*? | ☐ | ☐ | ☐ |
| 9. Can Fetal Alcohol Syndrome or Fetal Alcohol Effect be *prevented*? | ☐ | ☐ | ☐ |

10. **Does smoking during pregnancy increase the risk of giving birth to a low birth weight baby?**

- ☐ Yes
- ☐ No
- ☐ Don't know

11. **If street drugs, such as cocaine, heroin, marijuana, ecstacy, LSD, etc., are used during pregnancy, which of the following birth outcomes can result? (Select all that apply).**

- ☐ Low birth weight
- ☐ Premature birth
- ☐ Miscarriage
- ☐ Heart and brain defects
- ☐ Learning problems
- ☐ Behavioral problems
- ☐ Problems with eating
- ☐ Problems with sleeping
- ☐ Withdrawal from the drug
- ☐ None of the above
- ☐ Don't know

12. **Can either drugs or alcohol be transferred to a baby through breast milk?**

- ☐ Yes
- ☐ No
- ☐ Don't know

**Finally, to help us interpret the results, we have a few questions about you.**

13. **What is your gender?**

- ☐ Male
- ☐ Female

14. **What is your age?**

- ☐ 15-24
- ☐ 25-34
- ☐ 35-44
- ☐ 45-54
- ☐ 55-64
- ☐ 65 or older

15. **Where do you live?**

- ☐ Rural area
- ☐ City with 500 or less population
- ☐ City with 501 to 1,000 population
- ☐ City with 1,001 to 5,000 population
- ☐ City with 5,001 or greater

16. **What is your zip code?**

- ☐ 56514
- ☐ 56525
- ☐ 56529
- ☐ 56536
- ☐ 56547
- ☐ 56549
- ☐ 56560
- ☐ 56580
- ☐ Other_____

**Thank you for your cooperation!**

# IMPORTANT SURVEY

Dear Respondent,
Service providers at Clay County Public Health are interested in your perceptions of Fetal Alcohol Syndrome. Please take a few minutes and fill out this short survey. Your responses are important and will be recorded without any identifying information. The information you provide will help us determine ways to increase public awareness. If you have any questions regarding the survey, please call Clay County Public Health at 299-5220. Thank you so much.

-Select only **one** answer unless the instructions specify otherwise.
-Fill out the survey using either a **#2 pencil** or a pen (**black or blue ink**). **Fill in ovals completely.**
-Place the "survey" in the enclosed postage-paid envelope and return it as soon as possible.

**1. Have you ever heard of Fetal Alcohol Syndrome (FAS) or Fetal Alcohol Effect (FAE)?**

- ○ Yes
- ○ No

**2. Does drinking alcohol during pregnancy...**

| Yes | No | Don't Know | |
|---|---|---|---|
| ○ | ○ | ○ | 2a. Increase the risk of mental retardation for the fetus? |
| ○ | ○ | ○ | 2b. Increase the risk of a miscarriage? |
| ○ | ○ | ○ | 2c. Increase the risk of a low birth weight baby? |
| ○ | ○ | ○ | 2d. Increase the risk of birth defects [both internal (heart & lungs) and external (limbs)]? |

**3. The placenta serves as a filter and removes impurities, such as alcohol, from the mother's bloodstream before it reaches the developing fetus.**

- ○ True
- ○ False
- ○ Don't know

**4. How often can a pregnant woman safely have a drink containing alcohol?**
(A "drink" refers to a can or bottle of beer, a glass of wine, a wine cooler, or 1 cocktail or shot of hard liquor).

- ○ a. Never, no amount of alcohol is safe
- ○ b. Once a month or less
- ○ c. 2 to 4 times per month
- ○ d. 2 to 3 times per week
- ○ e. More than 3 times per week
- ○ f. Don't know

**5. A father can cause Fetal Alcohol Syndrome when:**

- ○ a. He is an alcoholic
- ○ b. He drinks alcohol at conception
- ○ c. He has Fetal Alcohol Syndrome
- ○ d. He is on drugs
- ○ e. He can't cause Fetal Alcohol Syndrome
- ○ f. Don't know

**6. What is the leading cause of mental retardation?**

- ○ a. FAE (Fetal Alcohol Effect)/FAS (Fetal Alcohol Syndrome)
- ○ b. Cerebral Palsy
- ○ c. Spina Bifida
- ○ d. Down Syndrome
- ○ e. Don't know

7. **What is the nationwide, annual cost of treating infants, children, and adults with Fetal Alcohol Syndrome (Fetal Alcohol Effect not included)?**

- ☐ 0 to $500,000
- ☐ $500,001 to $1,000,000
- ☐ $1,000,001 to $10,000,000
- ☐ $10,000,001 to $50,000,000
- ☐ $50,000,001 to $100,000,000
- ☐ More than $100,000,000
- ☐ Don't know

| | Yes | No | Don't know |
|---|---|---|---|
| 8. **Can Fetal Alcohol Syndrome or Fetal Alcohol Effect be *cured*?** | ☐ | ☐ | ☐ |
| 9. **Can Fetal Alcohol Syndrome or Fetal Alcohol Effect be *prevented*?** | ☐ | ☐ | ☐ |

10. **Does smoking during pregnancy increase the risk of giving birth to a low birth weight baby?**

- ☐ Yes
- ☐ No
- ☐ Don't know

11. **If street drugs, such as cocaine, heroin, marijuana, ecstacy, LSD, etc., are used during pregnancy, which of the following birth outcomes can result? (Select all that apply)**

- ☐ Low birth weight
- ☐ Premature birth
- ☐ Miscarriage
- ☐ Heart and brain defects
- ☐ Learning problems
- ☐ Behavioral problems
- ☐ Problems with eating
- ☐ Problems with sleeping
- ☐ Withdrawal from the drug
- ☐ None of the above
- ☐ Don't know

12. **Can either drugs or alcohol be transferred to a baby through breast milk?**

- ☐ Yes
- ☐ No
- ☐ Don't know

13. **During the past 3 months, did you see, read, or hear any information about Fetal Alcohol Syndrome?**

- ☐ Yes → 13a. **Where did you see, read, or hear the information about Fetal Alcohol Syndrome? (Select all that apply)**
  - ☐ Magazine articles
  - ☐ Newspaper articles
  - ☐ Television ads or stories
  - ☐ Doctor's office or clinic
  - ☐ Other_____
- ☐ No

13b. **Based on the information you saw, read, or heard, did your level of knowledge about Fetal Alcohol Syndrome...**

- ☐ Decrease
- ☐ Stay about the same
- ☐ Increase
- ☐ Don't know

**Finally, to help us interpret the results, we have a few questions about you.**

14. **What is your gender?**

- ☐ Male
- ☐ Female

15. **What is your age?**

- ☐ 15-24
- ☐ 25-34
- ☐ 35-44
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17. **What is your zip code?**

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- ☐ 56549
- ☐ 56560
- ☐ 56580
- ☐ Other_____

**Thank you for your cooperation!**