



IOWA'S  
BARRIERS TO  
**PRENATAL CARE**  
PROJECT

## **2017 Data Summary**

July 2018

**Prepared by**  
**Mary E. Losch, Ph.D.**  
**Rodney J. Muilenburg, B.L.S.**  
**Athena K. Strong**  
**Center for Social and Behavioral Research**  
**University of Northern Iowa**

## OVERVIEW

The findings in this summary are based on the Iowa Barriers to Prenatal Care project. Ongoing since 1991, the purpose of this project is to obtain brief, accurate information about women delivering babies in Iowa hospitals. Specifically, the project seeks to learn about women's experiences getting prenatal or delivery care during their current pregnancy. Other information is included which may be pertinent to health planners or those concerned with the systematic development of health care services.

This project is a cooperative venture of all of Iowa's maternity hospitals, the University of Northern Iowa Center for Social and Behavioral Research, and the Iowa Department of Public Health. The Robert Wood Johnson Foundation funded the first three years of this project. The current funding is provided by the Iowa Department of Public Health. The Director is Dr. Mary Losch, University of Northern Iowa Center for Social and Behavioral Research. The Coordinator for the project is Rodney Muilenburg.

The questionnaire is distributed to nearly eighty maternity hospitals across the state of Iowa. Nursing staff or those responsible for obtaining birth certificate information in the obstetrics unit are responsible for approaching all birth mothers prior to dismissal to request their participation in the study. The questionnaire takes approximately ten minutes to complete. Completed questionnaires are returned to the University of Northern Iowa Center for Social and Behavioral Research for data entry and analysis. Returns are made monthly, weekly, or biweekly depending on the number of births per week in a given hospital. Except in the case of a mother who is too ill to complete the questionnaire, all mothers are eligible to be recruited for participation.

The present yearly report includes an analysis of large Iowa cities, a trend analysis of the last ten years, and a frequency analysis of all variables included in the 2017 questionnaire. Unless otherwise noted, all entries reflect percentages. Please note that, because percentages were rounded, total values may not equal 100%. Data presented are based upon 2017 questionnaires received to date (n = 20,919). All analyses reflect unweighted percentages of those responding.

**Questions concerning this project or additional data requests may be addressed to:**

Mary Losch, Ph.D.  
Director, Center for Social & Behavioral Research  
University of Northern Iowa  
Cedar Falls, IA 50614-0402  
Phone: (319) 273-2105  
Fax: (319) 273-3104  
[mary.losch@uni.edu](mailto:mary.losch@uni.edu)

Rodney Muilenburg, B.L.S.  
Field Supervisor, Center for Social & Behavioral Research  
University of Northern Iowa  
Cedar Falls, IA 50614-0402  
Phone: (319) 273-2105  
Fax: (319) 273-3104  
[rod.muilenburg@uni.edu](mailto:rod.muilenburg@uni.edu)

**Recommended Citation:**

Losch, M. E., Muilenburg, R. J., & Strong, A. K. (2017). Iowa Barriers to Prenatal Care Project. Iowa Department of Public Health, University of Northern Iowa Center for Social and Behavioral Research: 2017 Data Summary.

## TABLE OF CONTENTS

A. Analysis of Selected Variables by City.....	5
B. Dental Care by City.....	17
C. Trend Analysis of Barriers Data: 2008-2017.....	29
D. 2017 Questionnaire Frequency Tables.....	34

## A. Analysis of Selected Variables by City

The present section compares the findings across the following cities for all 2017 data received (n = 12,319). Location of hospital where mothers gave birth is the basis for analysis.

DM = Des Moines (n = 6,885)  
 QC = Quad Cities (n = 604)  
 SC = Sioux City (n = 489)  
 WL = Waterloo (n = 1,194)  
 CR = Cedar Rapids (n = 1,432)  
 DB = Dubuque (n = 692)  
 IC = Iowa City (n = 1,023)

\*All data provided in the following tables reflect percentages unless otherwise noted.

### Mother/Family Characteristics

Overall, the age of the mothers in the cities matched the state data. Sioux City had a higher percentage of mothers aged 18-19 (5%) than the other cities. Iowa City (12%) had the highest percentage of mothers over 35 (see Table A1).

**Table A1. Mother's Age**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>&lt; 18 years</b>	01	01	01	01	01	01	01	<1
<b>18 - 19 years</b>	03	03	03	05	03	02	01	01
<b>20 - 25 years</b>	25	22	19	29	25	22	20	18
<b>26 - 30 years</b>	36	35	41	32	39	36	38	37
<b>31 - 35 years</b>	26	29	26	25	25	29	30	31
<b>&gt; 35 years</b>	09	11	09	09	08	10	11	12

Sioux City had the largest percentage of Hispanic mothers (16%) and Native American mothers (8%). Waterloo (11%) had the highest percentages of Black mothers (see Table A2).

**Table A2. Race/Ethnicity**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Hispanic</b>	07	07	11	16	04	03	02	05
<b>Non-Hispanic</b>	93	93	89	84	96	97	98	95
<b>White</b>	90	87	87	84	85	87	94	86
<b>Black</b>	06	08	09	06	11	09	03	09
<b>Asian/Pacific Islander</b>	03	05	03	02	03	04	03	05
<b>Native American</b>	01	01	01	08	01	01	<1	<1

As shown in Table A3, the largest proportion of mothers born outside of the US was found in Sioux City (11%) while Waterloo (72%) had the highest percentage of mothers who were born in Iowa.

**Table A3. Mother's Place of Birth**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>In Iowa</b>	66	67	51	62	72	70	66	59
<b>In U.S., outside of Iowa</b>	26	24	43	27	22	22	31	31
<b>Outside of U.S.</b>	08	10	06	11	07	08	04	10

Sioux City had the lowest level of educational attainment compared to the other cities with 8% of mothers possessing less than a high school education. Iowa City had the highest level of educational attainment compared to the other cities with 19% of mothers possessing a graduate degree (see Table A4).

**Table A4. Education**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>&lt; High School</b>	07	06	06	08	07	07	03	04
<b>High School</b>	21	17	20	25	21	17	15	15
<b>Some College</b>	34	31	34	34	32	33	31	29
<b>College</b>	27	32	26	21	29	28	35	33
<b>Graduate School</b>	12	14	13	12	11	15	16	19

Des Moines (48%) and Dubuque (48%), respondents reported the highest family incomes at \$70,000 or more. Sioux City (18%), on the other hand, had the highest percentage of respondents in the lowest-income category (see Table A5).

**Table A5. Annual Family Income Last Year**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Under \$10,000</b>	12	10	13	18	15	12	07	10
<b>\$10,000 - \$19,999</b>	09	08	09	11	10	08	06	08
<b>\$20,000 - \$29,999</b>	09	08	10	11	09	08	07	06
<b>\$30,000 - \$39,999</b>	08	08	06	08	06	08	06	07
<b>\$40,000 - \$49,999</b>	07	06	06	07	07	05	06	07
<b>\$50,000 - \$59,999</b>	08	06	07	05	09	08	09	09
<b>\$60,000 - \$69,999</b>	07	07	06	07	06	07	11	08
<b>\$70,000 or more</b>	39	48	43	33	39	45	48	45

Sioux City had the highest percentage (25%) of women reporting smoking in the last two years while Dubuque and Iowa City (15%) had the lowest percentage. Across locations, Waterloo had the highest proportion of women (49%) reporting smoking one or more cigarettes per day during the last 3 months of their pregnancy (see Table A6).

**Table A6. Smoked in Last 2 Years and Cigarettes Smoked Per Day in Last 3 Months of Pregnancy**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Not smoked in last 2 years</b>	78	82	78	75	79	79	85	85
<b>Smoked in last 2 years</b>	22	18	22	25	21	21	15	15
<b>Zero in last three months of pregnancy</b>	53	57	56	56	51	57	63	58
<b>1-10 per day in last three months of pregnancy</b>	41	37	38	40	45	40	36	37
<b>11-20 per day in last three months of pregnancy</b>	05	05	06	04	04	03	01	04
<b>&gt;20 per day in last three months of pregnancy</b>	01	<1	<1	<1	<1	<1	<1	01

Dubuque and Iowa City (79%) had the highest rates of intended pregnancy. Of all unintended pregnancies (mistimed and/or unwanted), women in Des Moines and Waterloo had the highest rate of pregnancies while not using birth control (71%). Sioux City (34%) had the highest rates of unintended pregnancy while using some form of birth control and the lowest rate (66%) of unintended pregnancies when no birth control was used (see Table A8).

**Table A7. Pregnancy Intent**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Intended</b>	71	73	73	67	70	73	79	79
<b>Unintended</b>	29	27	27	33	30	27	21	21

**Table A8. Unintended Pregnancy, Birth Control Use**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Unintended, no birth control used</b>	70	71	70	66	71	70	70	67
<b>Unintended, birth control used</b>	30	29	30	34	29	30	30	33

Table A9 shows that Dubuque had a far greater percentage (75%) of women, who had a health care worker talk to them about the Zika virus without having to ask the health care worker specifically about it, than any other area of the state. Women in the Quad Cities (47%) were the least like to have talked with a health care worker about the virus.

**Table A9. Talked with a Doctor about Zika Virus**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Yes, a health care worker talked with me without my asking about it</b>	37	33	48	42	31	36	75	42
<b>Yes, a health care worker talked with me, but only AFTER I asked about it</b>	07	09	05	09	07	08	03	10
<b>No</b>	56	58	47	50	62	56	22	48



Respondents from across the state were very knowledgeable about the recommendation that pregnant women should avoid travel to areas with the Zika virus. Dubuque (94%) was the highest while Waterloo (81%) was the lowest.

**Table A10. Aware of Recommendations that Pregnant Women Should Avoid Travel to Areas with Zika Virus**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Yes</b>	85	88	85	83	81	87	94	89
<b>No</b>	15	12	15	17	19	13	06	11

Women in Dubuque (78%) were aware that the Zika virus could be transmitted sexually. In all other areas of the state, 30% or more of the women were not aware of this transmission method.

**Table A11. Aware that Zika Virus can be Sexually Transmitted**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Yes</b>	64	68	61	64	60	64	78	70
<b>No</b>	36	32	39	36	40	36	22	30

The three most common stressors during pregnancy were moving to a new address, having a family member or close friend die and having a close family member very sick who had to be hospitalized. The highest percentage of women who moved (22%) lived in Des Moines and Waterloo. Women in the Quad Cities, Waterloo and Iowa City had the highest percentage of women (14%) who had a sick and hospitalized family member. The highest percentage of women who had a family member or friend die were from Sioux City (see Table A12).

**Table A12. Possible Stressors During Pregnancy**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>A close family member was very sick and had to be hospitalized</b>	12	12	14	11	14	12	11	14
<b>I got separated or divorced from my husband or partner</b>	03	02	02	04	02	02	02	03
<b>I moved to a new address</b>	21	22	18	20	22	19	14	21
<b>I was homeless (for example, had to sleep outside, in a car, or in a homeless shelter)</b>	01	01	<01	01	01	01	<01	01
<b>My husband or partner lost their job</b>	04	04	03	05	03	05	03	04
<b>I lost my job</b>	05	05	05	05	06	05	03	06
<b>I argued with my husband or partner more than usual</b>	10	09	09	12	10	10	08	10
<b>My husband or partner said they didn't want me to be pregnant</b>	01	01	02	01	01	02	01	01
<b>I had a lot of bills I couldn't pay</b>	07	06	07	08	07	07	05	07
<b>I was in a physical fight</b>	01	<01	<01	01	01	01	<01	<01
<b>My husband or partner or I went to jail</b>	02	02	01	02	03	02	01	02
<b>A family member or close friend has a bad problem with drinking or drugs</b>	04	03	04	04	03	04	02	03
<b>A family member or close friend died</b>	17	16	16	19	18	16	17	15

Most mothers statewide were not diagnosed with depression either during or before their pregnancy. Cedar Rapids (15%) had the largest proportion of mothers diagnosed with depression during or before pregnancy (see Table A13).

**Table A13. Diagnosed with Depression During this Pregnancy**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Yes</b>	03	03	03	02	03	03	02	03
<b>No</b>	87	88	86	88	89	85	89	87
<b>No, I was diagnosed with depression before I became pregnant</b>	10	09	10	10	08	12	09	10

Of those diagnosed with depression, either before or during this pregnancy, Iowa City mothers (57%) were more likely than women in other areas to take prescription medication during their pregnancy. Mothers from Sioux City (23%) were the most likely to stop taking depression medication during pregnancy (see Table A14).

**Table A14. Took Prescription Medication for Depression During this Pregnancy**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Yes</b>	48	51	43	46	43	52	54	57
<b>No</b>	32	29	32	25	34	32	32	30
<b>No, my doctor told me to stop taking my medications for depression during pregnancy</b>	06	05	07	05	09	04	03	07
<b>No, I decided on my own to stop taking my medications for depression during my pregnancy</b>	14	15	18	23	14	12	11	06

Only about a third of mothers across the state who were diagnosed either before or after this pregnancy received counseling for depression. The largest percentage of these mothers (36%) were located in Dubuque and Iowa City (see Table A15).

**Table A15. Counseling for Depression During this Pregnancy**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Yes</b>	30	33	35	29	27	31	36	36
<b>No</b>	70	67	65	71	73	69	64	64

## Prenatal Care

Only 34% of women in Des Moines were given information about using seatbelts during pregnancy, while 55% in the Quad Cities were given this information. Women in Iowa City (82%) were most likely to receive information from a health care professional regarding tests to screen for birth defects and diseases. Des Moines had the lowest percentage of women (23%) who received information regarding physical abuse to women by their husbands or partners. The highest percentage (80%) of women provided information pertaining to oral health and dental care during pregnancy were from Dubuque (see Table A16).

**Table A16. Information Provided by a Health Care Professional During This Pregnancy**

	STATE	DM	QC	SC	WL	CR	DB	IC
How smoking during pregnancy may affect baby	52	44	57	54	56	56	53	52
Breastfeeding my baby	69	61	73	68	75	69	73	75
How drinking alcohol during pregnancy may affect baby	51	44	54	50	54	55	54	54
Using a seatbelt during pregnancy	43	34	55	39	44	43	43	45
Medicines safe to take during pregnancy	81	81	83	76	80	79	85	84
How using illegal drugs may affect baby	40	33	46	40	46	43	41	42
How using prescription medications may affect baby	49	44	54	46	50	50	50	52
Doing tests on me/baby to screen for birth defects/diseases	76	75	77	68	76	76	78	82
What to do if I feel depressed during pregnancy/after baby born	53	49	59	44	56	52	53	58
Physical abuse to women by their husbands or partners	29	23	36	25	36	31	28	32
Signs and symptoms of preterm labor	62	57	66	57	61	60	63	66
What to do if labor starts early	65	61	73	61	64	62	69	71
How to monitor changes in baby's activity during pregnancy	75	75	77	68	72	73	76	80
What to do if baby had not felt as active as expected	75	74	77	70	72	75	75	79
Oral health or dental care during pregnancy	44	39	45	40	49	49	53	44
Not provided with any information listed above	05	05	05	05	06	05	04	03

Women in Cedar Rapids (47%) and Iowa City (47%) reported the highest rates of HIV/AIDS testing during pregnancy, while women in Dubuque (30%) reported the lowest rates of testing. Over 20% of mothers in all locations indicated that they did not know whether or not they were tested for HIV/AIDS (see Table A16).

**Table A16. HIV/AIDS Testing**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Tested</b>	41	38	46	46	42	47	30	47
<b>Not tested</b>	32	35	30	30	35	29	44	31
<b>Offered but not tested</b>	02	02	01	01	02	01	02	02
<b>Don't know</b>	25	25	22	22	22	23	25	21

Table A17 shows that over half of the women in the state (65%) reported receiving a flu shot during their pregnancy. Women in Sioux City and Iowa City were more likely than women in other areas to get a flu shot (75% and 74% respectively) and women in the Quad Cities and Waterloo were less likely to get a flu shot (50% and 54%). Fourteen percent of women in the state report they never get a flu shot, with the highest number of those in the Quad Cities (21%) and Waterloo (19%) (see Table A17).

**Table A17. Flu Shot**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Received during</b>	65	67	50	75	54	70	63	74
<b>Received before</b>	07	06	07	05	08	05	05	07
<b>Not wanted</b>	12	12	20	10	16	11	14	08
<b>Doctor instructed to wait</b>	01	01	01	<1	01	<1	01	01
<b>Never get flu shots</b>	14	12	21	10	19	12	15	09
<b>Flu shot not available</b>	02	02	02	<1	02	02	02	02

## Hospital Care

Mothers statewide are encouraged by hospital staff to breastfeed their baby. Iowa City mothers (88%) are encouraged at the highest rate while mothers in Cedar Rapids (82%) are the lowest (see Table A18).

**Table A18. Encouraged to Breastfeed by Hospital Staff**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Yes</b>	84	84	83	83	85	82	86	88
<b>No</b>	13	13	15	15	12	15	13	11
<b>I don't remember</b>	02	03	03	02	03	03	02	01

Iowa City (85%) had the highest percentage of mothers who breastfed their baby while in the hospital. Mothers in Waterloo (70%) were the most likely to breastfeed during the first hour after birth (see Table A19).

**Table A19. Breastfeeding Information**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>I breastfed my baby in the hospital</b>	81	83	80	80	81	80	79	85
<b>Hospital staff gave me information about breastfeeding</b>	87	87	85	88	89	88	87	89
<b>My baby was placed in skin-to-skin contact within the first hour of life</b>	84	82	89	85	89	89	85	70
<b>I breastfed in the first hour after my baby was born</b>	64	64	67	66	70	60	66	58
<b>Hospital staff helped me learn how to breastfeed</b>	72	74	74	74	72	73	72	76
<b>Hospital staff told me to breastfeed whenever my baby wanted</b>	68	66	74	69	69	70	65	67
<b>I am feeding my baby</b>	94	94	95	93	95	95	96	91

Table A20 shows that the largest proportion of women receiving breastfeeding information from a doctor were in Iowa City (70%). Seventy-two percent of women in the state report getting information from a nurse, midwife or doula, with the highest number of those in Waterloo (79%).

**Table A20. Sources of Breastfeeding Information**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>My doctor</b>	63	56	64	66	61	61	59	70
<b>A nurse, midwife, or doula</b>	72	69	69	68	79	69	72	74
<b>A breastfeeding or lactation specialist</b>	56	63	65	62	68	68	68	76
<b>My baby's doctor or health care provider</b>	46	39	37	49	45	41	38	48
<b>A breastfeeding support group</b>	12	10	16	18	18	14	17	12
<b>A breastfeeding hotline or toll-free number</b>	05	04	07	06	08	06	05	04
<b>Family or friends</b>	54	55	58	58	55	53	52	53
<b>Other</b>	09	09	09	14	11	07	05	11

Only fourteen percent of women in the state were offered long acting contraception (IUD) after their baby was born. Women in Iowa City (31%) were offered an IUD at a rate double that of the state (see Table A21).

**Table A21. Offered Long Acting Contraception (IUD/Implant) after Baby was Born**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Yes</b>	14	05	22	12	24	18	13	31
<b>No</b>	86	95	78	88	76	82	87	69

Of the mothers offered an IUD after birth, Iowa City (49%) had the largest percentage receive the implant. Dubuque mothers (29%) were the least likely to receive the IUD (see Table A22).

**Table A22. Will Receive or Have Received Long Acting Contraception (IUD/Implant) after Baby was Born**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Yes</b>	43	47	48	47	44	42	29	49
<b>No</b>	57	53	52	53	56	58	71	51



## B. Dental Care

### Dental Care by Location of Birth Hospital

The two most commonly reported dental problems were toothache and gums bleeding a lot. Sioux City had the highest number of mothers (14%) reporting toothache, while Des Moines and the Quad Cities reported the highest number (19%) whose gums bled a lot (see Table B1).

**Table B1. Reported Dental Problems When Mother Was Pregnant According to Location of Birth**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Toothache</b>	11	10	10	14	11	11	08	09
<b>Loose tooth</b>	01	01	01	02	01	01	01	01
<b>Gums bled a lot</b>	18	19	19	18	18	17	15	17
<b>Painful, red, or swollen gums</b>	08	09	09	09	07	08	07	08
<b>Cavities that need filled</b>	08	08	09	08	06	07	08	07
<b>Tooth that needs pulled</b>	03	03	03	04	03	04	03	02
<b>Root canal/oral surgery</b>	02	02	02	02	02	02	02	01
<b>Cracked/broken tooth</b>	06	05	06	06	06	05	04	04
<b>Did not have any problems</b>	56	57	49	55	56	58	61	57
<b>Other</b>	02	02	02	02	01	02	01	01

Table B2 shows respondents in Dubuque (69%) were more likely to have received dental care during their pregnancy than respondents in other areas of the state. Respondents in Sioux City were the least likely (55%) to report having received dental care.

**Table B2. Reported Dental Care During Pregnancy According to Location of Birth**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>No</b>	44	43	41	45	40	38	31	41
<b>Yes</b>	56	57	59	55	60	62	69	59

Dubuque had the highest rate of women (35%) stating the reason for not getting dental care during pregnancy was because they went to the dentist beforehand and had the lowest rate (1%) of women stating dentists wouldn't accept Medicaid or Title 19. The rate of women saying they do not routinely visit the dentist even when not pregnant was highest (25%) in Cedar Rapids (see Table B3).

**Table B3. Reported Reason For Not Getting Dental Care During Pregnancy According to Location of Birth**

	STATE	DM	QC	SC	WL	CR	DB	IC
<b>Dental check-ups not important during pregnancy</b>	12	12	09	16	07	11	07	13
<b>Didn't have dental insurance/cost too much</b>	11	09	10	09	08	10	11	09
<b>Dentist wouldn't accept Medicaid/Title 19 coverage</b>	06	04	04	03	05	05	01	05
<b>Nervous or afraid</b>	06	05	06	07	06	06	05	05
<b>Didn't have transportation</b>	02	01	02	03	01	01	03	01
<b>Couldn't take time off work/too busy</b>	09	10	08	10	12	11	08	10
<b>Doctor/nurse told me not to go to the dentist during pregnancy</b>	<01	<01	<01	<01	<01	<01	<01	<01
<b>Someone at dentist's office told me to wait until after pregnancy</b>	02	02	01	02	02	02	01	01
<b>Heard/read it wasn't safe to go to the dentist during pregnancy</b>	03	03	02	04	02	02	02	02
<b>Do not routinely go to the dentist, even when not pregnant</b>	23	24	19	15	23	25	23	16
<b>Went to the dentist before pregnancy</b>	25	26	20	18	24	25	35	24
<b>Other</b>	03	03	03	03	03	03	03	04

## Dental Care by Age

Almost two-thirds of mothers in the oldest two age categories (61% and 62% respectively) reported they did not have any dental problems during pregnancy, while only half the mothers age 18-25 reported the same. The most common problems for those younger mothers were toothache and gums bleeding (see Table B4).

**Table B4. Reported Dental Problems When Mother Was Pregnant According to Age**

	STATE	<18 years	18-19 years	20-25 years	26-30 years	31-35 years	>35 years
<b>Toothache</b>	11	13	18	15	11	08	08
<b>Loose tooth</b>	01	01	01	01	01	01	01
<b>Gums bled a lot</b>	18	18	21	22	18	16	15
<b>Painful, red, or swollen gums</b>	08	07	10	10	09	07	07
<b>Cavities that need filled</b>	08	07	11	11	08	07	06
<b>Tooth that needs pulled</b>	03	02	04	05	04	02	03
<b>Root canal/oral surgery</b>	02	01	02	02	02	02	01
<b>Cracked/broken tooth</b>	06	05	05	07	06	05	05
<b>Did not have any problems</b>	56	55	50	50	57	61	62
<b>Other</b>	02	02	03	02	01	02	02

Women in the 31-35 years old category were the most likely (66%) to receive dental care during their pregnancy. The lowest percentage of women (41%) receiving dental care were in the 18-19 year old age group, followed closely (42%) by the 20-25 year old group (see Table B5).

**Table B5. Reported Dental Care During Pregnancy According to Age**

	STATE	<18 years	18-19 years	20-25 years	26-30 years	31-35 years	>35 years
<b>No</b>	44	49	59	58	42	34	37
<b>Yes</b>	56	51	41	42	58	66	63

Mothers under the age of 18 (12%) had more difficulties with transportation to get dental care than any of the other age groups. Only 20% of mothers age 18-25 received dental care prior to their pregnancy (see Table B6).

**Table B6. Reported Reason For Not Getting Dental Care During Pregnancy According to Age**

	STATE	<18 years	18-19 years	20-25 years	26-30 years	31-35 years	>35 years
<b>Dental check-ups not important during pregnancy</b>	12	13	15	14	11	09	10
<b>Didn't have dental insurance/cost too much</b>	10	03	09	11	11	09	10
<b>Dentist wouldn't accept Medicaid/Title 19 coverage</b>	06	05	10	09	05	04	04
<b>Nervous or afraid</b>	05	03	04	06	05	05	07
<b>Didn't have transportation</b>	02	12	04	02	01	01	01
<b>Couldn't take time off work/too busy</b>	09	05	08	09	10	09	08
<b>Doctor/nurse told me not to go to the dentist during pregnancy</b>	<01	01	01	<01	<01	<01	<01
<b>Someone at dentist's office told me to wait until after pregnancy</b>	02	02	02	02	02	02	02
<b>Heard/read it wasn't safe to go to the dentist during pregnancy</b>	03	04	05	03	02	02	01
<b>Do not routinely go to the dentist, even when not pregnant</b>	23	22	24	27	24	19	19
<b>Went to the dentist before pregnancy</b>	25	30	20	20	25	30	31
<b>Other</b>	03	03	02	02	03	04	04

## Dental Care by Education

Respondents with a graduate degree (66%) or a 4-year college degree (64%) had the fewest dental problems when comparing different levels of educational attainment. If the highest level of education was a high school degree or less, the three most common dental problems were toothache, gums bleeding and cavities (see Table B7).

**Table B7. Reported Dental Problems When Mother Was Pregnant According to Education**

	STATE	< High school	High school	Some college	College	Graduate school
<b>Toothache</b>	11	18	17	12	06	05
<b>Loose tooth</b>	01	03	02	01	<01	<01
<b>Gums bled a lot</b>	18	18	20	21	16	15
<b>Painful, red, or swollen gums</b>	08	09	10	09	07	07
<b>Cavities that need filled</b>	08	12	12	09	06	04
<b>Tooth that needs pulled</b>	03	08	07	04	01	01
<b>Root canal/oral surgery</b>	02	02	03	02	01	01
<b>Cracked/broken tooth</b>	06	11	10	06	03	02
<b>Did not have any problems</b>	56	47	48	54	64	66
<b>Other</b>	02	01	02	02	01	02

The higher the level of education completed, the higher the percentage is of women getting dental care during pregnancy. Only 37% of women with less than a high school diploma, while 76% of women with a graduate degree got dental care (see Table B8).

**Table B8. Reported Dental Care During Pregnancy According to Education**

	STATE	< High school	High school	Some college	College	Graduate school
<b>No</b>	44	63	59	49	32	24
<b>Yes</b>	56	37	41	51	68	76

Women with less than a high school diploma (16%) and with a high school diploma (14%) reported more frequently than other education levels that dental check-ups were not important during pregnancy as a reason for not getting dental care. Those same groups were more likely to report another reason as they didn't have health insurance or dental care cost too much (see Table B9).

**Table B9. Reported Reason For Not Getting Dental Care During Pregnancy According to Education**

	STATE	< High school	High school	Some college	College	Graduate school
<b>Dental check-ups not important during pregnancy</b>	12	16	14	10	10	10
<b>Didn't have dental insurance/cost too much</b>	11	12	11	11	09	07
<b>Dentist wouldn't accept Medicaid/Title 19 coverage</b>	06	09	08	07	02	<01
<b>Nervous or afraid</b>	06	06	07	05	05	03
<b>Didn't have transportation</b>	02	06	03	01	<01	<01
<b>Couldn't take time off work/too busy</b>	09	04	08	11	11	09
<b>Doctor/nurse told me not to go to the dentist during pregnancy</b>	<01	<01	<01	<01	<01	<01
<b>Someone at dentist's office told me to wait until after pregnancy</b>	02	03	02	02	01	01
<b>Heard/read it wasn't safe to go to the dentist during pregnancy</b>	03	04	03	02	01	02
<b>Do not routinely go to the dentist, even when not pregnant</b>	24	24	25	24	22	18
<b>Went to the dentist before pregnancy</b>	25	15	17	27	33	32
<b>Other</b>	03	03	02	03	05	04

## Dental Care by Where Mother was Born

Mothers born in Iowa were slightly more likely (57%) to not have a dental problem during their pregnancy than mothers born in the U.S. but outside of Iowa (55%) and mothers born outside the U.S. (55%) (see Table B10).

**Table B10. Reported Dental Problems When Mother Was Pregnant According to Where Mother was Born**

	STATE	In Iowa	In U.S., outside of Iowa	Outside the U.S.
<b>Toothache</b>	11	11	13	10
<b>Loose tooth</b>	01	01	01	02
<b>Gums bled a lot</b>	18	19	19	14
<b>Painful, red, or swollen gums</b>	08	09	09	05
<b>Cavities that need filled</b>	08	08	09	07
<b>Tooth that needs pulled</b>	03	03	04	03
<b>Root canal/oral surgery</b>	02	02	02	02
<b>Cracked/broken tooth</b>	06	06	07	04
<b>Did not have any problems</b>	56	57	55	55
<b>Other</b>	02	02	02	01

The lowest percentage of mothers receiving dental care were those born outside the U.S. (46%). Mothers born in Iowa received dental care during their pregnancy at a higher rate (58%) than the state average (56%) (see Table B11).

**Table B11. Reported Dental Care During Pregnancy According to Where Mother was Born**

	STATE	In Iowa	In U.S., outside of Iowa	Outside the U.S.
<b>No</b>	44	42	45	54
<b>Yes</b>	56	58	55	46

Women born outside the U.S. reported more often that they do not think dental check-ups are important during pregnancy (23%) and that they do not have dental insurance or it costs too much (18%). Not routinely going to the dentist, even when not pregnant was reported by a larger percentage of women born in Iowa (25%) than those born outside the state (see Table B12).

**Table B12. Reported Reason For Not Getting Dental Care During Pregnancy According to Where Mother was Born**

	STATE	In Iowa	In U.S., outside of Iowa	Outside the U.S.
<b>Dental check-ups not important during pregnancy</b>	12	10	10	23
<b>Didn't have dental insurance/cost too much</b>	10	09	11	18
<b>Dentist wouldn't accept Medicaid/Title 19 coverage</b>	06	06	06	03
<b>Nervous or afraid</b>	06	06	06	03
<b>Didn't have transportation</b>	02	02	02	02
<b>Couldn't take time off work/too busy</b>	09	10	10	04
<b>Doctor/nurse told me not to go to the dentist during pregnancy</b>	<01	<01	<01	<01
<b>Someone at dentist's office told me to wait until after pregnancy</b>	02	02	02	01
<b>Heard/read it wasn't safe to go to the dentist during pregnancy</b>	03	02	03	03
<b>Do not routinely go to the dentist, even when not pregnant</b>	24	25	24	15
<b>Went to the dentist before pregnancy</b>	25	26	24	17
<b>Other</b>	03	03	03	02



## Dental Care by Race/Ethnicity

Hispanic respondents (50%) said they did not have any dental problems during pregnancy while (57%) of non-Hispanic respondents said the same. Black respondents (48%) had the lowest percentage reporting not having any dental problems (see Table B13).

**Table B13. Reported Dental Problems When Mother Was Pregnant According to Race/Ethnicity**

	STATE		Hispanic	Non-Hispanic	White	Black	Asian/Pacific Islander	Native American
	Ethn	Race						
<b>Toothache</b>	11	11	12	11	11	17	09	19
<b>Loose tooth</b>	01	01	01	01	01	02	01	03
<b>Gums bled a lot</b>	18	18	21	18	19	16	12	20
<b>Painful, red, or swollen gums</b>	08	08	08	08	09	08	04	10
<b>Cavities that need filled</b>	08	08	08	08	08	09	07	13
<b>Tooth that needs pulled</b>	04	04	03	04	03	07	02	11
<b>Root canal/oral surgery</b>	02	02	01	02	02	02	02	03
<b>Cracked/broken tooth</b>	06	06	04	06	06	08	04	13
<b>Did not have any problems</b>	56	57	50	57	57	48	59	45
<b>Other</b>	02	02	02	02	02	01	02	03

Just under half (47%) of Hispanic mothers said they received dental care during their pregnancy. Native American mothers were the least likely to receive dental care (37%) and white mothers were the mostly (58%) to receive care (see Table B14).

**Table B14. Reported Dental Care During Pregnancy According to Race/Ethnicity**

	STATE		Hispanic	Non-Hispanic	White	Black	Asian/Pacific Islander	Native American
	Ethn	Race						
<b>No</b>	44	44	53	43	42	58	55	63
<b>Yes</b>	56	56	47	57	58	42	45	37

The highest percentage of mothers (28%), who do not believe dental check-ups are important during pregnancy, were Asian/Pacific Islander. Black mothers reported the dentist wouldn't accept Medicaid or Title 19 at a higher rate (8%) than other races. Hispanic mothers (16%) reported not having insurance or that costs were too high to get dental care versus non-Hispanic mothers (10%). Non-Hispanic mothers tend to not routinely visit the dentist (24%) at a higher rate than Hispanic mothers (16%), even when not pregnant (see Table B15).

**Table B15. Reported Reason For Not Getting Dental Care During Pregnancy According to Race/Ethnicity**

	STATE		Hispanic	Non-Hispanic	White	Black	Asian/Pacific Islander	Native American
	Ethn	Race						
<b>Dental check-ups not important during pregnancy</b>	11	11	19	11	10	16	28	16
<b>Didn't have dental insurance/cost too much</b>	11	10	16	10	10	11	12	13
<b>Dentist wouldn't accept Medicaid/Title 19 coverage</b>	06	06	06	06	06	08	01	05
<b>Nervous or afraid</b>	06	06	04	06	06	03	02	05
<b>Didn't have transportation</b>	02	02	02	02	01	03	01	06
<b>Couldn't take time off work/too busy</b>	09	09	08	10	10	07	04	05
<b>Doctor/nurse told me not to go to the dentist during pregnancy</b>	<01	<01	<01	<01	<01	01	<01	02
<b>Someone at dentist's office told me to wait until after pregnancy</b>	02	02	01	02	02	02	01	02
<b>Heard/read it wasn't safe to go to the dentist during pregnancy</b>	03	03	03	03	02	05	03	02
<b>Do not routinely go to the dentist, even when not pregnant</b>	24	24	16	24	24	20	19	21
<b>Went to the dentist before pregnancy</b>	25	25	17	25	26	18	17	18
<b>Other</b>	03	03	02	03	03	02	01	04

## Dental Care by Income

As income increases, the percentage of mothers reporting they didn't have dental problems also increases. Two-thirds of mothers in the highest income category said they didn't have any problems. Mothers with incomes under \$10,000 were more likely to have toothaches (21%), teeth that needed pulled (9%) and cracked or broken teeth (12%) than mothers in the other income categories (see Table B16).

**Table B16. Reported Dental Problems When Mother Was Pregnant According to Income**

	STATE	Under \$10,000	\$10,000-\$19,999	\$20,000-\$29,999	\$30,000-\$39,000	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$69,999	\$70,000 or more
<b>Toothache</b>	11	21	18	16	13	12	10	09	06
<b>Loose tooth</b>	01	03	02	02	01	01	<01	<01	<01
<b>Gums bled a lot</b>	18	21	23	22	20	20	19	19	15
<b>Painful, red, or swollen gums</b>	09	12	11	10	09	10	07	08	07
<b>Cavities that need filled</b>	08	13	13	11	10	10	08	07	05
<b>Tooth that needs pulled</b>	04	09	07	05	04	04	02	02	01
<b>Root canal/oral surgery</b>	02	03	03	02	03	02	01	01	01
<b>Cracked/broken tooth</b>	06	12	11	08	07	07	04	04	02
<b>Did not have any problems</b>	56	45	45	48	52	54	58	57	66
<b>Other</b>	02	02	02	02	02	02	01	02	01

Women with incomes under \$10,000 were almost half as likely (38%) than mothers with incomes of \$70,000 or more (72%) to receive dental care during their pregnancy (see Table B17).

**Table B17. Reported Dental Care During Pregnancy According to Income**

	STATE	Under \$10,000	\$10,000-\$19,999	\$20,000-\$29,999	\$30,000-\$39,000	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$69,999	\$70,000 or more
<b>No</b>	44	62	60	58	53	50	48	43	28
<b>Yes</b>	56	38	40	42	47	50	52	57	72

Mothers with incomes of \$40,000-\$49,999 (28%) and \$50,000-\$59,999 (27%) were the highest groups stating they do not routinely go to the dentist, even when not pregnant. Those with incomes under \$10,000 (15%) had the highest rate for saying dental check-ups are not important during pregnancy (see Table B18).

**Table B18. Reported Reason For Not Getting Dental Care During Pregnancy According to Income**

	STATE	Under \$10,000	\$10,000-\$19,999	\$20,000-\$29,999	\$30,000-\$39,000	\$40,000-\$49,999	\$50,000-\$59,999	\$60,000-\$69,999	\$70,000 or more
<b>Dental check-ups not important during pregnancy</b>	12	15	13	12	11	11	10	12	09
<b>Didn't have dental insurance/cost too much</b>	10	10	13	13	13	13	14	11	05
<b>Dentist wouldn't accept Medicaid/Title 19 coverage</b>	06	11	12	08	07	05	03	02	<01
<b>Nervous or afraid</b>	06	07	07	06	06	06	05	05	04
<b>Didn't have transportation</b>	02	05	03	02	01	01	01	<01	<01
<b>Couldn't take time off work/too busy</b>	10	6	11	10	11	11	11	12	09
<b>Doctor/nurse told me not to go to the dentist during pregnancy</b>	<01	<01	01	<01	<01	<01	<01	<01	<01
<b>Someone at dentist's office told me to wait until after pregnancy</b>	02	02	02	02	02	03	01	02	01
<b>Heard/read it wasn't safe to go to the dentist during pregnancy</b>	03	04	04	03	03	01	02	01	02
<b>Do not routinely go to the dentist, even when not pregnant</b>	24	24	24	23	24	28	27	24	20
<b>Went to the dentist before pregnancy</b>	25	15	17	21	21	24	25	27	37
<b>Other</b>	03	02	03	02	02	03	03	03	04

## C. Trend Analysis of Barriers Data 2008-2017

All percentages in the present section reflect statewide percentages. The number of respondents was greater than 20,000 for all years.

**Respondents by Year**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>N =</b>	21,603	20,752	23,511	23,934	23,674	24,634	24,696	23,212	21,928	20,919

### Demographics

The age distribution of mothers has maintained a generally stable pattern over the past ten years with about two-thirds of mothers between the ages of 20 and 30 years of age. However, there has been a slight decrease in mothers <18 and 20 to 25 years old and an increase in mothers 26 to 35 years old (see Table C1).

**Table C1. Mother's Age Ranges**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>&lt;18 years</b>	03	02	02	02	02	02	01	01	01	01
<b>18 - 19 years</b>	06	06	06	05	05	04	04	04	03	03
<b>20 - 25 years</b>	32	31	30	29	29	29	28	27	26	25
<b>26 - 30 years</b>	33	33	35	35	35	35	35	35	36	36
<b>31 - 35 years</b>	19	20	21	22	22	23	24	25	25	26
<b>&gt; 35 years</b>	07	07	07	07	07	07	08	08	08	09

Educational levels have shown small increases in the past ten years. The proportion of mothers completing college has increased from 23% in 2008 to 27% in 2017. The proportion of mothers completing graduate school also increased from 8% in 2008 to 12% in 2017 (see Table C2).

**Table C2. Education**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Mother</b>										
< High school	11	10	09	09	08	08	08	07	07	07
High school	22	21	20	20	20	20	19	20	20	21
Some college	38	36	37	36	36	36	36	35	34	34
College	23	24	25	26	26	26	27	27	27	27
Graduate school	08	08	09	10	10	10	10	11	11	12

Although not quite as pronounced as in previous years, racial and ethnic backgrounds of respondents have become more diverse over the last ten years. This is consistent with population changes in the state. The proportion of Hispanic mothers has varied from 8% in 2008 down to 6% in 2011 and 2012. There was then a slight increase to 7% in 2013, which has been consistent since. Additionally, the proportion of Black mothers responding has increased slightly from 4% in 2008 to 6% in 2017 (see Table C3).

**Table C3. Race/Ethnicity**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Mother</b>										
Hispanic	08	07	08	06	06	07	07	07	07	07
Non-Hispanic*	92	93	93	94	94	93	93	93	93	93
White	94	93	93	92	91	91	91	91	91	90
Black	04	04	04	05	05	05	05	05	05	06
Asian/Pacific Islander	02	02	03	03	03	03	03	03	03	03
Native American	01	01	01	01	01	01	01	01	01	01

The proportion of mothers reporting an annual family income over \$70,000 has steadily increased over the past ten years from 25% in 2008 to 39% in 2017. The proportion of mothers in the lowest income range (under \$10,000) has decreased slightly over the last several of years. This downward trend resulted in 2017 being the lowest percentage (12%) reported in the past 10 years of annual family income under \$10,000 (see Table C4).

**Table C4. Annual Family Income Last Year**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Under \$10,000</b>	13	14	14	15	16	16	14	14	12	12
<b>\$10,000 - \$19,999</b>	11	10	11	11	11	11	10	10	09	09
<b>\$20,000 - \$29,999</b>	11	11	10	09	10	10	10	09	09	09
<b>\$30,000 - \$39,999</b>	10	10	10	09	08	08	09	09	09	08
<b>\$40,000 - \$49,999</b>	10	10	10	09	08	08	08	07	08	07
<b>\$50,000 - \$59,999</b>	10	10	10	09	09	08	09	08	08	08
<b>\$60,000 - \$69,999</b>	09	09	09	09	08	08	07	08	07	07
<b>Above \$70,000</b>	25	27	28	29	31	32	33	36	38	39

## Prenatal Experiences and Care

The most widely used form of birth control across all ten years was the birth control pill. Condoms were the second most popular method across the period. Those indicating that they used no birth control has increased slightly over time (see Table C5).

**Table C5. Birth Control Used At Conception**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>No birth control used</b>	84	83	84	84	85	84	86	86	87	86
<b>Birth control pills</b>	07	08	07	07	07	07	06	06	06	06
<b>Diaphragm</b>	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>Spermicidal foam/insert</b>	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>Condom</b>	04	05	05	05	04	04	04	04	03	03
<b>NFP/rhythm method</b>	01	01	01	01	01	01	01	01	01	01
<b>Birth control patch</b>	01	<1	01	<1	<1	<1	<1	<1	<1	<1
<b>Birth control injection</b>	01	01	01	01	01	01	01	01	01	01
<b>NuvaRing</b>	01	01	01	01	01	01	01	01	<1	<1
<b>IUD/IUC**</b>	--	<1	01	01	01	01	01	01	01	01
<b>Implant/ Nexplanon**</b>	--	<1	--	<1	<1	<1	<1	<1	<1	<1
<b>Other</b>	01	<1	--	<1	<1	01	01	<1	01	<1

\*\*Analysis on category began in 2009.

Over two-thirds of women not desiring pregnancy reported that they were not using birth control at the time of conception; this number has increased from 67% in 2008 to 70% in 2017 (see Table C6).

**Table C6. Reported Birth Control Type  
Among Those Not Desiring Pregnancy**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>No birth control used</b>	67	64	65	64	66	66	66	68	70	70
<b>Birth control pills</b>	17	19	18	19	18	18	17	17	16	16
<b>Diaphragm</b>	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
<b>Spermicidal foam/insert</b>	01	01	<1	01	<1	<1	<1	<1	<1	<1
<b>Condom</b>	10	11	11	12	11	10	09	09	07	08
<b>NFP/rhythm method</b>	03	03	02	02	02	01	02	02	02	02
<b>Birth control patch</b>	01	01	01	01	01	01	01	01	01	01
<b>Birth control injection</b>	01	01	01	01	02	02	02	02	01	02
<b>NuvaRing</b>	02	02	02	02	02	02	01	01	01	01
<b>IUD/IUC</b>	--	01	01	01	01	01	01	01	01	01
<b>Implant/Nexplanon</b>	--	<1	<1	<1	<1	<1	<1	<1	<1	01
<b>Other</b>	01	01	01	01	01	01	01	01	01	01

Approximately two-thirds of the pregnancies were reported to be desired across the time frame. The percentage of mistimed pregnancies decreased slightly to 25% in 2017 which is the lowest level in a more than a decade (see Table C7).

**Table C7. Desirability of Pregnancy**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Yes, and earlier</b>	31	32	33	32	33	32	34	33	34	34
<b>Yes, at that time</b>	33	33	33	36	35	37	36	38	37	37
<b>No, but in future</b>	32	32	30	29	29	28	27	26	26	25
<b>No, nor in future</b>	04	04	04	03	03	04	04	04	03	04



Lack of birth control use among mothers not desiring a pregnancy has increased slightly over the past ten years (see Table C8).

**Table C8. No Birth Control Use by Desirability of Pregnancy**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Yes, and earlier</b>	98	97	97	96	97	96	97	96	97	96
<b>Yes, at that time</b>	95	95	95	94	95	94	94	93	94	94
<b>No, but in future</b>	68	65	65	65	67	67	67	68	71	70
<b>No, nor in future</b>	59	57	61	57	55	61	59	62	63	62

For the mothers who reported not wanting to be pregnant at that time, the reported reasons for not using birth control has remained relatively consistent since 2012. The most common reason reported for not using birth control among these mothers was not trying to become pregnant but not actively preventing it, with nearly half of these mothers (46.2%) selecting this response (see Table C9 – note that a single decimal place was used in this table owing to the very small percentages).

**Table C9. Reported Reason For Not Using Birth Control When Pregnancy Not Desired**

	2012	2013	2014	2015	2016	2017
<b>Didn't want to ruin mood</b>	1.0	1.0	1.1	1.0	1.0	1.0
<b>Physical discomfort/side effects from BC</b>	8.5	8.6	8.0	8.8	10.3	10.0
<b>Embarrassed buying or going to health care provider</b>	0.4	0.5	0.4	0.5	0.5	0.5
<b>Against religious beliefs</b>	1.5	1.4	1.2	1.4	1.5	1.5
<b>Judgment impaired</b>	2.4	1.8	2.0	2.0	1.6	1.8
<b>Ran out</b>	5.2	5.5	5.7	4.4	5.1	3.8
<b>Did not plan to have intercourse</b>	5.3	5.8	5.9	5.4	5.7	4.7
<b>Father wanted child/refused</b>	1.0	1.1	1.0	0.9	0.8	0.7
<b>Preferred method too expensive</b>	1.8	1.9	1.9	1.4	1.0	1.1
<b>Birth control failed</b>	22.6	22.1	21.3	19.1	18.9	17.9
<b>Not trying to become pregnant, not actively preventing</b>	43.9	43.5	45.6	44.8	47.7	46.2
<b>Thought I (or partner) could not become pregnant</b>	8.3	8.3	8.1	9.0	8.1	8.7
<b>Other</b>	4.5	7.3	7.1	5.4	6.4	5.2

## D. 2017 Questionnaire Frequency Tables

Presented below is a frequency analysis of all variables in the 2017 questionnaire. Data presented in this section are based upon 2017 questionnaires received to date (n = 20,919). All entries reflect unweighted percentages of those mothers answering the item.

### MOTHER/FAMILY CHARACTERISTICS

#### 1. How old are you (baby's mother)?

	Frequency	Valid Percent
< 18 years	191	0.9
18 - 19 years	666	3.2
20 - 25 years	5,229	25.3
26 - 30 years	7,398	35.8
31 - 35 years	5,338	25.8
> 35 years	1,861	9.0

#### 2. Where were you born?

	Frequency	Valid Percent
In Iowa	13,578	66.0
In the US outside of Iowa	5,345	26.0
Outside the US	1,645	8.0

3. What is the highest grade or year of regular school or college that you completed? (select one)?

	Frequency	Valid Percent
Grade school	184	0.9
Junior high	110	0.5
Some high school	1,171	5.6
12 <sup>th</sup> grade or GED	4,302	20.6
Vocational school or A.A. degree	3,031	14.5
Some college	3,959	19.0
Bachelor's degree	5,634	27.0
Master's degree	1,801	8.6
Doctoral/Professional degree	643	3.1

4. Which one of the following best describes your racial background? Are you...

	Frequency	Valid Percent
Black	1,196	5.9
White	18,348	89.8
Asian/Pacific Islander	699	3.4
American Indian or Native Alaskan	199	1.0

5. Which one of the following best describes your ethnic background? Are you...

	Frequency	Valid Percent
Hispanic	1,492	7.2
Non-Hispanic	19,152	92.8

6. What was the general range of your household income before taxes last year – including wages, unemployment, Social Security, and all other sources of income?

	Frequency	Valid Percent
<b>Under \$10,000</b>	<b>2,490</b>	<b>12.4</b>
<b>\$10,000-\$19,999</b>	<b>1,862</b>	<b>9.2</b>
<b>\$20,000-\$29,999</b>	<b>1,869</b>	<b>9.3</b>
<b>\$30,000-\$39,999</b>	<b>1,629</b>	<b>8.1</b>
<b>\$40,000-\$49,999</b>	<b>1,465</b>	<b>7.3</b>
<b>\$50,000-\$59,999</b>	<b>1,521</b>	<b>7.6</b>
<b>\$60,000-\$69,999</b>	<b>1,473</b>	<b>7.3</b>
<b>\$70,000 or over</b>	<b>7,828</b>	<b>38.9</b>

7. During the last year, how many people, including you depended on that income?

	Frequency	Valid Percent
<b>1</b>	<b>2,461</b>	<b>12.0</b>
<b>2</b>	<b>6,037</b>	<b>29.5</b>
<b>3</b>	<b>6,073</b>	<b>29.7</b>
<b>4</b>	<b>3,546</b>	<b>17.3</b>
<b>5</b>	<b>1,504</b>	<b>7.4</b>
<b>6</b>	<b>499</b>	<b>2.4</b>
<b>7</b>	<b>172</b>	<b>0.8</b>
<b>8</b>	<b>88</b>	<b>0.4</b>
<b>9</b>	<b>30</b>	<b>0.1</b>
<b>10 or more</b>	<b>48</b>	<b>0.2</b>

**BEFORE YOU BECAME PREGNANT**

- 8. In the twelve months prior to becoming pregnant, did a health care provider talk to you about any of the things listed below? (mark all that apply)**

	<b>Frequency</b>	<b>Valid Percent</b>
<b>Birth control</b>	<b>10,231</b>	<b>48.9</b>
<b>Timing of pregnancy</b>	<b>5,395</b>	<b>25.8</b>
<b>Spacing of children</b>	<b>2,389</b>	<b>11.4</b>
<b>Did not see health professional</b>	<b>6998</b>	<b>33.5</b>

- 9. In the twelve months prior to becoming pregnant, did a doctor, nurse, dental provider, or other health care professional ever talk to you about any of the following topics as they relate to pregnancy? (mark all that apply)**

	<b>Frequency</b>	<b>Valid Percent</b>
<b>Taking folic acid or multivitamin</b>	<b>9,196</b>	<b>44.0</b>
<b>Smoking</b>	<b>6,124</b>	<b>29.3</b>
<b>Drinking alcohol</b>	<b>5,254</b>	<b>25.1</b>
<b>Your weight</b>	<b>5,007</b>	<b>23.9</b>
<b>Regular exercise</b>	<b>5,717</b>	<b>27.3</b>
<b>How romantic relationships affect your health</b>	<b>2,052</b>	<b>9.8</b>
<b>Oral health</b>	<b>4,719</b>	<b>22.6</b>
<b>Did not see health professional</b>	<b>6,515</b>	<b>31.1</b>

## WHEN YOU BECAME PREGNANT

10. Thinking back to the time you became pregnant were you (or your partner) using any form of birth control when you got pregnant? (mark all that apply)

	Frequency	Valid Percent
No birth control used	18,072	86.4
Birth control pills	1,248	43.8
Patch	54	1.9
Diaphragm	6	0.2
Spermicidal foam/insert	26	0.9
Injection	126	4.4
Nuva Ring	92	3.2
Condom	607	21.3
NFP/rhythm method	195	6.8
IUD/IUC/ParaGard/Mirena	119	4.2
Implant/Nexplanon	66	2.3
Other	68	2.4

11. Thinking back, just before you became pregnant, did you want to become pregnant at that time?

	Frequency	Valid Percent
Yes and earlier	6,985	34.1
Yes, at that time	7,591	37.0
No, but in future	5,208	25.4
No, nor in future	726	3.5

12. If you did not want to get pregnant, why did you not use any form of birth control?  
(mark all that apply)

	Frequency	Valid Percent
Wanted to get pregnant – SKIP TO Q12	14,788	70.7
Didn't want to ruin mood	64	1.0
Physical discomfort/side effects from BC	614	10.0
Embarrassed buying or going to health care provider	30	0.5
Against religious beliefs	89	1.5
Judgment impaired	108	1.8
Ran out	233	3.8
Did not plan to have intercourse	291	4.7
Father wanted child/refused	43	0.7
Preferred method too expensive	69	1.1
Birth control failed	1,100	17.9
Not trying to become pregnant, not actively preventing	2,833	46.2
Thought I (or partner) could not become pregnant	531	8.7
Other	319	5.2

## DENTAL CARE

13. Some women experience problems with their teeth or mouth during pregnancy. Here is a list of problems women may have with their teeth or mouth. Please tell us if you had any of the following problems during this pregnancy. (mark all that apply)

	Frequency	Valid Percent
Toothache	2,348	11.2
Loose tooth	188	0.9
Gums bled a lot	3,863	18.5
Painful, red, or swollen gums	1,769	8.5
Cavities that needed filled	1,758	8.4
Tooth that needed pulled	729	3.5
Root canal or other oral surgery	379	1.8
Cracked or damaged tooth	1,221	5.8
Did not have problems with teeth or mouth	11,794	56.4
Other	339	1.6

**14. During this pregnancy, did you visit a dentist, dental clinic, or get dental care?**

	Frequency	Valid Percent
No	8,927	44.2
Yes - Skip to Q16	11,278	55.8

**15. What were the reasons that you did not go to a dentist, dental clinic, or get dental care?  
(mark all that apply)**

	Frequency	Valid Percent
Not important to get dental check-ups when pregnant	1,116	11.6
Didn't have dental insurance/Costs too much	1,019	10.6
Couldn't find a dentist who accepted Medicaid/Title 19	569	5.9
Nervous or afraid to go to dentist	532	5.5
Didn't have transportation	160	1.7
Couldn't take time off work/Too busy	902	9.4
Doctor or nurse told me not to go to dentist	29	0.3
Someone in dentist office said wait until after pregnancy	176	1.8
Heard/Read wasn't safe to go during pregnancy	249	2.6
Don't routinely go to dentist, even when not pregnant	2,255	23.4
Went to dentist before pregnancy	2,372	24.6
Other	282	2.9

**DURING YOUR PREGNANCY**

**16. At any time during your most recent pregnancy, did you talk with a doctor, nurse, or other health care workers about Zika virus?**

	Frequency	Valid Percent
Yes, without asking	7,434	36.8
Yes, only after asking	1,387	6.9
No	11,368	56.3



**17. During your most recent pregnancy, were you aware of recommendations that pregnant women should avoid travel to areas with Zika virus?**

	Frequency	Valid Percent
Yes	17,091	84.9
No	3,033	15.1

**18. During your most recent pregnancy, were you aware Zika can be sexually transmitted if your partner has it and that pregnant women should use condoms when having sex with a partner who traveled to areas with Zika virus?**

	Frequency	Valid Percent
Yes	12,987	64.4
No	7,188	35.6

**19. Here are a few things that might happen to some women during pregnancy. Please tell us if any of these things happened to you during this pregnancy.**

	Frequency	Valid Percent
Close family member was sick and hospitalized	2,504	12.0
Got separated or divorced from husband or partner	535	2.6
Moved to a new address	4,476	21.4
Was homeless (sleep outside, in car, or homeless shelter)	166	0.8
Husband or partner lost their job	878	4.2
Lost my job	1,107	5.3
Argued with husband or partner more than usual	2,083	10.0
Husband/Partner said didn't want me to be pregnant	305	1.5
Had a lot of bills I couldn't pay	1,436	6.9
Was in a physical fight	110	0.5
Husband or partner or I went to jail	392	1.9
Family member/Friend had problem with drinking/drugs	770	3.7
Family member or close friend died	3,453	16.5

20. During your most recent pregnancy, did your health care provider recommend that you receive progesterone to keep your baby from being born too early? The medication is given in a series of weekly shots called 17P (17 alphahydroxyprogesterone) or Makena or it can be administered in vaginal suppositories.

	Frequency	Valid Percent
<b>Yes shots recommended</b>	<b>723</b>	<b>3.5</b>
<b>Yes, suppositories recommended</b>	<b>347</b>	<b>1.7</b>
<b>No – SKIP TO Q22</b>	<b>18,008</b>	<b>86.1</b>
<b>I don't know/Not sure – SKIP TO Q22</b>	<b>1,070</b>	<b>5.1</b>

21. Did you encounter any of the barriers below in receiving the 17P, Progesterone or Makena shots or suppositories recommended by your health care provider? (mark all that apply)

	Frequency	Valid Percent
<b>Hard to remember to use suppositories or make appointments for shots</b>	<b>22</b>	<b>2.1</b>
<b>No way to get to clinic/doctor's office</b>	<b>8</b>	<b>0.7</b>
<b>Couldn't take time off work/school</b>	<b>8</b>	<b>0.7</b>
<b>No one to take care of children</b>	<b>8</b>	<b>0.7</b>
<b>Medicaid did not cover medicine</b>	<b>59</b>	<b>5.5</b>
<b>Insurance did not cover the medicine</b>	<b>152</b>	<b>14.2</b>
<b>Doctor was not able to get medicine</b>	<b>7</b>	<b>0.7</b>
<b>Don't like or was afraid of the shots/injections</b>	<b>43</b>	<b>4.0</b>
<b>Afraid of possible side effects for me or my baby</b>	<b>40</b>	<b>3.7</b>
<b>Could not afford the medication or co-pay</b>	<b>37</b>	<b>3.5</b>
<b>Too busy to get to appointments</b>	<b>5</b>	<b>0.5</b>
<b>No major barriers</b>	<b>657</b>	<b>61.4</b>

22. At any time during this pregnancy, did a doctor, nurse, or other health care worker diagnose you with depression?

	Frequency	Valid Percent
Yes	557	2.8
No, SKIP TO Q25	17,273	87.1
No, diagnosed before pregnancy	2,005	10.1

23. At any time during this pregnancy, did you take prescription medicine for your depression?

	Frequency	Valid Percent
Yes	1,224	48.3
No	803	31.7
No – Doctor told me to stop taking medication	145	5.7
No – I decided to stop taking medication	360	14.2

24. At any time during this pregnancy, did you get counseling for your depression?

	Frequency	Valid Percent
Yes	751	29.6
No	1,784	70.4

25. Have you smoked any cigarettes in the past 2 years?

	Frequency	Valid Percent
Yes	4,412	21.7
No – SKIP TO Q28	15,880	78.3

**26. In the 3 months before you got pregnant, how many cigarettes did you smoke on an average day? (If none, fill in 00; a pack has 20 cigarettes)**

	Frequency	Valid Percent
Zero Cigarettes per day	617	14.2
1-10 per day	2,364	54.3
11-20 per day	1,199	27.5
More than 20 per day	175	4.0

**27. In the last 3 months of your pregnancy, how many cigarettes did you smoke on an average day? (If none, fill in 00)**

	Frequency	Valid Percent
Zero Cigarettes per day	2,316	53.5
1-10 per day	1,794	41.4
11-20 per day	199	4.6
More than 20 per day	23	0.5

## PRENATAL CARE

The next questions are about the prenatal care that you received during this pregnancy. Prenatal care includes visits to a doctor, nurse, or health care worker before your baby was born to checkups and advice about pregnancy.

28. During any of your prenatal care visits, did a doctor, nurse, or other health care professional provide you with information about any of the things listed below? (mark all that apply)

	Frequency	Valid Percent
How smoking during pregnancy may affect baby	10,941	52.3
Breastfeeding my baby	14,461	69.1
How drinking alcohol during pregnancy may affect baby	10,591	50.6
Using a seatbelt during pregnancy	8,952	42.8
Medicines safe to take during pregnancy	16,944	81.0
How using illegal drugs may affect baby	8,445	40.4
How using prescription medications may affect baby	10,167	48.6
Doing tests on me/baby to screen for birth defects/diseases	15,839	75.7
What to do if feel depressed during pregnancy/after baby born	11,125	53.2
Physical abuse to women by their husbands or partners	6,025	28.8
Signs and symptoms of preterm labor	12,937	61.8
What to do if labor starts early	13,680	65.4
How to monitor changes in baby's activity during pregnancy	15,673	74.9
What to do if baby had not felt as active as expected	15,630	74.7
Oral health or dental care during pregnancy	9,174	43.9
Not provided with any information listed above	986	4.7

29. Were you tested for HIV/AIDS during this pregnancy?

	Frequency	Valid Percent
Yes	8,390	40.1
No	6,537	31.2
No, offered testing, but didn't want to be tested	370	1.8
I don't know	5,035	24.1

**30. Did you get a flu shot during this pregnancy?**

	Frequency	Valid Percent
Yes	13,069	64.5
No – Received a flu shot before became pregnant	1,332	6.6
No – Did not want a flu shot during pregnancy	2,428	12.0
No – Doctor said to wait until after pregnancy	133	0.7
No – Do not ever get flu shots	2,879	14.2
No – Flu shot was not available	407	2.0

**HOSPITAL CARE**

**31. During the first 24 hours following the birth of your baby, did the hospital staff encourage you to breastfeed?**

	Frequency	Valid Percent
Yes	17,037	84.2
No	2,709	13.4
Don't remember	496	2.5

**32. During the course of your pregnancy or time in the hospital, has a doctor, nurse, or other healthcare professional provided you with information or scheduled a time to discuss any of the follow? (mark all that apply)**

	Frequency	Valid Percent
Action steps to take to decrease frustration when baby cries	9,495	45.4
How to lay my baby down to sleep	12,044	57.6
Dangers of shaking an infant	9,055	43.3
Did not receive information and have not scheduled a time	6,323	30.2

**33. In which of the following positions do you plan to lay your baby down to sleep most of the time?**

	Frequency	Valid Percent
On his/her back	18,802	93.1
On his/her side	421	2.1
On his/her stomach	38	0.2
No preference, whatever seems most comfortable	927	4.6

34. Listed below are some location or descriptions of where a new baby might sleep. For each one, please mark yes, no or not sure for whether you think your baby will ever sleep in a similar way for naps or at night.

*In a crib, bassinet, or portable crib*

	Frequency	Valid Percent
Yes	19,951	99.0
No	74	0.4
Not sure	121	0.6

*With pillows nearby or under him/her*

	Frequency	Valid Percent
Yes	301	1.6
No	17,913	95.8
Not sure	494	2.6

*With bumper pads*

	Frequency	Valid Percent
Yes	1,264	6.8
No	16,242	87.3
Not sure	1,106	5.9

*Covered with a loose blanket*

	Frequency	Valid Percent
Yes	1,056	5.7
No	16,660	89.4
Not sure	918	4.9

*With stuffed toys*

	Frequency	Valid Percent
Yes	113	0.6
No	18,189	97.9
Not sure	283	1.5

*In a bed with me or another person*

	Frequency	Valid Percent
Yes	783	4.2
No	16,633	88.8
Not sure	1,317	7.0

35. This question asks about things that may have happened at the hospital where your new baby was born. For each item, mark No if it did not happen or Yes if it did.

	Yes		No	
	Frequency	Valid Percent	Frequency	Valid Percent
I breastfed my baby in the hospital	15,888	81.0	3,722	19.0
Hospital staff gave me information about breastfeeding	16,897	86.9	2,546	13.1
Skin-to-skin contact within the first hour of life	16,278	83.5	3,207	16.5
Breastfed in the first hour after my baby was born	12,469	64.3	6,911	35.7
Hospital staff helped me learn how to breastfeed	13,717	72.3	5,244	27.7
Hospital staff told me to breastfeed whenever my baby wanted	12,984	68.3	6,021	31.7
I am feeding my baby	18,026	94.0	1,144	6.0



**36. Before or after your new baby was born, did you receive information about breastfeeding from any of the following sources? For each one, mark No if you did not receive information from this source or Yes if you did.**

	Yes		No	
	Frequency	Valid Percent	Frequency	Valid Percent
My doctor	11,820	63.4	6,809	36.6
Nurse, midwife, or doula	13,233	72.2	5,090	27.8
Breastfeeding or lactation specialist	10,044	56.0	7,878	44.0
Baby's doctor/healthcare provider	8,080	46.3	9,366	53.7
Breastfeeding support group	1,971	11.5	15,149	88.5
Breastfeeding hotline/toll-free number	767	4.5	16,213	95.5
Family or friends	9,667	54.5	8,075	45.5
Other	343	9.0	3,475	91.0

**37. Were you offered long acting contraception (IUD/implant) when your baby was born?**

	Frequency	Valid Percent
Yes	2,722	14.0
No – SKIP TO Q39	16,670	86.0

**38. Will you, or have you received the long acting contraception (IUD/implant)?**

	Frequency	Valid Percent
Yes	1,115	42.6
No	1,504	57.4

**39. How often do you plan to have your new baby sleep in the same bed, in a reclining chair or on a couch with you or anyone else? Sleeping would include both at night and for naps during the day.**

	Frequency	Valid Percent
Daily	1,928	9.7
Weekly	1,226	6.2
Monthly	234	1.2
A few times/year	866	4.4
Do not plan to have baby sleep with me or anyone else	15,563	78.5

**40. What is the current month?**

	Frequency	Valid Percent
January	1656	7.9
February	1610	7.7
March	1727	8.3
April	1751	8.4
May	1779	8.5
June	1844	8.8
July	1850	8.8
August	1924	9.2
September	1814	8.7
October	1723	8.2
November	1729	8.3
December	1509	7.2