



IOWA'S
BARRIERS TO
PRENATAL CARE
PROJECT

2018 Data Summary

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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 seventy 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 2018 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 2018 questionnaires received to date (n = 20,035). All analyses reflect unweighted percentages of those responding.

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A. Analysis of Selected Variables by City

The present section compares the findings across the following cities for all 2018 data received (n =11,980). Location of hospital where mothers gave birth is the basis for analysis.

DM = Des Moines (n = 6,328)
 QC = Quad Cities (n = 672)
 SC = Sioux City (n = 360)
 WL = Waterloo (n = 1,420)
 CR = Cedar Rapids (n = 1,621)
 DB = Dubuque (n = 682)
 IC = Iowa City (n = 897)

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

Mother/Family Characteristics

Overall, the age of the mothers in the cities closely matched the state data. The Quad Cities and Sioux City had a higher percentage of mothers aged 18 to 19 (4%) than the other cities. Iowa City (15%) had the highest percentage of mothers over 35 (see Table A1).

Table A1. Mother's Age

	STATE	DM	QC	SC	WL	CR	DB	IC
< 18 years	01	01	01	02	01	01	01	<1
18 - 19 years	03	02	04	04	02	03	02	02
20 - 25 years	24	21	22	23	25	20	15	16
26 - 30 years	37	36	39	41	38	37	40	36
31 - 35 years	26	29	25	23	25	28	33	31
> 35 years	09	11	09	07	08	11	09	15

Sioux City had the largest percentage of Hispanic mothers (23%) and Native American mothers (7%). Waterloo (9%) and the Quad Cities (9%) had the highest percentages of Black mothers (see Table A2).

Table A2. Race/Ethnicity

	STATE	DM	QC	SC	WL	CR	DB	IC
Hispanic	08	09	13	23	05	03	05	07
Non-Hispanic	92	91	87	77	95	97	95	93
White	90	88	88	84	88	89	94	89
Black	06	07	09	06	09	08	03	07
Asian/Pacific Islander	03	05	03	02	03	03	03	03
Native American	01	01	01	07	<1	01	<1	01

As shown in Table A3, the largest proportion of mothers born outside of the US was found in Sioux City (15%) while Waterloo (73%) 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
In Iowa	66	65	44	58	73	71	68	65
In U.S., outside of Iowa	26	24	49	27	19	22	27	27
Outside of U.S.	08	11	07	15	08	07	05	08

Sioux City had the lowest level of educational attainment compared to the other cities with 12% 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
< High School	07	06	05	12	08	06	03	05
High School	21	18	19	23	21	17	13	14
Some College	33	29	35	33	33	34	30	30
College	27	32	26	21	29	27	35	31
Graduate School	12	15	15	10	10	15	18	19

Dubuque (53%) respondents reported the highest family incomes at \$70,000 or more. Sioux City (14%), 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
Under \$10,000	11	09	12	14	11	10	08	08
\$10,000 - \$19,999	08	07	08	08	07	07	05	07
\$20,000 - \$29,999	09	08	10	13	10	09	04	08
\$30,000 - \$39,999	08	08	05	10	09	06	06	06
\$40,000 - \$49,999	08	06	06	08	08	05	06	05
\$50,000 - \$59,999	08	07	07	07	08	07	08	09
\$60,000 - \$69,999	07	06	06	09	08	08	10	07
\$70,000 or more	41	50	45	32	39	48	53	49

During Pregnancy

Waterloo (21%) had the highest percentage of women reporting smoking in the last two years while Dubuque (13%) had the lowest percentage (see Table A6).

Table A6. Smoked in Last 2 Years

	STATE	DM	QC	SC	WL	CR	DB	IC
Not smoked in last 2 years	79	83	83	80	79	80	87	84
Smoked in last 2 years	21	17	17	20	21	20	13	16

Across locations, Waterloo had the highest proportion of women (53%) reporting smoking one or more cigarettes per day during the last 3 months of their pregnancy. Mothers in Sioux City reported the highest percent of smoking more than twenty cigarettes per day in the last three months of the pregnancy (see Table A7).

Table A7. Cigarettes Smoked Per Day in Last 3 Months of Pregnancy

	STATE	DM	QC	SC	WL	CR	DB	IC
Zero in last three months of pregnancy	53	56	56	62	47	58	62	63
1-10 per day in last three months of pregnancy	41	37	39	34	44	39	34	30
11-20 per day in last three months of pregnancy	06	06	04	01	08	03	04	07
>20 per day in last three months of pregnancy	01	01	01	03	01	<1	<1	<1

Sioux City (33%) had the highest rate of unintended pregnancy (see Table A8). Of all unintended pregnancies (mistimed and/or unwanted), women in the Quad Cities (73%), Waterloo (73%) and Iowa City (72%) had the highest rates of pregnancies while not using birth control. Dubuque (36%) had the highest rates of unintended pregnancy while using some form of birth control and the lowest rate (64%) of unintended pregnancies when no birth control was used (see Table A8).

Table A8. Pregnancy Intent

	STATE	DM	QC	SC	WL	CR	DB	IC
Intended	72	74	70	67	72	74	80	77
Unintended	28	26	30	33	28	26	20	23

Table A9. Unintended Pregnancy, Birth Control Use

	STATE	DM	QC	SC	WL	CR	DB	IC
Unintended, no birth control used	70	70	73	68	73	68	64	72
Unintended, birth control used	30	30	27	32	27	32	36	28

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 (20%) lived in Des Moines. Women in Waterloo and Iowa City had the highest percentages (12%) who reported having a sick and hospitalized family member. The highest percentage of women who had a family member or friend die were from the Quad Cities (see Table A10).

Table A10. Possible Stressors During Pregnancy

	STATE	DM	QC	SC	WL	CR	DB	IC
A close family member was very sick and had to be hospitalized	11	11	11	09	12	10	11	12
I got separated or divorced from my husband or partner	03	02	03	02	03	02	01	02
I moved to a new address	20	20	19	19	18	18	15	18
I was homeless (for example, had to sleep outside, in a car, or in a homeless shelter)	01	01	01	<1	<1	01	01	01
My husband or partner lost their job	04	04	04	03	03	04	02	03
I lost my job	05	05	05	03	04	05	04	04
I argued with my husband or partner more than usual	08	07	09	09	10	08	07	09
My husband or partner said they didn't want me to be pregnant	01	01	02	02	01	02	01	01
I had a lot of bills I couldn't pay	06	05	06	06	05	05	05	05
I was in a physical fight	<1	<1	<1	01	<1	01	01	<1
My husband or partner or I went to jail	02	01	01	01	02	02	01	01
A family member or close friend has a bad problem with drinking or drugs	03	03	03	01	04	03	02	03
A family member or close friend died	14	13	16	14	14	14	14	14

Most mothers statewide plan to return to work following the birth of their baby with Dubuque having the highest percentage of women (84%) planning to return to work (see Table A11).

Table A11. Plans to Return to Work Following Birth

	STATE	DM	QC	SC	WL	CR	DB	IC
Yes	74	74	76	70	75	78	84	80
No	26	26	24	30	25	22	16	20

Throughout the state, about two-thirds of mothers reported that their worksites have a designated room for women to breastfeed. Des Moines and Dubuque respondents (71%) reported a higher percentage of worksites having a designated breastfeeding room compared to the other cities (see Table A12).

Table A12. Designated Breastfeeding Room in Workplace

	STATE	DM	QC	SC	WL	CR	DB	IC
Yes	66	71	67	64	67	69	71	68
No	34	29	33	36	33	31	29	32
Not sure	17	14	14	22	17	16	13	13

While most worksites had a designated room for women to breastfeed, only 44% of women stated their workplace had a written policy regarding breastfeeding at work (see Table A13).

Table A13. Written Breastfeeding Policy at Workplace

	STATE	DM	QC	SC	WL	CR	DB	IC
Yes	44	50	46	45	43	46	48	51
No	56	50	54	55	57	54	52	49
Not sure	50	49	48	53	51	52	47	48

Prenatal Care

Only 35% of women in Des Moines report being given information about using seatbelts during pregnancy, while 61% in the Quad Cities report being given this information. Women in the Quad Cities (86%) were most likely to report receiving information from a health care professional regarding tests to screen for birth defects and diseases. Des Moines had the lowest percentage of women (25%) reporting receiving information regarding physical abuse to women by their husbands or partners. The highest percentage (67%) of women reporting being provided information about the Zika virus during pregnancy were from Dubuque (see Table A14).

Table A14. 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	59	52	64	59	62	60	64	58
Breastfeeding my baby	67	59	75	67	71	64	75	70
How drinking alcohol during pregnancy may affect baby	55	48	62	56	58	56	61	57
Using a seatbelt during pregnancy	43	35	61	44	47	45	45	42
Medicines safe to take during pregnancy	84	84	87	82	83	82	88	87
How using illegal drugs may affect baby	45	37	55	47	49	46	50	45
How using prescription medications may affect baby	53	48	58	51	57	51	58	57
Doing tests on me/baby to screen for birth defects/diseases	83	84	86	78	84	83	85	85
What to do if I feel depressed during pregnancy/after baby born	59	55	64	51	65	58	59	60
Physical abuse to women by their husbands or partners	31	25	40	31	40	31	33	33
Signs and symptoms of preterm labor	67	63	74	66	68	66	70	69
What to do if labor starts early	69	65	76	65	70	66	72	71
How to monitor changes in baby's activity during pregnancy	78	79	82	75	77	78	81	82
What to do if baby had not felt as active as expected	78	77	83	72	77	79	80	81
Oral health or dental care during pregnancy	44	39	48	47	51	46	50	45
The Zika virus	36	33	45	42	35	32	67	36
Not provided with any information listed above	04	03	04	05	04	03	03	02

Women in the Quad Cities (64%) and Iowa City (64%) reported the highest rates of HIV/AIDS testing during pregnancy, while women in Dubuque (52%) reported the lowest rates of testing (see Table A15).

Table A15. HIV/AIDS Testing

	STATE	DM	QC	SC	WL	CR	DB	IC
Tested	60	56	64	62	62	61	44	64
Not tested	37	41	32	34	36	37	52	34
Offered but not tested	03	03	03	04	02	02	04	02

Table A17 shows that about two-thirds of the women in the state (65%) reported receiving a flu shot during their pregnancy. Women in Cedar Rapids and Iowa City were more likely than women in other areas to get a flu shot (72% and 74% respectively) and women in the Quad Cities and Waterloo were less likely to get a flu shot (59% and 54%). Thirteen percent of women in the state report they never get a flu shot, with the highest number of those in the Quad Cities (16%) and Waterloo (17%) (see Table A16).

Table A16. Flu Shot

	STATE	DM	QC	SC	WL	CR	DB	IC
Received during	65	66	59	70	54	72	66	74
Received before	06	07	05	06	08	05	06	07
Not wanted	13	12	19	12	17	11	14	07
Doctor instructed to wait	01	01	<1	02	01	<1	<1	01
Never get flu shots	13	12	16	09	17	11	13	09
Flu shot not available	02	02	01	02	03	01	01	02

Hospital Care

Mothers statewide are encouraged by hospital staff to breastfeed their baby. Iowa City mothers (88%) are most likely to report being encouraged while mothers in Cedar Rapids (83%) are the lowest (see Table A17).

Table A17. Encouraged to Breastfeed by Hospital Staff

	STATE	DM	QC	SC	WL	CR	DB	IC
Yes	85	86	87	85	84	83	87	88
No	13	12	11	12	14	14	12	10
I don't remember	02	03	03	03	02	03	02	02

Women in Cedar Rapids (78%) were less likely to receive information about breastfeeding or breastfeeding techniques compared to the other cities. Sioux City respondents (64%) had the highest percentage of women reporting receiving information about the dangers of shaking an infant (see Table A18).

Table A18. Information Provided by a Health Care Professional During This Pregnancy

	STATE	DM	QC	SC	WL	CR	DB	IC
Breastfeeding or breastfeeding techniques	82	85	83	84	83	78	88	82
Action steps to decrease frustration when my infant cries	43	33	34	64	40	52	41	35
How to lay my baby down to sleep	56	47	45	66	63	61	55	52
Dangers of shaking an infant	40	31	30	64	37	50	33	30
Did not receive information and have not scheduled time to discuss these topics	08	08	09	08	06	08	06	08

Most mothers plan to have their baby sleep on their back. A higher percentage of women in the Quad Cities and Sioux City (6%) have no preference on their baby's sleep position (see Table A19).

Table A19. Baby's Sleep Position

	STATE	DM	QC	SC	WL	CR	DB	IC
On his/her back	94	94	90	90	95	94	94	95
On his/her side	02	02	03	03	01	02	01	02
On his/her stomach	<1	<1	01	<1	<1	<1	<1	<1
No preference	04	04	06	06	04	04	04	03

Women in the Quad Cities were more likely to have their baby sleep in the same bed as them compared to the other major cities. Waterloo and Cedar Rapids (86%) had the highest percentage of women reporting that they did not plan to have their baby sleep with anyone (see Table A20).

Table A20. Plan to Have Baby Sleep in Same Bed

	STATE	DM	QC	SC	WL	CR	DB	IC
Daily	07	06	11	07	06	06	05	08
Weekly	06	05	10	07	04	05	06	08
Monthly	01	01	01	<1	01	01	02	01
A few times/year	04	03	05	05	03	04	04	05
Do not plan to have my baby sleep with me or anyone else	82	85	74	80	86	86	83	77

B. Analysis of Selected Variables by Black, Hispanic, and Low Income Mothers

The following section looks at the mothers who identify as Black, Hispanic, or with an annual gross household income under twenty thousand dollars. Table B1 breaks down the frequency and percent of mothers across all races and ethnicities with household incomes under twenty thousand dollars a year.

Table B1. Income Under \$20,000 by Race/Ethnicity

	Income Under \$20,000		
	Frequency	Valid Percent	% Within Race/Ethnicity
White	2,827	80	17% of all White Mothers
Black	539	15	53% of all Black Mothers
Asian/Pacific Islander	120	03	19% of all Asian/Pacific Islander Mothers
American Indian or Native Alaskan	65	02	45% of all American Indian or Native Alaskan Mothers
Hispanic	545	15	37% of all Hispanic Mothers

Mother/Family Characteristics

Overall, mothers with an income of under twenty thousand dollars a year (47%) were most likely between twenty and twenty-five years old. This is similar to Black (36%) and Hispanic (35%) mothers who were also more likely to be twenty to twenty-five years old when they gave birth (see Table B2).

Table B2. Mother's Age

	STATE	Income under \$20,000	Black	Hispanic
< 18 years	01	03	03	03
18 - 19 years	03	11	07	07
20 - 25 years	24	47	36	35
26 - 30 years	37	25	32	30
31 - 35 years	26	11	15	16
> 35 years	09	04	08	08

Approximately one-fourth of Black mothers were born outside of the US. Hispanic (39%) and Black (24%) mothers were much more likely to be born outside of the US than other mothers (see Table B3).

Table B3. Mother's Place of Birth

	STATE	Income under \$20,000	Black	Hispanic
In Iowa	66	62	39	26
In the US outside of Iowa	26	27	37	35
Outside of Iowa	08	11	24	39

Black and Hispanic mothers reported much lower percentages of completing their Bachelor's degree than other mothers. Almost half (47%) of the respondents with an annual income under twenty thousand dollars reported their highest level of school completed as twelfth grade or GED (see Table B4).

Table B4. Mother's Education

	STATE	Income under \$20,000	Black	Hispanic
Grade school	01	02	02	05
Junior high	<1	01	01	02
Some high school	06	19	14	16
12th grade or GED	21	47	38	36
Vocational school or A.A. degree	14	07	08	07
Some college	19	22	26	22
Bachelor's degree	27	03	07	08
Master's degree	09	<1	03	03
Doctoral/Professional degree	03	<1	01	01

Overall, Black mothers (23%) and mothers with an annual income under twenty thousand dollars (33%) had a much higher percentage of only one person depending on the household income compared to other mothers. Hispanic mothers and Black mothers reported similar numbers of dependents relying on the household income (see Table B5).

Table B5. Number of People Dependent on Household Income

	STATE	Income under \$20,000	Black	Hispanic
1	12	33	23	18
2	30	27	26	24
3	30	19	22	25
4	17	12	16	18
5	07	05	07	09
6	02	02	03	03
7	01	01	02	01
8	<1	<1	<1	<1
9	<1	<1	<1	<1
10 or more	<1	<1	01	<1

Before Becoming Pregnant

Black (35%) and Hispanic (38%) mothers were less likely to visit a health professional compared to other mothers (33%). Throughout all topics discussed by a healthcare professional before becoming pregnant, Black mothers (30%) were less likely to discuss taking folic acid or multivitamin than Hispanic mothers (42%); however, Hispanic mothers (31%) reported smaller percentages of discussing smoking with their healthcare professional than Black mothers (36%) before becoming pregnant (see Table B6).

Table B6. Topics Discussed with a Healthcare Professional Prior to Becoming Pregnant

	STATE	Income under \$20,000	Black	Hispanic
Taking folic acid or multivitamin	46	27	30	42
Smoking	35	33	36	31
Drinking alcohol	32	25	30	30
Your weight	29	25	31	30
Regular exercise	33	24	30	30
How romantic relationships affect your health	14	12	15	13
Oral health	21	16	17	20
Did not see a health professional	33	45	35	38

When You Became Pregnant

Mothers in households with incomes under twenty thousand dollars a year (81%), Black mothers (82%), and Hispanic mothers (81%) were more likely to report using birth control at the time of conception compare to other mothers (87%). Hispanic mothers (5%) were slightly more likely to use condoms compared to mothers overall (3%) (see Table B7).

Table B7. Birth Control Used at Conception

	STATE	Income under \$20,000	Black	Hispanic
No birth control	87	81	82	81
Pills	06	09	07	07
Patch	<1	01	01	01
Diaphragm	<1	<1	<1	<1
Spermicidal foam/insert	<1	<1	<1	<1
Injection	01	01	01	01
Nuvaring	<1	01	<1	<1
Condom	03	04	03	05
NFP or rhythm method	01	<1	<1	01
IUD/IUC/Paragard/Mirena	01	01	01	01
Implant/Implanon	<1	01	01	01
Some other method	01	01	<1	01

Overall, mothers who are Black (48%), Hispanic (62%), or with an annual income under twenty thousand dollars (43%) were less likely to desire a child at the time of conception as well as before the time of conception than other respondents (72%). A majority of mothers (50%) with an income under twenty thousand a year were mostly likely to want a child in the future, but not at the time of conception. Hispanic (4%) mothers reported smaller percentages of not desiring a pregnancy now, nor in the future, compared to Black (7%) mothers and mothers with an annual income under twenty thousand (6%) (see Table B8).

Table B8. Desirability of Pregnancy

	STATE	Income under \$20,000	Black	Hispanic
Yes, and earlier	35	20	24	28
Yes, at that time	37	23	24	34
No, but in the future	24	50	45	33
No, nor in the future	03	06	07	04

Both Black mothers (36%) and mothers with a lower income (40%) reported not trying to become pregnant, but not actively preventing it as the most common reason for not using birth control when they did not desire a pregnancy. Black mothers (9%) were slightly less likely to experience their birth control failing than other mothers (12%) (see Table B9).

Table B9. Reasons for Not Using Birth Control When Pregnancy Not Desired

	STATE	Income under \$20,000	Black	Hispanic
Didn't want to ruin mood	01	01	02	01
Physical discomfort/side effects from BC	08	11	10	06
Embarrassed buying or going to health care provider	<1	01	<1	01
Against religious beliefs	01	02	02	01
Judgment impaired	01	03	02	<1
Ran out	03	04	04	04
Did not plan to have intercourse	03	07	07	05
Father wanted child/refused	01	01	02	01
Preferred method too expensive	01	01	01	01
Birth control failed	12	14	09	10
Not trying to become pregnant, not actively preventing	33	40	36	29
Thought I (or partner) could not become pregnant	06	09	07	06
Other	04	05	04	03

Hispanic mothers (62%) had higher reports of desiring their pregnancy than Black mothers (48%) and lower income mothers (43%). Lower income and Black mothers (57% and 52% respectively) had higher reports of not desiring their pregnancy than mothers overall (28%) (see Table B10).

B10. Pregnancy Desirability

	STATE	Income under \$20,000	Black	Hispanic
Yes	72	43	48	62
No	28	57	52	38

While Black mothers (80%) and mothers with an annual income under twenty thousand a year (75%) were most likely to not desire a pregnancy, they also had the highest reports of not using birth control when not desiring a pregnancy compared to other mothers (70%) (see Table B11).

Table B11. Birth Control Use When Pregnancy Not Desired

	STATE	Income under \$20,000	Black	Hispanic
Unintended, birth control used	30	25	20	31
Unintended, no birth control used	70	75	80	69

During Pregnancy

Black respondents (7%) were more likely to report having progesterone shots recommended to them by their health care provider than other mothers (4%) (see Table B12).

Table B12. Recommendation of Progesterone by Health Care Provider

	STATE	Income under \$20,000	Black	Hispanic
Yes, shots recommended	04	04	07	05
Yes, suppositories recommended	02	01	02	02
No	94	95	91	94

The following table looks at the percentages of 58 Black mothers, 57 Hispanic mothers, and 125 low income mothers. Hispanic (38%) mothers and lower income (47%) mothers reported experiencing at least one or more barriers to receiving progesterone than Black (54%) mothers. Hispanic (9%) mothers were more likely to experience Medicaid not covering the medicine than other mothers (4%), while lower income mothers (5%) were more likely to be too busy for an appointment than others (1%) (see Table B13). Caution should be exercised in generalizing from small cell sizes.

Table B13. Barriers to Receiving Progesterone

	STATE	Income under \$20,000	Black	Hispanic
Hard to remember to use suppositories/make appointments for shot	03	07	04	04
No way to get to clinic/doctor's office	01	03	06	<1
Couldn't take time off from work/school	01	03	03	02
No one to take care of children	<1	<1	<1	<1
Medicaid did not cover medicine	04	07	03	09
Insurance did not cover medicine	13	05	06	07
Doctor not able to get medicine	01	<1	01	<1
Do not like or afraid of shots/injections	04	07	04	07
Afraid of possible side effects for me or baby	04	03	04	06
Could not afford medication or co-pay	04	07	04	05
Too busy to get appointments	01	05	01	01
No major barriers to receiving medication	57	47	54	38

The most common stressor experience during pregnancy across all mothers was moving to a new address (20%), but this stressor was even more prevalent for lower income (34%), Black (29%), and Hispanic mothers (23%). In general, Black mothers and mothers with an annual income under twenty thousand dollars experienced more stressors during their pregnancy than other mothers (see Table B14).

Table B14. Possible Stressors Experienced During Pregnancy

	STATE	Income under \$20,000	Black	Hispanic
Close family member very sick or hospitalized	11	11	12	09
Separated/divorced husband or partner	03	08	05	04
Moved to a new address	20	34	29	23
Was homeless	01	03	03	01
Husband/partner lost job	04	08	05	05
Lost my job	05	13	11	06
Argued with husband/partner more often than usual	08	14	15	08
Husband/partner said they did not want me to be pregnant	01	03	03	02
Had a lot of bills I couldn't pay	06	14	14	09
Was in a physical fight	01	02	02	<1
Husband/partner went to jail	02	06	05	02
Family member/close friend had bad problem with drinking/drugs	04	07	04	03
Family member/close friend died	14	17	18	10

Compared to other mothers (74%), Hispanic mothers (56%) were less likely to return to work following the birth of their child (see Table B15).

Table B15. Plan to Return to Work Following Birth of Baby

	STATE	Income under \$20,000	Black	Hispanic
Yes	74	67	72	56
No	26	33	28	43

Black mothers (50%) and Hispanic mothers (56%) were less likely to report having a designated breastfeeding location at their workplace than mothers overall (66%); furthermore, mothers of lower incomes (42%) were the least likely to have a breastfeeding location at their workplace (see Table B16).

Table B16. Designated Breastfeeding Location at Workplace

	STATE	Income under \$20,000	Black	Hispanic
Yes	66	42	50	56
No	34	58	50	44

While mothers with lower incomes were the least likely to report having a location at their workplace for breastfeeding there were even lower reports of having a written policy about breastfeeding in the workplace for lower income mothers (19%) compared to other mothers (44%) (see Table B17).

Table B17. Written Policy about Breastfeeding in Workplace

	STATE	Income under \$20,000	Black	Hispanic
Yes	44	19	29	32
No	56	82	71	68

Lower income mothers reported much higher percentages (46%) of smoking in the last two years compared to mothers overall (21%), while Hispanic mothers reported the lowest percentages (19%) of smoking within the last two years (see Table B18).

Table B18. Smoked Cigarettes in the Last 2 Years

	STATE	Income under \$20,000	Black	Hispanic
Yes	21	46	26	14
No	80	54	74	86

Lower income (91%) and Black mothers (93%) were more likely to have smoked cigarettes in the three months before becoming pregnant than Hispanic mothers (81%). Mothers with lower incomes reported slightly higher percentages (5%) of smoking more than twenty cigarettes per day in the three months prior to becoming pregnant than Black or Hispanic mothers (3% and 4% respectively) (see Table B19).

Table B19. Cigarettes Smoked 3 Months Before Becoming Pregnant

	STATE	Income under \$20,000	Black	Hispanic
Zero cigarettes per day	14	09	07	19
1-10 per day	54	53	76	58
11-20 per day	28	33	14	19
More than 20 per day	04	05	03	04

Hispanic mothers had the highest reports (65%) of not smoking during the last three months of their pregnancy compared to other mothers (53%). More than half of lower income and Black mothers stated (52% and 51% respectively) they smoked between one and ten cigarettes during the last the three months of their pregnancy (see Table B20).

Table B20. Cigarettes Smoked During the Last 3 Months of Pregnancy

	STATE	Income under \$20,000	Black	Hispanic
Zero cigarettes per day	53	39	46	65
1-10 per day	41	52	51	34
11-20 per day	06	08	02	01
More than 20 per day	01	01	<1	01

Low-income mothers reported the highest percentage (46%) of consuming alcohol within the past two years compare to other mothers (21%), while Hispanic mothers had the lowest reports of consuming alcohol within the past two years (14%) (see Table B21).

Table B21. Consumed Alcohol in the Past Two Years

	STATE	Income under \$20,000	Black	Hispanic
Yes	21	46	26	14
No	80	54	74	86

Lower income mothers (29%), Black mothers (28%), and Hispanic mothers (32%) were more likely to have zero drinks per week in the three months before they became pregnant compare to other mothers (25%). Lower income mothers (3%) were slightly more likely to drink more than ten drinks per week in the three months before becoming pregnant compared to mothers overall (1%) (see Table B22).

Table B22. Alcohol Consumed 3 Month Before Becoming Pregnant

	STATE	Income under \$20,000	Black	Hispanic
Zero drinks per week	25	29	28	32
1-2 drinks per week	50	44	48	46
3-5 drinks per week	19	18	19	17
6-10 drinks per week	04	06	04	04
More than 10 drinks per week	01	03	01	01

Black mothers (4%) were slightly more likely than other mothers (2%) to drink one to two drinks per week during the last three months of their pregnancy. Mothers with an annual income under twenty thousand dollars a year, Black mothers, and Hispanic mother were less likely (96%) to drink zero alcoholic beverages during the last three months of their pregnancy compared to mothers overall (98%) (see Table B23).

Table B23. Alcohol Consumed During the Last 3 Months of Pregnancy

	STATE	Income under \$20,000	Black	Hispanic
Zero drinks per week	98	96	96	96
1-2 drinks per week	02	03	04	03
3-5 drinks per week	<1	01	01	<1
6-10 drinks per week	<1	<1	<1	<1
More than 10 drinks per week	<1	00	00	00

Prenatal Care

Difficulty paying for the doctor visit (3%) and problems with signing up for Medicaid and/or Title 19 (3%) were reported as the most common barrier to receiving prenatal care for Hispanic mothers. For lower income mothers and Black mothers, the most common barrier to receiving prenatal care was not having a way to get to the doctor’s office or clinic (3%) (see Table B24).

Table B24. Barriers to Receiving Prenatal Care

	STATE	Income under \$20,000	Black	Hispanic
Did not have any problems	87	80	76	79
Couldn’t get appointment when wanted	01	02	02	02
Difficulty paying for visits	01	02	02	03
No way to get to doctor’s office or clinic	01	03	03	02
Couldn’t take time off work	01	01	01	01
Doctor of health plan wouldn’t start care as early as wanted	<1	01	01	01
Problems signing up for Medicaid/Title 19	01	02	02	03
Medicaid coverage was dropped during pregnancy	01	02	02	02
Had no one to take care of my children	01	01	01	01
Had too many other things going on	01	02	02	02
Didn’t want anyone to know I was pregnant	<1	01	01	01
Doctor would not take my insurance	<1	01	01	01
Some other problem	01	01	01	01

Across all mothers, Black mothers were had the highest reports (3%) of being refused prenatal care (see Table B25).

Table B25. Ever Refused Prenatal Care During Pregnancy

	STATE	Income under \$20,000	Black	Hispanic
Yes	01	02	03	01
No	99	98	97	99

The following table looks at the percentages of 24 Black mothers, 16 Hispanic mothers, and 58 low income mothers. The most common reported reason for being refused prenatal care for lower income and Black mothers was having problems with their insurance (28% and 27% respectively), while Hispanic mothers experienced not having insurance (36%) as the most common reason for being refused prenatal care (see Table B26). Caution should be exercised in generalizing from small cell sizes.

Table B26. Reasons for Being Refused Care

	STATE	Income under \$20,000	Black	Hispanic
Didn't have insurance	18	24	21	36
Had problems with insurance	23	28	27	32
Doctor was not accepting new patients	11	09	09	05
Unable to find doctor who accepted Medicaid/Title 19	07	06	06	09
Pregnancy was high risk	15	19	15	09
Too late in pregnancy to change doctors	10	05	07	09
Unsure why I was refused care	13	08	10	09

Mothers who are Hispanic (90%), Black (86%), or have lower incomes (88%) were less likely to receive prenatal care within the first three months of their pregnancy compared to other mothers (95%); Specifically, Hispanic (8%), Black (11%), and lower income (11%) mothers were more likely to begin receive prenatal care within the second trimester of their pregnancy compared to other mothers (4%) (see Table B27).

Table B27. Months into Pregnancy When Received Prenatal Care

	STATE	Income under \$20,000	Black	Hispanic
0	04	03	03	04
1	30	32	27	32
2	47	39	40	38
3	14	14	16	16
4	02	05	06	05
5	01	03	03	02
6	01	02	02	01
7	01	01	01	01
8	01	01	01	01
9	<1	01	01	01

Black mothers (86%) and mothers with an annual income of under twenty thousand dollars (88%) were less likely to receive prenatal care as early as they wanted compared to Hispanic mothers (92%). Compared to mothers overall (95%), Hispanic mothers (92%) were slightly less likely to receive prenatal care as early as they wanted (see Table B28).

Table B28. Receive Prenatal Care as Early as Wanted

	STATE	Income under \$20,000	Black	Hispanic
Yes	95	88	86	92
No	05	12	14	09

Black mothers (9%) were more likely than other mothers (7%) to receive most of their prenatal care from of midwife’s office or a home visit for a midwife. Hispanic (28%) and lower income (24%) mothers had higher reports of going to a public clinic than mothers overall (15%) (see Table B29).

Table B29. Location Received Prenatal Care

	STATE	Income under \$20,000	Black	Hispanic
Private doctor’s office or clinic or OBGYN	78	68	70	64
Midwife’s office or home visit from a midwife	07	06	09	05
Public clinic	15	24	18	28
Other	01	01	01	02
No prenatal care	01	01	02	01

Lower income mothers and Black mothers were more likely (6%) than Hispanic mothers (4%) to report not receiving any information from a healthcare professional during their pregnancy. Medicines that are safe to take during pregnancy was the most common piece of information provided by a healthcare professional overall, but lower income (77%), Black (72%), and Hispanic (77%) mothers had lower reports of receiving this information compared to mothers overall (84%). Black respondents (64%) and respondents with an income under twenty thousand dollars a year (69%) were more likely to report receiving information on how smoking during pregnancy may affect the baby compared to Hispanic respondents (57%) (see Table B30).

Table B30. Information Provided by a Healthcare Professional During Pregnancy

	STATE	Income under \$20,000	Black	Hispanic
How smoking during pregnancy may affect baby	59	69	64	57
Breastfeeding my baby	67	68	66	68
How drinking alcohol during pregnancy may affect my baby	55	56	54	53
Using a seat belt during pregnancy	43	44	44	45
Medicines that are safe to take during pregnancy	84	77	72	77
How illegal drugs may affect my baby	45	51	48	44
How prescription medicines may affect my baby	53	52	44	46
Tests on me or my baby to screen for birth defects/disease	83	74	67	72
What to do if I feel depressed during pregnancy	59	58	52	53
Physical abuse by husbands/partners	31	32	30	31
Signs/ symptoms of preterm labor	67	60	54	58
What to do if labor starts early	69	60	53	58
How to monitor changes in baby activity during pregnancy	78	68	61	67
What to do if baby is not as active as I would have expected	78	69	61	65
Oral health or dental care during pregnancy	44	45	43	44
The Zika virus	36	31	27	34
Did not receive information	04	06	06	04

Lower income (55%), Black (60%), and Hispanic (53%) mothers were more likely to be tested for HIV or AIDS during their pregnancy, with Black mothers reporting the highest percentage (60%) of being tested during their pregnancy compared to mothers overall (45%). Mothers with lower incomes, Hispanic mothers, and Black mothers were slightly less likely (1%) to refuse being tested compared to other mothers (2%) (see Table B31).

Table B31. Tested for HIV/AIDS During Pregnancy

	STATE	Income under \$20,000	Black	Hispanic
Yes	45	55	60	53
No	28	19	19	23
Offered, but refused	02	01	01	01
Don't know	26	26	20	23

Black mothers (53%) were less likely to report receiving a flu shot during their pregnancy compared to other mothers (65%), but Black mothers (19%) were more likely to report they did not get one because they didn't want one during their pregnancy compared to mothers overall (12%) (see Table B32).

Table B32. Given the Flu Shot During Pregnancy

	STATE	Income under \$20,000	Black	Hispanic
Yes	65	57	53	65
No, before pregnancy	06	06	08	06
No, did not want during pregnancy	12	17	19	15
No, told to wait by doctor	01	01	01	01
No, never get shots	13	17	18	10
No, not available	02	02	02	03

Hospital Care

Hispanic mothers (87%) were more likely to report being encouraged to breastfeed by hospital staff than were other mothers (85%), while lower income and Black mothers had lower reports (72%) of being encouraged to breastfeed by hospital staff (see Table B33).

Table B33. Encouraged to Breastfeed by Hospital Staff

	STATE	Income under \$20,000	Black	Hispanic
Yes	85	72	72	87
No	13	23	20	10
Don't remember	02	05	08	04

Overall, lower income mothers and Black mothers were more likely (13%) to report not receiving any information after their birth from the hospital compared to other mothers (8%). In general, Black and Hispanic mothers were less likely to receive information about specific topics from the hospital after their birth than mothers overall (see Table B34).

Table B34. Information Provided After Birth at Hospital

	STATE	Income under \$20,000	Black	Hispanic
Breastfeeding or breastfeeding techniques	83	72	71	81
Actions steps to decrease frustration when my infant cries	43	42	35	37
How to lay my baby down to sleep	56	55	51	51
Dangers of shaking an infant	40	41	34	36
Not provided any information	08	13	13	08

In general, mothers with lower incomes, Black mothers, and Hispanic mothers were less likely to plan on laying their baby on their back when sleeping and more likely to not have a preference on the position of the baby when they were sleeping compared to mothers overall (see Table B35).

Table B35. Position Planning to Lay Baby When Sleeping

	STATE	Income under \$20,000	Black	Hispanic
On his/her back	94	87	84	84
On his/her side	02	04	05	06
On his/her stomach	<1	<1	01	<1
No preference	04	08	10	10

Black and Hispanic mothers were slightly less (97%) likely compared to mothers overall (99%) to have their baby sleep in a crib, bassinet, or portable crib (see Table B36a). Lower income (11%), Black (10%), and Hispanic (12%) mothers were more likely to be unsure if their baby was going to sleep with bumper pads compared to other mothers (6%) (see Table B36c). Black mothers (19%) reported higher percentages of planning to have their baby sleep with a loose blanket covering them than other mothers (6%) (see Table B36d).

Table B36a. Plan to Have Baby Sleep in a Crib, Bassinet, or Portable Crib

	STATE	Income under \$20,000	Black	Hispanic
Yes	99	98	97	97
No	<1	01	02	01
Not sure	01	01	02	02

Table B36b. Plan to Have Baby Sleep with Pillows Nearby or Under Him/Her

	STATE	Income under \$20,000	Black	Hispanic
Yes	02	03	06	04
No	96	91	87	90
Not sure	03	06	07	06

Table B36c. Plan to Have Baby Sleep with Bumper Pads

	STATE	Income under \$20,000	Black	Hispanic
Yes	06	10	11	07
No	88	79	79	80
Not sure	06	11	10	12

Table B36d. Plan to Have Baby Sleep Covered in a Loose Blanket

	STATE	Income under \$20,000	Black	Hispanic
Yes	06	11	19	11
No	90	80	72	81
Not sure	05	09	09	09

Table B36e. Plan to Have Baby Sleep with Stuffed Toys

	STATE	Income under \$20,000	Black	Hispanic
Yes	01	01	02	01
No	98	96	94	97
Not sure	02	03	04	02

Table B36f. Plan to Have Baby Sleep in Bed with Someone

	STATE	Income under \$20,000	Black	Hispanic
Yes	04	05	08	07
No	90	86	85	82
Not sure	06	09	07	11

Black mothers (78%) reported higher percentages of not planning to have the baby share a bed with any one compared to Hispanic mothers (73%); however, Black (78%) and Hispanic (73%) mothers reported lower percentages of not planning to have their baby share a bed with anyone compared to mothers overall (82%). Black (11%) and Hispanic (12%) mothers were more likely to have their baby share a bed with someone every day compared to other mothers (7%) (see Table B37).

Table B37. How Often Will the Baby Share a Bed with Someone

	STATE	Income under \$20,000	Black	Hispanic
Daily	07	08	11	12
Weekly	06	07	06	07
Monthly	01	01	01	02
A few times/year	04	04	04	06
Do not plan to have baby share a bed	82	81	78	73

C. Trend Analysis of Barriers Data 2009-2018

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

Respondents by Year

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
N =	20,752	23,511	23,934	23,674	24,634	24,696	23,212	21,928	20,919	20,035

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 decrease in mothers 18 to 25 years old and a steady increase in mothers 26 years of age and older (see Table C1).

Table C1. Mother's Age Ranges

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<18 years	02	02	02	02	02	01	01	01	01	01
18 - 19 years	06	06	05	05	04	04	04	03	03	03
20 - 25 years	31	30	29	29	29	28	27	26	25	24
26 - 30 years	33	35	35	35	35	35	35	36	36	37
31 - 35 years	20	21	22	22	23	24	25	25	26	26
> 35 years	07	07	07	07	07	08	08	08	09	09

Educational levels have shown small increases in the past ten years. The proportion of mothers completing college has increased from 24% in 2009 to 27% in 2018. The proportion of mothers completing graduate school also increased from 8% in 2009 to 12% in 2018 (see Table C2).

Table C2. Education

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mother										
< High school	10	09	09	08	08	08	07	07	07	07
High school	21	20	20	20	20	19	20	20	21	21
Some college	36	37	36	36	36	36	35	34	34	33
College	24	25	26	26	26	27	27	27	27	27
Graduate school	08	09	10	10	10	10	11	11	12	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 7% in 2009 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 2009 to 6% in 2018 (see Table C3).

Table C3. Race/Ethnicity

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mother										
Hispanic	07	08	06	06	07	07	07	07	07	08
Non-Hispanic*	93	93	94	94	93	93	93	93	93	92
White	93	93	92	91	91	91	91	91	90	90
Black	04	04	05	05	05	05	05	05	06	06
Asian/Pacific Islander	02	03	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 27% in 2009 to 41% in 2018. 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 2018 being the lowest percentage (11%) reported in the past 10 years of annual family income under \$10,000 (see Table C4).

Table C4. Annual Family Income Last Year

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Under \$10,000	14	14	15	16	16	14	14	12	12	11
\$10,000 - \$19,999	10	11	11	11	11	10	10	09	09	08
\$20,000 - \$29,999	11	10	09	10	10	10	09	09	09	09
\$30,000 - \$39,999	10	10	09	08	08	09	09	09	08	08
\$40,000 - \$49,999	10	10	09	08	08	08	07	08	07	08
\$50,000 - \$59,999	10	10	09	09	08	09	08	08	08	08
\$60,000 - \$69,999	09	09	09	08	08	07	08	07	07	07
Above \$70,000	27	28	29	31	32	33	36	38	39	41

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

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
No birth control used	83	84	84	85	84	86	86	87	86	87
Birth control pills	08	07	07	07	07	06	06	06	06	06
Diaphragm	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Spermicidal foam/insert	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Condom	05	05	05	04	04	04	04	03	03	03
NFP/rhythm method	01	01	01	01	01	01	01	01	01	01
Birth control patch	<1	01	<1	<1	<1	<1	<1	<1	<1	<1
Birth control injection	01	01	01	01	01	01	01	01	01	01
NuvaRing	01	01	01	01	01	01	01	<1	<1	<1
IUD/IUC	<1	01	01	01	01	01	01	01	01	01
Implant/ Nexplanon	<1	--	<1	<1	<1	<1	<1	<1	<1	<1
Other	<1	--	<1	<1	01	01	<1	01	<1	01

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 64% in 2009 to 72% in 2018 (see Table C6).

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

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
No birth control used	64	65	64	66	66	66	68	70	70	72
Birth control pills	19	18	19	18	18	17	17	16	16	16
Diaphragm	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Spermicidal foam/insert	01	<1	01	<1	<1	<1	<1	<1	<1	<1
Condom	11	11	12	11	10	09	09	07	08	07
NFP/rhythm method	03	02	02	02	01	02	02	02	02	02
Birth control patch	01	01	01	01	01	01	01	01	01	01
Birth control injection	01	01	01	02	02	02	02	01	02	01
NuvaRing	02	02	02	02	02	01	01	01	01	01
IUD/IUC	01	01	01	01	01	01	01	01	01	01
Implant/Nexplanon	<1	<1	<1	<1	<1	<1	<1	<1	01	01
Other	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 24% in 2018 which is the lowest level in a more than a decade (see Table C7).

Table C7. Desirability of Pregnancy

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Yes, and earlier	32	33	32	33	32	34	33	34	34	35
Yes, at that time	33	33	36	35	37	36	38	37	37	37
No, but in future	32	30	29	29	28	27	26	26	25	24
No, nor in future	04	04	03	03	04	04	04	03	04	03

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

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Yes, and earlier	97	97	96	97	96	97	96	97	96	97
Yes, at that time	95	95	94	95	94	94	93	94	94	94
No, but in future	65	65	65	67	67	67	68	71	70	73
No, nor in future	57	61	57	55	61	59	62	63	62	64

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 2013. 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 (49.9%) 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

	2013	2014	2015	2016	2017	2018
Didn't want to ruin mood	1.0	1.1	1.0	1.0	1.0	1.0
Physical discomfort/side effects from BC	8.6	8.0	8.8	10.3	10.0	11.8
Embarrassed buying or going to health care provider	0.5	0.4	0.5	0.5	0.5	0.5
Against religious beliefs	1.4	1.2	1.4	1.5	1.5	2.0
Judgment impaired	1.8	2.0	2.0	1.6	1.8	1.8
Ran out	5.5	5.7	4.4	5.1	3.8	4.8
Did not plan to have intercourse	5.8	5.9	5.4	5.7	4.7	5.3
Father wanted child/refused	1.1	1.0	0.9	0.8	0.7	0.8
Preferred method too expensive	1.9	1.9	1.4	1.0	1.1	1.0
Birth control failed	22.1	21.3	19.1	18.9	17.9	18.4
Not trying to become pregnant, not actively preventing	43.5	45.6	44.8	47.7	46.2	49.9
Thought I (or partner) could not become pregnant	8.3	8.1	9.0	8.1	8.7	9.3
Other	7.3	7.1	5.4	6.4	5.2	5.4

D. 2018 Questionnaire Frequency Tables

Presented below is a frequency analysis of all variables in the 2018 questionnaire. Data presented in this section are based upon 2018 questionnaires received to date (n = 20,035). 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	195	1.0
18 - 19 years	611	3.1
20 - 25 years	4,840	24.3
26 - 30 years	7,298	36.7
31 - 35 years	5,123	25.8
> 35 years	1,815	9.1

2. Where were you born?

	Frequency	Valid Percent
In Iowa	13,067	66.1
In the US outside of Iowa	5,051	25.6
Outside the US	1,650	8.3

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

	Frequency	Valid Percent
Grade school	195	1.0
Junior high	81	0.4
Some high school	1,135	5.7
12 th grade or GED	4,135	20.7
Vocational school or A.A. degree	2,872	14.4
Some college	3,692	18.5
Bachelor's degree	5,434	27.2
Master's degree	1,808	9.0
Doctoral/Professional degree	629	3.1

4. Which one of the following best describes your racial background? (select only one)
Are you...

	Frequency	Valid Percent
Black	1,089	5.6
White	17,644	90.2
Asian/Pacific Islander	664	3.4
American Indian or Native Alaskan	157	0.8

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

	Frequency	Valid Percent
Hispanic	1,636	8.3
Non-Hispanic	18,155	91.7

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
Under \$10,000	2,159	11.2
\$10,000-\$19,999	1,557	8.1
\$20,000-\$29,999	1,772	9.2
\$30,000-\$39,999	1,536	8.0
\$40,000-\$49,999	1,443	7.5
\$50,000-\$59,999	1,493	7.8
\$60,000-\$69,999	1,382	7.2
\$70,000 or over	7,890	41.0

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

	Frequency	Valid Percent
1	2,242	11.5
2	5,782	29.7
3	5,829	30.0
4	3,353	17.2
5	1,414	7.3
6	463	2.4
7	198	1.0
8	69	0.4
9	42	0.2
10 or more	50	0.3

BEFORE YOU BECAME PREGNANT

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

	Frequency	Valid Percent
Taking folic acid or multivitamin	9,288	46.4
Smoking	7,002	34.9
Drinking alcohol	6,313	31.5
Your weight	5,839	29.1
Regular exercise	6,631	33.1
How romantic relationships affect your health	2,775	13.9
Oral health	4,171	20.8
Did not see health professional	6,674	33.3

WHEN YOU BECAME PREGNANT

9. 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	17,484	87.3
Birth control pills	1,150	5.7
Patch	67	0.3
Diaphragm	11	0.1
Spermicidal foam/insert	38	0.2
Injection	97	0.5
NuvaRing	72	0.4
Condom	507	2.5
NFP/rhythm method	264	1.3
IUD/IUC/ParaGard/Mirena	135	0.7
Implant/Nexplanon	76	0.4
Other	92	0.5

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

	Frequency	Valid Percent
Yes and earlier	6,875	35.1
Yes, at that time	7,269	37.1
No, but in future	4,783	24.4
No, nor in future	675	3.4

11. 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	11,638	58.1
Didn't want to ruin mood	59	0.7
Physical discomfort/side effects from BC	636	7.6
Embarrassed buying or going to health care provider	32	0.4
Against religious beliefs	112	1.3
Judgment impaired	99	1.2
Ran out	259	3.1
Did not plan to have intercourse	283	3.4
Father wanted child/refused	47	0.6
Preferred method too expensive	56	0.7
Birth control failed	991	11.8
Not trying to become pregnant, not actively preventing	2,726	32.5
Thought I (or partner) could not become pregnant	511	6.1
Other	304	3.6

DURING YOUR PREGNANCY

12. 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
Yes shots recommended	715	3.8
Yes, suppositories recommended	330	1.7
No – SKIP TO Q14	16,938	89.3
I don't know/Not sure – SKIP TO Q14	974	5.1

13. 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
Hard to remember to use suppositories or make appointments for shots	27	2.6
No way to get to clinic/doctor's office	6	0.6
Couldn't take time off work/school	12	1.1
No one to take care of children	3	0.3
Medicaid did not cover medicine	39	3.7
Insurance did not cover the medicine	140	13.4
Doctor was not able to get medicine	7	0.7
Don't like or was afraid of the shots/injections	46	4.4
Afraid of possible side effects for me or my baby	46	4.4
Could not afford the medication or co-pay	40	3.8
Too busy to get to appointments	12	1.1
No major barriers	597	57.1

14. 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. (mark all that apply)

	Frequency	Valid Percent
Close family member was sick and hospitalized	2,188	10.9
Got separated or divorced from husband or partner	515	2.6
Moved to a new address	3,959	19.8
Was homeless (sleep outside, in car, or homeless shelter)	132	0.7
Husband or partner lost their job	796	4.0
Lost my job	940	4.7
Argued with husband or partner more than usual	1,665	8.3
Husband/Partner said didn't want me to be pregnant	271	1.4
Had a lot of bills I couldn't pay	1,191	5.9
Was in a physical fight	99	0.5
Husband or partner or I went to jail	342	1.7
Family member/Friend had problem with drinking/drugs	695	3.5
Family member or close friend died	2,807	14.0

15. Do you plan to return to work outside of your home following the birth of this baby?

	Frequency	Valid Percent
Yes	14,082	74.3
No – SKIP TO Q18	4,873	25.7

16. Does your worksite have a designated room/location (not counting bathroom stalls) for mothers to breastfeed or pump/express their breast milk?

	Frequency	Valid Percent
Yes	7,657	55.3
No	3,878	28.0
Don't know	2,323	16.8

17. Does your worksite have a written policy about breastfeeding?

	Frequency	Valid Percent
Yes	3,080	22.3
No	3,855	27.9
Don't know	6,895	49.9

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

	Frequency	Valid Percent
Yes	3,989	20.5
No – SKIP TO Q28	15,427	79.5

19. 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	562	14.3
1-10 per day	2,121	54.1
11-20 per day	1,092	27.9
More than 20 per day	144	3.7

20. 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	2,097	53.3
1-10 per day	1,594	40.5
11-20 per day	221	5.6
More than 20 per day	22	0.6

21. Have you had any alcoholic drinks in the past 2 years? (A drink is 12 oz. of beer, 4 oz. of wine, and 1 ½ oz. of liquor)

	Frequency	Valid Percent
Yes	13,623	71.1
No – SKIP TO Q23	5,550	28.9

22. In the 3 months before you got pregnant, how many alcoholic drinks did you have in an average week? (If none, fill in 00)

	Frequency	Valid Percent
Zero drinks per week	3,456	25.4
1-2 drinks per week	6,812	50.2
3-5 drinks per week	2,618	19.3
6-10 drinks per week	545	4.0
More than 10 drinks per week	152	1.1

23. In the last 3 months of your pregnancy, how many alcoholic drinks did you have in an average week? (If none, fill in 00)

	Frequency	Valid Percent
Zero drinks per week	13,344	98.0
1-2 drinks per week	225	1.7
3-5 drinks per week	30	0.2
6-10 drinks per week	9	0.1
More than 10 drinks per week	2	0.0

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 for checkups and advice about pregnancy.

24. Some women experience problems getting prenatal care, while others do not. Here is a list of problems some women can have getting prenatal care. (Mark all that applied during this pregnancy.)

	Frequency	Valid Percent
Did not have any problems	17,515	87.4
Couldn't get appointment when wanted	203	1.0
Difficulty paying for visits	227	1.1
No way to get to doctor's office or clinic	162	0.8
Couldn't take time off work	137	0.7
Doctor or health plan wouldn't start care as early as wanted	78	0.4
Problems signing up for Medicaid/Title 19	223	1.1
Medicaid coverage was dropped during pregnancy	136	0.7
Had no one to take care of my children	102	0.5
Had too many other things going on	140	0.7
Didn't want anyone to know I was pregnant	51	0.3
Doctor would not take my insurance	49	0.2
Some other problem	107	0.5

25. Were you ever refused prenatal care during this pregnancy?

	Frequency	Valid Percent
Yes	175	0.9
No – SKIP TO Q27	18,918	99.1

26. Why were you refused care? (mark all that apply)

	Frequency	Valid Percent
Didn't have insurance	32	18.3
Had problems with insurance	41	23.4
Doctor was not accepting new patients	19	10.9
Unable to find doctor who accepted Medicaid/Title 19	13	7.4
Pregnancy was high risk	27	15.4
Too late in pregnancy to change doctors	17	9.7
Unsure why I was refused care	22	12.6

27. How many months along were you when you went for your first prenatal care visit?

	Frequency	Valid Percent
0	719	3.8
1	5,671	30.0
2	8,838	46.7
3	2,610	13.8
4	444	2.3
5	214	1.1
6	148	0.8
7	87	0.5
8	113	0.6
9	75	0.4

28. Did you get prenatal care as early in this pregnancy as you wanted?

	Frequency	Valid Percent
Yes	17,928	94.3
No	977	5.1
No prenatal care	109	0.6

29. Where did you go for most of your prenatal care?

	Frequency	Valid Percent
Private doctor's office or clinic	14,683	77.6
Midwife's office or home visit from a midwife	1,286	6.8
Public clinic	2,769	14.6
Other	86	0.5
No prenatal care	108	0.6

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

	Frequency	Valid Percent
How smoking during pregnancy may affect baby	11,774	59.1
Breastfeeding my baby	13,422	67.4
How drinking alcohol during pregnancy may affect baby	10,900	54.7
Using a seatbelt during pregnancy	8,657	43.4
Medicines safe to take during pregnancy	16,790	84.3
How using illegal drugs may affect baby	8,913	44.7
How using prescription medications may affect baby	10,548	52.9
Doing tests on me/baby to screen for birth defects/diseases	16,538	83.0
What to do if feel depressed during pregnancy/after baby born	11,705	58.7
Physical abuse to women by their husbands or partners	6,184	31.0
Signs and symptoms of preterm labor	13,396	67.2
What to do if labor starts early	13,667	68.6
How to monitor changes in baby's activity during pregnancy	15,605	78.3
What to do if baby had not felt as active as expected	15,449	77.5
Oral health or dental care during pregnancy	8,795	44.1
The Zika virus	7,096	35.6
Not provided with any information listed above	726	3.6

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

	Frequency	Valid Percent
Yes	8,727	44.9
No	5,373	27.6
No, offered testing, but didn't want to be tested	387	2.0
I don't know	4,969	25.5

32. Did you get a flu shot during this pregnancy?

	Frequency	Valid Percent
Yes	12,735	65.4
No – Received a flu shot before became pregnant	1,206	6.2
No – Did not want a flu shot during pregnancy	2,519	12.9
No – Doctor said to wait until after pregnancy	130	0.7
No – Do not ever get flu shots	2,528	13.0
No – Flu shot was not available	355	1.8

HOSPITAL CARE

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

	Frequency	Valid Percent
Yes	16,095	85.0
No	2,382	12.6
Don't remember	457	2.4

34. During your hospitalization, has a doctor, nurse, or other healthcare professional discussed any of the following topics? (mark all that apply)

	Frequency	Valid Percent
Breastfeeding or breastfeeding techniques	16,518	82.4
Action steps to take to decrease frustration when baby cries	8,570	42.8
How to lay my baby down to sleep	11,231	56.1
Dangers of shaking an infant	8,078	40.3
Did not receive information and have not scheduled a time	1,530	7.6

35. 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	18,109	93.5
On his/her side	386	2.0
On his/her stomach	42	0.2
No preference, whatever seems most comfortable	825	4.3

36. 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	19,151	99.0
No	86	0.4
Not sure	110	0.6

With pillows nearby or under him/her

	Frequency	Valid Percent
Yes	275	1.5
No	17,201	95.6
Not sure	519	2.9

With bumper pads

	Frequency	Valid Percent
Yes	1,117	6.2
No	15,773	88.0
Not sure	1,027	5.7

Covered with a loose blanket

	Frequency	Valid Percent
Yes	999	5.6
No	16,156	90.0
Not sure	802	4.5

With stuffed toys

	Frequency	Valid Percent
Yes	95	0.5
No	17,519	98.0
Not sure	268	1.5

In a bed with me or another person

	Frequency	Valid Percent
Yes	706	3.9
No	16,160	89.8
Not sure	1,135	6.3

37. 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	1,380	7.2
Weekly	1,180	6.1
Monthly	185	1.0
A few times/year	707	3.7
Do not plan to have baby sleep with me or anyone else	15,754	82.0

38. Please indicate who completed this questionnaire:

	Frequency	Valid Percent
I completed it alone	14,261	74.6
I completed it with a nurse/other hospital staff member	99	0.5
I completed it with my husband/partner	4,493	23.5
I completed it with another family member	237	1.2
I completed it with a friend	36	0.2

39. What is the current month?

	Frequency	Valid Percent
January	1,697	8.5
February	1,541	7.7
March	1,783	8.9
April	1,665	8.3
May	1,834	9.2
June	1,773	8.8
July	1,747	8.7
August	1,881	9.4
September	1,635	8.2
October	1,697	8.5
November	1,492	7.4
December	1,290	6.4