

In The Know: Fertility IQ 2011 Survey

Fertility Knowledge Among US Women Aged 25–35



Dear Healthcare Colleagues:

It is my pleasure to introduce the *In The Know: Fertility IQ 2011 Survey*, the first nationally representative survey about fertility knowledge, attitudes, and beliefs among women aged 25-35 in the U.S.

With this survey, we set out to improve our understanding of the level of fertility knowledge among women before they are faced with having to make fertility decisions, in order to identify opportunities for improving the education that is offered to them. We chose women between 25 and 35 as our study population because they represent the group from which the next generation of women will be seeking infertility treatments, and where reproductive health educational efforts are perhaps timelier.

In this survey we asked participants about their fertility and childbearing expectations, assessed their level of fertility knowledge (including their knowledge of fertility treatment options), and inquired about their preferred sources of fertility information, both present and future. The results highlight the importance of the Obstetrician/Gynecologist for the patients, the role of the Reproductive Endocrinologist from patients' perspective, and highlights opportunities to engage patients and their healthcare providers in a dialogue about reproductive health.

Since its creation, EMD Serono has been a pioneer in reproductive health. This report is a symbol of our ongoing commitment to the science and practice that is such an important part of our daily lives. EMD Serono remains committed to advancing reproductive health, through technological advancements, the delivery of innovative solutions to patients, and through the dissemination of scientific data stemming from our research.

We hope you find the *In The Know: Fertility IQ 2011 Survey* both informative and useful. We sincerely hope that it helps to create more opportunities for improved communications between patients and their healthcare providers, and that it plays a role in getting the right information to the right patients, at the right time.



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In The Know: Fertility IQ 2011 Survey

Fertility Knowledge Among US Women
Aged 25–35: Insights From a New
Generation

Report on the *In The Know: Fertility IQ 2011 Survey*,
Commissioned by EMD Serono

CONTENTS

EXECUTIVE SUMMARY	3
Background and Rationale.....	3
Survey Population.....	3
Main Findings.....	3
Conclusion.....	6
BACKGROUND	7
Infertility in the US and Age as a Major Risk Factor	7
Factors that Negatively Impact Fertility	7
Age as a Major Risk Factor for Infertility	8
The Use of Infertility Services	8
Rationale for Survey.....	9
FINDINGS	10
Survey Participants	10
Participant Inclusion Criteria	10
Participant characteristics.....	10
Fertility and Childbearing Expectations.....	12
Timing of Childbearing.....	12
Fertility Concerns	12
Fertility Knowledge	14
Awareness of Infertility Definition.....	14
Awareness of Fertility and Associated Risk Factors.....	14
Length of Time to Become Pregnant	15
Rate of Infertility	16
Personal Connections	17
Menopause	18
Hormonal Birth Control Use.....	18
Knowledge of Fertility Treatment Options	20
Willingness to Seek Infertility Treatment	20
Familiarity with Infertility Treatment Options	20
Preferred Doctor to Visit for Infertility Treatment	21
IVF Knowledge	22
Trusted Sources of Fertility Advice	23
Current and Preferred Source of Fertility Advice.....	23
Frequency and Length of Visits to Ob/Gyn	23
Conversations with Ob/Gyn.....	24
Women's Confidence in Ob/Gyn.....	25
Opportunities for Education.....	26
APPENDIX I: DETAILED METHODOLOGY	27
Profile of the Survey Population.....	27
Harris Poll Online Internet Panel.....	29
Propensity Weighting	31
REFERENCES.....	33

EXECUTIVE SUMMARY

Background and Rationale

Most married women in the US expect to have children at some point in their lives (Chandra *et al.* 2005). However, many of these women experience fertility problems, complicating plans to have children and causing untold emotional stress. In 2002, it was estimated that 1 in 13 married US women were infertile (Chandra *et al.* 2005).

Although there are many hereditary and environmental factors that are associated with infertility, a major risk factor is age – 1 in 4 childless women over the age of 35 experience fertility problems (Chandra *et al.* 2005). With many women now waiting until their 30s and 40s before having their first child (CDC 2011), there is a need to increase education about the impact of age on fertility.

Issues relating to infertility have previously been explored from a number of perspectives. However, little is known about the levels of fertility knowledge in the current generation of US women aged between 25 and 35. A better understanding of the knowledge gaps among this fertility treatment-naïve population could help to inform future educational strategies to optimize fertility outcomes among women.

Survey Population

The *In The Know: Fertility IQ 2011 Survey* was based on an online self-administered questionnaire completed by 1,010 women aged 25–35, who had not given birth, had used birth control/family planning (or were not actively trying to conceive), were not seeing an infertility specialist, and had in the last 12 months visited an Obstetrician/Gynecologist (Ob/Gyn) and discussed birth control or family planning.

Main Findings

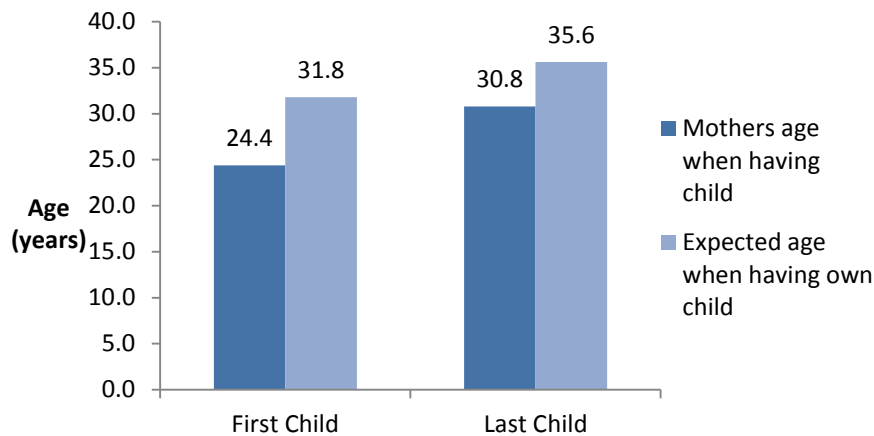
Results from the survey showed that nearly 7 out of 10 women plan to have children at some point in the future and, on average, expect to be about 7 years older than their mother was when having her first child (see Figure below). Despite most women planning to leave their first pregnancy until their early 30s, 3 in 4 women do not have concerns about being able to conceive – the same percentage believe that they will have an average, or easier, time becoming pregnant compared to most women.

In 2002, it was estimated that 1 in 13 married women in the US were infertile

Increasingly, women wait until their 30s and 40 before having children

This survey examines the fertility knowledge of US women aged 25–35

Women are planning to have children later in life than their mothers



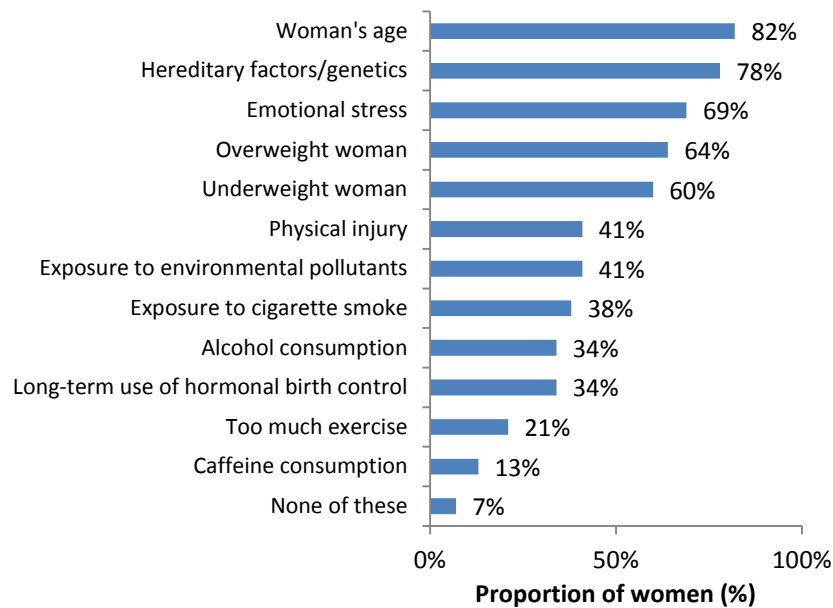
Average age women plan to have children and the corresponding age of their mothers

If they were to have difficulty becoming pregnant, the majority of women (64%) stated that they would be likely to seek fertility treatments; those who might seek fertility treatments would do so from either an Ob/Gyn or an infertility expert. However, many women are not aware of the types of treatment options available to them, with more than 2 in 3 women unfamiliar with hormonal fertility injections, or oral hormonal agents. Approximately half of women are familiar with *in vitro* fertilisation (IVF) and many recognize it as a viable option to aid conception. However, they tend to overestimate its success rate. Many women also failed to recognize that the chance of success with IVF is affected by the age of the egg donor.

Women's general awareness of infertility is high, with the majority recognizing that fertility declines more than a decade prior to menopause. Women also tend to be aware of risk factors that are associated with infertility, in particular recognizing age and hereditary factors/genetics as important. However, as many as 1 in 3 women thought that long-term use of hormonal birth control is a risk factor for infertility.

The majority of women would use infertility services if faced with difficulties becoming pregnant

Women understand that increasing age affects fertility



Risk factors for infertility (multiple response) as predicted by respondents

In general, women seem to believe that it is easier to get pregnant than is the actual case. The majority of women underestimate the length of time that it takes to become pregnant. Furthermore, 9 out of 10 women underestimate the rate of infertility problems among couples in which the woman is aged over 40.

While a large minority (39%) of women are aware that a woman under the age of 35 is considered to be infertile if she fails to conceive after 12 months of trying, 4 out of 5 women were not aware that a woman age 35 or over is considered infertile after only 6 months of trying.

Women's primary and preferred source of fertility information is their Ob/Gyn and most women are confident in the counsel provided to them. However, they only tend to visit their Ob/Gyn once a year, and each visit typically consists of just 12 minutes of conversation, presenting a limited period of time for women to obtain education about fertility issues. Furthermore, the majority of women reported that they never discussed future pregnancy plans (52%), age as an infertility risk factor (78%), or infertility treatment options (89-96%) with their Ob/Gyn.

Women underestimate the length of time to become pregnant, as well as rate of infertility problems

Women spend very little time with their Ob/Gyn, the primary and preferred source of fertility information

Conclusion

Many women still feel confident about postponing childbearing into their 30s, without necessarily understanding the potential impact of age on fertility. In particular, awareness needs to be raised around how long couples in which the woman 35 or older should wait before seeking help when unsuccessfully trying to conceive.

Women's primary and preferred source of fertility information is their Ob/Gyn. As such, more should be done to encourage physicians to assume the role of educator on fertility issues.

The findings from the Fertility IQ survey demonstrate that there are important gaps in the knowledge about infertility and associated treatment options in US women aged 25–35. In particular, there is a need to further educate in areas such as:

- The extent of the impact of age on infertility
- The impact of hormonal contraceptives on infertility
- Actual success rates of assisted reproductive technologies (ARTs) among older women
- The importance of using a 'young' egg during IVF

BACKGROUND

Infertility in the US and Age as a Major Risk Factor

The majority of married women expect to have children at some point in their lives (Chandra *et al.* 2005). However, for many couples, fertility problems can hinder their aspirations of starting, or expanding, their family. In 2002, it was estimated that approximately 1 in 13 married women in the US (aged 15–44) were infertile, the equivalent of 2.1 million women (Chandra *et al.* 2005). Typically, physicians in the US classify couples as infertile if they fail to achieve pregnancy after 12 months or more of regular unprotected sex, or 6 months if the woman is aged 35 or older (CDC 2011, ASRM 2008).

**In 2002, 1 in 13
married women in
the US were
infertile**

Factors that Negatively Impact Fertility

Most cases of female infertility are caused by problems with ovulation, most commonly as a result of a hormonal imbalance that affects the development and release of eggs (e.g. polycystic ovary syndrome, PCOS), or as a result of the premature dysfunction of the ovaries (e.g. primary ovarian insufficiency, POI). Other less common causes of fertility problems include blocked fallopian tubes, physical problems with the uterus, and uterine fibroids (non-cancerous clumps of tissue and muscle on the wall of the uterus) (CDC 2011).

A number of environmental and lifestyle factors can affect a woman's probability of experiencing fertility problems. These factors include (CDC 2011):

- Age
- Smoking
- Excess alcohol use
- Stress
- Poor diet
- Athletic training
- Being overweight or underweight
- Sexually transmitted infections

**Environmental
and lifestyle
factors can affect
women's fertility**

Age as a Major Risk Factor for Infertility

Age is a major risk factor for fertility problems. With increasing age, the ovary's ability to produce normal healthy eggs declines, thereby increasing the risk of chromosomal abnormalities and unsuccessful implantation of the fertilized egg into the uterus (CDC 2011). In 2002, it was estimated that among married US women who don't have children, 1 in 4 of those aged 35–44 were infertile; compared to only 1 in 10 of those aged 15–29 (Chandra *et al.* 2005).

Many women are now waiting until their 30s and 40s before having their first child – the CDC estimate that about 1 in 5 women in the US now have their first child after the age of 35 (CDC 2011). There is therefore an increasing need for education about the impact of age on fertility.

The Use of Infertility Services

Of the 61.6 million women of reproductive age in 2002, approximately 1 in 8 had used some kind of medical help, either to become pregnant or to prevent miscarriage, at some point in their lifetime – in general, older women were more likely to use infertility services than younger women (Chandra *et al.* 2005). The same study reported that over a 12 month period between 2001–2002, 1 in 8 married women made at least one visit to infertility services (Chandra *et al.* 2005). The most common infertility services received were advice or medical help to prevent miscarriage. Other services that were used included fertility testing for women or their partner, receiving ovulation drugs, undergoing artificial insemination, and using ARTs such as IVF (Chandra *et al.* 2005). The actual number of ART cycles performed in US has nearly doubled from 87,636 cycles in 1999 to 148,055 in 2008 (CDC 2008)

Increasing age is associated with a higher risk of infertility

1 in 4 women older than 35 have fertility problems

1 in 8 women have ever used medical help, either to become pregnant or to prevent miscarriage

Rationale for Survey

Issues related to infertility have been explored from a number of perspectives, including both men and women (Tough *et al.* 2007, Adashi *et al.* 2000), student populations (Svanberg *et al.* 2007), people who have been exposed to infertility treatments (Maheshwari *et al.* 2008, Ryan *et al.* 2005), women outside of the US (Tough *et al.* 2007, Svanberg *et al.* 2007, Maheshwari *et al.* 2008), and small segments of the US population (Ryan *et al.* 2005). However, little is known about the treatment-naïve population's level of fertility knowledge, or their awareness of risk factors and treatment options for infertility.

This study focuses on a young segment of the US population, providing insight into the fertility knowledge of women between the ages 25 and 35, who have never been exposed to fertility treatments and who were not currently trying to become pregnant. An assessment of the fertility knowledge among the treatment naïve population should form the basis for future educational strategies to help women achieve optimal reproductive health outcomes.

**This survey
examines the
fertility
knowledge
among infertility
treatment-naïve
US women, aged
25–35**

FINDINGS

Survey Participants

Participant Inclusion Criteria

The *In The Know: Fertility IQ 2011* survey was completed over a two week period in March 2011. The participants were US women between the ages of 25 and 35 who:

- had not given birth to a child
- used birth control/family planning or were not actively trying to conceive were not seeing an infertility specialist
- had in the last 12 months visited an Ob/Gyn and discussed birth control or family planning

In total 1,010 women completed the online survey, which consisted of questions adapted from Bretherick *et al.* 2009 as well as additional questions about knowledge of fertility treatment options and women's relationship with healthcare professionals (see Appendix I for detailed methodology).

Participant characteristics

83% of women participating in the study were using some form of birth control, of whom 3 in 4 were using hormonal birth control pills. The average age of women participating in the survey was 29.1, with a relatively even split between those aged 25–29 years old (56%) and those aged 30–35 years old (44%). The majority of participants were white (66%), college educated (59%), employed full-time (75%), and covered by private health insurance (59%) (Table 1).

Results from the survey were weighted in order to make them more representative of the actual US population of women aged 25–35 defined according to the inclusion criteria, including those with and without internet access. A full profile of the survey participants and weighting methodology are provided in Appendix 1.

The Fertility IQ 2011 Survey included more than 1,000 participants

8 out of 10 women participating in the survey were using some form of birth control

Table 1. Profile of the survey population

	Fertility IQ Qualified Respondents*
Age	
Mean Age	29.1
25-29 years old	56%
30-35 years old	44%
Level of Education	
High School or Less	14%
Some College/Associate Degree	28%
College educated	59%
Marital Status	
Never Married	46%
Living with Partner	12%
Married/Civil Union	35%
Divorced/Separated/Widowed	4%
Ethnicity	
White	66%
Hispanic	17%
African-American	11%
Asian	4%
Primary Medical Insurance	
PPO/Private Health Insurance	59%
HMO/Managed Care Organization	23%
Medicaid/Medicare	4%
None	9%

% who declined to answer not shown

Fertility and Childbearing Expectations

Of the women who participated in the Fertility IQ survey, 7 out of 10 plan to have children at some point in the future, with women who want to have children being, on average, younger than women who have no plans to conceive (28.7 vs 29.9 years).

7 out of 10 women plan to have children in the future

Timing of Childbearing

The survey revealed that even though the majority of women plan to have children, they expect to have their first child approximately 7 years later than when their mother had her first child (24.4 years old – see Figure 1). On average, women expect to have 2.1 children, between the ages of 31.8 and 35.6.

Women expect to be about 7 years older than their mother was when having their first child

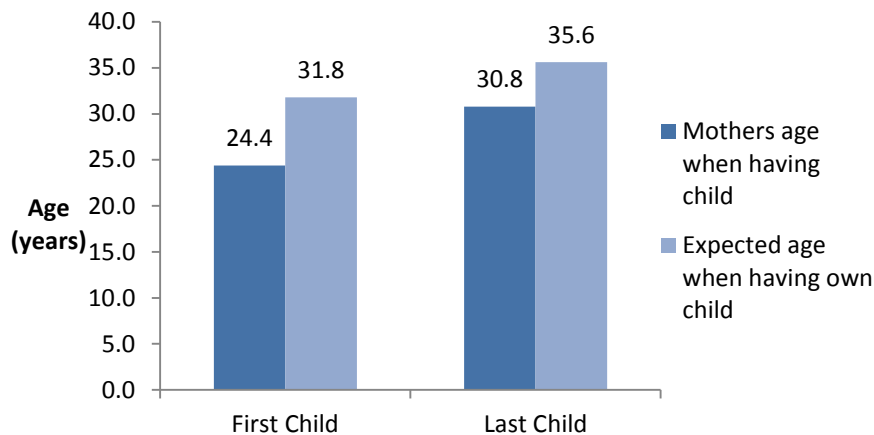
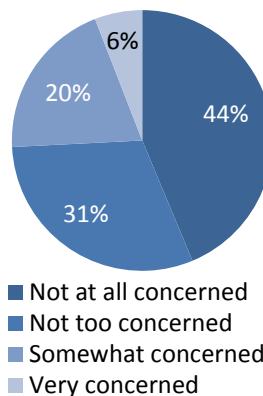


Figure 1: Average age women plan to have children and the corresponding age of their mothers

Fertility Concerns

Concerns about being able to get pregnant were generally low among participants, with 3 out of 4 women (75%) responding that they are not concerned about being able to conceive (Figure 2).

As a group, women who are more concerned about being able to conceive also express a desire to have children in the future, generally consider themselves to be familiar with fertility treatment options, and are likely to know someone who had difficulty getting pregnant after 40.



3 in 4 women do not have concerns about trying to conceive

Figure 2: Concerns about being able to pregnant

(Note: The percentages do not add up to 100% due to rounding)

Nearly 3 out of 4 women (73%) anticipate that they would have an average, or easier than average, time conceiving than most women (Figure 3). Older survey respondents (ages 30–35) have less confidence in their success of conceiving than younger respondents (ages 25–30). About 1 in 3 of the older group feel that they would have a more difficult time becoming pregnant compared to most women, whereas only 1 in 5 younger women have the same belief.

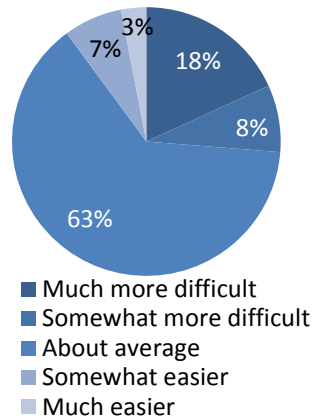


Figure 3: Anticipated difficulty getting pregnant (compared to most women)

(Note: The percentages do not add up to 100% due to rounding)

Nearly 3 out of 4 women anticipate that they would have an average or easier than average time getting pregnant compared to most women

Fertility Knowledge

Awareness of Infertility Definition

Even though many women would seek help if experiencing fertility problems, many are unclear about when they should seek help – particularly if the woman experiencing problems is age 35 or over. Many women (39%) are aware that, under the age of 35, a woman is considered infertile if she fails to conceive after 12 months of trying. However, the majority of women (4 out of 5) are not aware that, at age of 35 or over, a woman is considered infertile after 6 months of trying.

Awareness of Fertility and Associated Risk Factors

Women’s awareness of infertility is generally high, with over 3 in 4 women (78%) recognizing that fertility declines more than a decade prior to menopause. Women also tend to be aware of factors that are associated with infertility – 82% of women recognize women’s age and 78% recognize hereditary factors/genetics as risk factors (Figure 4). The full list of risk identified by women are shown in Figure 4.

Interestingly, despite 86% of women participating in the survey currently using some form of hormonal birth control, over 1 in 3 are concerned that the long-term use of hormonal birth control is a risk factor for infertility (Figure 4).

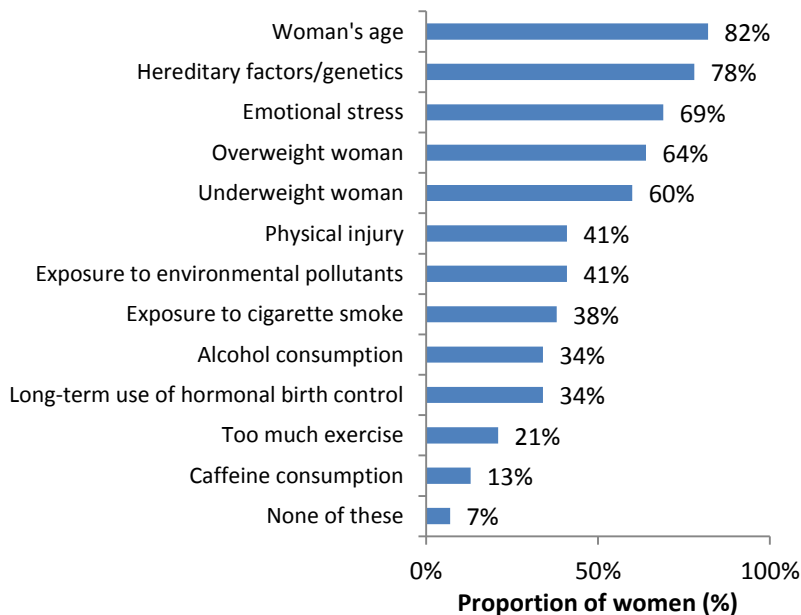


Figure 4: Risk factors for infertility (multiple response) as identified by respondents

The majority of women are unclear about when they should seek help with fertility

Women are highly aware that age is a risk factor for infertility

Over 1 in 3 women indicated that long-term use of hormonal birth control is a risk factor for infertility

Among those women who identified risk factors for infertility, 41% of women cite hereditary factors or genetics as the single strongest risk factor. One third of respondents cite age as the single strongest risk factor (Figure 5).

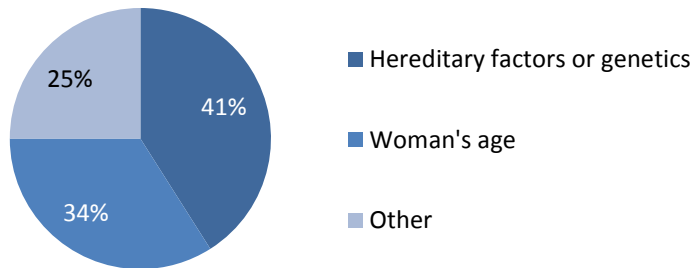


Figure 5: Single strongest risk factor for fertility as understood by respondents

Length of Time to Become Pregnant

Although women generally show a good level of awareness about fertility and associated risk factors, they are less knowledgeable about the average length of time it takes to become pregnant, or the likelihood of achieving a pregnancy at different ages. Women tend to overestimate the likelihood of a woman achieving pregnancy after one month of unprotected sex, and underestimate the length of time to become pregnant if having regular unprotected sex, for all age groups (Table 2).

Many women underestimate the length of time to become pregnant and overestimate the likelihood of achieving pregnancy

Table 2: The likelihood of becoming pregnant after one month of unprotected sex, and length of time to become pregnant if having regular unprotected sex, as understood by respondents

	Correct response	% with correct answer	Most popular response	% with most popular answer
Chance (%) of becoming pregnant after one month of unprotected sex for a:				
20-year old woman	20–29%	(6%)	80–89%	(24%)
30-year old woman	20–29%	(9%)	70–79%	(18%)
40-year old woman	<10%	(10%)	10–19% 20–29% 30–39%	(15% each)
Length of time to become pregnant if having regular unprotected sex				
20-year old woman	5 months	(3%)	<2 months	(38%)
30-year old woman	6 months	(16%)	4 months	(20%)
40-year old woman	7–12 months	(22%)	>12 months	(23%)

Rate of Infertility

Nearly half (47%) of women participating in the survey correctly recognize that 10–29% of all couples are infertile. However, approximately 9 out of 10 women do not realize that more than 7 out of 10 couples in which the woman is over 40 experience fertility problems.

In general, respondents had good awareness of the causes of infertility problems by gender (Figure 6). Nearly 1 in 3 infertility problems are as a result of male factors, and the same proportion are as a result of female factors. The remainder of fertility problems are attributed to both the male and the female, or have unexplained causes.

Half of women correctly recognize that 10–29% of all couples are infertile

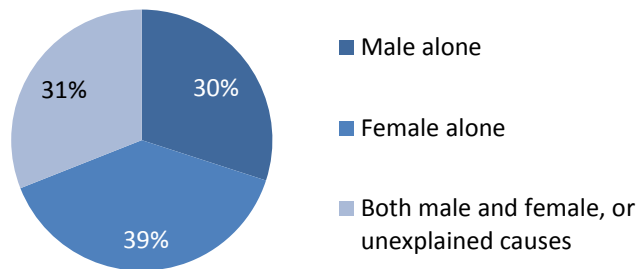


Figure 6: Average proportion of infertility problems attributed by respondents to either male or female factors

Women are aware that fertility problems are equally attributed to male, female, and combined factors

Personal Connections

Approximately half of women (48%) have a friend or relative who has experienced difficulties becoming pregnant, and approximately 1 in 5 women have a friend or relative who has used hormonal infertility injections (23%) or IVF (19%). Fewer women (16%) are aware of someone who has used oral hormonal agents (Table 3).

Half of women have a friend or relative who has had difficulty getting pregnant

Table 3: Proportion of women who know a friend or relative who has used fertility treatment options

	Proportion of women who know a friend or relative who has used...
Hormonal fertility injections	23%
IVF	19%
Oral hormonal agents	16%

Women who know someone who had a child after the age of 40 are more likely to believe that women are at peak fertility between the ages of 30–34

Just over 1 in 5 women (22%) know someone who has had a child after the age of 40. Compared to the average survey respondent, these women spend more time with their Ob/Gyn in a routine office visit and are more concerned with trying to get pregnant. However, the same respondents are more likely to incorrectly believe that women are at peak fertility between the ages of 30–34, whereas peak fertility is, in fact, between 20–24 years of age (Tyden *et al.* 2006).

Menopause

Over 1 in 3 women (37%) report that their mother was 50–59 years old when she reached menopause. Consequently, nearly half of respondents (46%) correctly identified the average age at which women reach menopause to be 50–54 (Figure 7).

Nearly half of women correctly identify the average age at which women reach menopause

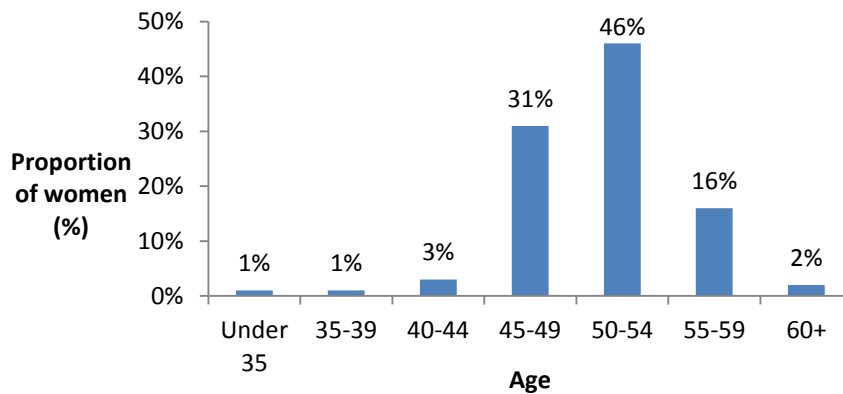


Figure 7: Response to the question ‘As far as you know, at what age does the average woman experience menopause?’

Hormonal Birth Control Use

86% of women in the study use some form of hormonal birth control or family planning; of whom, 75% use birth control pills (Figure 8).

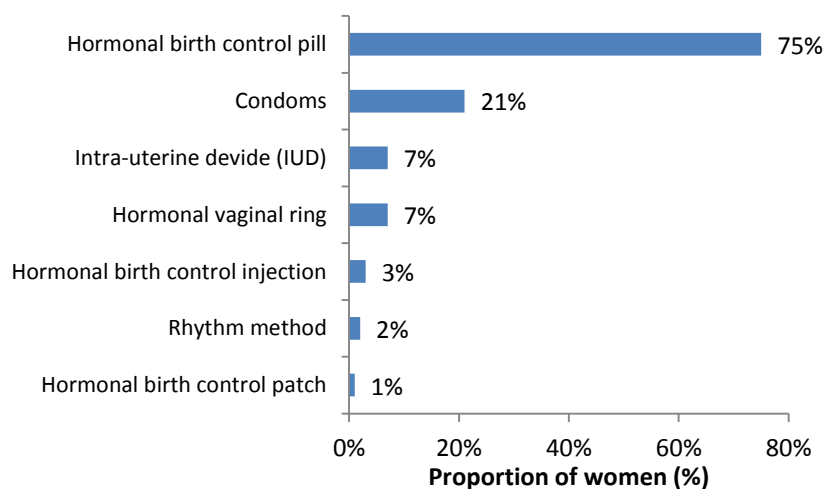


Figure 8: Type of birth control used (multiple response)

Regardless of whether or not they are taking the hormonal birth control pill, women have similar views about its impact on fertility. Nearly half of women (44%) believe that women who have used hormonal birth control for a long time may take longer to conceive. Similarly, approximately 1 in 3 participants (34%) believe that long-term use of hormonal birth control is a risk factor for infertility. These findings highlight a need for education about the use of hormonal birth control and associated risks.

Nearly half of women believe that long-term hormonal birth control use is a risk factor for infertility

Knowledge of Fertility Treatment Options

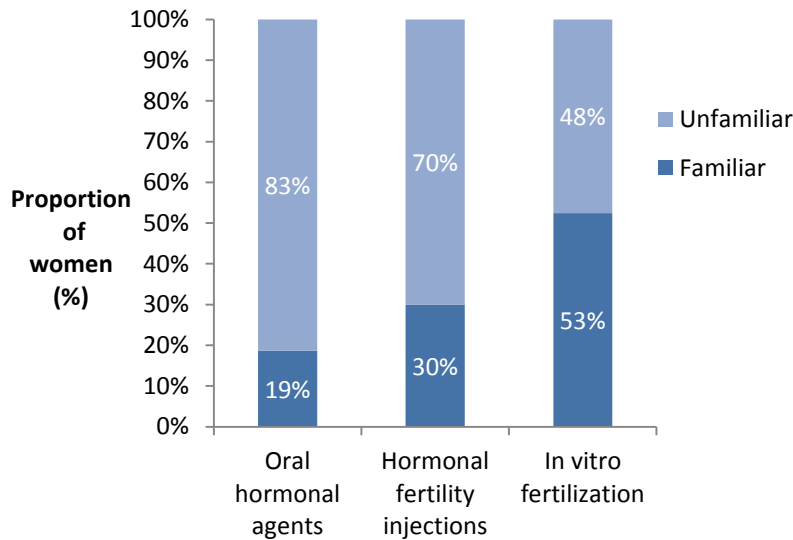
Willingness to Seek Infertility Treatment

If faced with difficulty becoming pregnant, 4 out of 5 women (85%) would consider seeking infertility treatment. Unsurprisingly, women who are likely to seek infertility treatment are more familiar with infertility treatment options (IVF, oral hormonal agents, hormonal fertility injections). Women more likely to seek infertility treatment also have a higher household income, and are younger than those women who are not likely to seek treatment.

4 out of 5 of women would consider infertility treatment if they were faced with fertility problems

Familiarity with Infertility Treatment Options

Despite a willingness to seek infertility treatment if required, many women are unaware of the treatment options available to them. While over half (53%) of women report being familiar¹ with IVF, fewer than 1 in 3 women are familiar with hormonal fertility injections (30%), or oral hormonal agents (19%)(Figure 9).



Less than 1 in 3 women are familiar with hormonal fertility injections or oral hormonal agents

Figure 9: Familiarity with infertility treatment options²

(Note: Not all percentages add up to 100% due to omission of some response options, decline to answer and/or rounding)

¹Women described as 'familiar' are defined as those who responded 'very familiar' or 'somewhat familiar' to the

²Women described as 'familiar' are defined as those who responded 'very familiar' or 'somewhat familiar' to the question: *The following are a few ways that women can receive help to overcome their difficulties in becoming pregnant. How would you describe your familiarity with each of these?* Women that answered 'Not too familiar', or 'Not at all familiar' were classed as 'unfamiliar'.

Women’s level of familiarity with treatment options appears to be linked to whether or not they have plans to conceive; women who want to have children in the future show a greater familiarity with hormonal injections and IVF than do women who do not have plans to conceive (Table 4).

Table 4: Familiarity with infertility treatment options amongst women who do/do not want to have children in the future

	Want to have children	Do not want to have children
Familiar with oral hormonal agents	19%	16%
Familiar with hormonal fertility injections	33%	22%
Familiar with IVF	60%	41%

(Note: not all percentages add up to 100% due to omission of some response options, decline to answer and/or rounding)

Women who plan to have children are more familiar with infertility treatment options than those who don’t

Preferred Doctor to Visit for Infertility Treatment

The vast majority of the women who would be at all likely to seek infertility treatment would consult a specialist³ for that treatment. Only 3% of such women would consult their family doctor or a general practitioner. The rest would either consult an infertility expert (reproductive endocrinologist, 51%) or an Ob/Gyn s (46%) (Figure 10).

Women would consult an Ob/Gyn or infertility expert for infertility treatment

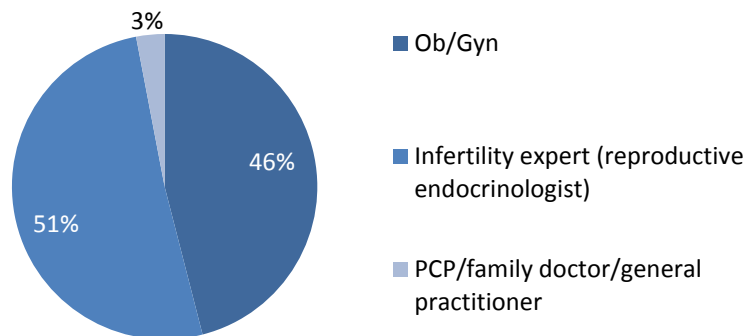


Figure 10: Preferred doctor to visit for infertility treatment

³ Specialist=Ob/Gyn or infertility expert (reproductive endocrinologist).

IVF Knowledge⁴

Although many women recognize that IVF provides a viable treatment option for infertile women, even those familiar with IVF tend to overestimate its effectiveness. The chance of pregnancy with the help of IVF is 20–29% (Tyden *et al.* 2006, Svanberg, *et al.* 2006). However, the most popular response from women familiar with IVF was that the chances are 50–59% (21%) .

Approximately half of women familiar with IVF (54%) do not realize that the chance successful conception with IVF is affected by the age of the egg donor. Most of these women (54%) think that the chance of a successful pregnancy via IVF does not depend on the origin of the egg – fewer than 1 in 5 recognize that for a woman undergoing IVF over the age of 35, success is most likely using eggs donated from a 20 year old.

Respondents familiar with IVF estimated that the number of IVF babies born in the US is 1 in 1,000 (33%), or 1 in 10,000 babies (33%). Only 19% correctly identified that 1 in 100 babies born in the US are conceived via IVF (CDC 2011b). A sizable proportion of women familiar with IVF (39%) correctly identified that a single cycle of IVF costs \$5,001–\$15,000. Over 2 in 5 (43%) women familiar with IVF correctly identified that once pregnant, the odds of an IVF conceived baby and a naturally conceived baby reaching term, are equal.

Many women overestimate the likelihood that IVF will actually help them get pregnant

Even among women familiar with IVF, a majority are unaware of the importance of using a ‘young’ egg during IVF

⁴ Only women that are familiar with IVF (see Figure 4) were questioned on IVF knowledge.

Trusted Sources of Fertility Advice

Current and Preferred Source of Fertility Advice

Approximately half (49%) of the women that participated in the survey receive information about fertility from their Ob/Gyn, making them the women's primary source of fertility information. Other sources for fertility information included friends and family, online searches, PCP/family doctor/GP, magazine articles and others (Figure 11).

Ob/Gyns are the primary and preferred source of fertility information

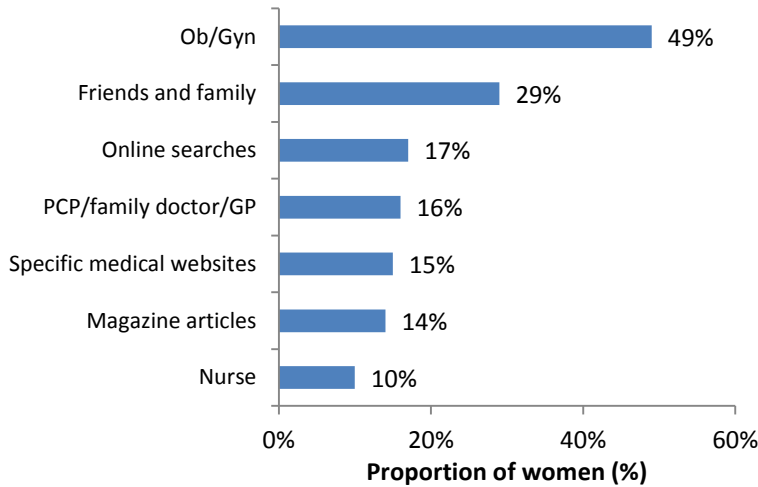


Figure 11: Current source of fertility information

When asked to rank their preferred sources of fertility information for the future, nearly two-thirds of women responded that Ob/Gyns would be their first-, second-, or third-most preferred channel for information. About one-third ranked each of primary care physicians and fertility specialists, respectively, as their first, second, or third choice.

Frequency and Length of Visits to Ob/Gyn

Most women (77%) reported visiting their Ob/Gyn once a year (Figure 12).

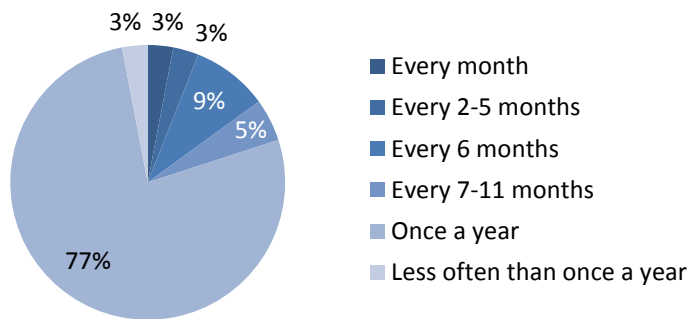


Figure 12: Frequency of Ob/Gyn visits

Each of these visits lasts an average of 23.2 minutes, with a little over half of this time (12.2 minutes on average) spent in conversation with their Ob/Gyn. This presents a very limited period of time for women to obtain education about fertility issues.

Conversations with Ob/Gyn

The most frequent topic of conversation between patients and their Ob/Gyn is about contraception/birth control/family planning – nearly 2 out of 3 (64%) women discuss this topic every time they visit their Ob/Gyn.

Majorities of women that took part in the survey stated that they never discuss future pregnancy plans (52%), age as a factor in becoming pregnant (78%), or the availability of treatment options with their Ob/Gyn (93%-96%) (Table 5). Among women who have had each of the more general types of conversation, the majority report that, in general, they are the initiators of these conversations with their Ob/Gyn. In the less frequent instances in which specific infertility treatment options are discussed, physicians tend to initiate the conversation.

Table 5: Frequency of conversation topics with Ob/Gyn

	Discuss every visit	Occasionally discuss	Never discuss
Contraception/birth control/family planning	64%	19%	17%
Plans to get pregnant	22%	26%	52%
Likelihood of getting pregnant	15%	26%	57%
Time it takes to get pregnant	7%	14%	78%
Age as a factor in getting pregnant	6%	16%	78%
Availability of oral hormonal agents	4%	7%	89%
Medical tests to measure infertility	2%	9%	90%
Availability of intra-uterine insemination (IUI)	2%	5%	93%
Availability of hormonal fertility injections	1%	4%	95%
Availability of IVF	1%	3%	96%

Women typically spend only 12.2 minutes per year in conversation with their Ob/Gyn

The majority of women never discuss future pregnancy plans, infertility risk factors, or treatment options with their Ob/Gyn

Women's Confidence in Ob/Gyn

Nearly all women that took part in the survey (94%) are confident in the fertility counsel provided to them by their Ob/Gyn (Figure 13). Women who answered that they are 'very confident' in their Ob/Gyn's fertility counsel tend to spend more time with their Ob/Gyn during a routine office visit and are generally older than women who are less confident.

Women are confident in the counsel offered by their Ob/Gyn

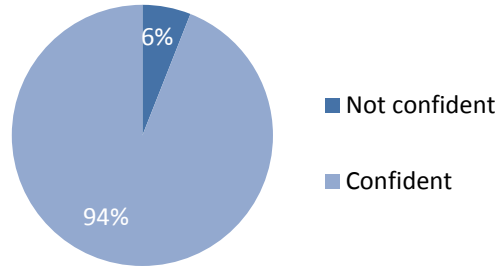


Figure 13: Confidence in Ob/Gyn's fertility counsel

Opportunities for Education

Findings from the Fertility IQ survey indicate that there are important gaps in knowledge about fertility in US women aged 25–35. In particular, there is a need to further educate in areas such as:

- The extent of the impact of age on infertility
- The impact of hormonal contraceptives on infertility
- Actual success rates of assisted reproductive technologies (ARTs) among older women
- The importance of using a 'young' egg during IVF

While women have a general sense of the impact of age on fertility, they do not understand the nuances about age-related changes. Many women still feel confident about postponing childbearing into their 30s, without truly understanding the potential impact that this may have on fertility. In particular, awareness needs to be raised around how long couples in which the woman is older than 35 should wait before seeking help when unsuccessfully trying to conceive.

It is apparent that women's primary and preferred source of fertility information is their Ob/Gyn. They have confidence in their physician's counsel and will trust information that they receive from them. As such, more should be done to encourage these physicians to assume the role of educator on fertility issues. Public health initiatives to help achieve this objective might include arming Ob/Gyns with fertility education resources, such as pamphlets, links to websites, discussion guides, or self-assessments, that they can pass along to patients even if their time together is limited. In addition, more should be done to encourage discussions between patients and Ob/Gyns on important matters surrounding fertility, beyond contraception and family planning.

Awareness of the specific impact of ageing on fertility needs to be improved

More should be done to encourage discussion between Ob/Gyns and patients about fertility issues

APPENDIX I: DETAILED METHODOLOGY

Profile of the Survey Population

Compared to the average 25–35 year old woman, those who took the Fertility IQ study are younger, more likely to have completed college, less likely to be married, and more likely to be employed. Geographically and ethnically, the two populations are similar (Table 1).

Table 1: Profile of the study population

	Fertility IQ Qualified Respondents	2010 Census
Age		
Mean Age	29.1	--
25-29 years old	56%	47%
30-35 years old	44%	53%
Level of Education		
High School or Less	14%	34%
Some College/Associate Degree	28%	30%
Completed College	37%	26%
More than College	22%	11%
Marital Status		
Never Married	46%	36%
Living with Partner	12%	NA
Married/Civil Union	35%	53%
Divorced/Separated/Widowed	4%	11%
Region		
Midwest	21%	20%
East	23%	20%
West	25%	25%
South	31%	35%
Ethnicity		
White	66%	60%
Hispanic	17%	18%
African-American	11%	14%
Asian	4%	6%
Employment Status		
Employed Full-Time	75%	53%
Employed Part-Time	24%	15%

	Fertility IQ Qualified Respondents	2010 Census
Student	15%	NA
Not Employed	11%	6%
Self-Employed	8%	NA
Stay at Home Spouse	4%	NA
Primary Medical Insurance		
PPO/Private Health Insurance	59%	NA
HMO/Managed Care Organization	23%	NA
Medicaid/Medicare	4%	NA
None	9%	NA
Household Income		
Less than \$35,000	20%	29%
\$35,000-\$74,999	32%	35%
\$75,000-\$149,999	34%	28%
\$150,000+	6%	8%

Harris Poll Online Internet Panel

The 'Fertility: In The Know' survey was self-administered and approximately 22 minutes in duration. Participants for the Fertility IQ Survey were recruited from the Harris Poll OnlineSM Panel (HPOL).

What is HPOL?

HPOL is a multimillion-member panel of cooperative online respondents. It is one of the largest databases of *individual* double opt-in respondents for market research in the world.

All panelists that were recruited have completed a "confirmed" or "double" opt-in (COI/DOI) process, which requires that each registrant confirm his or her desire to join the panel by clicking on a link within an email that is sent to the registrant's email address upon registering. If the registrant clicks on the link within the email, he/she is added to the Harris Poll Online. If the registrant takes some other action or simply deletes the email, he/she is not added to the database.

How are panelists recruited?

Panelists have joined the Harris Poll Online from over 100 different sources. Diverse methods are used to gain panelists, including co-registration offers on partners' websites, targeted emails sent by online partners to their audiences, graphical and text banner placement on partners' websites (including social media, news, search, and community portals), trade show presentations, targeted postal mail invitations, TV advertisements, and telephone recruitment of targeted populations. Panel recruitment and maintenance operations allow the firm to provide a representative sample of the general population as well as identify and reach under-represented and hard-to-reach populations of interest. Each recruitment source is carefully vetted through a rigorous interviewing and testing process.

How are panelists targeted?

Each time Harris Poll Online members participate in a survey, they are asked various demographic questions. The responses are used to update their individual member profiles.

To keep member profiles as current as possible, panelists are typically asked to view pertinent demographic information on screen and either confirm that it remains unchanged or make appropriate changes.

How is the integrity of the data maintained?

Harris Interactive randomly selects respondents from Harris Poll Online panel based on the population of interest. Surveys are password protected so that respondents can take the survey only once. In addition, respondents cannot choose the subject of the surveys they are offered the opportunity to participate in (although they may, of course, choose not to take a particular survey).

Profiling data are collected using larger internal surveys that are interspersed between client surveys according to our standard panel management practices. This profiling approach is superior to posting profiling surveys in an open forum, where respondents know they are being screened for their ability to qualify for future surveys, because it minimizes the potential for dishonest responses from panelists who are over eager to be invited to future surveys.

How are panelists incentivized?

Harris Interactive maintains a loyalty and retention program called Harris Poll Online Rewards. Harris Poll Online Rewards has two key features:

1. Hlpoints offers panel members “points” for select surveys they complete. When they accumulate enough points in their online “accounts,” panelists can redeem them for products, or cash-like gift cards.
2. Hlstakes is a bi-monthly sweepstakes available to all survey respondents. Both Harris Poll Online members and non-members who take Harris Interactive surveys (e.g., customers who complete a client-sponsored survey) are eligible to win Hlstakes prizes.

Propensity Weighting

There is an inevitable selection bias associated with the sample in an Internet-based survey. All respondents have made several choices that potentially differentiate them from the population of interest:

- They have chosen to become a part of the Internet population;
- They have chosen to become a part of a survey panel;
- They have chosen to take the survey for which they received the invitation.

As a result of the choices respondents make, the respondents may differ in fundamental ways from the population of interest on attitudinal and behavioral dimensions as well as demographic dimensions.

Consequently, demographic weighting may not be enough. One solution to this selection bias problem is a technique called propensity score weighting. This process allows for the virtual elimination of selection bias that is associated with Internet based surveys.

Propensity Weighting Process

Respondents are asked a range of questions that measure attitudes and behaviors that are correlated with the decisions to go online, join an online panel, and respond to an online survey.

Additionally, demographic questions are used to weight data to remove the effects of differential response rates and demographic skews in online panels.

Respondents to a survey offered in a mode that also reaches those who are offline (e.g., telephone) are asked the same range of attitudinal/behavioral and demographic questions. Harris Interactive collects such parallel data via a bi-monthly telephone survey.

The data from the two modes (online and bi-monthly telephone surveys) are merged and a statistical model is estimated to predict whether an online respondent “looks like” the type of respondent who would be more likely to answer by phone versus online.

The model segments all respondents into groups based on the propensity scores calculated for each respondent. These groups are anchored on one end by respondents who demographically, attitudinally, and behaviorally look like the type of person who would be likely to answer an online survey and anchored at the other end by respondents who demographically, attitudinally, and behaviorally look like the type who would be more likely to answer a survey by telephone.

Once classification into segments is complete, the online respondents are demographically weighted (using standard weighting techniques) to match US population targets for age, sex, region, race, education, and household income. In addition, the propensity score is included in the weighting scheme as an additional factor in order to balance the attitudes and behaviors of the online respondents.

Drop-Out Weighting

Drop-out weighting is a common practice for situations in which weighting targets are not available for the population of individuals who qualify for a study. The process involves weighting the data for which there is a viable source for targets (which will likely include qualified, over quota, and not qualified data which meet more general criteria), and then once this weighting has been completed, “dropping out” the data that won’t be used for analysis, and retaining the qualified data for analysis purposes.

For this study, the screener questions were asked of all women ages 25–35, those who did not meet the screening criteria (e.g. had not been to Ob/Gyn in past 12 months and/or have given birth to a child) were “dropped out” of the data used for analysis purposes.

As a subgroup of the total weighted data, we assume that the qualified respondents will be appropriately representative of individuals meeting the screening criteria. This assumption requires that response rates are similar across subgroups (including the subgroup of qualified respondents), so that any biases are scalable.

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