

Fetal Sex Determination Survey Study Results

Kathi McGregor, President/Managing Partner
Larry Worden, Vice President/Senior Partner

Market Diagnostics International, Dallas, Texas



Background

A study was conducted surveying women across the United States on their opinions surrounding fetal sex determination during the first trimester of pregnancy and at what price they are willing to pay out-of-pocket.

Method

A nationally representative sample of 400 web-based surveys were completed with women aged 21 to 40 who are currently pregnant or have had a baby within the past five years.

Results

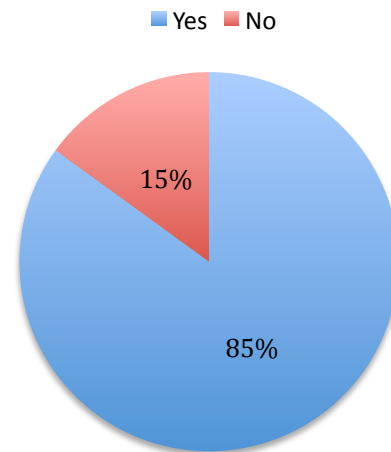
For the majority (85%) of pregnancies, the baby's sex was known prior to giving birth. Almost all were determined by ultrasound examinations, typically performed around week 20.

Half of those who did not know their baby's sex for their most recent delivery would not want to know under any circumstances. They don't want to know because they want to be surprised at the time of delivery.

Discussion

Interest in the maternal blood test to determine sex early is high (80%) when cost and availability are not a concern.

Under any circumstances, these results would be considered positive for the introduction of a new fetal sex determination test. Once claims of accuracy (sensitivity and specificity) and gestational age are ascertained, pricing levels can be established to introduce a new genetic based fetal sex determination test to the public. ■



Found out Baby's Sex Prior to Giving Birth

Overview

Between August 11 and 13, 2009 Market Diagnostics International (MDxI) conducted a web-based research surveying women across the US on their opinions surrounding fetal sex determination during early pregnancy.

The primary objective of this research was to assist in determining the price women are willing to pay out-of-pocket for fetal sex determination during the first trimester of pregnancy.

Secondary objectives were to assist in positioning the test and estimating likelihood of women to ask their Ob/Gyn to prescribe the test.

Methodology

MDxInt conducted a web-based survey with women aged 21 to 40 who are currently pregnant or have had a baby within the past five years, and had visited an OB/Gyn during the first trimester of their most recent pregnancy.

A total of 400 surveys were completed with a nationally representative sample.

All percentages are based on the number of people answering a particular question with a meaningful response. "Don't know" and non-responsive answers are not included in the analysis unless otherwise noted.

Most of the respondents are married, have attended college, and live in households of 3-4 people. There is a mix of employed and unemployed females, and household income typically is between \$35,000 and \$100,000 annually.

Results

Table 1. States and Respondents

State	# Respondents	State	# Respondents
NY	31	NC	6
CA	25	NH	6
TX	25	CO	5
IL	24	MS	5
PA	24	AR	4
IN	18	KY	4
VA	18	NE	4
MI	16	WA	4
NJ	16	ME	3
FL	15	RI	3
GA	15	WV	3
OH	14	ID	2
MN	12	LA	2
WI	11	ND	2
TN	10	NV	2
CT	9	OK	2
KS	9	AK	1
MD	9	AL	1
MO	8	IA	1
MA	7	MT	1
SC	7	NM	1
UT	7	OR	1
AZ	6	SD	1

Most of the respondents are married, have attended college, and live in households of 3-4 people. There is a mix of employed and unemployed females, and household income typically is between \$35,000 and \$100,000 annually.

Table 2. Current Age

Age	Percent
21-24	5%
25-29	27%
30-34	37%
35-40	32%

Table 3. Marital Status

Marital Status	Percent
Married	87%
Single - with Partner	6%
Single - other	7%

Table 4. Employment Status

Employment Status	Percent
Homemaker	44%
Employed Full time	31%
Employed Part time	19%
Student / Not Employed	6%

Table 5. Education Level

Education Level	Percent
HS or Less	14%
Some College	32%
College Grad	34%
Post Grad	20%

Table 6. Household Size

Household Size	Percent
2 People	2%
3 People	28%
4 People	39%
5 People	23%
6+ People	9%

Table 7. Household Income

Household Size	Percent
Under \$35k	16%
\$35-\$50k	23%
\$50-\$75k	25%
\$75-\$100k	20%
\$100-\$150k	11%
More than \$150k	5%

Table 8. First Prenatal Care Visit

How far along were you in your pregnancy when you first visited a doctor (or other medical professional) for prenatal care? Was it...? Base = 400

First Prenatal Care Visit	Percent
6 weeks or earlier	55%
7-9 weeks	32%
10-12 weeks	11%
13-18 weeks	2%

The majority of first-time prenatal visits occur within the first 9 weeks of pregnancy.

Table 9. Method of Payment

Which of the following best describes how your prenatal care was paid for during your most recent pregnancy? Base = 369

Method of Payment	Percent
PPO	52%
HMO	20%
Public Health (ex. Medicaid)	24%
Other	3%

The most common method of payment is through a PPO insurance plan. Very few pay for their medical care themselves.

Table 10. Found Out Baby's Sex

Thinking of your most recent pregnancy, did you choose to find out the sex of your baby prior to giving birth? Base = 400

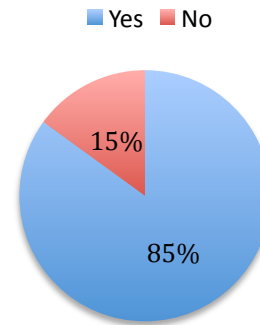


Table 11. How Sex Was Determined

Which of the following methods did you use to learn the sex of your baby? (multiple responses accepted) Base = 341

How Sex Determined	Percent
Ultrasound	99%
Other	1%

Table 12. When Sex Determined

How many weeks pregnant were you when you first learned the sex of your baby? Base = 341

When Sex Determined	Percent
15 weeks or earlier	10%
16-18 weeks	20%
19-21 weeks	46%
22 weeks or later	23%

The majority knew the sex of their baby prior to giving birth. Virtually all of them found out via an ultrasound examination, typically performed around the 20th week of pregnancy.

Table 13. Reasons for Determining Baby's Sex

Please indicate how much each of the reasons influenced your decision to learn the sex of your baby prior to giving birth? Base = 341

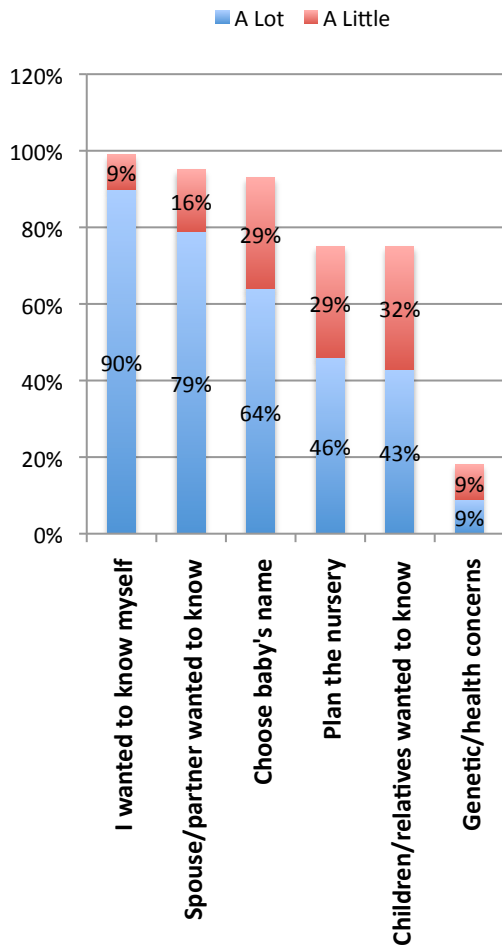


Table 14. Reasons They Did Not Want to Know Sex

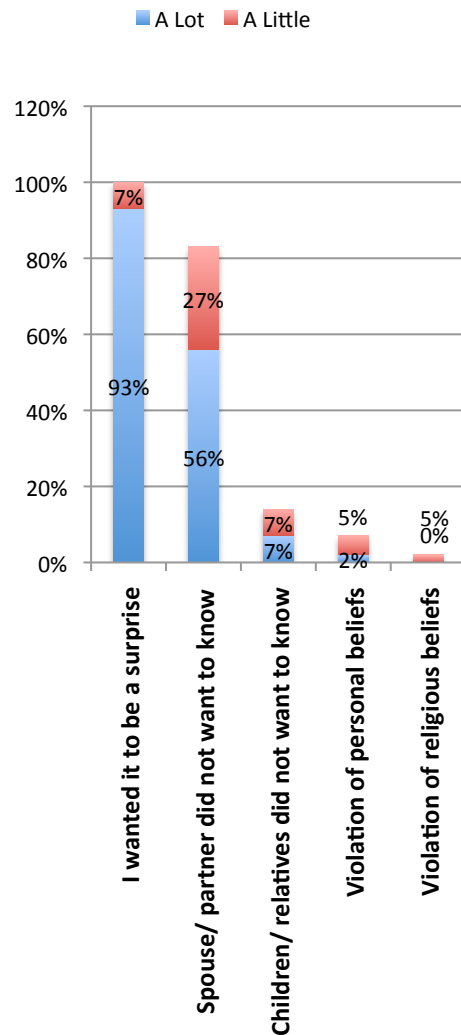
Please indicate how much each of the reasons influenced your decision not to learn the sex of your baby prior to giving birth? Base = 59

Half (53%) of those who did not know the sex of their most recently delivered baby would not want to know the baby's sex prior to giving birth under any circumstances.

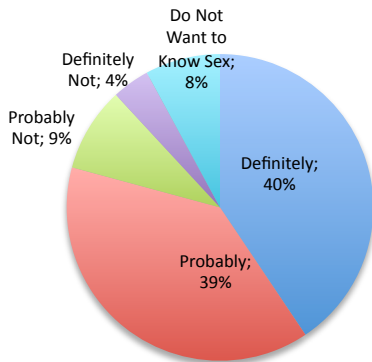
Among those who did not know their most recent baby's sex, respondents in smaller households are less likely to be interested in knowing the baby's sex.

Table 15. Interest in Maternal Blood Test to Determine Fetal Sex

Our client has developed a highly specialized blood test using maternal blood for the accurate determination of your baby's sex early in pregnancy. The test would be ordered by your doctor and be drawn (just like routine tests) in the doctor's office or the lab where you typically have your routine blood work done.



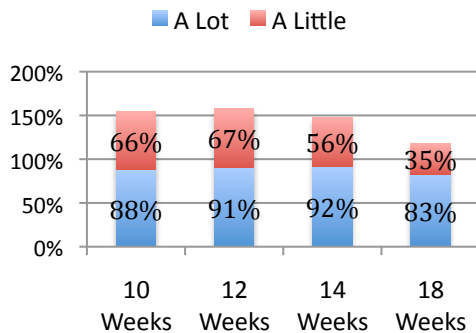
If this test had been available during your most recent pregnancy, and cost was not a concern, would you have wanted to have the test? Base = 400



If cost were not a concern and the test had been available to them, the majority would have wanted to have the blood test to determine sex early in pregnancy.

Table 16. Interest in Test to Determine Sex Before 20 Weeks

Most women learn the sex of their baby during an ultrasound examination at about 20 weeks. How much would it increase your interest if the test were available at ___ weeks? Base = 354



There is little difference in determining sex at 10 or 12 weeks. However, at 18 weeks, there are significantly fewer with “a lot” of interest.

“If cost were not a concern and the test had been available to them, the majority would have wanted to have the blood test to determine sex early in pregnancy.”

Table 17. Willingness to Pay Out-of-Pocket

Because this test is optional, rather than diagnostic, medical insurance would not pay. Would you pay for the test yourself if it cost \$ ___? Base = 400

Price of Test	Percent
\$250	12%
\$300	9%
\$350	8%
\$400	8%

One in eight are willing to pay for the test at the lowest price tested.

The majority of those who are willing to pay for the test will pay at the \$400 price point.

Those most willing to pay for the test at all price points are more likely to:

- Be employed
- Live in households that earn between \$35,000 and \$50,000, or more than \$100,000 a year. Those in the middle income range are significantly less likely to pay for the test.
- Live in the Midwest (IL, IN, MI, OH, or WI)



“Women in households making \$75,000 or more are more than twice as likely to be willing to pay for the test.”

According to the US government, in 2007 there were approximately 3.75 million births among women ages 20-39, with 83% receiving prenatal care in the first trimester. Using these numbers to produce the most aggressive estimate,

- At \$250 price point, the potential number of tests per year is 450,000.
- At \$400 price point, the potential number of tests per year is 300,000.

Conclusions

For the majority (85%) of pregnancies, the baby's sex was known prior to giving birth. Almost all were determined by ultrasound examinations, typically performed around week 20.

Half of those who did not know their baby's sex for their most recent delivery would not want to know under any circumstances. They don't want to know because they want to be surprised at the time of delivery.

Interest in the maternal blood test to determine sex early is high (80%) when cost and availability are not a concern. However, there is a smaller number of women who would pay for the test at the price points tested.

- 12% would be willing to pay \$250
- 9% would be willing to pay \$300
- 8% would be willing to pay \$350 or \$400.

Women in households making \$75,000 or more are more than twice as likely to be willing to pay for the test.

- 26% would be willing to pay \$250
- 17% would be willing to pay \$300 or more. In the USA, there are approximately 4.3 million births annually; 69% of which receive prenatal care in the first trimester.

Under any circumstances, these results would be considered positive for the introduction of a new diagnostics test. Once claims (accuracy, earliest week available) have been verified and pricing levels narrowed, the client company should conduct additional research to fine-tune these findings prior to launch. ■

Study sponsored by Sequenom, Inc.
3595 John Hopkins Court San Diego, CA 92121 www.sequenom.com, www.scmmlab.com