Executive Summary

It’s time to make way for Generation Alpha—the children who will be born to the 80 million Millennials over the next fifteen years. This new generation will be part of “new normal” when it comes to defining family. While researchers will begin to evaluate their levels of education, future job markets, and spending trends, Reproductive Medicine Associates of New Jersey (RMANJ) wanted to take a step back and examine what family planning actually looks like for Millennials – What are the gaps between myth and reality?

We know there is a trend across previous generations to start having children later in life, but we have reached a crucial tipping point where the science and education around fertility and assisted reproductive technologies need to be better aligned. Thanks to RMANJ’s inaugural Infertility in America 2015 survey and report, we have deeper insights into current and future issues and concerns for Americans as they plan their families.

In general, our report found that many misconceptions remain about infertility procedures that can impact patient outcomes. As Millennials age and plan on having children as late as their mid-30s, they need to, at the very least, be aware of how these misconceptions could impact their fertility and ability to build a family through traditional methods.

For Millennials and Generation X, knowledge is power. Millennials greatly benefit from knowing that if they experience infertility, there are treatment options that are available, some of which – like cryopreservation, In Vitro Fertilization (IVF), Single Embryo Transfer (SET), Comprehensive Chromosome Screening (CCS) and others – can help ensure they will be able to have a family when they are ready.

Businesses must also beware. As Millennials embark on their careers, our report found that they will be looking to employers to offer insurance that includes fertility coverage and will be more willing to change jobs for one that caters to their needs. This was true for more than two-thirds of both male and female Millennials in our survey. We believe that businesses forgoing or offering minimal fertility coverage will see this impact their ability to retain talent.

With more dialogue about infertility, there will be better understanding among Millennials that infertility treatment methods are ever evolving and paving the way for those currently struggling with infertility to experience the joys of parenthood – one healthy baby at a time.
Introduction
We are seeing a fundamental shift in society when it comes to family planning. No matter what the reason – commitment to career, financial stability or finding Mr. or Mrs. Right – individuals are starting to have families later in life. While there are clear benefits and advantages to the above, there are also tradeoffs that must be considered.

It is well known that age plays a critical factor in infertility and often causes unforeseen challenges and complications. The Center for Disease Control and Prevention recently released a report showing that birth rates in the U.S. are declining despite a larger population.1 Furthermore, our own proprietary survey found that Millennials aren’t planning to start having children until their early to mid-30s, which could drive infertility rates even higher and birth rates even lower.

As Millennials plan on starting their families even later, what will the implications be and how will they overcome them?

This year alone, nearly seven million men and women in the U.S. will experience infertility and will need help through some sort of assisted fertility treatment, such as in vitro fertilization (IVF). According to the Society for Assisted Reproductive Technology (SART), nearly 175,000 cycles of IVF were conducted in 2013, a six percent increase since 2012.2 And while advances in research and science will help many of these individuals grow their families, some will find they may have waited too long.

Even as stories surrounding IVF, surrogacy and infertility continue to flood the media, the general public still grapples with myths and misinformation regarding the various programs and procedures available to help responsible adults become loving parents. That is why RMANJ decided to launch our own exploration into what individuals understand about infertility; what family planning looks like for the next generation; and what the biggest concerns are when it comes to starting a family and coping with infertility.

Facing the challenges associated with infertility can be extremely stressful, even competitive with more commonly discussed stresses. In fact, our survey discovered that 55 percent of individuals who have experienced infertility believe it is more stressful than unemployment, and 61 percent of that same group believes it is more stressful than divorce. Clearly, more attention needs to be given to those individuals facing infertility and more education needs to be provided to help overcome current misconceptions about IVF and infertility.

RMANJ’s inaugural survey and report – Infertility in America 2015 – was conducted among 1,000 nationally representative U.S. adults ages 25-40, plus oversamples of up to 200 men or women actively trying to get pregnant or expecting to try within the next five years, between February 12 – 23, 2015.

The results of our survey have led to the development of following report focusing on:
- Not Your Mother’s IVF
- Timing is Everything
- Peace of Mind
- The Money Factor
AMERICANS ARE CONFIDENT IN THEIR ABILITY TO HAVE THEIR FIRST OR NEXT CHILD

91% OF THOSE ACTIVELY TRYING

95% OF THOSE EXPECTING TO TRY WITHIN 5 YEARS

REALITY CHECK!

EACH MONTH A FERTILE 30-YEAR-OLD WOMAN ONLY HAS A 20% CHANCE OF CONCEIVING NATURALLY

Over Confident
Here’s the bad news: Americans are overly confident in their ability to conceive. Our results showed that those most confident in their ability to have their first or next child when ready were those individuals actively trying (91%) or expecting to try within five years (95%). However, we know that even a healthy, fertile 30-year-old woman only has a 20 percent chance of conceiving naturally each month. Individuals must be prepared – or at least more aware – about what their options are if they are unable to get pregnant on their own.

According to our survey, most respondents plan on starting their family in their early to mid-30s. Over the past few years, this number has continued to increase, which is significant because, for women, age remains the single most significant factor impacting fertility. However, there is good news: before visiting a fertility specialist, those opting to start a family later in life can meet with their OB/GYN to run a 30-day evaluation that can assess their egg supply with a simple blood test.

• Women over the age of 30 should ask their OB/GYN to perform a simple blood test that measures the levels of the anti-mullerian hormone (AMH) in their system. The presence (or lack of) this hormone helps determine the viability of a woman’s egg reserve before visiting a fertility specialist. Unfortunately, many women don’t know about this until it is too late for them to start exploring fertility treatment options.

It’s important to remember that fertility is not just about the number of eggs available – it is also about the quality of those eggs.

There is no perfect test to evaluate a woman’s fertility. Even reassuring testing cannot fully predict whether a woman can conceive. The greatest predictor we have is a woman’s age.

• Women over 35 should start considering testing for egg quality. As women age, their eggs become more susceptible to chromosomal imbalances and the frequency of chromosomal mistakes increases in human embryos, which limits their reproductive potential. Comprehensive Chromosome Screening (CCS), a process by which fertility specialists can safely identify whether embryos have a normal number of chromosomes, allows physicians to eliminate embryos which would not implant or lead to successful pregnancies and deliveries.

In general, if a woman is under the age of 35 and unable to achieve pregnancy or stay pregnant after 12 months of trying, or is 35 and over and actively trying for six months without conceiving, she should reach out to a fertility specialist.

While some women are able to have healthy babies into their 40s and 50s, widespread media coverage on this rarity has also contributed to Americans becoming overly confident in their ability to conceive. When asked if the advancements in science mean that younger adults don’t have to worry about infertility, 64 percent agreed that it was true. And while science has made great strides, there is no better advice than to start gathering information early and to be informed on your fertility and on specialists who can help.

Do your research before visiting and selecting a fertility center. Don’t just look at pregnancy rates – take into consideration live birth rates, location, convenience, financial and wellness resources as well as the clinical expertise of their physician before making a final decision.
Singletons vs. Multiples
While more than two-thirds (67%) of respondents claim they are familiar with infertility treatment options, in reality they are not. Even after years of scientific advancements and a large push by many industry experts, an overwhelming 87 percent of respondents believed that in order to increase their chances of having a child through IVF they must be willing to transfer more than one embryo. Even more concerning was that this number climbed further with individuals actively trying to get pregnant (94%) and those expecting to try within five years (90%).

This exact sentiment has contributed to an explosion of twins, high-risk pregnancies and unnecessary health and financial burdens to both patient and child. In fact, according to the CDC, twin birth rates in the U.S. nearly doubled over the last three decades, rising from 1 out of every 53 in 1980 to 1 out of every 30 babies in 2009. A simple look at the data even shows that while fertility treatments are used for approximately 1 percent of U.S. births, they account for nearly 20 percent of the nation’s twin and multiple deliveries.

In the United States, twin pregnancies account for approximately 30 percent of IVF pregnancies. While this has tapered off and showed a slight reduction last year, the number is still too high. RMANJ’s Blastocyst Eupoloid Selective Transfer (BEST) trial was the first ever in the U.S. to study transferring one embryo screened vs. two embryos without screening. The study found that the health complications and financial impact associated with double embryo transfers resulting in multiple births (twins, triplets, etc.) were significantly higher than single embryo transfers. The unintended consequence of pregnancies that result in multiples has led to more obstetric complications and annual costs of almost $1 billion.

Industry leaders are working to reverse the trend of multiples and low-birth-weight babies. Through its ongoing mission to help patients have “one healthy baby at a time,” RMANJ is educating patients about other lower-risk and healthy options with equal success rates. The combination use of comprehensive chromosome screening (CCS) and single embryo transfer (SET) provides delivery rates equivalent to double embryo transfer, while resulting in fewer multiple deliveries and a lower total cost of care.

### REALITY CHECK

<table>
<thead>
<tr>
<th>ONE EMBRYO (WITH CCS)</th>
<th>VS</th>
<th>TWO EMBRYOS (WITHOUT CCS)</th>
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<tbody>
<tr>
<td><strong>LIVE BIRTH RATES</strong></td>
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<td>61%</td>
<td>65%</td>
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<td><strong>TWIN DELIVERY RATES</strong></td>
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<td>0%</td>
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<td><strong>MISCARRIAGE</strong></td>
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<td><strong>PRETERM DELIVERY RATE</strong></td>
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<td>8%</td>
<td>28%</td>
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<td><strong>TOTAL NICU DAYS</strong></td>
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<td>80</td>
<td>373</td>
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<td><strong>BIRTH WEIGHT</strong></td>
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<td>3,408g</td>
<td>2,745g</td>
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<td><strong>TOTAL COSTS</strong></td>
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<td>$48,576</td>
<td>$90,583</td>
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Timing Is Everything

Procrastinating Parenthood
In 2006, the average age of a mother at the birth of her first child was 25 (up from 21.4 in 1970). In our survey, Millennials reported that they plan to wait to have children until after they turn 30. While individuals may be planning on starting a family later than previous generations, having a family is still a priority for those who have never had children. For those planning to try within the next five years, 92 percent reported that having children was important. The top reasons cited among those as to why they have not had children include focusing on their career first (48%) and an inability to afford it (33%).

Interestingly, 27 percent of the survey respondents who are actively trying to get pregnant reported that they are facing infertility issues – this figure is more than double what the CDC has estimated (12%).

FERTILITY ISSUES IN SCIENCE WE TRUST

<table>
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<tr>
<th>MILLENNIALS</th>
<th>GEN XERS</th>
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<tr>
<td>67% Believe advances in science mean younger adults shouldn’t worry about infertility</td>
<td>57% Believe advances in science mean younger adults shouldn’t worry about infertility</td>
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<tr>
<td>73% Would use cryopreservation</td>
<td>64% Would use cryopreservation</td>
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</table>

REASONS FOR DELAYING STARTING A FAMILY

- **FOCUSING ON CAREER:** 48%
- **CAN’T AFFORD IT:** 33%
- **TOO YOUNG:** 19%

One option that Americans are increasingly turning to is cryopreservation, or freezing their eggs/sperm or embryos. In fact, 73 percent of Millennials surveyed reported that they would use cryopreservation to ensure that they would be able to have children in the future. Technology has made this particularly effective with a survival rate for eggs (oocytes) that is near 90 percent and over 95 percent for embryos.

The report also unearthed a growing belief that advances in science mean that younger adults don’t need to worry about infertility; 57 percent of Gen Xers increasing to 67 percent among Millennials. This could be a case of getting wiser with age, but it also shows that Millennials need to be more aware of the issues and less reliant on science and technology to overcome the health issues they may face in the future.
Genetic Testing

Genetic testing remains on the forefront of fertility treatments. Individuals who carry a genetic disease can now be easily identified. These future parents can now breathe a sigh of relief. More and more diseases can now be screened for, giving parents an opportunity to protect the health of their future children. In the last five years alone, our understanding of genetics has improved IVF success and safety. This is thanks to genomic sequencing, which was originally mapped for $2.7 billion (The Human Genome Project) but sequencing a patient’s genetic makeup can now be done within a matter of hours for about $1,000.

The survey revealed that more than three-quarters (79%) of Americans say that if they had a genetic disease they would choose in vitro fertilization and have cells from the embryo tested for the disease-causing gene to help ensure they could have a healthy child. This number increases drastically among those who are actively trying to get pregnant (90%). For those who know of a genetic disease in their family, 91 percent reported that they would likely choose IVF with genetic testing.

Genetic testing is a huge asset for parents who face the burden of potentially passing genetic diseases to their children. RMANJ continues to work to expand the types of genetic diseases for which testing is available.

The most common types of genetic disease currently tested for include:
- Tay-Sachs
- Cystic Fibrosis
- Down syndrome
- Sickle cell disease
- Some cancers

As science advances and we are able to detect more genetic disorders, specialists are able to help more and more couples with genetic disorders have healthy babies. Unfortunately, all too often these screenings are not covered by insurance providers. While they may cover the disorder, they view these screenings as non-essential even though they can ultimately determine the health and livelihood of a child.
The Money Factor

Cost & Insurance: The Biggest Burden
For many individuals (58%), cost remains a leading cause for why they would forgo fertility treatments. IVF cycles may not always be covered by employer insurance or categorized as an Essential Health Benefit (EHB), which varies on a state-by-state level. Concerns around stress of the process (34%), physical and psychological, followed by the potential health impact (30%) were the second and third most common responses among those surveyed.

The rules and stipulations (or “fine print”) in many insurance plans often make it difficult to understand and/or obtain fertility benefits. Currently, just 15 states have mandates for fertility coverage and these current mandates run the risk of being eliminated by the end of 2015 due to recent changes in healthcare law, which could make it nearly impossible for individuals facing infertility to have the opportunity to conceive and deliver their own children.

Of even greater concern is the lack of a fertility coverage mandate in 35 states, despite the World Health Organization classification of infertility as a recognized disease. Misinformation, underreporting, and a lack of conversation about infertility have created a perfect storm, making many believe that procedures involving artificial reproductive technologies are elective, rather than the treatment to a very complicated disease.

The majority of Americans (52%) want insurance companies to cover fertility treatments, while in the meantime, hopeful parents look to access to various financial programs (like shared-risk programs) that help cover costs. High costs can cause individuals to take misinformed or unhealthy risks when it comes to seeking treatment – such as using multiple embryos. However, recent research has shown a 40 percent savings when patients rely on the right treatment paradigm: a paradigm that includes a combination of comprehensive chromosome screening (CCS) with single embryo transfer (SET) resulting in higher birth weights (which is explained on pages 2-3 of this report), less time in the NICU and greater savings when it comes to downstream costs. By offering coverage to those who adhere to this paradigm – one that results in healthier pregnancies and babies – we all serve to gain the most reward.
Workplace and Infertility

Infertility is not an issue that stays at home, as it has the potential to profoundly impact the workplace. As people start to plan families later in life, there will be an increasing need for fertility coverage and benefits. The survey found that more than two-thirds (68%) of respondents were willing to change jobs to ensure they had infertility coverage. This number jumps to 90 percent among those who have experienced fertility issues.

In the current business climate, where organizations are already struggling to retain top talent, offering fertility coverage can be a unique benefit that may help close the talent gap. And it’s not just women who said they would leave their jobs.

- Among those who have experienced fertility issues, this figure increases to 90 percent.
- 70 percent of Millennials reported they would switch jobs to gain fertility benefits if they have difficulty getting pregnant.

Businesses can benefit in the long run by offering coverage that encourages one healthy baby at a time, instead of leaving it to the employees to select treatment options that may result in twins or other high-risk pregnancies. Employers spend 12 times as much on healthcare costs for premature or low-weight babies as they do for babies without complications. In fact, it is estimated U.S. businesses spend $5.7 billion just to cover these healthcare costs – many of which were tied to the delivery of multiples as a result of IVF.

Furthermore, studies show that while 1 out of 9 babies are born prematurely, for an employer, the cost of that one premature baby will be more expensive than the other eight healthy babies combined.

If businesses are able to plan ahead, they can ensure their employees are given an option to have one healthy baby at a time – ultimately saving individual businesses thousands of dollars and increasing the ability to attract and retain top talent.
Conclusion
There is no turning back. As family planning is beginning at a later life stage, individuals must be better informed about the available options they have, businesses need to prepare to deal with how this will impact their workforce, and public policy needs to be in place to ensure that we are caring for the increasing population that will, inevitably, face infertility.

An overall shift in how we perceive infertility needs to take place, focusing more on the patient and offering support and transparency to those who are struggling with infertility. New programs and cost structures need to be introduced to encourage individuals to make healthier medical decisions which will create substantially better outcomes for the individual, the businesses, the insurance companies, and, most importantly, the family.

While science is making great strides when it comes to helping families with genetic disorders have healthy babies and with extending fertility option for older patients, the solutions we have now are not a panacea. There is a need for more dialogue, more research, more understanding and more financial support for individuals facing infertility to ensure that the next generation is able to raise the same healthy – or even healthier – families as the generations before.

It is our belief that this needs to be done one healthy baby at a time.

Links and More Information
www.asrm.org  www.cdc.org  www.resolve.org  www.sart.org

Methodology
The RMANJ Survey was conducted by Wakefield Research (www.wakefieldresearch.com) among 1,000 nationally representative U.S. adults ages 25-40, plus oversamples of up to 200 men or women actively trying to get pregnant or expecting to try within the next 5 years, between February 12th and February 23rd, 2015, using an email invitation and an online survey. Quotas have been set to ensure reliable and accurate representation of U.S. adults ages 25-40.

Results of any sample are subject to sampling variation. The magnitude of the variation is measurable and is affected by the number of interviews and the level of the percentages expressing the results. For the interviews conducted in this particular study, the chances are 95 in 100 that a survey result does not vary, plus or minus, by more than 3.1 percentage points from the result that would be obtained if interviews had been conducted with all persons in the universe represented by the sample.


