

# **U.S. Fertility Clinics & Infertility Services: An Industry Analysis** **(November 2018)**

## **Table of Contents**

	<b><u>Page</u></b>
<b><u>Introduction</u></b>	
* Report Scope & Methodology, Sources used	1-3
<b><u>Executive Overview of Major Findings</u></b>	4-20
* Key facts about infertility, analysis of <b>fertility treatment services</b> industry: nature & components of the field, key growth drivers, no. of ART clinics, ethical issues, major industry trends (untapped potential, strong growth, room for consolidation, better success rates, hot egg donor market, effect of recessions), treatment methods (diagnostic, therapeutic approaches, no. of procedures performed per year and cost), infertile customer demographics, industry \$ size/growth/segments (1988-2016, 2018 & 2023 Forecast – 2014-2016 performance, \$ value of mkt segments (MD consults, semen & hormone analyses, tubal reversals, ART and GIFT procedures, fertility drugs mkt., sperm banks, egg donor mkts.), no. of clinics and ART cycles, discussion of rationale for future growth, importance of Chinese patients, ranking of top 20 fertility clinics by ART cycles and estd. revenues in 2016, customer demographics.	
<b><u>Nature &amp; Structure of the Industry</u></b>	21-38
* Definition of market segments (IVF ART clinics, sperm banks, egg donors, fertility drugs, surrogacy programs, surgeries)	
* Industry evolution – when clinics first appeared	
* Market demand and potential: Number and percent of women of childbearing age infertile, increase in IVF procedures from 1987-2016, reasons for continued growth, past estimates of industry size	
* Insurance coverage: typical fees and client affordability, state mandated coverage, financing	
* Causes of infertility: discussion of main reasons for infertility in men and women, treatment methods (HSG procedures, lap and dye procedures – description, cost, estimated number of procedures). Tubal reversal surgeries (description of, success rates, costs, percent of women having procedure, estimated number of surgeries).	
* IVF procedures: discussion of procedure, cost. GIFT procedures: discussion of procedure, cost, number of procedures.	
<b><u>Customer Demographics</u></b>	39-46
* U.S. birth & fertility rates: data – report highlights regarding number of births, total births in the United States, crude birth rate, general fertility rate	
* Americans' use of fertility services: demographics and characteristics	
* Chinese couples demand for U.S. fertility services, discussion, IVF tourism trends by European couples	
* Summary and discussion of number and percent of infertile female population in the U.S. (U.S. Census Bureau data, American Society for Reproductive Medicine)	
* Reasons why the market is largely untapped: how price deters most candidates	
* Delayer boom: more educated women have children later in life	
<b><u>Tables:</u></b>	
- Number of U.S. births and general fertility rate	

## Industry Size and Growth

47-68

- \* Summary and Analysis; historical estimates of industry size – 1988,1995, 2000 (gov't. & private sources)
- \* Marketdata estimate of mkt. size in 1999, by diagnostic procedure, IVF, drugs, surgeries
- \* Harvard Business School estimate for 2004
- \* Discussion of no. of **IVF clinics** 1985-2016, avg. revenues, value of this market segment
- \* **2014-2016 market performance:** estimated growth, pricing, IntegraMed revenues.
- \* **2017 & 2018 estimates/projections** -: discussion of key factors: Chinese medial tourists, domestic economy, small clinics vs. IntegraMed performance, user demographics, Marketdata forecast of ART cycles volume, \$ value of the market.
- \* **2023 Forecast:** Factors affecting current and future industry growth: IVF tourism, economic Recovery/recession probability, public policy, improved success rates, gay/lesbian use of IVF, etc.
- \* **Status of the European and Chinese Markets**, report of ESHRE, IVF volume, percent distribution of IVF vs. ICSI (1997-2009), which nations infertile couples come from, reasons, reimbursement ESHRE headquarters address.

### Tables:

- Historical \$ Size of fertility services industry – 1995-2018: diagnostic & therapeutic procedures (no. performed, avg. cost, estd. \$ value: office consultations, semen analysis, hormone evaluations, tubal reversals, IVF & GIFT procedures, fertility drugs, donor eggs, donor sperm, surrogacies)
- Size of fertility treatment industry: 2004 (Debra Spar, Harvard Business School book)
- No. of clinics, ART procedures performed, revenues: 1985-2016 (CDC data)
- Top 21 U.S. fertility clinics, by no. of IVF cycles performed and revenues: 2016
- Top 21 U.S. fertility clinics, by no. of IVF cycles performed and revenues: 2014
- No. of ART cycles performed, % change: 1997-2023 forecast
- Demand for assisted reproductive technology in China - infographic
- Size of fertility services industry – 2012 vs. 2008: diagnostic & therapeutic procedures (no. performed, avg. cost, estd. \$ value) – breakdowns as above
- Estimated historical size of mkt., by segment: 1988, 1995, 2000, 2004, 2006, 2008, 2012
- No. of ART cycles performed in various European nations: 1997-2009.

## Sperm Banks and Egg Donor Markets, Surrogacy

69-83

### Sperm Banks

- \* Summary and discussion: number of U.S. sperm banks, typical fees, main activities
- \* How the process works: requirements and screening of sperm donors, who typical donors are, fees, contracts
- \* Estimated value of the market: 2004 – 2023 F
- \* Market trends – why market is flat, gray market sperm
- \* Major competitor Profiles: Cryos International Sperm Bank (Denmark), California Cryobank – typical procedures and requirements of donors, findings of phone interview

### Egg Donor Market

- \* Discussion of egg donors, frozen embryo replacement, fees, who they are, differentiated pricing structure, estimated market value: why this is a strong growth market, foreign demand, market size: 2004-2023 Forecast.
- \* Analysis of egg donation data from 2015 CDC ART report, Marketdata's mkt. size estimates for 2016, 2018, 2023
- \* Discussion of European mkt. report about social egg freezers, low rate of thawing.

Surrogacy Programs: Discussion of the need for it, mkt. size, fees, etc.

## The Fertility Drugs Market

84-90

- \*Summary of the U.S. & global fertility drugs market: estimated size, key competitors (Organon, Merck Serono, Ferring)
- \*Outlook and sales results from Merck's annual reports for North America versus rest of world, outlook for Gonal-f and Pergoveris
- \*Estimated market share for Merck Serono, \$ sales
- \*Discussion of increase in illicit drug market developing between buyers and sellers
- \*Marketdata estimates of fertility drug sales: 1995 – 2023 F, five year forecast

## Findings of 2015-2016 CDC ART Surveys on Assisted Reproductive Technology - Success Rates

91-110

- \* Findings of 2015 survey & preliminary. 2016 data: success rates, by age of woman, fresh & frozen embryos from nondonor eggs, donor eggs, percent of clinics offering services by type.
- \* Discussion/analysis of: type ART procedure used, pregnancy success rates, ART cycles using frozen embryos, ART cycles using donor eggs, ART cycles using nondonor eggs and embryos, success rates by women's age

### Tables and analyses of 2015 report: National Summary

- \* Total no. of ART procedures performed, % by type.
- \* No. of infants born through ART
- \* Percent multiple birth deliveries
- \* Percent of ART transfers resulting in a pregnancy.
- \* Age distribution of patients undergoing fresh IVF cycles: 2014

### Text, analyses & discussion covering these topics: (long-term trend data)

- How old were women who used ART?
- How did the types of ART cycles performed differ by a woman's age?
- How many frozen egg cycles were conducted and what were the outcomes of these cycles?
- Why were some ART cycles canceled?
- What percentage of ART cycles resulted in a pregnancy?
- What percentage of ART pregnancies resulted in a live birth?
- What percentage of ART cycles resulted in a multiple-fetus pregnancy or multiple-infant birth?
- How did the percentage of ART cycles that resulted in pregnancies, live births, and births of single live infants differ among women aged 40 or older?
- How did a woman's age affect ART cycle progress and outcomes?
- How did previous birth impact ART live-birth outcomes?
- How did previous unsuccessful ART use impact ART live-birth outcomes among women with no previous births?
- Did the use of ICSI differ by age group or by male factor infertility diagnosis?
- How many embryos were typically transferred in an ART procedure?
- Did the number of embryos transferred impact the percentage of single, term, and normal birth weight infants born?
- How long after egg retrieval did embryo transfer occur?
- What percentage of ART cycles resulted in a multiple-fetus pregnancy or multiple-infant birth?
- Was the use of donor eggs or embryos higher among older women undergoing ART?
- What are egg/embryo banking cycles and have they increased?
- Has the number of cycles using donor eggs or embryos increased?
- Is the use of ART increasing? Is the use of ICSI increasing?
- Have there been changes in the type of ART cycles performed among women who used fresh or frozen nondonor eggs or embryos?

- Has the no. of embryos transferred in fresh non-donor cycles changed?
- Has the no. of embryos transferred in each ART cycle changed?
- Have there been improvements in ART success rates by no. of embryos transferred?
- Has the % of multiple-infant live births changed?
- Has the % of singletons, twins and triplets or more changed for ART cycles using fresh non-donor eggs or embryos?

### **Major Competitor Profiles**

111-129

Summary: discussion of consolidation, how larger clinics are capturing greater share of the market

#### Tables:

- Ranking of top 21 IVF clinics, by no. of cycles performed: 2006, 2010, 2011, 2014, 2016
- Ranking of top 21 IVF clinics, by. no. of cycles performed and estd. revenues per clinic in 2016

Descriptions of activities, specialties, mission, revenues if available, address, for:

- Resolve
- Allan Guttmacher Institute
- Genetics and IVF Institute
- IntegraMed America, Inc.

### **Industry Reference Directory**

130-132

- \* List of adoption and fertility services industry trade groups, associations, surveys, consultants, and other sources.