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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

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**FORM 8-K**

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**CURRENT REPORT**

**Pursuant to Section 13 or 15(D)  
of the Securities Exchange Act of 1934**

**August 2, 2017**

Date of report (Date of earliest event reported)

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**Agile Therapeutics, Inc.**

(Exact name of registrant as specified in its charter)

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**Delaware**  
(State or other jurisdiction  
of incorporation)

**001-36464**  
(Commission  
File Number)

**23-2936302**  
(IRS Employer  
Identification No.)

**101 Poor Farm Road**  
**Princeton, New Jersey**  
(Address of principal executive offices)

**08540**  
(Zip Code)

Registrant's telephone number, including area code **(609) 683-1880**

(Former name or former address, if changed since last report)

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Check the appropriate box below if the Form 8-K is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425).
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12).
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b)).
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c)).

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter)

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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**Item 8.01. Other Events.**

On August 2, 2017, Agile Therapeutics, Inc. ("Agile") updated its corporate presentation that it intends to use in connection with presentations at conferences and meetings with investors.

A copy of Agile's presentation is attached hereto as Exhibit 99.1 and is hereby incorporated by reference herein.

**Item 9.01. Financial Statements and Exhibits.**

**(d) Exhibits.**

<b>Exhibit Number</b>	<b>Description</b>
99.1	Agile Therapeutics, Inc. Presentation.

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**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

**Agile Therapeutics, Inc.**

Dated: August 2, 2017

By: /s/ Alfred Altomari  
Name: Alfred Altomari  
Title: Chairman and Chief Executive Officer

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A Forward Thinking Women's Health Company  
NASDAQ: AGRX

Agile<sup>®</sup>  
THERAPEUTICS

# Forward-Looking Statement

Certain information contained in this presentation and other matters discussed today or answers that may be given in response to questions may include “forward-looking statements”. We may, in some cases, use terms such as “predicts,” “believes,” “potential,” “continue,” “estimates,” “anticipates,” “expects,” “plans,” “intends,” “may,” “could,” “might,” “will,” “should” or other words that convey uncertainty of future events or outcomes to identify these forward-looking statements.

In particular, the Company’s statements regarding trends and potential future results are examples of such forward-looking statements. The forward-looking statements are subject to important factors, risks and uncertainties, including, but not limited to, the success, timing and cost of our ongoing clinical trials and anticipated clinical trials for our current product candidates, including statements regarding the timing of initiation, enrollment and completion of the trials; the timing of and our ability to obtain and maintain U.S. Food and Drug Administration or other regulatory authority approval of, or other action with respect to our product candidates; the Company’s ability to continue as a going concern; the Company’s ability to obtain the capital necessary to fund its operations; the Company’s ability to generate revenues; the successful implementation of the Company’s research and development programs and collaborations; the acceptance by the market of the Company’s products; the Company’s ability to successfully defend its intellectual property or obtain the necessary licenses at a cost acceptable to the Company, if at all; the cost of our efforts to commercialize and promote our product candidates once they are approved; and other factors, including general economic conditions and regulatory developments, not within the Company’s control.

These factors could cause actual results and developments to be materially different from those expressed in or implied by such statements. The forward-looking statements are made only as of the date of this presentation and the Company undertakes no obligation to publicly update such forward-looking statements to reflect subsequent events or circumstance.

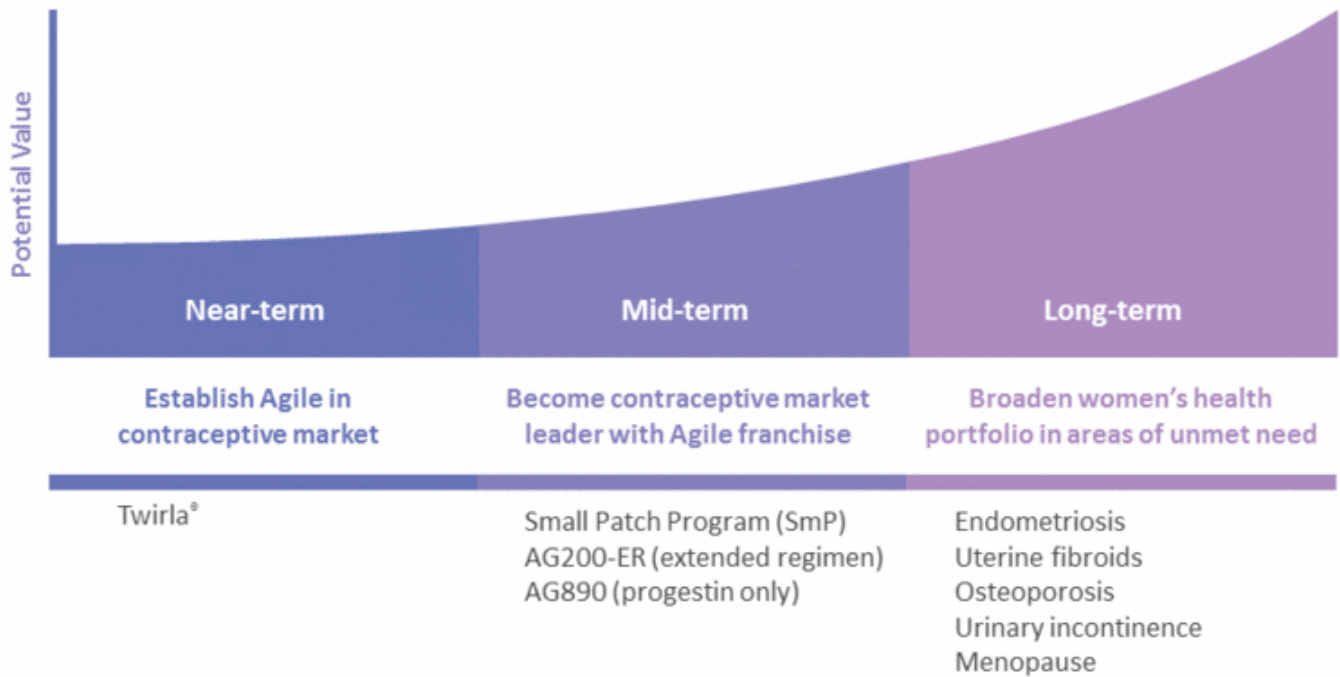
# Executive Management Team

## Deep Experience in Women's Healthcare and Contraceptive Products

<p><b>Al Altomari</b> President and Chief Executive Officer</p>	 
<p><b>Elizabeth Garner, M.D., M.P.H.</b> Sr. Vice President and Chief Medical Officer</p>	  
<p><b>Renee Selman</b> Chief Commercial Officer</p>	   
<p><b>Scott Coiante</b> Vice President and Chief Financial Officer</p>	 
<div style="display: flex; justify-content: space-around; align-items: center;">   </div>	

59 TriCyclen and Evra are registered trademarks of Johnson & Johnson, Inc.

# Corporate Strategy: Become a Leader in Women's Health

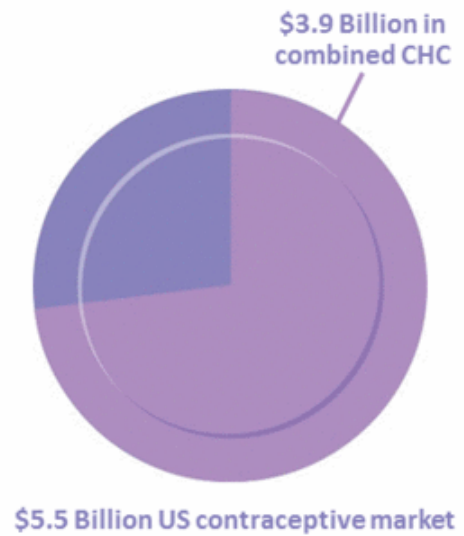


# Corporate Overview

## Agile is Building a Robust Women's Health Franchise

### Significant Near-Term Market Opportunity

- ~\$5.5 Billion US contraceptive market in 2016, with \$3.9 Billion in combined hormonal contraceptives (CHC)
- Lead product candidate is Twirla®
- NDA resubmission occurred on June 26, 2017
- Twirla expected to be the first non-oral CHC brand\* introduced in over 15 years and is designed to be an improvement on the currently available contraceptive patch



## Agile is Well-Positioned for Successful Twirla Market Entry

3.9 \*Brand is defined as products approved under an NDA, Source: IMS NSP and NPA through Dec 2016

# Twirla<sup>®</sup> is our Lead Product Candidate

## Twirla is a once-weekly contraceptive patch

- Designed to deliver a low daily dose of estrogen, comparable to a low dose oral contraceptive
- Only one other contraceptive patch is available in the US, and delivers a higher dose of estrogen

## Women want alternatives to a daily birth control pill

- Chief complaint is fitting daily pills into their busy lifestyles
- Women frequently forget to take their pill (1-4x per month)

Positive Topline Phase 3 Clinical Trial Data  
Announced January 2017

NDA re-submitted to FDA June 26, 2017  
Accepted by FDA July 27, 2017

PDUFA Goal Date December 26, 2017





## Favorable Safety and Tolerability Profile for Twirla in the SECURE Trial

Low rates of hormone-related adverse events, consistent with publicly available information for other low-dose combined hormonal products:

Adverse Event*	SECURE Trial	Prior Agile Phase 3 Trials	Ortho Evra Trials*	Quartette Trial*
Total in Safety Population	2031	1043	3322	3597
Headache	4.5%	3.7%	21.0%	12.2%
Nausea	4.1%	4.3%	16.6%	6.7%
Breast tenderness/pain/discomfort	2.0%	1.8%	22.4%	2.2%
Mood swings/changes/depression	2.7%	2.8%	6.3%	2.9%
Heavy/irregular vaginal bleeding**	2.6%	2.1%	6.4%	9.7%

\*\*2.2% of subjects in the SECURE trial discontinued due to a bleeding-related adverse event

- Overall serious adverse events (SAEs) were observed in 1.97% of the SECURE trial study population; generally in line with those observed in other low-dose combined hormonal products\* (rate in Quartette trial = 1.6%); 0.7% of subjects had SAEs that were considered potentially study drug related, including deep vein thrombosis (DVT), pulmonary embolism (PE), gallbladder disease, ectopic pregnancy, and depression
- In the combined safety database for Agile Phase 3 trials (n >3,000), there were 5 subjects with potentially study drug related DVTs or PEs, 4 of whom were obese (BMI >30kg/m<sup>2</sup>)

\*Information is based on currently marketed product labels and publicly available information; adverse event (AE) terms utilized in table (except nausea) represent composites of relevant specific AE preferred terms. Different terminology may be used in product labels and reports. We have not performed a head-to-head comparison of Twirla to Ortho Evra or Quartette.

**Agile**  
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# SECURE Achieved a Lower Loss to Follow-Up Rate

Loss to follow-up rate substantially reduced compared to prior Agile Phase 3 trial, and in line with other contraceptive trials

Metric	SECURE		Agile Prior Phase 3*		Quartette†	
	n	%	n	%	n	%
Enrolled	2032	100.0	1129	100.0	3597	100.0
Discontinued**	1042	51.3	644	57.0	1453	40.4
Lost to Follow-up	229	11.3	229	20.3	480	13.3
Completed	989	48.7	485	43.0	2144	59.6

\*\*Main reasons for subject discontinuation from SECURE trial: subject decision, adverse event, loss to follow-up

- Discontinuation rate and reasons for discontinuation were in line with other Phase 3 clinical trials for approved hormonal contraceptives, for example: Seasonique (51.5%), Lybrel (56.8%), Natazia (48%)†

\*Includes only subjects originally randomized to patch arm in the larger Phase 3 trial

†Information is based on currently marketed product labels and publicly available information for Quartette, Seasonique, Lybrel, and Natazia. We have not performed a head-to-head comparison of Twirla to these products.

# Positive Evidence of Efficacy in a Real-World Population

A tight confidence interval was achieved on the overall results:

Population (ITT)	Pearl Index	UB 95% CI
≤ 35 years of age	4.80	6.06

An effect of obesity was observed:

\*Reflective of Historical CHC Trial Populations

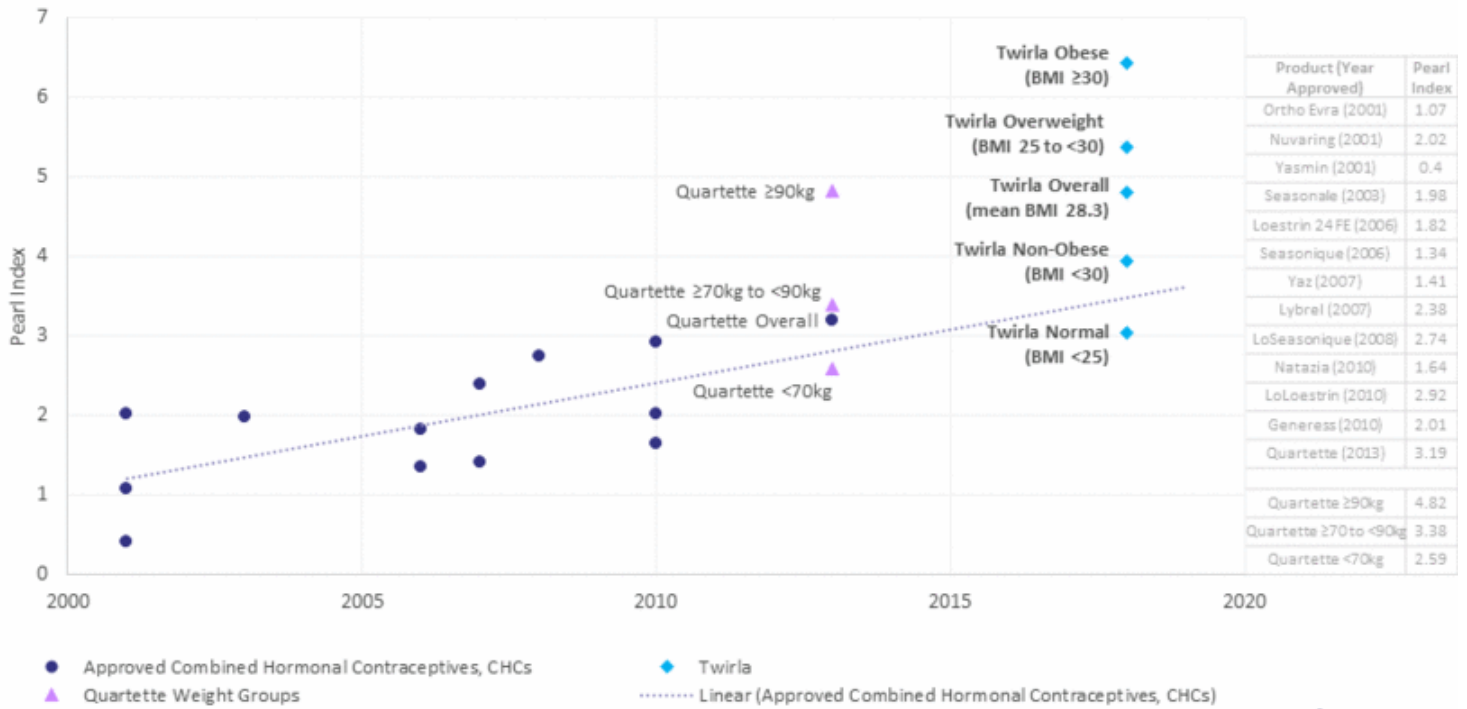
BMI Category	BMI (kg/m <sup>2</sup> )	% of Study Population	Pearl Index	UB 95% CI
Normal*	< 25	39%	3.03	4.62
Overweight	≥ 25 - < 30	25%	5.36	7.98
Obese	≥ 30	35%	6.42	8.88
Non-Obese*	< 30	65%	3.94	5.35
Obese	≥ 30	35%	6.42	8.88

ITT = Intent to Treat; all results shown are based on ITT subjects ≤ 35 years of age

UB 95% CI = upper bound of the 95% confidence interval

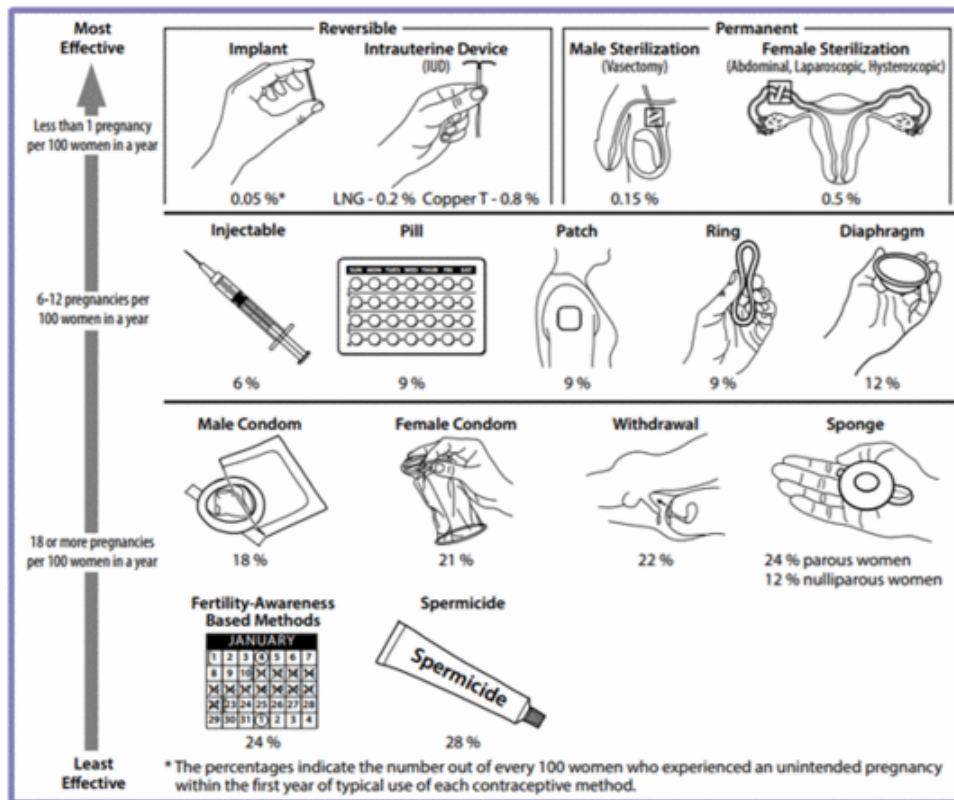
# Observable Trend in Pearl Indices for Approved Combined Hormonal Contraceptives (CHCs)

## Historical Pearl Indices for CHCs Approved Since 2000 and the Pearl Indices Observed in the SECURE Trial



5.9 Sources: Trussell, et al., *The Creeping Pearl* (2013), currently marketed product labels, and publicly available information

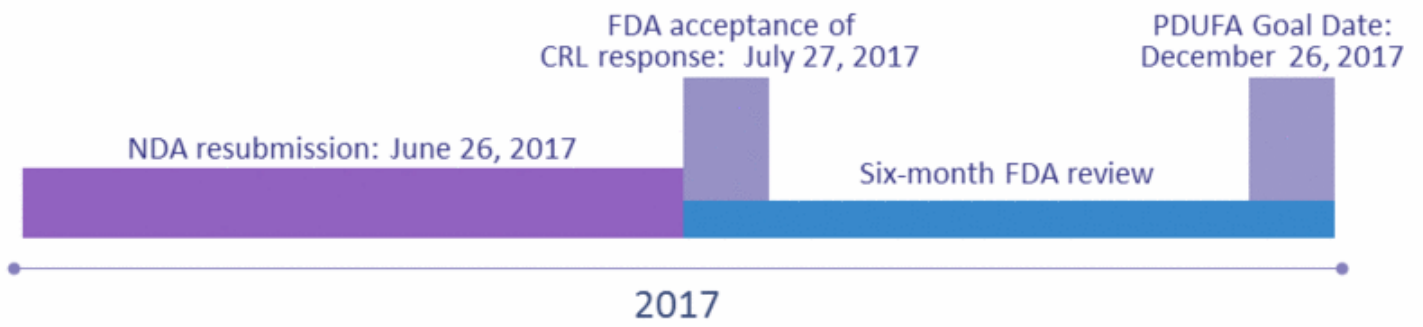
# FDA-Approved Contraceptive Methods Offer a Range of Effectiveness



33 Source: CDC Effectiveness of Family Planning Methods Chart

# Potential for Approval By End of 2017

We are proud of the SECURE Trial and look forward to working with the FDA during their review



# Why Women Would Use Twirla®



- Expected to be the only low-dose contraceptive patch, delivering ~30µg/day EE
- Don't have to remember it every day
- Less invasive than some methods (vaginal ring, IUDs, injectables, implants)

## Pill Regimen: Once a day

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

## Patch Regimen: Once a week

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

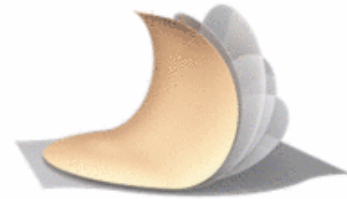
7 days no patch

5.9 Source: Qualitative and quantitative consumer research, RG&A 2012. Data on File, Agile Therapeutics

# Designed for Aesthetic Appeal and the Flexibility to Choose

## Proprietary Skinfusion® technology is designed to:

- minimize adhesive breakdown that causes “black ring”
- improve 7-day adhesion



## Women can choose where to apply the patch:

Buttock 48%



Abdomen 40%

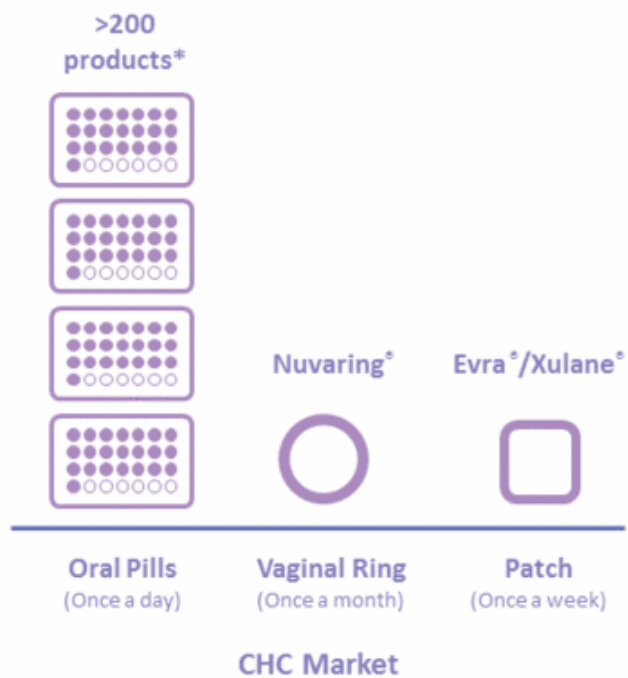


Upper Torso 12%





# Non-Oral CHC Forms Have Appeal For the Market



Non-oral CHCs have reached significant peak market shares

- Evra 11.1% (in 2005)
- Nuvaring 6.6% (in 2014)

The current market leader is a non-oral product

- Nuvaring annual sales for 2016 \$786 Million

The most successful contraceptive launch was a non-oral product

- Evra reached 10% TRx share 18 months after 2002 launch

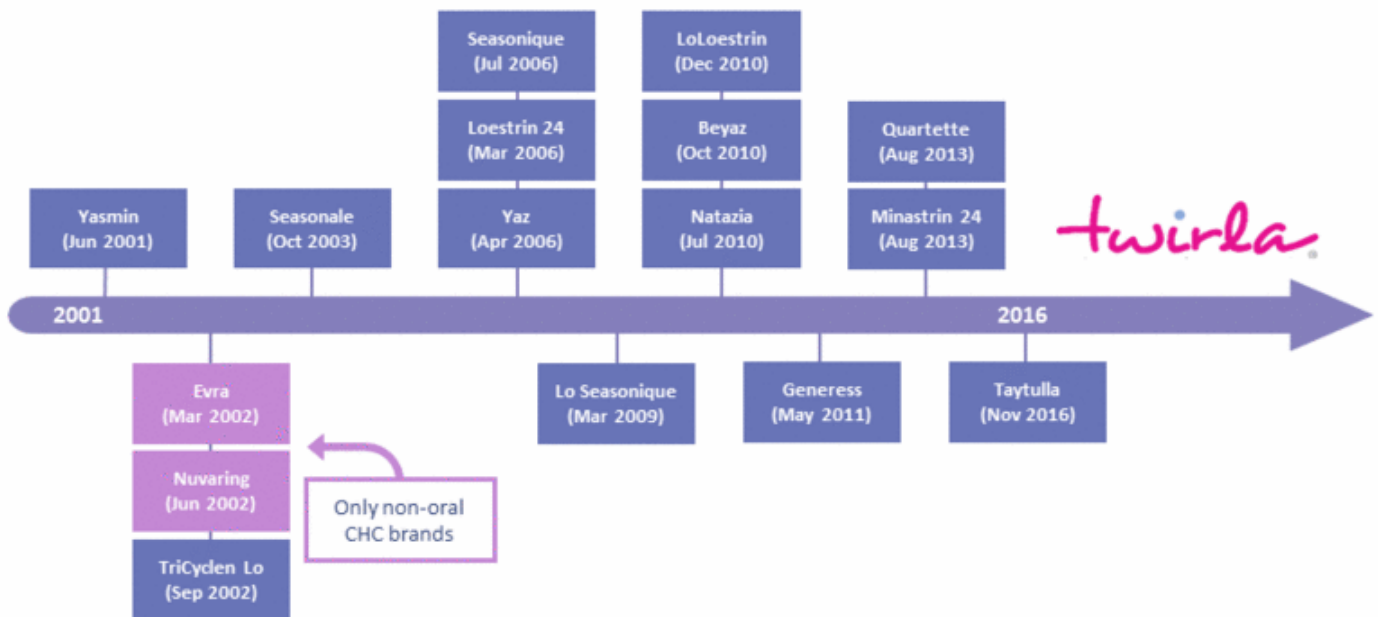
\*includes brands and generic products (brands defined as products approved under an NDA, generics approved under an ANDA)

Source: IMS NPA and NSP, through Dec 2016

Evra is a registered trademark of Johnson & Johnson, Inc.; Xulane is a registered trademark of Mylan, Inc.;

5.9 Nuvaring is a registered trademark of Merck & Co., Inc.

# There is a Market Need for New Non-Oral CHC Options

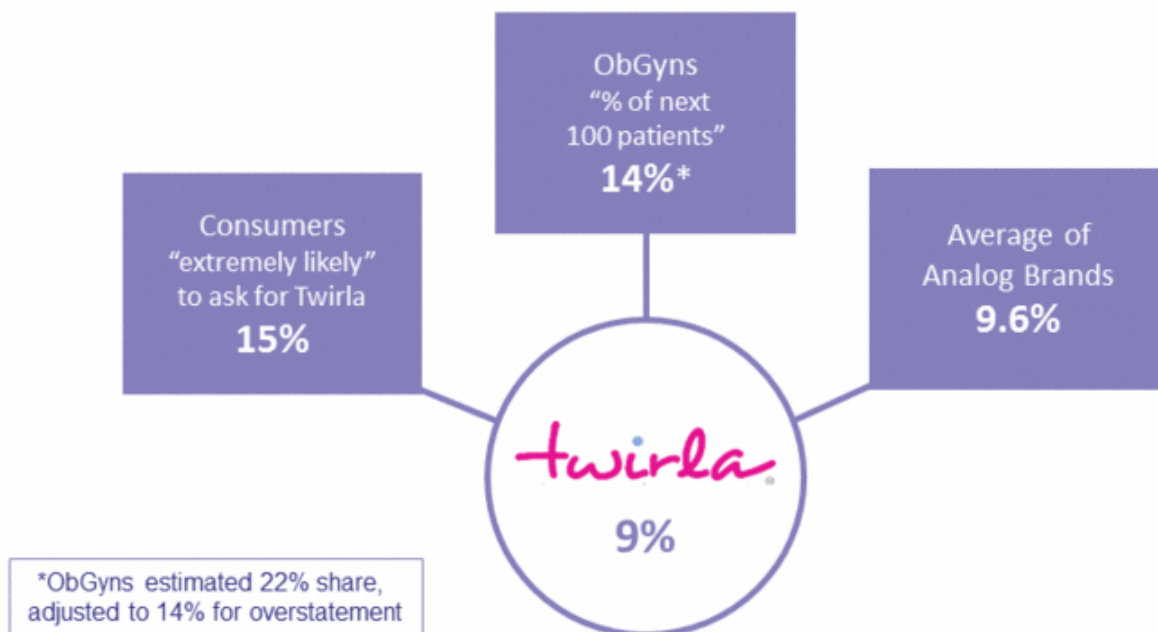


TriCyclen and Evra are registered trademarks of Johnson & Johnson, Inc.; Nuvaring is a registered trademark of Merck & Co., Inc.; Yasmin, Yaz, Beyaz and Natazia are registered trademarks of Bayer; Loestrin, Generess, Minastrin, and Taytulla are registered trademarks of Allergan, Inc.; Seasonale, Seasonique and Quartette are registered trademarks of Teva Pharmaceuticals USA, Inc.

3.9 Source: IMS NPA 2000-2016

# Twirla<sup>®</sup> Peak Share Estimate Rationale

Based on Consumer & Physician Market Research and Market Analogs



# Twirla® Marketing Plan is a 3-Pronged Approach

## Managed Care

- Potentially favorable Managed Care environment for Twirla®, with or without the Affordable Care Act (ACA) Contraceptive Mandate

## ObGyn/NP Specialty Market

- Specialty market allows for an estimated sales force of only 70-100 reps
- Access to ObGyns is high – among the lowest “no-see” rate of all specialties
- Lack of introductions of new CHC brands means opportunity for Twirla® to have high share of voice

## Targeted Consumer Segment

- Consumers have active role in product choice
- Twirla target demographic responds to digital marketing
- Women want contraception that is easy to use, non-daily, and less invasive

*“...the ACA has affected my ability to prescribe a broader range of contraceptives...affordability has changed everything. The patient truly has choice now.”*

*– Nurse Practitioner  
October 2016*

*“I am happy to see [Twirla]! It’s time another patch came to the market.”*

*– OB/GYN  
October 2016*

*“I want to eliminate the forgetfulness... but I don’t want to lose that control either.”*

*– Consumer  
October 2016*

# Financial Profile

## Balance Sheet Data

- \$33.9 Million cash on hand at June 30, 2017
- 28.8 Million common shares outstanding at July 27, 2017

## Background and Recent Financings

- Initial Public Offering (May 2014)
  - \$55.0 Million gross proceeds (~\$49.7 Million net proceeds)
- Private Placement (January 2015)
  - \$20.0 Million gross proceeds (~\$19.3 Million net proceeds)
- Debt Facility of up to \$25.0 Million (Hercules Capital) (February 2015)
  - \$16.5 Million funded at loan closing (primarily to repay prior debt)
- Follow-on Public Offering (February 2016)
  - \$40.25 Million gross proceeds (~\$37.5 Million net proceeds)
- Additional capital required to launch Twirla, if approved, and advance development of additional product candidates

# Corporate Summary

## Recent Updates

- Positive top-line data announced January 2017
- Pre-NDA Submission Meeting, March 2017
- NDA resubmitted on June 26, 2017
- FDA acceptance of CRL Response received on July 27, 2017
- PDUFA Goal Date established as December 26, 2017
- Recently completed presentations on SECURE trial data (filed on Form 8K)

Contraceptive Technology - Poster

Congress on Women's Health - Presentation

ACOG Annual Meeting - Poster

March 15-18, Boston & March 29- April 1 San Francisco

April 28-30, Washington D.C.

May 6-9, San Francisco, CA

## Looking Forward

- Phase 3 asset in multi-billion dollar market
- Twirla<sup>®</sup> expected to be the first low-dose alternative to an oral CHC introduced in over 15 years
- Planning for commercialization
- Exciting pipeline opportunities

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The logo for Agile Therapeutics is centered on a background of a blue and purple gradient. The word "Agile" is written in a large, white, sans-serif font, with a registered trademark symbol (®) to its upper right. Below "Agile", the word "THERAPEUTICS" is written in a smaller, white, all-caps, sans-serif font.

Agile®  
THERAPEUTICS

## Agile Position

Championing the healthcare choices women deserve.


Agile is a forward-thinking women's healthcare company dedicated to fulfilling the unmet health needs of today's women.

## Agile Values

- Authentic listening and building trust to better understand and anticipate women's health and wellness needs
- Passionate determination to design and deliver inspiring and relevant women's healthcare solutions like no one else
- Innovative business practices that enable more efficient and effective customer experiences and partnerships



# Corporate Strategy (Short term & Midterm): Establish a Market-Leading Contraceptive Franchise

Contraceptive Pipeline							
Product		Indication	Preclinical	Phase 1	Phase 2	Phase 3	Status
		Contraception (21/7 cycle)	[Progress bar: Preclinical, Phase 1, Phase 2, Phase 3]				<ul style="list-style-type: none"> <li>Phase 3 clinical trial top-line data announced Jan 2017</li> </ul>
Small Patch (SmP) Program	AG200-SP (SmP)	Contraception (shorter, lighter periods)	[Progress bar: Preclinical, Phase 1]				<ul style="list-style-type: none"> <li>Initial Phase 2 trial of AG200-SP (SmP) preparations delayed</li> <li>Timing for initiation of dosing under evaluation</li> <li>Additional design and planning may be required based on outcome of initial Phase 2 clinical trial of SmP program</li> </ul>
	AG200-ER (SmP)	Contraception (extended cycle)	[Progress bar: Preclinical, Phase 1]				
AG200-ER		Contraception (extended cycle)	[Progress bar: Preclinical, Phase 1]				<ul style="list-style-type: none"> <li>Additional design and planning may be required</li> </ul>
AG890		Contraception (Progestin-only)	[Progress bar: Preclinical, Phase 1, Phase 2]				<ul style="list-style-type: none"> <li>Phase 2 PK/PD trial complete*</li> <li>Additional product and clinical development may be required to advance into Phase 3</li> </ul>

5.9 \*Data analysis from Phase 2 trial is under evaluation

# Pipeline: Offering More Options For Women



Patch Regimen: Once a week



## Small Patch (SmP) product candidates in development

### AG200-SP



#### AG200-SP: 4-week regimen

- Designed for shorter, lighter periods
- Small patch (SmP) is a smaller, lower dose LNG/EE patch worn in the 4<sup>th</sup> week of a cycle

Recent research suggests AG200-SP could expand Agile potential share of CHC market when introduced after Twirla

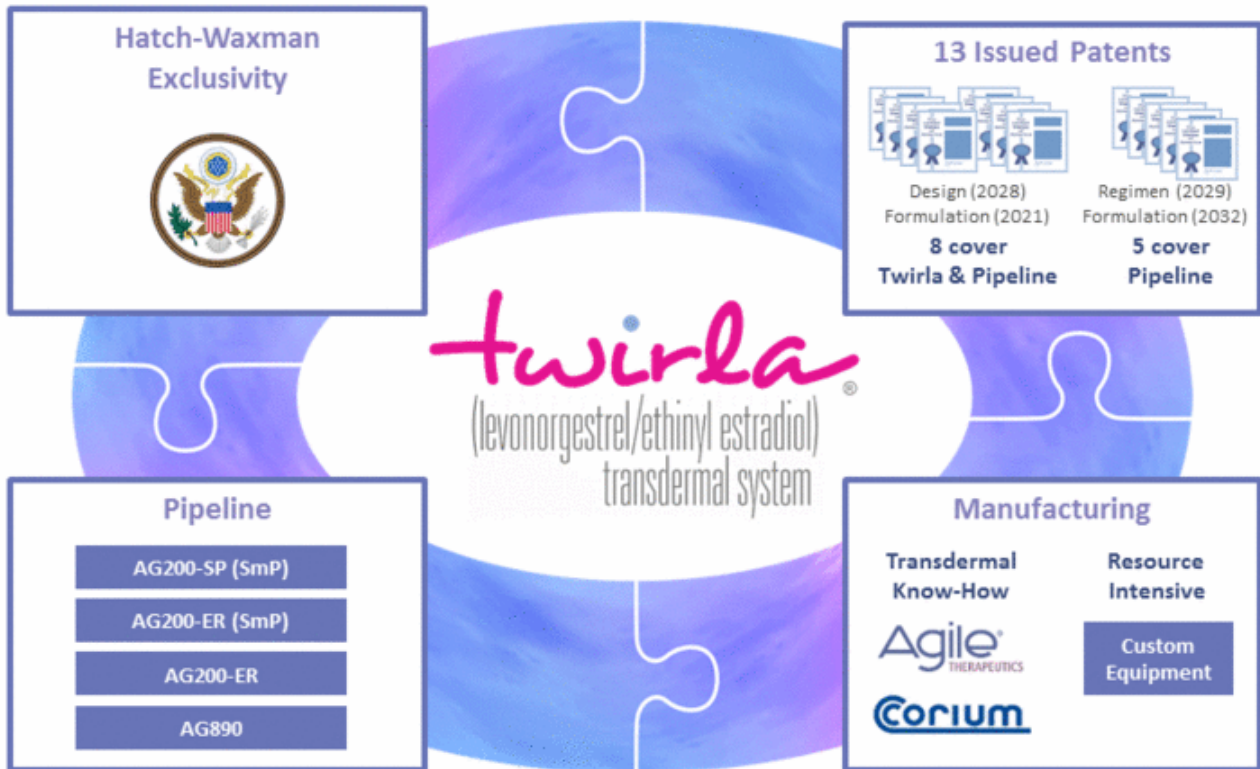
### AG200-ER



#### AG200-ER: 8-week extended cycle regimen

- Designed for fewer periods a year
- Small patch (SmP) worn in 8<sup>th</sup> week

# Intellectual Property Strategies For the U.S. Franchise



# The CRL Expressed a Clear Rationale for a New Study

## CRL Focused on 2 Key Elements:

- **Improved study conduct**
  - Reduced loss to follow-up rate compared to previous Phase 3 trials
  - Support subject compliance and overall retention
  
- **Demonstration of acceptable efficacy in a representative population**
  - “An acceptable Pearl Index and upper bound of the 95% confidence interval”
  - “A representative sample of women in the U.S. who are seeking hormonal contraception”
  - “A sufficiently large and diverse population so that efficacy can be assessed in subgroups”

Quotes sourced from FDA correspondence

CRL = Complete Response Letter; FDA = Food & Drug Administration

# The SECURE Trial Was Designed to Assess the Efficacy and Safety of Twirla® in a Real-World Population

Rigorous trial design was focused on key elements of the CRL

- Multicenter, single-arm, open-label 13-cycle trial at 102 experienced U.S. clinical sites
  - ~ 2,000 healthy subjects aged  $\geq 18$  treated with laser-etched patches
- Representative sample of women seeking hormonal contraception
  - No exclusions for BMI/weight
- Stringent Trial Design
  - Frequent pregnancy testing
  - Exclusion of cycles for BOTH use of back-up contraception and lack of sexual activity
- Analysis
  - Efficacy measure was Pearl Index in an ITT population of subjects 35 years of age and under
  - Prespecified analysis related to BMI and body weight

CRL = Complete Response Letter; ITT = Intent to Treat

3.9

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## Demographics Reflect the Broad Entry Criteria of the SECURE Trial

Study	SECURE	Ortho Evra Trials	Quartette Trial
<b>Age</b>			
Mean age	28 years	28 years	27 years
≤ 35 years	90%	83%	90%
> 35	10%	17%	10%
<b>Body Mass Index</b>			
Mean BMI*	28.3 kg/m <sup>2</sup>	23.6 kg/m <sup>2</sup>	27.4 kg/m <sup>2</sup>
< 25 (normal)	39%	Not available	47%
25 - < 30 (overweight)	25%		25%
≥ 30 (obese)	35%		28%
<b>Race</b>			
White	67%	91%	64%
Black	24%	5%	19%
Asian	3%	2%	2%
Other	6%	2%	14%
<b>Ethnicity</b>			
Hispanic	20%	Not available	11%
Non-Hispanic	80%		89%
<b>Hormonal Contraception Use</b>			
Current user	35%	Not available	44%
Recent user	13%		39%
Former user	43%		17%
New user	9%		

\*Based on CDC BMI categories

Information is based on currently marketed Ortho Evra and Quartette product labels and publicly available information. We have not performed a head-to-head comparison of Twirla to Ortho Evra or Quartette.

5.9

Percentages in table are rounded to nearest integer; may not add up to 100%

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# Twirla® Had a Favorable Wearability Profile in the SECURE Trial

Rates of patch-site irritation, itching, and patch detachment were low

- Of reported patches worn, 82% had no patch site irritation and 65% had no itching
  - If reported, most irritation and itching was mild
  - Overall, severe itching or irritation were observed in approximately 2.3% and 1.5% of patches worn
- Of reported patches worn, the rate of detachments ranged from 10% in Cycle 1 to 2% in Cycle 13

# The NDA Resubmission is Expected to Address the Clinical CRL Questions

We believe we submitted a robust data package that more clearly defines the risk/benefit profile for Twirla:

- **Substantially improved study conduct**
  - Lower discontinuation rate compared to previous Phase 3 trial; rate and reasons for discontinuation in line with other Phase 3 clinical trials for approved hormonal contraceptives\*
  - Lower loss to follow up rate (11.3%) compared to previous Phase 3 trial (20.3%)
  - Greater confidence in the reliability of the results based on improved loss to follow-up rate and focus on data quality
  
- **Study population reflects the broad entry criteria for the trial**
  - Allowed for efficacy to be assessed across different groups
  - No restrictions on BMI (unlike historical contraceptive trials)
  
- **Evidence of efficacy and safety**
  - Positive evidence of efficacy observed in a real-world study population
  - Favorable safety profile; rates of adverse events consistent with publicly available information for other low-dose combined hormonal products

5.9 \*Information is based on publicly available information.



# Summary of Recommendations from the 2007 FDA Advisory Committee Meeting on Contraceptive Trial Design

- Entry criteria should be more reflective of real-world prescribing regarding BMI, smoking, VTE family history
  - Subgroup analyses could be performed to assess efficacy
- Arbitrary limits for the UB of the 95% CI should be avoided in order to promote the widest range of new contraceptive products being developed and brought to market
- Substantial flexibility should be exercised in accepting given point estimates and UB of CI
- Provide all the information to the clinician and patient in an easily understandable format in labeling and let them make the final decision on which product is most appropriate
- Phase 4 trials may be used to obtain better estimates of true “actual use” effectiveness
- Product labeling should be modified to include pregnancy rates or safety data for subgroups when available

Source: 2007 FDA Advisory Committee for Reproductive Health Drugs, Summary of Recommendations  
<http://www.fda.gov/ohrms/dockets/ac/07/minutes/2007-4274m1.pdf>

## Approved Hormonal Contraceptive Products Had Higher Pearl Indices When Used As Comparators in Later Studies

Product	Trial	Year	Mean Weight/BMI	Pearl Index	UB 95% CI
Loestrin Fe 1/20	Original U.S. Registration	1973	Not available	0.75	Not available
	Ortho Tri-Cyclen Lo Phase 3	2002	23.6 kg/m <sup>2*</sup>	3.80	
	Loestrin 24 Fe U.S. Phase 3	2006	68.2 kg	3.67	13.20
Levlite	Original German Registration	1998	62.7 kg	0.29	0.91 <sup>†</sup>
	Original U.S. Registration	1998	63.0 kg	1.08	2.34 <sup>†</sup>
	Seasonale Phase 3	2003	69.7 kg	3.75	8.60
Nordette	Original U.S. Registration	1982	Not available	0.48	1.04 <sup>†</sup>
	Seasonale Phase 3	2003	71.0 kg	2.22	6.38
	Seasonique Phase 3	2006	71.8 kg	4.40	Not available

Sourced from publicly available NDA Reviews

\*Mean weight not available

<sup>†</sup>Calculated based on cycle and pregnancy data in NDA review

# Contraceptive Trials Have Historically Excluded Obese Women

Product	BMI/Weight Effect Observed	Trial Exclusions for BMI/Weight
Twirla 2017*	YES	No exclusions for BMI/weight
Quartette 2013	YES	No exclusions for BMI/weight
<b>Agile 2013 FDA CRL</b>		
Minastrin 2013	No	BMI > 35 kg/m <sup>2</sup> excluded from trials
Generess 2011	YES	
LoLoestrin Fe 2010	No	BMI > 30 kg/m <sup>2</sup> excluded from trials
Natazia 2010	No	
LoSeasonique 2008	No	No exclusions for BMI/weight
Lybrel 2007	No	No exclusions for BMI/weight
<b>2007 FDA Advisory Committee for Reproductive Health Drugs</b>		
Loestrin 24 Fe 2006	No	BMI > 35 kg/m <sup>2</sup> excluded from trials
Seasonique 2006	No	No exclusions for BMI/weight
Yaz 2006	No	BMI > 35 kg/m <sup>2</sup> excluded from trials
Seasonale 2003	No	No exclusions for BMI/weight
Ortho TriCyclen Lo 2002	No	Subjects were to be "within 35% of acceptable BMI"
Ortho Evra 2001	YES	Subjects were to be of "acceptable BMI"
Nuvaring 2001	No	BMI > 30 kg/m <sup>2</sup> excluded from trials
Yasmin 2001	No	Subjects were to be "within 25% of ideal body weight"

\*Candidate product

BMI = Body Mass Index; CRL = Complete Response Letter  
Information from publicly available information in NDA reviews and product labels

# FDA Meta-Analysis on the Effect of Obesity on HC Effectiveness

The Division requested weight/BMI-based analyses  
for the Agile SECURE trial

- FDA authors called for more data in obese women from Phase 3 clinical trials after an FDA meta-analysis showed an effect of obesity on hormonal contraceptive effectiveness.
- Publication suggests 44% increased risk of pregnancy during CHC use in obese compared to non-obese women

an international reproductive health journal  
**Contraception**

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Original research article

**Effect of obesity on the effectiveness of hormonal contraceptives:  
an individual participant data meta-analysis**

Michiyo Yamazaki<sup>a</sup>, Kate Dwyer<sup>b</sup>, Mahboob Sobhan<sup>b</sup>, Daniel Davis<sup>c</sup>, Myong-Jin Kim<sup>a</sup>,  
Lisa Soule<sup>c</sup>, Gerald Willett<sup>c</sup>, Chongwoo Yu<sup>a,\*</sup>



















<sup>a</sup>Division of Clinical Pharmacology 3, Office of Clinical Pharmacology, Office of Translational Sciences (OTS), Center of Drug Evaluation and Research (CDER), US Food and Drug Administration (FDA), Silver Spring, MD, USA  
<sup>b</sup>Division of Biostatistics 3, Office of Biostatistics, OTS, CDER, FDA, Silver Spring, MD, USA  
<sup>c</sup>Division of Bone, Reproductive, and Urologic Products, Office of New Drugs, CDER, FDA, Silver Spring, MD, USA

Received 20 August 2014; revised 27 July 2015; accepted 31 July 2015

# Healthcare Providers Focus on Typical Use Contraceptive Effectiveness

## BIRTH CONTROL GUIDE

If you do not want to get pregnant, there are many birth control options to choose from. No one product is best for everyone. Some methods are more effective than others at preventing pregnancy. Check the pregnancy rates on this chart to get an idea of how effective the product is at preventing pregnancy. The pregnancy rates tell you the number of pregnancies expected per 100 women during the first year of typical use. Typical use shows how effective the different methods are during actual use (including sometimes using a method in a way that is not correct or not consistent). The only sure way to avoid pregnancy is not to have any sexual contact. Talk to your healthcare provider about the best method for you.

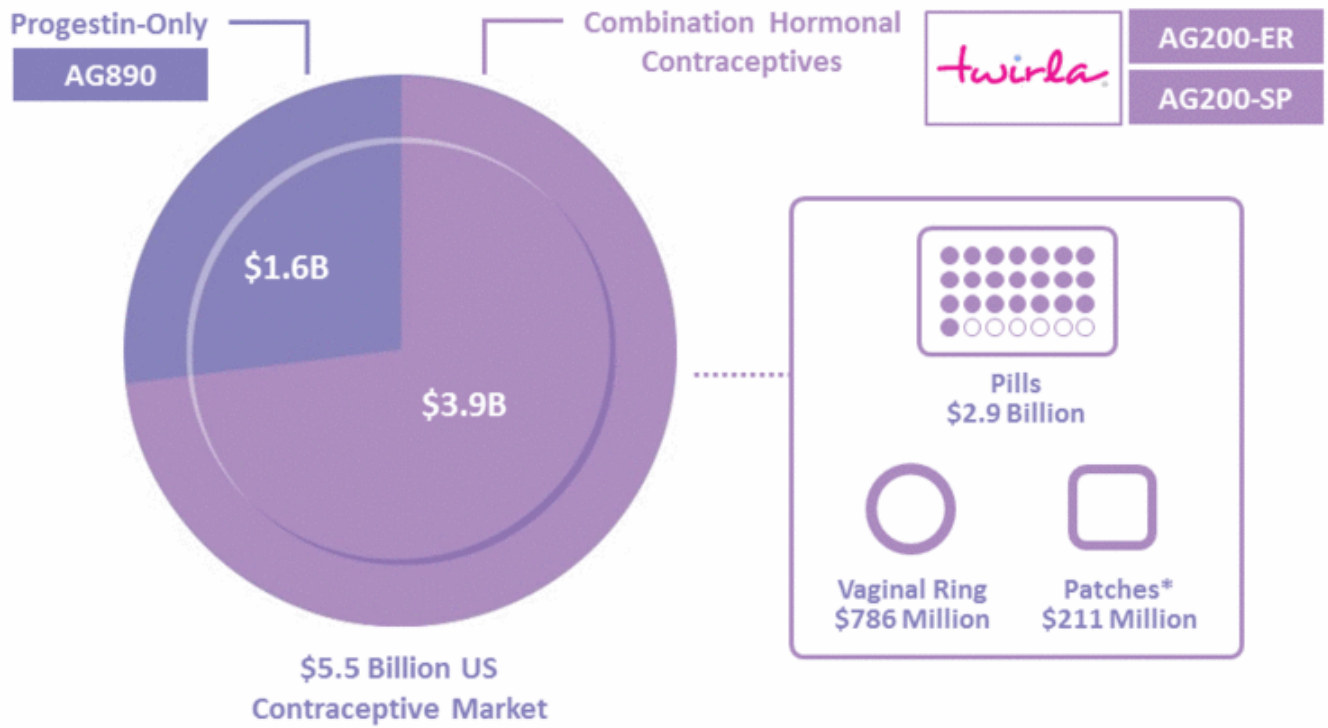
FDA-Approved Methods	Number of pregnancies expected (per 100 Women)*	Use	Some Risks or Side Effects*
 Sterilization Surgery for Women	Less than 1	One-time procedure. Permanent.	Pain Bleeding infection or other complications after surgery
 Sterilization Implant for Women	Less than 1	One-time procedure. Permanent.	Pain/cramping Pelvic or back discomfort Vaginal bleeding
 Sterilization Surgery for Men	Less than 1	One-time procedure. Permanent.	Pain Bleeding infection
 IUD Copper	Less than 1	Inserted by a healthcare provider. Lets up to 10 years.	Cramps Heavier, longer periods Spotting between periods
 IUD with Progestin	Less than 1	Inserted by a healthcare provider. Lets up to 3-5 years, depending on the type.	Irregular bleeding No periods (amenorrhea) Abdominal/pelvic pain
 Implantable Rod	Less than 1	Inserted by a healthcare provider. Lets up to 3 years.	Menstrual Changes Weight gain Acne Mood swings or depressed mood Headache
 Shot/Injection	6	Need a shot every 3 months.	Loss of bone density Irregular bleeding/ Bleeding between periods Headaches Weight gain Nervousness Dizziness Abdominal discomfort
 Oral Contraceptives "The Pill" (Combined Pill)	9	Must swallow a pill every day.	Spotting/ bleeding between periods Nausea Breast tenderness Headache
 Oral Contraceptives "The Pill" (Extended/Continuous Use Combined Pill)	9	Must swallow a pill every day.	Spotting/ bleeding between periods Nausea Breast tenderness Headache
 Oral Contraceptives "The Mini Pill" (Progestin Only)	9	Must swallow a pill at the same time every day.	Spotting/ bleeding between periods Nausea Breast tenderness Headache
 Patch	9	Put on a new patch each week for 3 weeks (21 total days). Don't put on a patch during the fourth week.	Spotting or bleeding between menstrual periods Nausea Breast tenderness Headache Stomach pain Skin irritation
 Vaginal Contraceptive Ring	9	Put the ring into the vagina yourself. Keep the ring in your vagina for 3 weeks and then take it out for one week.	Vaginal discharge, discomfort in the vagina, and mild irritation. Headache Nausea Mood changes Breast tenderness
 Diaphragm with Spermicide	12	Must use every time you have sex.	Irritation Allergic reactions Urinary tract infection
 Sponge with Spermicide	12-24	Must use every time you have sex.	Irritation
 Cervical Cap with Spermicide	17-23	Must use every time you have sex.	Irritation Allergic reactions Abnormal Pap test
 Male Condom	18	Must use every time you have sex. Provides protection against some STDs.	Irritation Allergic reactions
 Female Condom	21	Must use every time you have sex. Provides protection against some STDs.	Discomfort or pain during insertion or sex. Burning sensation, rash or itching
 Spermicide Alone	28	Must use every time you have sex.	Irritation Allergic reactions Urinary tract infection

Most Effective

Least Effective

If approved, we expect Twirla to be included with other Tier 2 methods

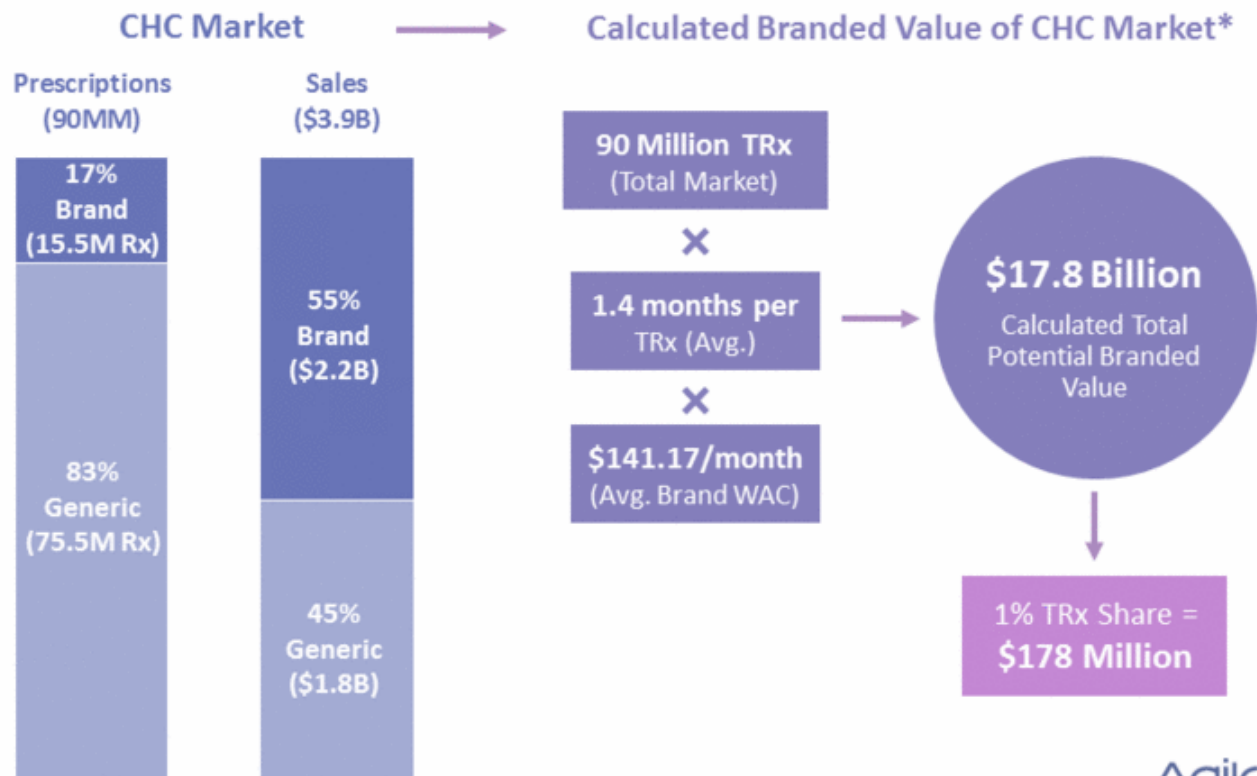
# US Hormonal Contraceptive Market is a Significant Opportunity



\*Patches includes sales of both Evra and Xulane

Source: IMS NSP, retail + non-retail through Dec 2016

# US Branded Combined Hormonal Contraceptives (CHC) Have High Potential Market Value

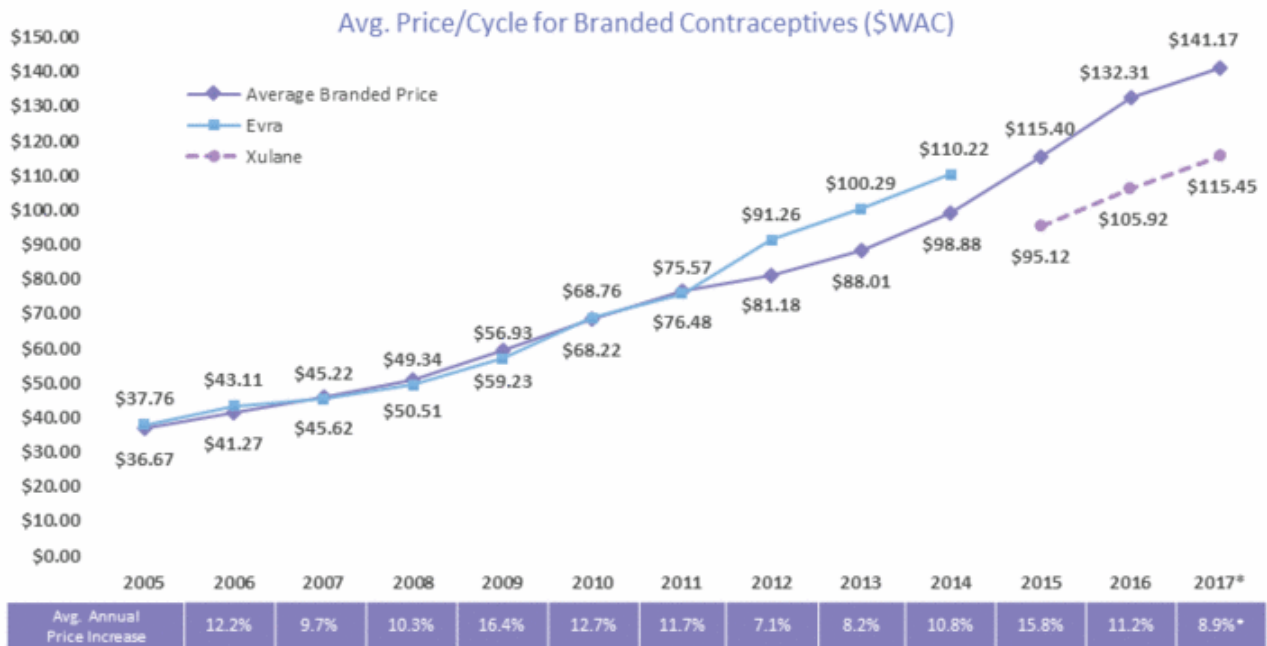


\*Market value if all prescriptions were branded, to demonstrate value of 1% TRx share of a brand

Sources: IMS NPA Dec 2016 and MediSpan Price Rx Select, July 2017

# Branded Contraceptives Continue to Take Consistent Price Increases

The current highest WAC for a branded combination contraceptive is \$181.83



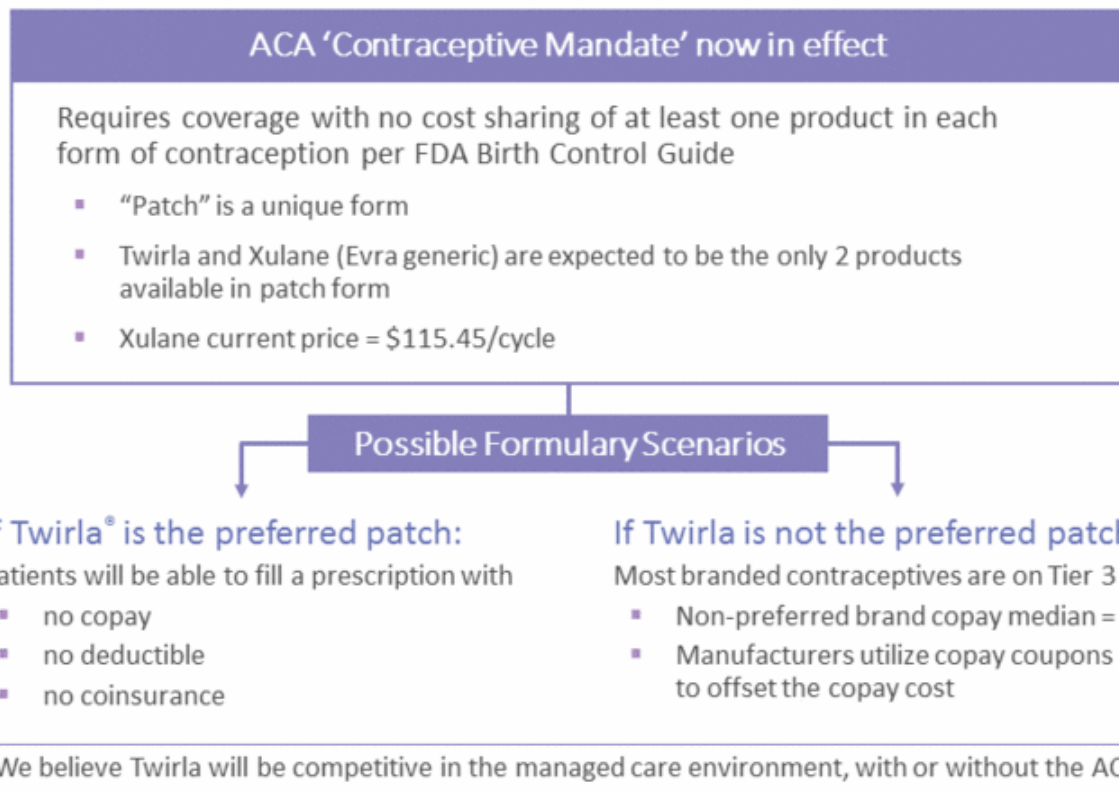
\*Data reflects the year through July 1, 2017

Source: MediSpan Price Rx Select, prices as of July 1, 2017.

3.9 Avg. Price/cycle calculation includes 14 leading branded contraceptive products.



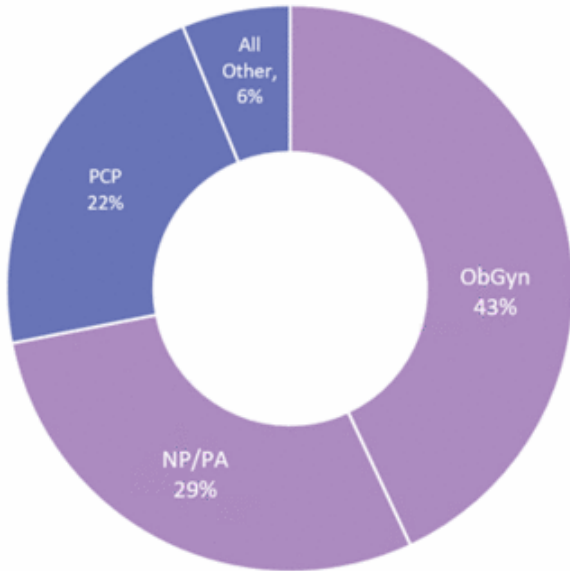
# We Believe Managed Care Environment is Favorable For a New Contraceptive Patch



# ObGyns and Nurse Practitioners are the Key Contraceptive Prescribers

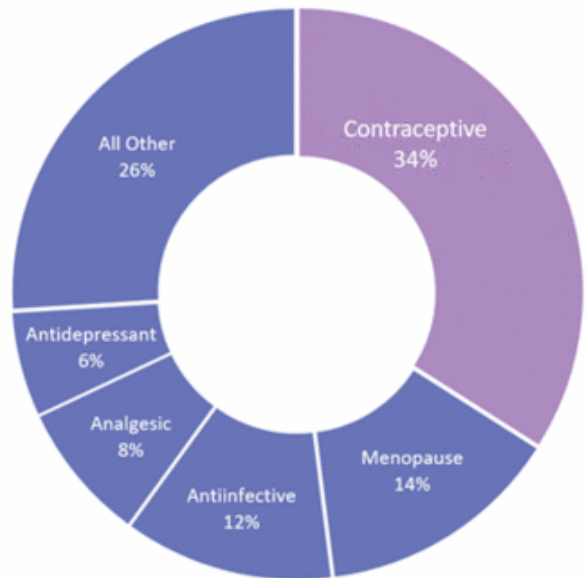
Over 70% of US Contraceptive TRx are Written by ObGyns/NPs/PAs

CHC Prescriptions by Prescriber Type



ObGyns Prescribe Contraceptives More than Any Other Therapy

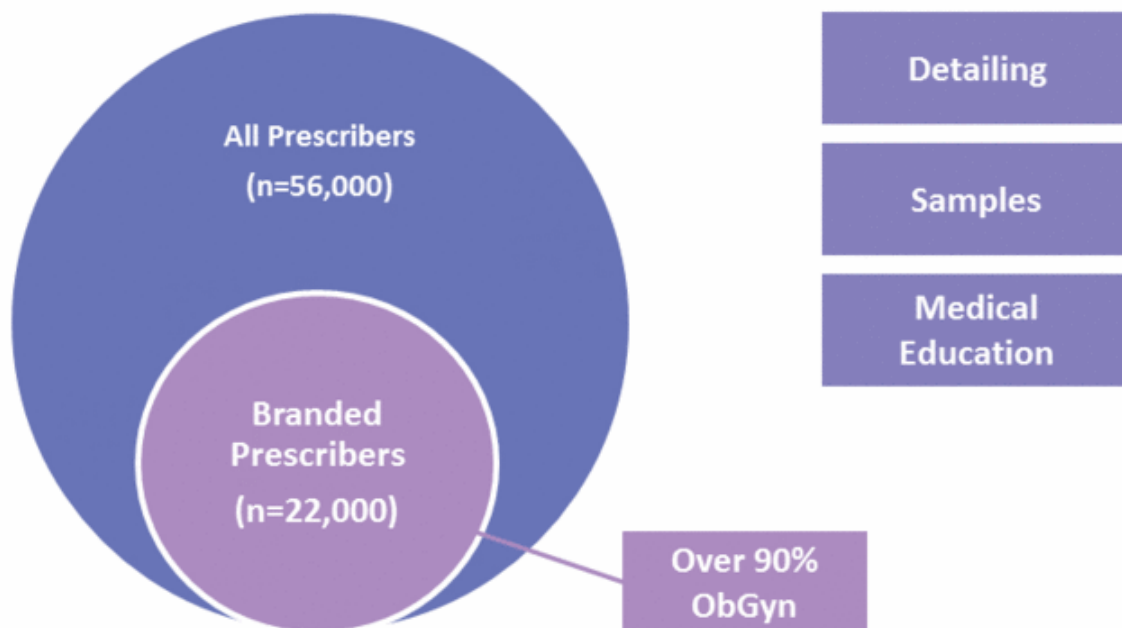
ObGyn TRx by Category



3.9 Source: IMS NPA, TRx Volume by Prescriber Type, MAT Sept 2016; IMS NPA, TRx Volume by Category, 2010

# A Sales Force of 70-100 Reps is Estimated for Twirla®

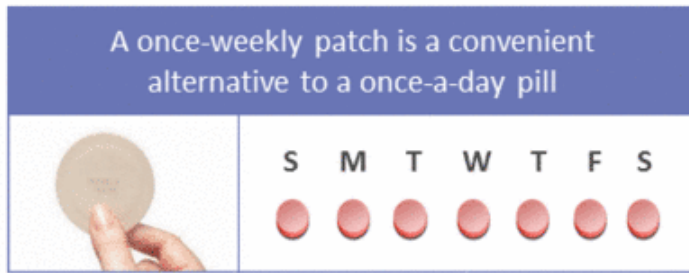
## US Contraceptive Prescribers



5.9 Source: Wolters Kluwer 2012 (# of prescribers) and IMS Prescriber Profiler 2009: %TRx written by ObGyns in Deciles 3-10 of contraceptive writers

# We Know the Twirla® Target Consumer

Women would choose Twirla because it's **weekly** and **easy to remember**

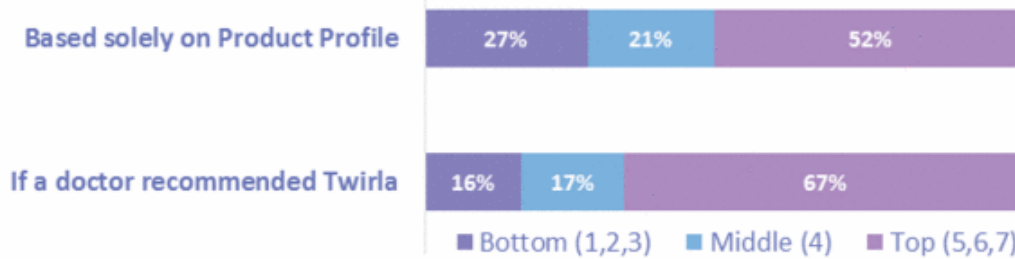


**"I like that it's weekly. That will be easier to remember. You see it too, so that's a reminder to change it."**

– Consumer  
October 2016

## Likelihood to Ask for a Prescription for Twirla

Rate 1-7, Not at all likely (1) to Extremely likely (7)



# Reaching Contraceptive Consumers Means Going Digital

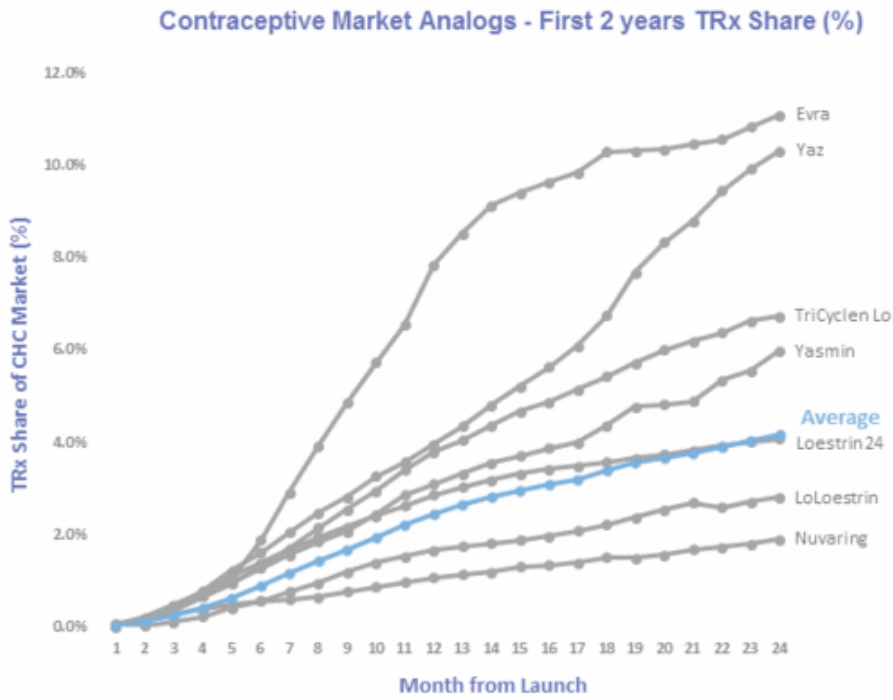
Who She Is
Twirla® interest is highest among:
▪ 20-29 years old
▪ College or graduate student
▪ Employed
▪ Women in a committed relationship

Where She Goes
Online
▪ Social Networks
▪ Discussion Forums
▪ Blogs & Online Magazines
Mobile
▪ Mobile apps
▪ Text messaging
Magazines



# Unique Contraceptive Brands Have Achieved High Market Share in the CHC Market



Product	Peak TRx Share*
Evra	11.1%
Yaz	13.1%
TriCyclen Lo	9.1%
Yasmin	12.9%
Loestrin 24	10.2%
LoLoestrin	4.0%
Nuvaring	6.6%
<b>Average</b>	<b>9.6%</b>

\*Time to peak TRx share varies by product, and in most instances occurred after the first two years post launch

Source: IMS NPA, 2002-2015