

FINAL PRESENTATION OF FINDINGS

Linking Projections, People and Prototypes (LPPP)

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Work developed for the Bill & Melinda Gates Foundation



OUTLINE

- Background
- LPPP Approach and Key Findings
 1. Developing Demographic Projections
 2. Forecast of 2040 Contraceptive Attribute Preferences & Uptake
 3. Pipeline Methods Forecast
 4. Preferred Clusters Forecast
- Potential Additional Analysis
- Conclusions & Next Steps
- Annexes
 - Methodology Annex
 - Results Annex

BACKGROUND

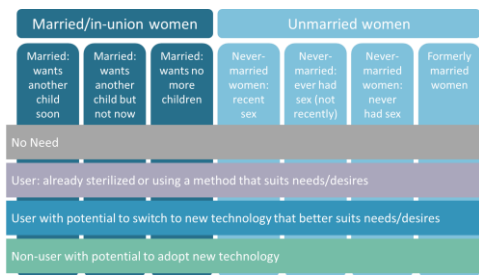
LPPP OBJECTIVES

- Test new and innovative approaches to provide **evidence to inform BMGF investment decisions** related to the development of new contraceptive technologies
- LPPP is **one of many investments** by CT team; Avenir was asked to consider how the world is changing between now and 2040 and the implications of these changes for method preferences
- LPPP forecasts what **contraceptive attributes** will align most closely with the demography, lifestyles, fertility intentions, and use patterns of **women in 2040** (*this language was developed by BMGF*).

OVERVIEW OF LPPP

1

Project key demographic shifts to 2040



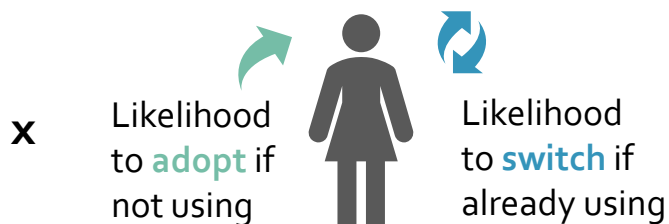
Accounts for changes in:

- Population growth rates
- Fertility preferences
- Marriage rates
- Sexual activity outside marriage
- Contraceptive use

Demographic projection model now published:
<https://gatesopenresearch.org/articles/5-152>

2

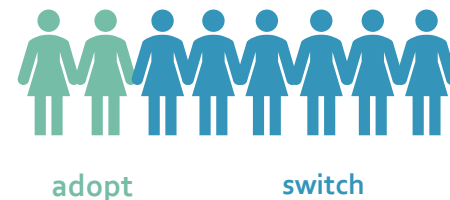
Strength of preference for method attributes
(informed by DCE survey)



Analysis done by segment (demographic x method x region); applied to matching segment in demographic model.

3

Forecast uptake of new CT with specified attributes



Results available by:

- Demographic
- Previous method use
- Sub-region

KEY CHARACTERISTICS OF LPPP DEMOGRAPHIC PROJECTIONS AND ATTRIBUTE PREFERENCE FORECASTS

Global



Forecasts cover all countries of the world
(results aggregated by sub-region)

Future looking



Projecting changes to 2040

Method agnostic



Capture many potential new CT through sets of attributes

SUMMARY OF LPPP APPROACH AND KEY FINDINGS

- LPPP Approach
 - Projecting changes to 2040 in the number of women of reproductive age (WRA) by segments that account for shifts in marriage patterns, desired family size, and levels of premarital sex
 - Layering on data collected on contraceptive method attribute preferences to forecast future uptake
- Key Findings: Projection of Demographic Segments from 2020 to 2040
 - Sub-Saharan Africa will see dramatic changes in segment sizes; married women wanting no more children have largest projected increase (+70 million), followed next by never-married sexually active women (+56 million)*
 - Married women wanting no more children will be the single largest segment in all regions in 2040; globally 4 in 10 women of reproductive age will be in this segment
- Key Findings: Forecast of Attribute Preferences and Potential 2040 Uptake
 - Universally strong preference for no side effects & shorter/regular periods
 - But see some trade-offs with mode of delivery and duration, especially for non-bleeding side effects
 - Consistently lower tolerance for bleeding changes (irregular/longer) compared to other side effects
 - Similar preferences regarding frequency of use and mode of delivery across segments; suggesting universality of preferences
 - Male partner using method highly desirable, but out of scope for this work

*Sub-Saharan Africa numbers based on sum of Eastern, Middle, Southern, and Western Africa. Never Married Sexually Active combines recent sex and non-recent sex.

1. DEVELOPING DEMOGRAPHIC PROJECTIONS

LPPP Approach and Key Findings

CREATING PROJECTABLE DEMOGRAPHIC SEGMENTS OF WOMEN OF REPRODUCTIVE AGE (WRA)

Criteria for creating segments

- Exhaustive & mutually exclusive categories
- Related to contraceptive needs and preferences
- Quantified using widely available population-based surveys (namely DHS, MICS, National surveys)
- Projectable to 2040

Resulting Segments

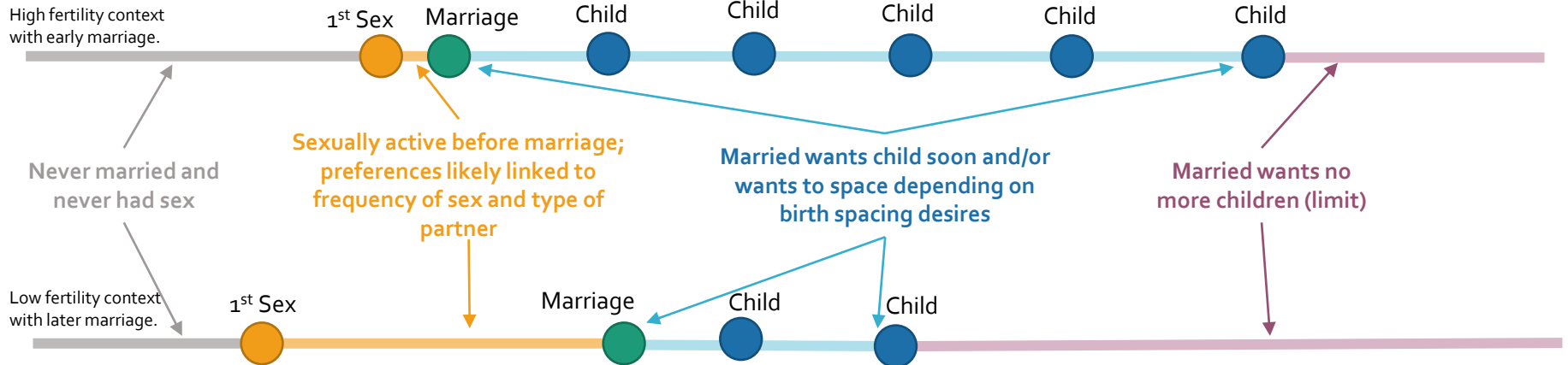
1. Never-married: never had sex
2. Never-married: sex but not recently (*proxy for infrequent sex*)
3. Never-married: recent sex (*proxy for frequent sex*)
4. Married: wants another child soon (*soon*)
5. Married: wants another child later (*space*)
6. Married: wants no more children (*limit*)
7. Formerly married women

DEMOGRAPHIC SEGMENTS ACCOUNT FOR REPRODUCTIVE LIFE COURSES AND CONTRACEPTIVE NEEDS

Demographic segments represent differences in reproductive life courses at the population level; projections capture how contraceptive needs are likely to shift over time:

- Delays in marriage, coupled with increases in pre-marital sex, will increase the amount of time women spend sexually active before marriage (at the population level the size of the never-married sexually active segments will increase)
- Reductions in family size will mean women spend more year's post family completion, wanting no more children (at the population level the size of the married limiters segment will increase)

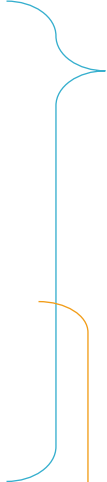
Illustrative Reproductive Life Courses



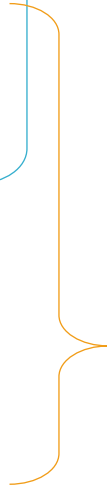
Illustrative only; there is wide variation in trajectories of women across countries based on experience and timing of sexual initiation and childbearing.

PROJECTING KEY DEMOGRAPHIC SEGMENT CHANGES TO 2040

- **Marriage Rates:** Most countries are projected to see a decline in the share of women who are married between now and 2040, driven primarily by delays in marriage.
 - As marriage rates decline, women spend more years either never-married or formerly married, influencing the size of the unmarried segments.
- **Fertility Intentions Among Married Women:** LPPP projects shifts in the fertility intentions of married women, informed by projected shifts in the total fertility rate (TFR).
 - As fertility rates decline, women spend fewer years trying to get pregnant, and more time not wanting any pregnancies (limiting).
- **Sexual Activity Before Marriage:** there is a wide range in the level of premarital sexual activity; from being almost non-existent in many Asian countries to near universal in much of Europe.
 - The LPPP 2040 projections account for some liberalization, assuming modest increases in premarital sexual activity.



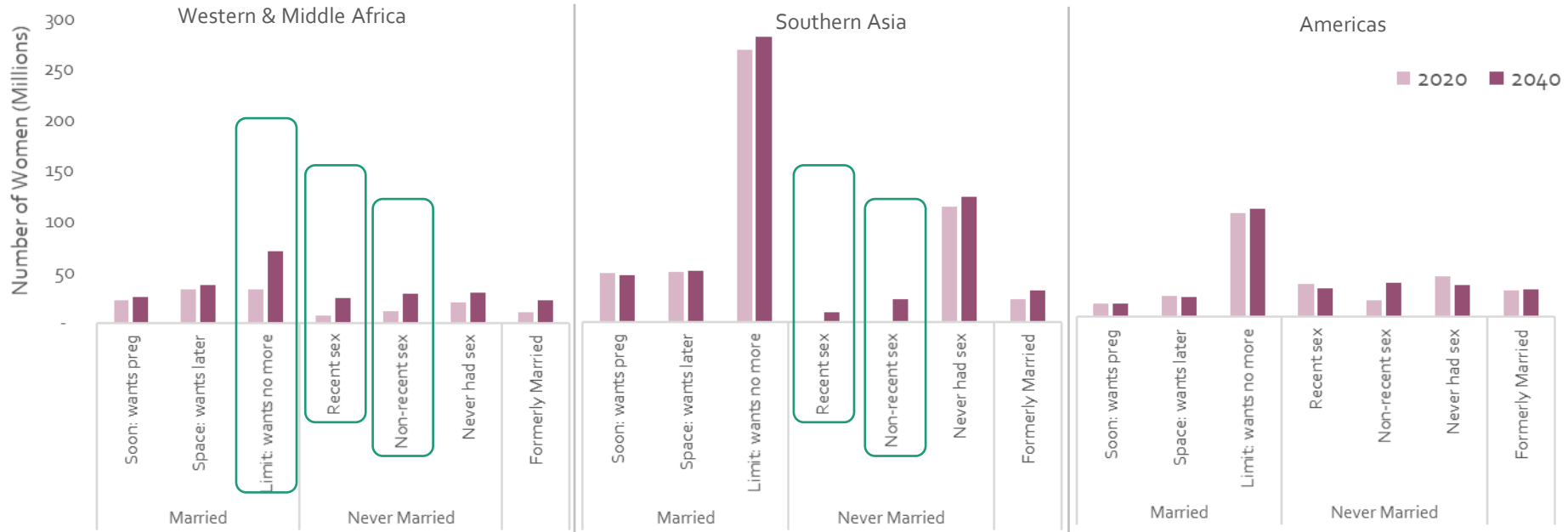
Together these two projected changes influence the number of married women and the relative sizes of the three married segments.



Together these two projected changes influence the size of the segment of never-married sexually active women.

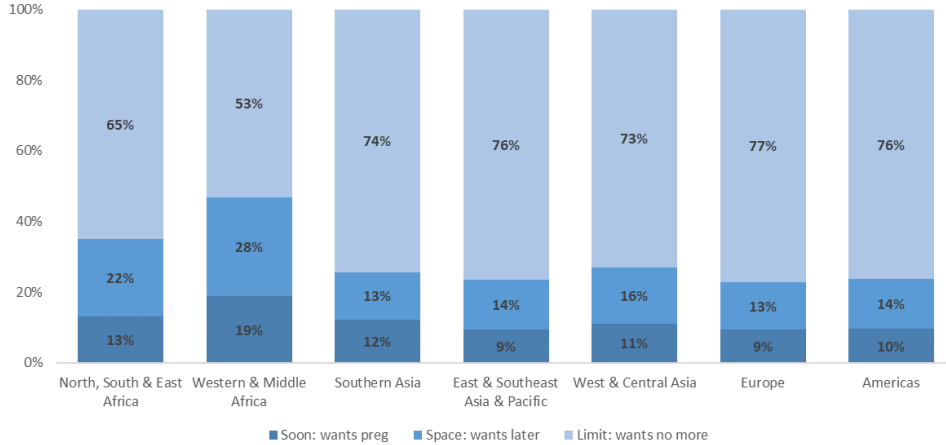
NUMBER OF WOMEN OF REPRODUCTIVE AGE BY SEGMENT: 2020 ESTIMATES AND 2040 PROJECTIONS FOR SELECT REGIONS

- Changes in segment size most pronounced in Sub-Saharan Africa:
 - Largest increases expected in segments of married women wanting no more children (limit) and never-married sexually active women (recent and non-recent sex)
 - Only modest changes in segment that wants a pregnancy soon or wants to space next pregnancy
- Projected increases also for never-married sexually active women in Asia, but segments remain small
- Little change in Europe and Americas



PROJECTIONS OF MARRIED SEGMENTS IN 2040: LIMITERS LARGEST GROUP; MOSTLY LIVING IN ASIA

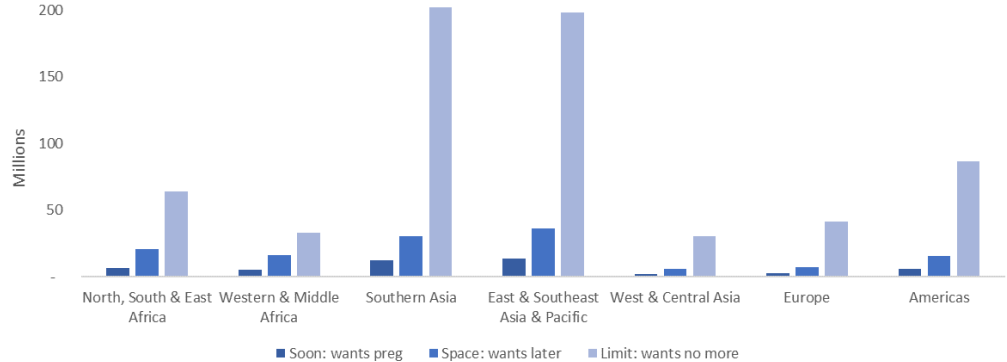
Distribution Across Married Segments by Region in 2040



- In all regions, more than half of married women are projected to be limiters (want no more children) by 2040

- By far the greatest number of married women wanting no more children (limit) in 2040 are projected to be in Asia

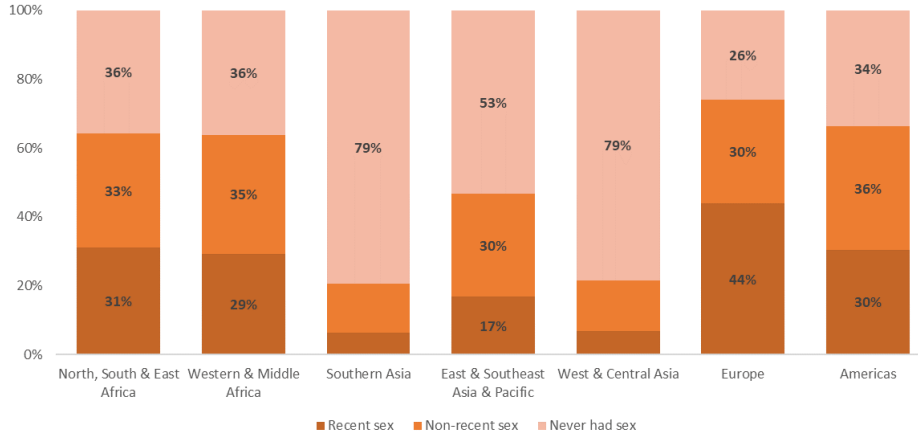
Married Users by Segment and Region in 2040, in Millions



PROJECTIONS OF NEVER-MARRIED SEGMENTS IN 2040

WOMEN AND USERS MORE EVENLY DISTRIBUTED BY SEGMENT AND REGION

Distribution Across Never-Married Segments by Region in 2040



- Even with liberalization assumptions, low levels of premarital sexual activity are still projected for most of Asia.
- See fairly even split of recent and non-recent sex (meant to be a proxy for frequency)

- Across Africa and Southern Asia, projected to be 4.5 times more married women than never married sexually active women.
- Never-married users in 2040 projected to be more evenly distributed across regions than married users as low levels of sexual activity in Asia counterbalance the high number of women in these regions.

Never-Married Users by Segment and Region in 2040, in Millions

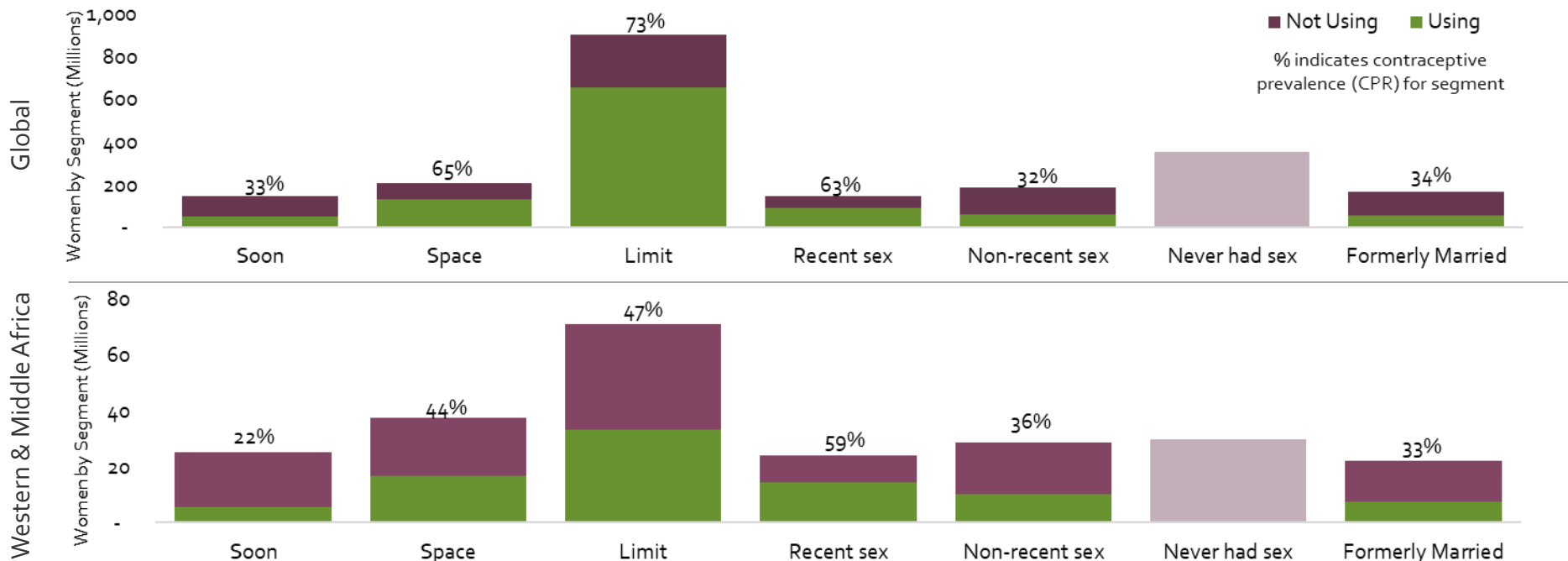


PROJECTED CONTRACEPTIVE USE AND NON-USE IN 2040 BY SEGMENT

GLOBAL PICTURE COMPARED TO WESTERN & MIDDLE AFRICA

Projections account for expected increases in contraceptive use; non-users adopting CT could accelerate progress:

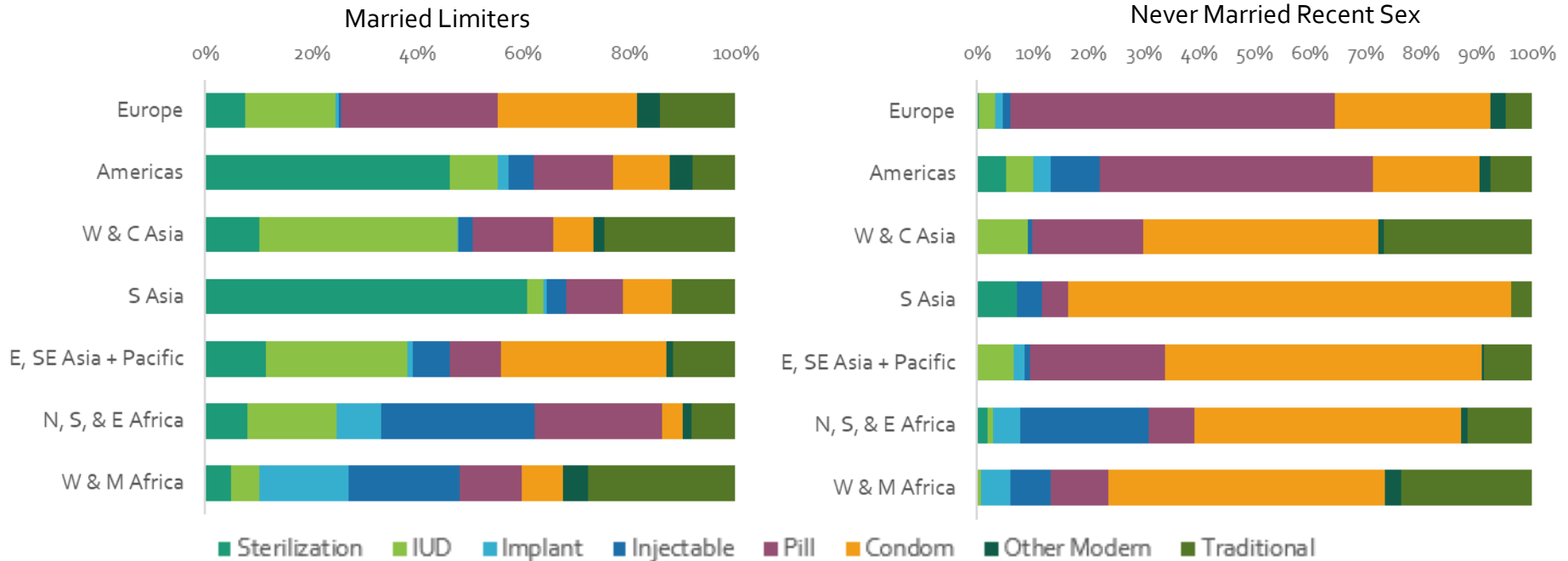
- Contraceptive use already projected to be high for many segments, limiting adoption potential among non-users*
- Higher adoption potential in regions where use is projected to remain low, e.g., Western & Middle Africa



*Contraceptive use is not expected to ever reach 100% and will be much lower for groups with reduced need for contraception (e.g. married wants soon, never-married non-recent sex). Never-married never had sex not considered to have adoption potential (use may exist for non-contraceptive benefits, e.g. acne, but not included in this work).

VARIABILITY IN METHOD MIX BY SEGMENT AND REGION: 2020

- Pronounced differences, even across more developed regions. For example, high prevalence of sterilization among married limiters in Americas not found in Europe.
- This suggests wide range of preferences and other influences on method choice (e.g. awareness, availability, cost).



2. FORECAST OF 2040 CONTRACEPTIVE ATTRIBUTE PREFERENCES & UPTAKE

LPPP Approach and Key Findings

LPPP CONDUCTED ONLINE DCE SURVEY TO INFORM PREFERENCES

- Piloted a unique discrete choice experiment (DCE) approach: method agnostic, covering all existing & a wide-range of future methods, including in all potential attribute combinations
- Online survey completed by over 120,000 respondents from nearly 200 countries. Disseminated via Clue App as well as other channels (purchased panel respondents, PSI promotion)
 - *Wide global reach despite being a small-scale investment; additional in-country survey work was considered early in the project but did not move forward due to COVID-19 disruptions and funding*
- DCE included 4 attributes categories (next slide) to capture characteristics inherent to a product (not specific products themselves)
- Bayesian model estimated using Monte Carlo Markov Chain algorithm including full set of interactions between attribute levels
- Analysis of preferences conducted by segment (based on demographic group, method use, and sub-region) and applied to matching segment within demographic projection model

DCE CONTRACEPTIVE ATTRIBUTES AND LEVELS

How you get it or use it

1. A medical provider must make a cut in your skin
2. A medical provider must insert it through your vagina
3. You insert it into your vagina, like a ring or gel
4. Injection given by a provider or by yourself
5. You swallow it, like a pill
6. You put it on your skin, like a patch or cream
7. Male partner uses method

How often you use it

1. Only once (lasts forever)
2. Once a year or more infrequently (e.g. every 2-5 years, 10+ years)
3. Multiple times a year (e.g. monthly, every 3-6 months)
4. Every day
5. Every time you have sex (before, during, or after)

Side effects you experience

1. May cause moderate weight gain
2. May cause mild nausea, headaches, fatigue
3. May cause mood changes, changes to sex drive
4. No side effects

Effect on menstruation

1. Regular periods
2. Shorter or lighter periods
3. Longer or heavier periods
4. Irregular bleeding (e.g. spotting)
5. No period (e.g. no bleeding)

Combine one level from each attribute into a “cluster”

BACKGROUND ON LPPP PREFERENCE AND UPTAKE FORECASTS

- DCE results analyzed to produce **preference shares by demographic, method, and sub-region**
- Preference shares then **applied to demographic model** so forecasts shown are 'weighted' by projected 2040 populations
- Forecasts can be segmented in different ways; key indicates what is shown:

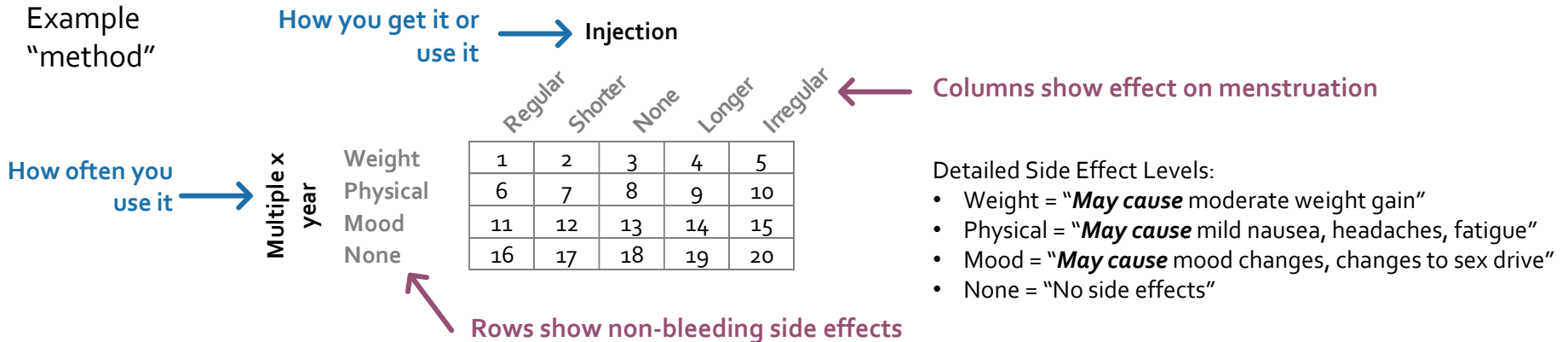
Demographic	Method	Region
All	All	All

→ *All includes non-users*

- Results presented as both absolute #s of women and % uptake (share of women in selected segment forecast to uptake the method in 2040)

INTERPRETING LPPP RESULTS

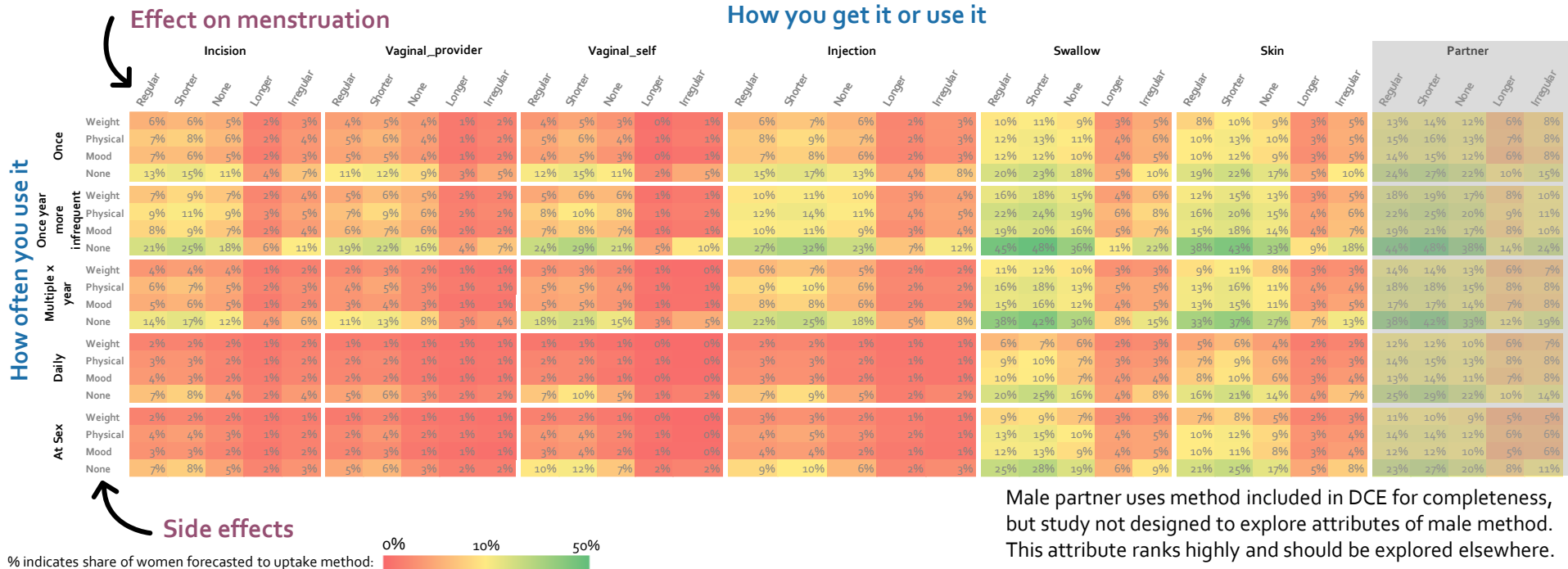
- Starts with a high-level look at **all possible combinations** of attribute levels, with the aim of providing a general sense of the relative importance of different attribute levels and combinations of attributes
 - Subsequent focus on pipeline methods and promising methods
- DCE produced 700 possible combinations (“clusters”) of attribute levels, organized into 35 “methods” defined based on combinations of **how you use it or get it** & **how often you use it**
 - Within each “method” look at variation in **side effects** and **effect on menstruation** (20 clusters)



GLOBAL PICTURE OF FORECASTED 2040 UPTAKE: ALL POSSIBLE CLUSTERS

Demographic	Method	Region
All	All	All

- Strong preference for no side effects, no bleeding disruption and less invasive modes of delivery
- Far less tolerance for negative bleeding changes (longer/irregular) than other side effects
- Stronger preference for shorter periods rather than regular or none

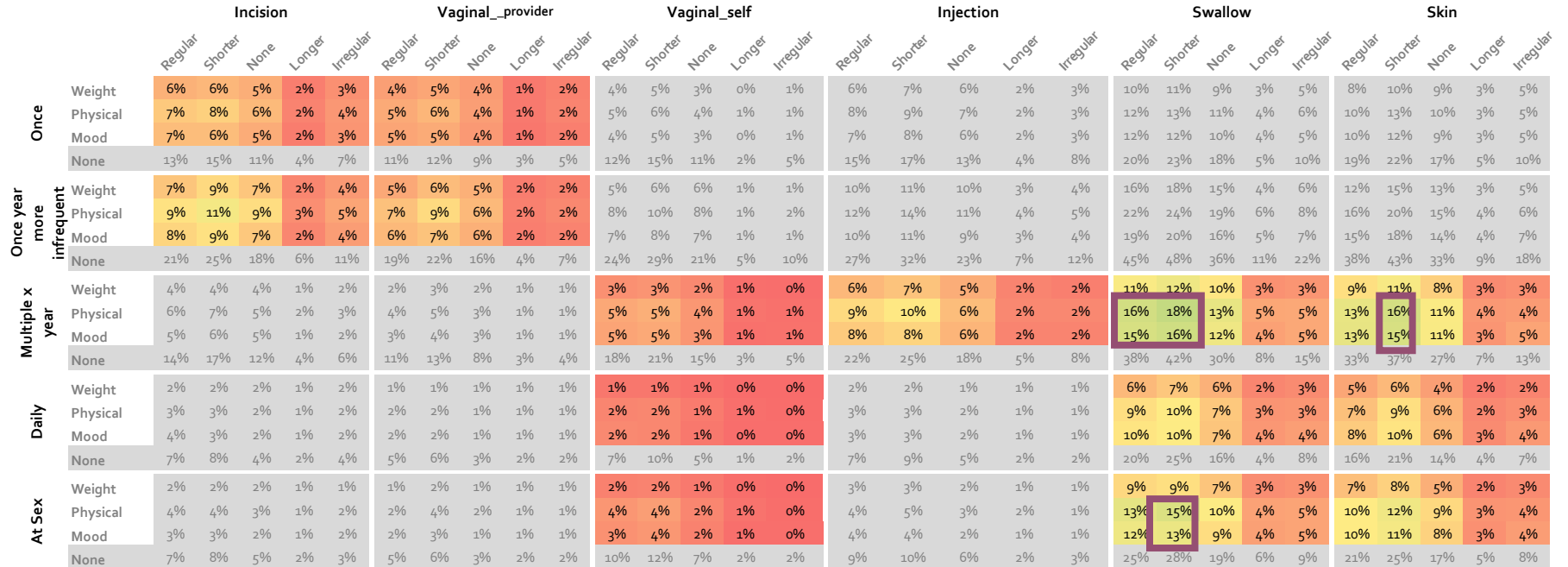


Male partner uses method included in DCE for completeness, but partner not designed to explore attributes of male method. This attribute ranks highly and should be explored elsewhere.

GLOBAL PICTURE OF FORECASTED 2040 UPTAKE: POTENTIAL CLUSTERS

Demographic	Method	Region
All	All	All

- Potential clusters removes unlikely combinations, including 'no side effects' which is likely not achievable for near-term investments to focus on highest near-term potential
- Strongest preferences for non-invasive methods used infrequently or on-demand, especially those that do not cause longer or irregular bleeding.



0% 10% 30%

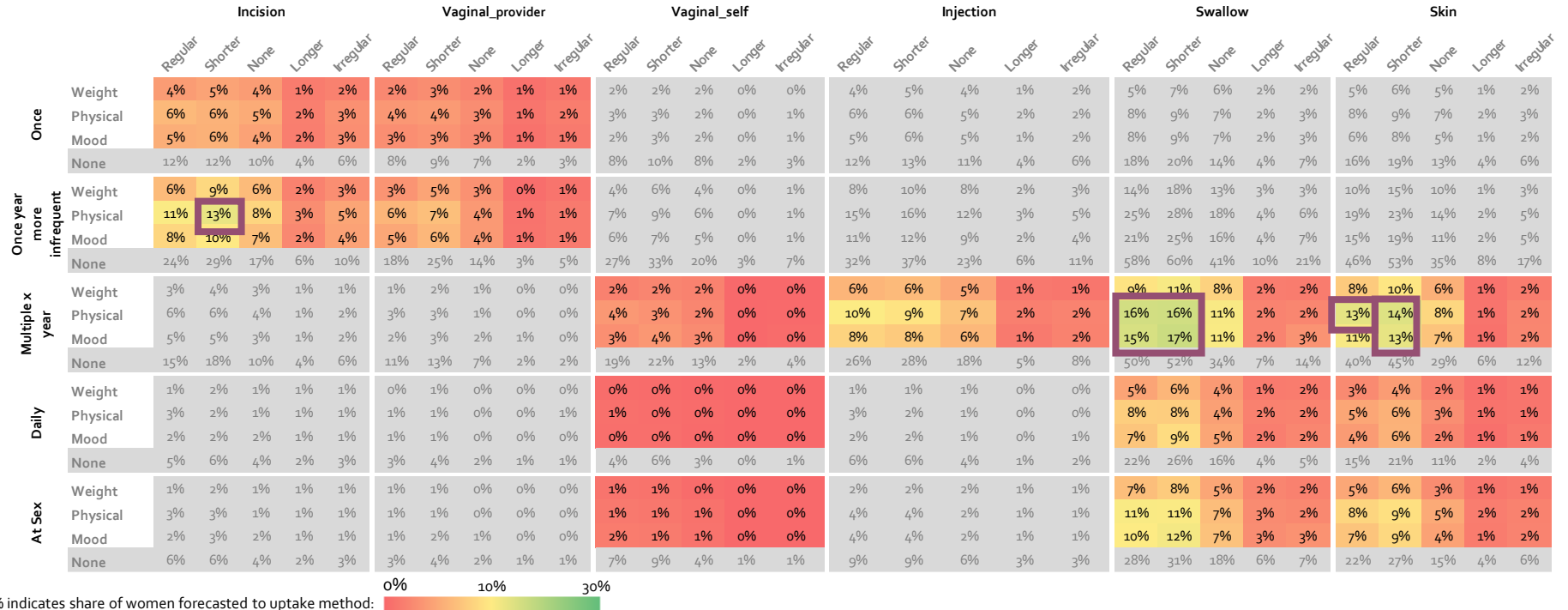
% indicates share of women forecasted to uptake method:

SSA NEVER MARRIED NON-USERS FORECASTED 2040

UPTAKE: POTENTIAL CLUSTERS

Demographic	Method	Region
Never Married	Non-User	SSA

- Similar stronger preferences for non-invasive methods used infrequently, especially those that do not cause longer or irregular bleeding.
- Slightly higher tolerance for an invasive, longer duration method, and slightly less interest in a peri-coital method.



3. PIPELINE METHODS FORECAST

Forecasts for Methods Currently in BMGF CT Development Pipeline

LPPP Approach and Key Findings

FOCUS PIPELINE METHODS

Forecasts developed for:

- Monthly pill
- Microarray patch
- Peri-coital pill
- Long-acting injectable

Three slides shown for each method:

1. Range of potential uptake depending on bleeding and side-effect profiles*
2. Regional variation based on “most likely” bleeding and side-effect profiles (% uptake)
3. Same regional variation but showing absolute number of women

*results shown for non-users in Sub-Saharan Africa (SSA)

See Results Annex for more details. Biodegradable implants included in results annex but results not shown here as attributes & levels unable to capture difference between provider removal and biodegrading.

MONTHLY PILL: OVERVIEW

Demographic	Method	Region
All	No Method	SSA

- Swallowing something infrequently generally has higher forecasted uptake than daily use
- Results show far less tolerance for negative bleeding changes (longer/irregular) than other side effects.

Swallow x every day

	Regular	Shorter	None	Longer	Irregular
Weight	7%	9%	6%	3%	3%
Physical	9%	12%	8%	4%	4%
Mood	11%	12%	8%	4%	5%
None	22%	27%	17%	4%	8%

Swallow x multiple times a year

(e.g. monthly, every 3-6 months)

	Regular	Shorter	None	Longer	Irregular
Weight	13%	14%	10%	3%	3%
Physical	17%	19%	14%	5%	5%
Mood	18%	19%	14%	4%	5%
None	40%	43%	30%	8%	16%

Cluster used for further analysis

0% 10% 30%

% indicates share of women forecasted to uptake method:

MONTHLY PILL: VARIATION IN FORECASTED 2040 UPTAKE (% OF ALL WOMEN) BY REGION AND DEMOGRAPHIC SEGMENT

- Highest forecasted uptake for married women who want a child soon (switching only) and married women who want to space (adoption & switching)
- Low uptake forecasted across the board in Europe/N. America/Aus for both switching and adoption

Cluster shown: swallow multiple times a year with regular period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Formerly Married	Adopt Method					
	Married		Never Married		Formerly Married	Married		Never Married		Formerly Married			
	Soon	Spacer	Limiter	Recent		Ever		Soon	Spacer		Limiter	Recent	Ever
Eastern Africa	25%	23%	17%	14%	19%	18%	12%	25%	17%	17%	9%	23%	
Middle Africa	26%	22%	20%	14%	17%	17%	12%	24%	21%	14%	9%	23%	
Southern Africa	25%	23%	17%	14%	20%	19%	12%	25%	17%	17%	9%	23%	
Western Africa	25%	23%	17%	14%	19%	17%	12%	25%	17%	17%	9%	23%	
North Africa/West Asia	25%	19%	17%	13%	19%	19%	12%	25%	19%	17%	9%	23%	
East/Central Asia	22%	17%	14%	13%	14%	18%	12%	24%	21%	14%	9%	23%	
South-Eastern Asia	26%	22%	20%	14%	17%	15%	12%	24%	21%	14%	9%	23%	
Southern Asia	27%	22%	19%	14%	15%	2%	12%	24%	20%	14%	12%	23%	
LAC	24%	21%	11%	15%	15%	12%	13%	25%	19%	15%	11%	23%	
Europe	6%	9%	4%	8%	8%	8%	4%	8%	4%	6%	5%	12%	
N. America/Aus	6%	10%	3%	8%	9%	7%	4%	12%	6%	9%	4%	12%	
Total	23%	20%	15%	12%	15%	12%	11%	24%	18%	14%	9%	21%	

0% 10% 30%

% indicates share of women forecasted to uptake method:

Note: East/Central Asia heavily influenced demographically by China, but have limited number of Chinese respondents (N=101) in DCE for preference shares analysis

MONTHLY PILL: FORECASTED VARIATION IN 2040 SWITCHERS & ADOPTERS BY REGION & DEMOGRAPHIC SEGMENT

- Married women wanting no more children (limiter) forecasted to be the largest market in absolute terms in all regions; around 1/4 of uptake among limiters is from adoption with the majority from women switching to the monthly pill from another method.
- In Africa, forecast some relatively larger non-limiter markets, especially spacers in Western and Eastern Africa

Cluster shown: swallow multiple times a year with regular period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method					
	Married			Never Married		Formerly Married	Married			Never Married		Formerly Married
	Soon	Spacer	Limiter	Recent	Ever		Soon	Spacer	Limiter	Recent	Ever	
Eastern Africa	1.07M	3.41M	6.78M	1.18M	1.04M	1.47M	1.07M	2.42M	3.65M	0.96M	0.99M	3.88M
Middle Africa	0.35M	1.10M	2.05M	0.87M	0.64M	0.60M	0.58M	1.56M	2.37M	0.60M	0.50M	1.22M
Southern Africa	0.07M	0.22M	0.71M	0.38M	0.49M	0.10M	0.07M	0.09M	0.31M	0.25M	0.24M	0.15M
Western Africa	1.06M	2.61M	3.83M	1.10M	1.23M	0.69M	1.73M	3.63M	3.62M	0.99M	1.15M	1.82M
North Africa/West Asia	0.86M	1.86M	7.31M	1.00M	0.85M	0.95M	0.90M	1.39M	3.10M	0.97M	0.86M	1.79M
East/Central Asia	2.28M	4.16M	19.55M	1.73M	1.83M	0.80M	1.16M	0.90M	4.16M	1.30M	2.56M	1.99M
South-Eastern Asia	0.90M	2.67M	12.61M	0.38M	0.31M	0.35M	0.89M	1.15M	4.33M	0.31M	0.76M	1.77M
Southern Asia	3.47M	6.58M	37.71M	0.78M	0.55M	0.19M	4.07M	4.93M	13.74M	0.62M	2.19M	3.67M
LAC	1.01M	2.24M	6.82M	1.47M	1.04M	1.20M	0.68M	0.85M	2.31M	0.52M	1.53M	2.22M
Europe	0.18M	0.65M	1.58M	1.39M	0.55M	0.40M	0.15M	0.18M	0.46M	0.44M	0.46M	1.04M
N. America/Aus	0.13M	0.56M	1.00M	0.98M	0.59M	0.24M	0.11M	0.17M	0.45M	0.44M	0.36M	0.59M
Total	11.38M	26.07M	99.95M	11.27M	9.13M	6.99M	11.41M	17.28M	38.49M	7.39M	11.61M	20.14M

Note: East/Central Asia heavily influenced demographically by China, but have limited number of Chinese respondents (N=101) in DCE for preference shares analysis

Note: Color formatting shows lowest to highest value within each row

MICROARRAY PATCH: OVERVIEW

Demographic	Method	Region
All	No Method	SSA

- Something put on skin generally has higher forecasted uptake than an injection
- Irregular bleeding (e.g. spotting) is generally undesirable, but some increased tolerance shown if coupled with no side effects and on-skin delivery.

On skin x multiple times a year

(e.g. monthly, every 3-6 months)

	Regular	Shorter	None	Longer	Irregular
Weight	11%	13%	9%	3%	3%
Physical	15%	18%	12%	4%	5%
Mood	16%	18%	13%	4%	6%
None	35%	39%	28%	8%	16%

Cluster used for further analysis

Injection x multiple times a year

(e.g. monthly, every 3-6 months)

	Regular	Shorter	None	Longer	Irregular
Weight	8%	9%	6%	3%	2%
Physical	11%	11%	7%	3%	3%
Mood	9%	9%	7%	2%	2%
None	24%	27%	19%	6%	9%

0% 10% 30%

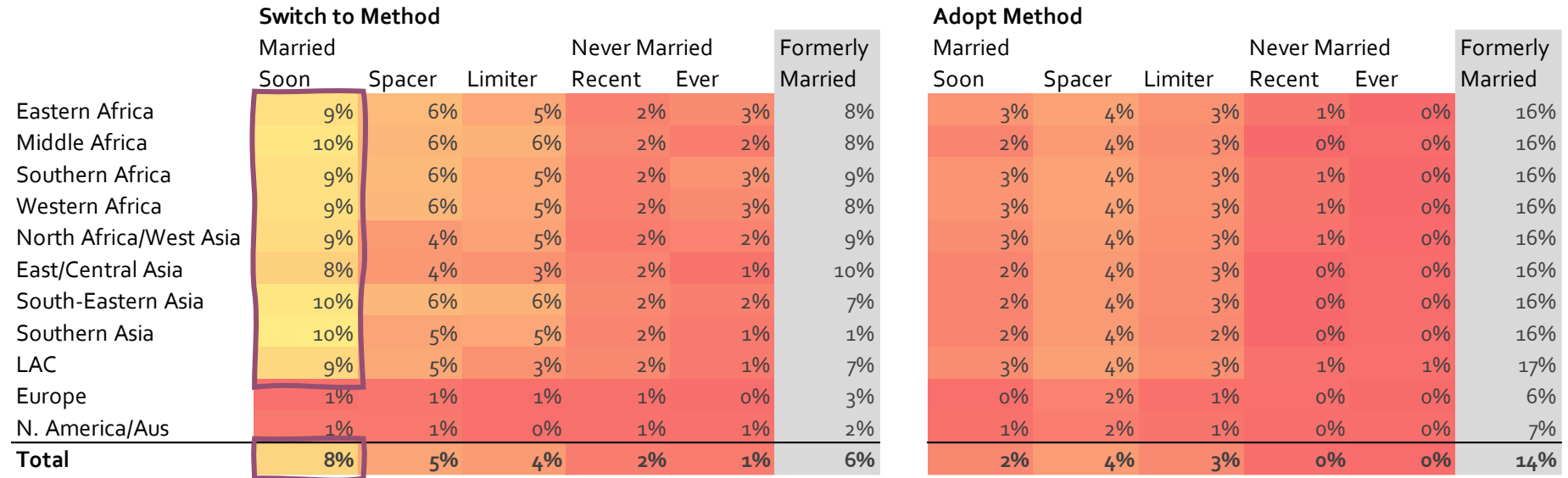
% indicates share of women forecasted to uptake method:



MICROARRAY PATCH: VARIATION IN FORECASTED 2040 UPTAKE (% OF ALL WOMEN) BY REGION AND DEMOGRAPHIC SEGMENT

- Forecast low uptake across all regions and segments; especially for adoption by non-users
- Highest potential forecasted among married users wanting a child soon switching from another method

Cluster shown: Put on skin multiple times a year with irregular period & may cause physical side effects (mild nausea, headaches, fatigue)



0% 10% 30%

% indicates share of women forecasted to uptake method:

MICROARRAY PATCH: FORECASTED VARIATION IN 2040 SWITCHERS & ADOPTERS BY REGION & DEMOGRAPHIC SEGMENT

- Married women wanting no more children (limiters) are forecasted to be the largest market in absolute terms in all regions; around 1/5 of uptake among limiters is from adoption with the majority from women switching to the microarray patch.

Cluster shown: Put on skin multiple times a year with irregular period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method						
	Married			Never Married			Married			Never Married			Formerly Married
	Soon	Spacer	Limiters	Recent	Ever	Soon	Spacer	Limiters	Recent	Ever			
Eastern Africa	0.40M	0.96M	1.99M	0.16M	0.14M	0.67M	0.31M	0.43M	0.68M	0.05M	0.00M	2.67M	
Middle Africa	0.13M	0.30M	0.57M	0.14M	0.06M	0.29M	0.11M	0.25M	0.31M	0.00M	0.02M	0.84M	
Southern Africa	0.03M	0.06M	0.21M	0.05M	0.08M	0.05M	0.02M	0.02M	0.06M	0.01M	0.00M	0.10M	
Western Africa	0.39M	0.71M	1.11M	0.15M	0.17M	0.33M	0.49M	0.65M	0.67M	0.05M	0.00M	1.25M	
North Africa/West Asia	0.30M	0.37M	1.94M	0.11M	0.09M	0.48M	0.21M	0.24M	0.49M	0.05M	0.01M	1.23M	
East/Central Asia	0.83M	0.91M	4.43M	0.28M	0.10M	0.46M	0.21M	0.14M	0.55M	0.00M	0.08M	1.36M	
South-Eastern Asia	0.34M	0.73M	3.49M	0.06M	0.03M	0.17M	0.16M	0.18M	0.57M	0.00M	0.02M	1.22M	
Southern Asia	1.28M	1.41M	9.71M	0.12M	0.05M	0.11M	0.73M	0.78M	1.67M	0.00M	0.08M	2.52M	
LAC	0.36M	0.52M	1.92M	0.24M	0.09M	0.67M	0.15M	0.14M	0.36M	0.02M	0.07M	1.62M	
Europe	0.02M	0.08M	0.21M	0.10M	0.03M	0.16M	0.02M	0.04M	0.07M	0.03M	0.02M	0.47M	
N. America/Aus	0.02M	0.07M	0.14M	0.08M	0.05M	0.09M	0.02M	0.02M	0.07M	0.02M	0.03M	0.32M	
Total	4.10M	6.10M	25.70M	1.50M	0.90M	3.46M	2.43M	2.89M	5.50M	0.25M	0.33M	13.60M	

Note: Color formatting shows lowest to highest value within each row

PERI-COITAL PILL: OVERVIEW

Demographic	Method	Region
All	No Method	SSA

- For a method that is swallowed, use around the time of sex generally has higher forecasted uptake than daily use.
- For methods used at sex, forecast comparable uptake between a method that is swallowed and a method used by a partner.

Swallow x at sex

	Regular	Shorter	None	Longer	Irregular
Weight	9%	10%	7%	3%	3%
Physical	14%	16%	12%	5%	5%
Mood	14%	15%	10%	4%	5%
None	27%	30%	21%	6%	10%

Cluster used for further analysis

0% 10% 30%

% indicates share of women forecasted to uptake method:

Swallow x every day

	Regular	Shorter	None	Longer	Irregular
Weight	7%	9%	6%	3%	3%
Physical	9%	12%	8%	4%	4%
Mood	11%	12%	8%	4%	5%
None	22%	27%	17%	4%	8%

Used by partner x at sex

	Regular	Shorter	None	Longer	Irregular
Weight	12%	11%	10%	6%	6%
Physical	15%	16%	13%	8%	7%
Mood	13%	13%	11%	5%	6%
None	25%	28%	21%	9%	11%

PERI-COITAL PILL: VARIATION IN FORECASTED 2040 UPTAKE (% OF ALL WOMEN) BY REGION AND DEMOGRAPHIC SEGMENT

- High forecasted uptake for married women wanting to wait (spacer) or have not more children (limiter) **adopting** the peri-coital pill and married women wanting a child soon **switching** from another method. Potentially groups having infrequent sex, so an on-demand method has appeal?
- Low uptake forecasted across the board in Europe/N. America/Aus for both switching and adoption

Cluster shown: swallow at sex with regular period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Formerly Married	Adopt Method					
	Married			Never Married				Married			Never Married		
	Soon	Spacer	Limiter	Recent	Ever	Soon		Spacer	Limiter	Recent	Ever		
Eastern Africa	20%	17%	14%	10%	12%	17%	8%	19%	15%	14%	5%	22%	
Middle Africa	21%	17%	18%	11%	10%	17%	10%	22%	20%	9%	7%	22%	
Southern Africa	20%	17%	14%	9%	13%	18%	8%	19%	15%	14%	4%	22%	
Western Africa	20%	17%	14%	10%	12%	17%	8%	19%	15%	14%	5%	22%	
North Africa/West Asia	20%	14%	15%	9%	12%	18%	9%	20%	18%	14%	6%	22%	
East/Central Asia	18%	12%	13%	10%	9%	18%	10%	22%	20%	9%	7%	23%	
South-Eastern Asia	21%	17%	18%	11%	11%	15%	10%	22%	20%	9%	7%	22%	
Southern Asia	23%	16%	17%	10%	8%	2%	10%	22%	22%	9%	8%	23%	
LAC	19%	15%	10%	11%	9%	12%	10%	20%	18%	11%	8%	22%	
Europe	4%	4%	3%	4%	3%	7%	3%	6%	3%	4%	2%	12%	
N. America/Aus	4%	5%	2%	4%	4%	6%	3%	7%	4%	5%	2%	11%	
Total	19%	14%	13%	8%	9%	12%	9%	20%	18%	10%	6%	21%	

0% 10% 30%

% indicates share of women forecasted to uptake method:

PERI-COITAL PILL: FORECASTED VARIATION IN 2040 SWITCHERS & ADOPTERS BY REGION & DEMOGRAPHIC SEGMENT

- Married women wanting no more children (limiters) are forecast to be the largest market in absolute terms; around 1/3 of uptake among limiters is from adoption with the majority from women switching to the peri-coital pill.

Cluster shown: swallow at sex with regular period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method						
	Married			Never Married			Formerly Married	Married			Never Married		Formerly Married
	Soon	Spacer	Limiters	Recent	Ever	Soon		Spacer	Limiters	Recent	Ever		
Eastern Africa	0.85M	2.61M	5.84M	0.83M	0.67M	1.39M	0.69M	1.82M	3.33M	0.80M	0.61M	3.77M	
Middle Africa	0.28M	0.83M	1.82M	0.68M	0.40M	0.59M	0.49M	1.39M	2.33M	0.40M	0.36M	1.18M	
Southern Africa	0.06M	0.17M	0.62M	0.26M	0.32M	0.09M	0.04M	0.07M	0.28M	0.20M	0.10M	0.14M	
Western Africa	0.84M	1.98M	3.30M	0.78M	0.78M	0.66M	1.11M	2.73M	3.30M	0.82M	0.71M	1.77M	
North Africa/West Asia	0.70M	1.31M	6.31M	0.69M	0.52M	0.95M	0.66M	1.14M	2.94M	0.79M	0.57M	1.75M	
East/Central Asia	1.83M	3.01M	17.54M	1.28M	1.13M	0.81M	0.97M	0.81M	4.09M	0.87M	1.85M	1.94M	
South-Eastern Asia	0.73M	2.03M	11.15M	0.28M	0.20M	0.33M	0.75M	1.03M	4.26M	0.20M	0.55M	1.72M	
Southern Asia	2.88M	4.76M	33.95M	0.54M	0.30M	0.19M	3.40M	4.41M	14.58M	0.41M	1.46M	3.58M	
LAC	0.81M	1.63M	5.99M	1.03M	0.63M	1.21M	0.54M	0.67M	2.24M	0.38M	1.11M	2.16M	
Europe	0.12M	0.31M	1.04M	0.75M	0.23M	0.36M	0.10M	0.12M	0.36M	0.26M	0.23M	1.06M	
N. America/Aus	0.07M	0.27M	0.60M	0.48M	0.27M	0.19M	0.07M	0.10M	0.33M	0.23M	0.19M	0.52M	
Total	9.17M	18.91M	88.15M	7.60M	5.44M	6.79M	8.83M	14.29M	38.03M	5.38M	7.75M	19.58M	

Note: Color formatting shows lowest to highest value within each row

LONG-ACTING INJECTABLE: OVERVIEW

Demographic	Method	Region
All	No Method	SSA

- Attribute levels are unable to account for the difference between a 3-month and 6-month duration; although longer duration generally has higher forecasted uptake suggesting some advantage of an increase in duration.
- However, at any duration, forecasted uptake is low for a method with irregular bleeding (e.g. spotting) or longer periods, even with no other side effects.

Injection x multiple times a year

(e.g. monthly, every 3-6 months)

	Regular	Shorter	None	Longer	Irregular
Weight	8%	9%	6%	3%	2%
Physical	11%	11%	7%	3%	3%
Mood	9%	9%	7%	2%	2%
None	24%	27%	19%	6%	9%

Injection x once a year or less frequent

(e.g. every 2-5 years, 10+ years)

	Regular	Shorter	None	Longer	Irregular
Weight	11%	13%	11%	4%	3%
Physical	14%	16%	13%	4%	5%
Mood	12%	13%	10%	3%	4%
None	29%	32%	24%	8%	13%

Cluster used for further analysis

0% 10% 30%

% indicates share of women forecasted to uptake method:

LONG-ACTING INJECTABLE: VARIATION IN FORECASTED 2040 UPTAKE (% OF ALL WOMEN) BY REGION AND DEMOGRAPHIC SEGMENT

- Forecast low uptake across all regions and segments for both switching and adopting
- Highest potential forecasted among married users wanting a child soon or wanting to space switching from another method; especially in Africa and South-Eastern Asia

Cluster shown: Injectable used multiple times a year with irregular period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Formerly Married	Adopt Method					
	Married			Never Married				Married			Never Married		
	Soon	Spacer	Limiter	Recent	Ever	Soon		Spacer	Limiter	Recent	Ever		
Eastern Africa	7%	7%	3%	2%	2%	5%	3%	4%	2%	1%	0%	6%	
Middle Africa	6%	6%	4%	2%	2%	3%	2%	3%	3%	1%	0%	6%	
Southern Africa	6%	6%	3%	3%	3%	5%	3%	4%	2%	1%	0%	6%	
Western Africa	6%	6%	3%	2%	2%	4%	3%	4%	2%	1%	0%	6%	
North Africa/West Asia	5%	4%	2%	1%	1%	4%	3%	4%	2%	1%	0%	6%	
East/Central Asia	3%	2%	2%	1%	1%	5%	2%	3%	3%	1%	0%	6%	
South-Eastern Asia	6%	6%	3%	2%	2%	4%	2%	3%	3%	1%	0%	6%	
Southern Asia	5%	4%	2%	1%	1%	1%	2%	3%	4%	1%	0%	6%	
LAC	5%	5%	2%	2%	1%	3%	2%	4%	2%	1%	0%	6%	
Europe	1%	1%	0%	0%	0%	1%	0%	0%	0%	0%	0%	1%	
N. America/Aus	1%	1%	0%	1%	0%	1%	0%	0%	1%	0%	0%	2%	
Total	5%	4%	2%	1%	1%	3%	2%	3%	3%	1%	0%	5%	

0% 10% 30%

% indicates share of women forecasted to uptake method:



LONG-ACTING INJECTABLE: FORECASTED VARIATION IN 2040 SWITCHERS & ADOPTERS BY REGION & DEMOGRAPHIC SEGMENT

- Married women wanting no more children (limiters) are forecast to be the largest market in absolute terms; around 1/4 of uptake among limiters is from adoption with the majority from women switching to the long-acting injectable.

Cluster shown: Injectable used multiple times a year with irregular period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method					
	Married			Never Married		Formerly Married	Married			Never Married		Formerly Married
	Soon	Spacer	Limiters	Recent	Ever		Soon	Spacer	Limiters	Recent	Ever	
Eastern Africa	0.28M	1.00M	1.39M	0.19M	0.11M	0.41M	0.27M	0.43M	0.41M	0.05M	0.00M	0.99M
Middle Africa	0.09M	0.30M	0.35M	0.11M	0.06M	0.12M	0.11M	0.16M	0.31M	0.04M	0.01M	0.31M
Southern Africa	0.02M	0.06M	0.14M	0.07M	0.07M	0.03M	0.02M	0.02M	0.03M	0.01M	0.00M	0.04M
Western Africa	0.27M	0.73M	0.76M	0.17M	0.13M	0.16M	0.43M	0.65M	0.40M	0.05M	0.00M	0.46M
North Africa/West Asia	0.16M	0.35M	1.01M	0.08M	0.04M	0.20M	0.20M	0.20M	0.38M	0.06M	0.01M	0.45M
East/Central Asia	0.35M	0.60M	2.43M	0.14M	0.10M	0.21M	0.21M	0.09M	0.55M	0.09M	0.04M	0.50M
South-Eastern Asia	0.22M	0.76M	2.17M	0.06M	0.03M	0.09M	0.16M	0.12M	0.57M	0.02M	0.01M	0.45M
Southern Asia	0.69M	1.20M	4.92M	0.06M	0.03M	0.06M	0.73M	0.52M	2.50M	0.04M	0.00M	0.92M
LAC	0.21M	0.48M	1.01M	0.17M	0.08M	0.31M	0.09M	0.13M	0.27M	0.04M	0.05M	0.58M
Europe	0.02M	0.04M	0.12M	0.06M	0.02M	0.05M	0.01M	0.01M	0.01M	0.00M	0.01M	0.11M
N. America/Aus	0.02M	0.04M	0.11M	0.09M	0.03M	0.04M	0.01M	0.01M	0.05M	0.02M	0.01M	0.10M
Total	2.32M	5.57M	14.40M	1.19M	0.69M	1.70M	2.24M	2.34M	5.48M	0.42M	0.13M	4.89M

Note: Color formatting shows lowest to highest value within each row

FORECASTED 2040 UPTAKE: COMPARISON ACROSS PIPELINE METHODS

- Monthly pill and peri-coital pill forecast to have the highest uptake; **results largely driven by bleeding profiles** rather than mode of delivery.
- Pipeline methods not competed against each other in forecasts; rather results show potential for each method relative to existing methods.

Forecasts based on 'most likely' side effect and menstruation profile shown previously; includes switching and adoption.

	Monthly pill	Peri-coital pill	Microarray patch	Long-acting injectable
Global	271.1M	229.9M	66.8M	41.4M
SSA Unmarried Non-Users	5.7M	4.0M	0.1M	0.2M

Lower uptake
largely driven by
irregular bleeding

Note: all methods include physical side effects; monthly and peri-coital pill include regular periods.

FORECASTED 2040 UPTAKE: COMPARISON ACROSS PIPELINE METHODS WITH ALTERNATIVE BLEEDING PROFILES

- Patch forecast to achieve similar uptake as monthly & peri-coital pills with alternative bleeding profiles
- Long-acting injectable uptake improves if address irregular bleeding but still lags other pipeline methods

Microarray patch	Long-acting injectable
182.0M	110.7M
3.0M	2.4M

No period

	Monthly pill	Peri-coital pill
Global	271.1M	229.9M
SSA Unmarried Non-Users	5.7M	4.0M

Microarray patch	Long-acting injectable
66.8M	41.4M
0.1M	0.2M

Irregular bleeding

- Shorter periods result in higher forecasted uptake than no periods for both the microarray patch and long-acting injectable

Microarray patch	Long-acting injectable
266.5M	167.9M
5.6M	3.5M

Shorter period

FORECASTED 2040 UPTAKE: COMPARISON ACROSS PIPELINE METHODS WITH ALTERNATIVE BLEEDING PROFILES

	Monthly pill	Peri-coital pill
Irregular Bleeding	83.0M	78.0M
	0.3M	0.6M

- If the monthly and peri-coital pills instead have a less desirable bleeding profile, forecasted uptake is substantially lower



	Monthly pill	Peri-coital pill	Microarray patch	Long-acting injectable
Global	271.1M	229.9M	66.8M	41.4M
SSA Unmarried Non-Users	5.7M	4.0M	0.1M	0.2M

Regular bleeding

- However, even with irregular bleeding, forecasted uptake of the monthly and peri-coital pills is still higher than that of the microarray patch and LAI (assuming these methods also result in irregular bleeding)


4. PREFERRED CLUSTER FORECAST

Exploring Highest Ranking Clusters in Terms of Forecasted 2040 Uptake

LPPP Approach and Key Findings

OVERLAYING PREFERRED CLUSTERS WITH FEASIBILITY CONSTRAINTS

- Many highly preferred clusters (in terms of 2040 forecasted uptake) are unlikely to be technologically feasible
- Look at highest ranking clusters with different attribute constraints¹
 1. **Clusters with side effects:** in short term unlikely to develop new methods without similar side effect profiles to existing hormonals
 2. **Clusters that may cause irregular bleeding:** in short term, likely to have methods that cause irregular bleeding
 3. **Clusters with no side effects, but exclude non-invasive with long duration:** in longer term as explore methods without hormonal mechanisms/side effects unlikely to achieve user-controlled methods with long duration (1+ years)



What are the most promising clusters within these constraints?

Results shown for SSA non-users; all clusters achieving 15%+ uptake² shown. Rank indicates overall rank (with no constraints applied).

¹ Male partner uses methods excluded from all results as outside scope of this work

² results for 5%+ are in the Results Annex; as well as rankings for dual markets (Europe, N. America, Australia)

PROMISING CLUSTERS WITH SIDE EFFECTS

Demographic	Method	Region
All	No Method	SSA

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Swallow	Once year more infrequent	Physical	Shorter	51.7M	26%
Swallow	Once year more infrequent	Physical	Regular	49.2M	25%
Swallow	Once year more infrequent	Mood	Shorter	45.7M	23%
Skin	Once year more infrequent	Physical	Shorter	44.2M	22%
Swallow	Once year more infrequent	Mood	Regular	43.7M	22%
Skin	Once year more infrequent	Mood	Shorter	41.1M	21%
Swallow	Once year more infrequent	Physical	None	39.4M	20%
Swallow	Once year more infrequent	Weight	Shorter	38.5M	20%
Skin	Once year more infrequent	Physical	Regular	38.3M	20%
Swallow	Multiple x year	Physical	Shorter	37.6M	19%
Swallow	Multiple x year	Mood	Shorter	37.0M	19%
Skin	Once year more infrequent	Mood	Regular	36.8M	19%
Swallow	Once year more infrequent	Weight	Regular	35.7M	18%
Swallow	Multiple x year	Mood	Regular	35.1M	18%
Skin	Multiple x year	Mood	Shorter	35.1M	18%
Swallow	Once year more infrequent	Mood	None	35.1M	18%
Skin	Multiple x year	Physical	Shorter	35.1M	18%
Skin	Once year more infrequent	Physical	None	34.5M	18%
Swallow	Multiple x year	Physical	Regular	33.8M	17%
Skin	Once year more infrequent	Weight	Shorter	33.5M	17%
Swallow	At Sex	Physical	Shorter	32.4M	16%
Injection	Once year more infrequent	Physical	Shorter	31.9M	16%
Swallow	Once year more infrequent	Weight	None	31.5M	16%
Skin	Multiple x year	Mood	Regular	31.2M	16%
Skin	Once year more infrequent	Mood	None	30.1M	15%
Skin	Multiple x year	Physical	Regular	29.7M	15%
Swallow	At Sex	Mood	Shorter	29.5M	15%

Infrequency of use and non-invasive modes of delivery (swallow, skin) can compensate for some non-bleeding side effects

PROMISING CLUSTERS WITH IRREGULAR BLEEDING

Demographic	Method	Region
All	No Method	SSA

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Swallow	Once year more infrequent	None	Irregular	45.1M	23%
Skin	Once year more infrequent	None	Irregular	39.8M	20%
Swallow	Multiple x year	None	Irregular	31.3M	16%
Skin	Multiple x year	None	Irregular	30.5M	16%

- Only 4 clusters with irregular bleeding achieve uptake greater than 15%, suggesting low tolerance for irregular bleeding even with other 'preferable' attributes
- Irregular bleeding can only be compensated for by highly unlikely combinations (non-invasive methods used infrequently)

PROMISING CLUSTERS WITH NO SIDE EFFECTS, EXCLUDING NON-INVASIVE WITH LONG DURATION (1 OF 2)

Demographic	Method	Region
All	No Method	SSA

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Swallow	Multiple x year	None	Shorter	85.1M	43%
Swallow	Multiple x year	None	Regular	78.4M	40%
Skin	Multiple x year	None	Shorter	75.7M	39%
Skin	Multiple x year	None	Regular	68.1M	35%
Swallow	At Sex	None	Shorter	59.6M	30%
Swallow	Multiple x year	None	None	59.4M	30%
Skin	Multiple x year	None	None	55.6M	28%
Skin	At Sex	None	Shorter	53.4M	27%
Injection	Multiple x year	None	Shorter	53.0M	27%
Incision	Once year more infrequent	None	Shorter	52.9M	27%
Swallow	At Sex	None	Regular	52.9M	27%
Swallow	Daily	None	Shorter	52.2M	27%
Injection	Multiple x year	None	Regular	47.2M	24%
Incision	Once year more infrequent	None	Regular	46.9M	24%
Skin	Daily	None	Shorter	46.5M	24%
Vaginal_provider	Once year more infrequent	None	Shorter	46.0M	23%
Vaginal_self	Multiple x year	None	Shorter	45.3M	23%
Skin	At Sex	None	Regular	44.4M	23%
Swallow	Daily	None	Regular	42.9M	22%
Swallow	At Sex	None	None	42.2M	21%
Vaginal_self	Multiple x year	None	Regular	40.2M	20%
Vaginal_provider	Once year more infrequent	None	Regular	39.7M	20%
Incision	Multiple x year	None	Shorter	38.7M	20%
Incision	Once year more infrequent	None	None	37.6M	19%
Skin	At Sex	None	None	36.7M	19%
Skin	Daily	None	Regular	35.9M	18%
Swallow	Daily	None	None	34.4M	17%
Incision	Multiple x year	None	Regular	34.3M	17%

Methods that are swallowed or put on the skin see highest potential

PROMISING CLUSTERS WITH NO SIDE EFFECTS, EXCLUDING NON-INVASIVE WITH LONG DURATION (2 OF 2)

Demographic	Method	Region
All	No Method	SSA

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Skin	Daily	None	None	32.3M	16%
Incision	Once	None	Shorter	32.1M	16%
Vaginal_provider	Once year more infrequent	None	None	32.0M	16%
Swallow	Multiple x year	None	Irregular	31.3M	16%
Vaginal_provider	Multiple x year	None	Shorter	31.2M	16%
Skin	Multiple x year	None	Irregular	30.5M	16%
Vaginal_self	Multiple x year	None	None	29.8M	15%

- Methods that are swallowed or put on the skin see highest potential

POTENTIAL ADDITIONAL ANALYSIS

Additional Analysis Possible with LPPP Demographic Projections and Other Survey Data Collected as Part of DCE

POTENTIAL ADDITIONAL ANALYSIS

DCE survey included a range of questions beyond those used in this analysis:

- Ever use of contraception
 - Can compare to current use; can also look at multiple method use
- Desirability of each attribute level included in DCE rated
 - Very undesirable, undesirable, neutral, desirable, very desirable
- Why did you choose your current method(s)?
 - Details on next slide
- Which of these side effects would make you stop using a method?
 - Details on next slide
- Desirability for different durations of return to fertility
 - Within one month, one to six months, longer than six months, never
- Desirability for non-contraceptive benefits desirability
 - Protect against STIs/HIV, skin improvements, reduced menstrual pain, reduced anemia
- Desirability for discreetness
 - Hide-able from partner, hide-able from family, hide-able from others in community

Additional analysis* could be conducted to look at responses to these questions:

1. Would additional analysis be useful?
2. If so, which questions are most useful to explore?

*Analysis would require weighting approach based on LPPP Demographic Projections

DETAILED QUESTION RESPONSES

Why did you choose your current method(s)?

(Please select up to three top reasons)

- Effect on menstruation/bleeding
- Non-contraceptive health reasons (e.g. acne reduction, endometriosis)
- Cost
- Ease of use
- Partner acceptability
- Lack of side effects
- Prevention of HIV and other STIs
- Recommendation from friend or family member
- Availability
- Health care worker recommendation
- How long it lasts
- Religious reasons
- Effectiveness of the method
- Convenient to use

Other reason (please describe):

Which of these side effects would make you stop using a contraceptive method?

(Please select all that apply)

- Some hair loss from your head
- Feeling mild nausea for a few months (then it goes away)
- Irregular bleeding/spotting for a few months (then it goes away)
- Headaches a few days a month
- Temporary redness or itching after application that lasts a few days
- Increased acne
- Temporary redness or itching after application that lasts a few hours
- Feeling depressed or sad more frequently
- Gaining 5-10 lbs (3-6 kg) in a year
- Occasional headaches for a few months (then they go away)
- Frequent mood swings
- Gaining 2-5 lbs (1-3 kg) in a year
- Feeling tired for a few weeks (then it goes away)
- Irregular bleeding/spotting a few days a month
- Temporary discomfort or bruising after insertion or application
- Cramping for a few months (then it goes away)
- Feeling nauseous a few days a month
- Breast tenderness a few days a month
- Excess hair growth on your body
- Lower sex drive
- None of the above

CONCLUSIONS

SUMMARY OF LPPP APPROACH AND KEY FINDINGS

- LPPP Approach
 - Projecting changes to 2040 in the number of women of reproductive age (WRA) by segments that account for shifts in marriage patterns, desired family size, and levels of premarital sex
 - Layering on data collected on contraceptive method attribute preferences to forecast future uptake
- Key Findings: Projection of Demographic Segments from 2020 to 2040
 - Sub-Saharan Africa will see dramatic changes in segment sizes; married women wanting no more children have largest projected increase (+70 million), followed next by never-married sexually active women (+56 million)*
 - Married women wanting no more children will be the single largest segment in all regions in 2040; globally 4 in 10 women of reproductive age will be in this segment
- Key Findings: Forecast of Attribute Preferences and Potential 2040 Uptake
 - Universally strong preference for no side effects & shorter/regular periods
 - But see some trade-offs with mode of delivery and duration, especially for non-bleeding side effects
 - Consistently lower tolerance for bleeding changes (irregular/longer) compared to other side effects
 - Similar preferences regarding frequency of use and mode of delivery across segments; suggesting universality of preferences
 - Male partner using method highly desirable, but out of scope for this work

*Sub-Saharan Africa numbers based on sum of Eastern, Middle, Southern, and Western Africa. Never Married Sexually Active combines recent sex and non-recent sex.

GOING BEYOND USER PREFERENCES

- More goes into decisions to use than preferences for specific attributes:
 - Awareness: marketing campaigns, satisfied users, friends' experiences
 - Provider counseling
 - Availability and cost

Preferences: results below for non-LAPM users in SSA; show low preference shares for an incision; especially when coupled with side effects and irregular/longer bleeding. A vaginally inserted method with no side effects has decently high preference shares.

		Incision					Vaginal_provider				
		Regular	Shorter	None	Longer	Irregula	Regular	Shorter	None	Longer	Irregula
Once year more infrequent	Weight	8%	10%	8%	3%	4%	5%	7%	5%	1%	2%
	Physical	11%	14%	10%	3%	6%	7%	9%	6%	2%	2%
	Mood	10%	11%	9%	3%	5%	7%	7%	6%	2%	2%
	None	23%	27%	20%	7%	12%	19%	23%	17%	4%	7%

Reality: huge takeoff of implants in SAA (even with many experiencing side effects and/or irregular bleeding); have not seen similar growth of IUD/IUS.

LPPP METHODOLOGY ANNEX

METHODOLOGY ANNEX OUTLINE

- DEMOGRAPHIC PROJECTION MODEL METHODS
- DISCRETE CHOICE EXPERIMENT (DCE) METHODS & ANALYSIS
- LINKING DEMOGRAPHIC PROJECTIONS AND DCE RESULTS TO FORECAST UPTAKE
- SENSITIVITY TESTING

DEMOGRAPHIC PROJECTION MODEL METHODS

DEMOGRAPHIC MODEL APPROACH

Criteria for development of segments:

- Related to contraceptive need and preferences
- Quantifiable in wide range of surveys
- Projectable with some accuracy
- Exhaustive and mutually exclusive (all women fall into one segment)

Segments created:

1. Married women who want another child soon (within 2 years; referred to as 'soon')
2. Married women who want another child later (2+ years; referred to as 'space')
3. Married women who want no more children (referred to as 'limit')
4. Never-married women who have had recent sex (within 30 days; referred to as 'recent sex')
5. Never-married women who have had sex but not recently (30+ days; referred to as 'non-recent sex')
6. Never-married women who have never had sex (referred to as 'no sex')
7. Formerly married women

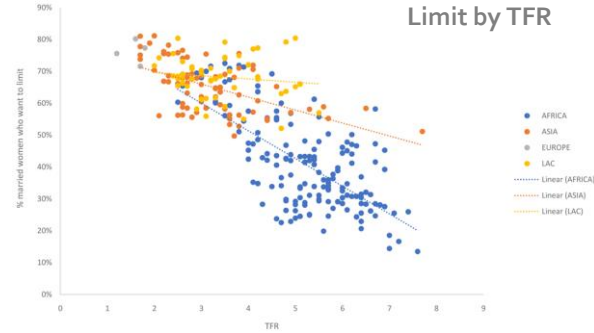
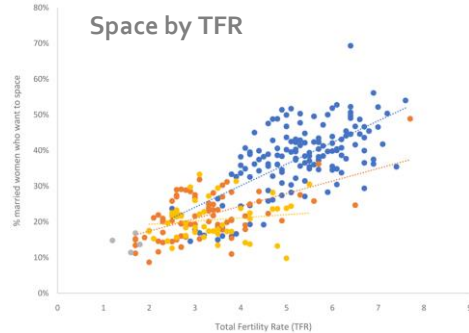
BUILDING ON EXISTING PROJECTIONS

- UN World Population Prospects (2019 Revision)
 - Women of reproductive age
 - Total Fertility Rate (TFR)
- UN World Marriage Data (2017)
 - Projection of proportion married
 - Projected to 2030 by UN; linear trend to extend to 2040 for LPPP
- UN Model-Based Estimates and Projections of Family Planning Indicators (2019)
 - Contraceptive prevalence (CPR) for married women
 - Projected to 2030 by UN; polynomial curve used to extend to 2040 for LPPP; held constant above 70%

Model built by country for all countries of the world. Results generated for 2020 and 2040.

MARRIED FERTILITY INTENTIONS

- Married women segmented by fertility intentions: (1) wants soon, (2) wants to wait (space), and (3) wants no more (limit)
 - Note: women who want more children but were unsure of timing were grouped in with those who want after 2+ years (space), and women who were undecided overall about having a(nother) child, women who they (or their partner) are already sterilized, and women who are declared infecund were grouped into married women wanting no more children (limit).
- Analysis conducted to quantify relationship between segment sizes and total fertility rate (TFR) using 280 surveys from 86 countries spanning 1985 to 2018. Linear regressions developed linking TFR to share of married women who want to space, and TFR to share of married women who want to limit. A global 'convergence' point was calculated from each, representing the share of women in each segment when TFR reaches replacement levels (2.1).



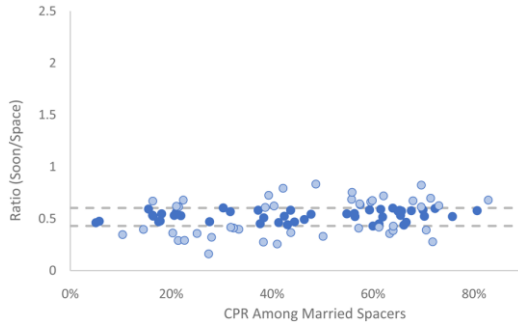
Some regional variation is seen; but largely driven by data availability (Africa data mostly at high TFR, LAC and Asia data mostly at low TFR). Therefore, a global trend was used.

- For countries with data; assume linear progression from most recent survey to global convergence point; sole and intercept used to estimate distribution at 2020 and 2040 TFR. If TFR below 2.3, or the survey value was < predicted value for spacers or > predicted value for limiters, values held constant from last survey. For countries with no data the global regression line was used to estimate proportions. Wants soon calculated as residual as segments must sum to 100%.

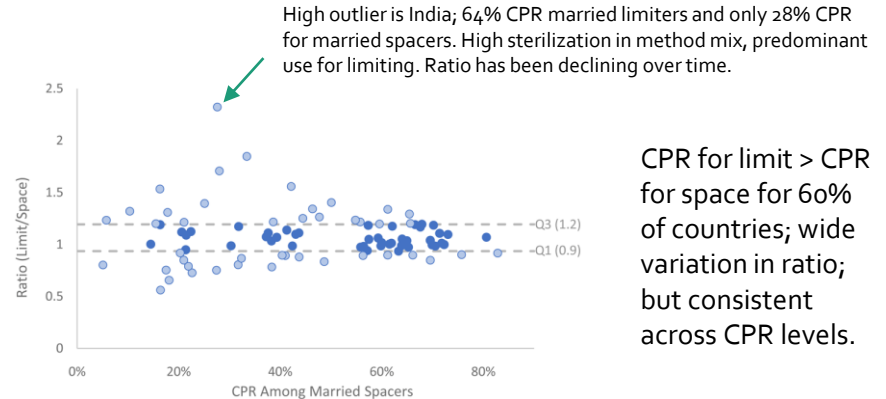
MARRIED CONTRACEPTIVE USE BY SEGMENT

- Overall married contraceptive prevalence rate (CPR) based on UN model-based estimates
- CPR by segment calculated from most recent DHS or MICS for 89 countries with available data (secondary analysis of survey datasets).
- Ratios created to look at CPR for married soon relative to CPR for married spacers, and CPR for married limiters relative to CPR for married spacers.

CPR for soon always < CPR for space; average ratio = .52; limited variation in ratio.



CPR ratio (Soon/Space) by CPR (Space)



High outlier is India; 64% CPR married limiters and only 28% CPR for married spacers. High sterilization in method mix, predominant use for limiting. Ratio has been declining over time.

CPR for limit > CPR for space for 60% of countries; wide variation in ratio; but consistent across CPR levels.

CPR ratio (Limit/Space) by CPR (Space)

- Ratios used to estimate CPR for each segment that reconciles with overall married CPR. For 2040, if a country's ratio fell outside the inter-quartile range (Q1-Q3, light blue dots in graph above), the ratio was increase/decreased to be within the range. For countries without data, regional averages were used.

UNMARRIED SEGMENTS: FORMERLY MARRIED & SEXUAL ACTIVITY AMONG NEVER-MARRIED

- Never-married vs formerly married informed by surveys and data published in the UN World Marriage Database (2017). Estimates available for 144 countries, regional averages used for remaining countries. Split held constant to 2040.
- Never-married women further segmented by sexual activity: (1) had sex recently (last 30 days), (2) had sex but not recently (>30 days), (3) never had sex. Recency of sex is intended to be a proxy for frequency; recently is collected more broadly in surveys and in a standard format. Cross-sectionally, recency and frequency have high correlation.
- Data on sexual activity of never-married women was analyzed using DHS and MICS survey datasets in 76 countries, and also supplemented by analysis of NATSAL, CPS, and NSFG from the US and UK to help inform patterns in Europe and North America. Countries were assigned to a category based on the share of never-married women who had ever had sex. For 2020, survey values or regional averages were used.

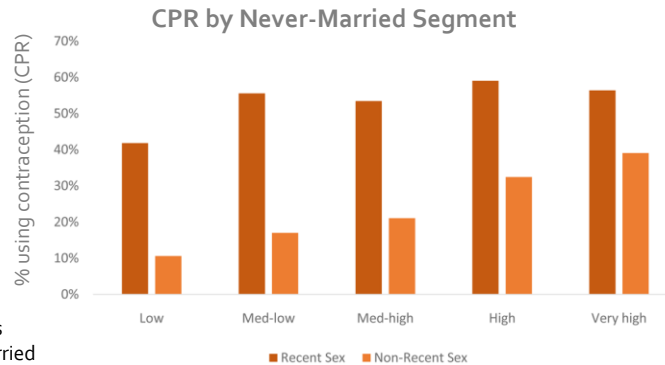
		Sexual Activity Among Never-Married Women		Recency of Sex (among those who have had sex)		# Countries
		Never Had Sex	Ever Had Sex	Not Recent	Recent	
Share of never-married women who have had sex	Low (<10%)	97%	3%	73%	27%	14
	Med-low (10–29%)	79%	21%	69%	31%	14
	Med-high (30–49%)	60%	40%	65%	35%	22
	High (50–70%)	42%	58%	64%	36%	19
	Very high (>70%)	22%	78%	46%	54%	9

Generally, as level of pre-marital sexual activity increases so does recency.

- For 2040, countries were shifted to the average values in the next-highest category (for those already in very high, were increased to the average for very high if not already above average) to represent some expected level of liberalization over time.

UNMARRIED CONTRACEPTIVE USE BY SEGMENT

- CPR was calculated from DHS and MICS datasets for never-married recent sex (n=70), never married ever sex (n=71), and formerly married women (n=74). In some surveys, sample size was insufficient to calculate this value. For 2020, survey estimates, or regional averages were used.
- For never-married women, CPR was averaged using the same categories based on level of sexual activity (see previous slide).



CPR consistently higher among those who had sex recently; as expected given the higher need in that group. CPR among those who had sex recently is consistent across levels of sexual activity; while among those who have had sex but not recently it increases with level of sexual activity.

- For 2040, countries were shifted to the average CPR in the next-highest category, unless the CPR from the last survey was already higher. For countries already in very high, CPR was increased to the average for very high if not already above average. CPR for formerly married women was held constant.

METHOD MIX BY SEGMENT

- Forecasts of uptake consider the method a women *would* be using in 2040 in the absence of the new CT. The methodology developed for 2040 method mix is informed by general typologies of method mix seen (e.g., high use of LAPMs, high use of condoms) rather than projecting changes to method mix based on recent changes.
- For married women, method mix by segment (soon, space, limit) was calculated from DHS and MICS datasets for 107 countries. For an additional 78 countries, overall married women method mix from the latest survey was used (drawing from the UN Population Division World Contraceptive Use 2020); a method mix with sterilization was used for limiters and an adjusted method mix without sterilization was used for soon and space. For these surveys, underlying datasets were not available to calculate method mix by segment, but applying this same approach to countries for which further analysis could be completed produced generally similar method mixes.
- For unmarried women, method mix by segment was calculated from MICS and DHS datasets in 70 countries. This was supplemented by method mix estimates for an additional 11 countries, mostly in Europe and North America, utilizing method mix data by age and marital status shared by colleagues at UNPD. For some surveys a split between never-married and formerly married was available. For others, age was used as a proxy as follows: the average method mix among younger unmarried women was used as a proxy for never-married method mix, while the average method mix among older unmarried women was used as a proxy for formerly married women.
- Average method mixes by segment were calculated for five typologies, developed by clustering together similar patterns of method mix (by sub-region). Typology development excluded countries with very low CPR as they were developed for future projections to 2040.
- For 2020, the method mix from a survey was used, or a regional average if no survey was available. For 2040, method mix was held constant if CPR surpassed set thresholds (60% for married, 45% for never-married recent sex, 30% for never-married non-recent sex, and 10% for formerly married). If not above the threshold, the method mix of the assigned future typology (1-5) was used.

AVERAGE METHOD MIX BY TYPOLOGY

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

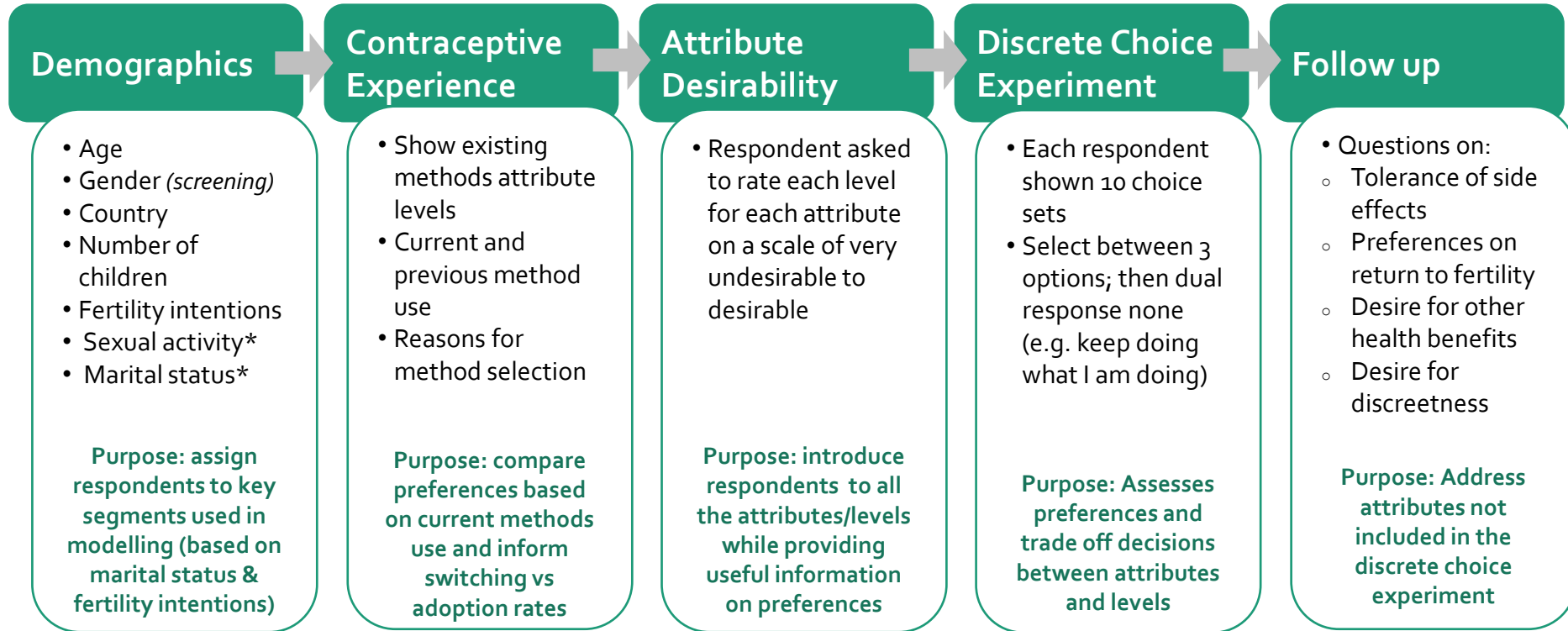


Typology assignment:

	Current	2040
Eastern Africa	1	1
Middle Africa	n/a	1
Northern Africa	n/a	1
Southern Africa	1	1
Western Africa	n/a	1
Eastern Asia	4	4
Central Asia	4	4
Southern Asia	5	5
South-Eastern Asia	1	1
Western Asia	2	2
Eastern Europe	3	3
Northern Europe	2	2
Southern Europe	3	3
Western Europe	2	2
Caribbean	5	5
Central America	n/a	5
South America	5	5
NORTHERN AMERICA	5	5
Australia/New Zealand	5	5
Melanesia	5	5
Micronesia	5	5
Polynesia	n/a	5

DISCRETE CHOICE EXPERIMENT (DCE) METHODS & ANALYSIS

DCE SURVEY FLOW



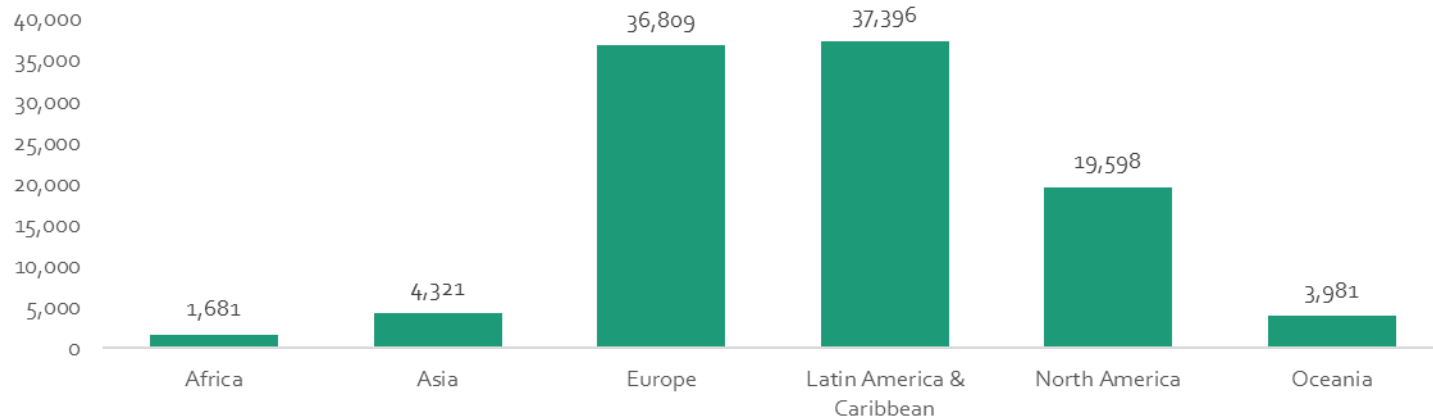
* Marital status and sexual activity will be asked later in the survey so it does not bias responses

DCE SURVEY DESIGN

- Design includes 30 versions (blocks) with 10 choice sets, including one fixed choice holdout to use for validation
- “Balanced overlap” choice set design was used to maximize orthogonality and level balance while allowing for enough overlap to analyze interactions
- Dual-response none approach was used to maximize information provided by each respondent and provide a constant alternative of the status quo
- Alternative-specific design and prohibitions were explored ultimately not included as their inclusion would not allow for the inclusion of interaction terms between attributes, which were considered central to the research question

DCE RESPONDENTS

- 104,163 responses from 176 countries analyzed*
- Top 10 countries: Mexico (n=19,898), United States (n=14,575), United Kingdom (n=13,381), France (n=9,739), Canada (n=5,023), Spain (n=4,730), Colombia (n=4,713), Argentina (n=3,814), Australia (n=3,110), Peru (n=2,012)
- Respondents largely from Clue sending survey to their user base (see Slide 23), but additional respondents sourced from: social media, PSI promotion (Guatemala, El Salvador, Honduras, Nicaragua, Dominican Republic, Benin, Cote d'Ivoire, Senegal, Mali, Kenya, Uganda, Nigeria), Nivi (Kenya, India), panel respondents purchased (via Dynata in India, Philippines, South Africa)



Note: small number of respondents did not provide location and are excluded from this graph

*after removing speeders and respondents with low RLH

ANALYSIS OF DCE RESULTS

Each respondent shown 10 choice sets

If you were considering using a contraceptive method and these were your only options, which would you choose?

(1 of 10)

	Option 1	Option 2	Option 3
How you get it or use it	You swallow it, like a pill	Injection given by a provider or by yourself	You swallow it, like a pill
How often you use it	Once a year or more infrequently (e.g. every 2-5 years, 10+ years)	Every day	Only once (lasts forever)
Side effects you experience	May cause mood changes, changes to sex drive	May cause moderate weight gain	May cause mild nausea, headaches, fatigue
Effect on menstruation	Regular periods	Irregular bleeding (e.g. spotting)	No period
	<input type="button" value="Select"/>	<input type="button" value="Select"/>	<input type="button" value="Select"/>

If the option you chose above was available, would you switch to it or would you rather continue doing what you are currently doing?

Asked to compare to current method/non-use

Hierarchical Bayesian model estimated using Monte Carlo Markov Chain algorithm. Model includes all possible interactions between attributes.

DCE approach allows for assessment of trade-offs between attribute levels

Produces 'utilities' for each attribute level, interactions between attributes, and respondent's current choice.

Calculate **strength of preference** for an alternative (relative to current choice)

$$\text{Strength of preference} = \frac{\text{Utility of alternative choice}}{(\text{Utility of alternative choice} + \text{Utility of current choice})}$$

ANALYSIS OF DCE RESULTS

- Data cleaning conducted before analysis:
 - removed "speeders" (respondents under 8 minutes)
 - removed respondents with low RLH (Root Likelihood), an internal consistency fit statistic to identify "random" responders
- Bayesian model estimated using Monte Carlo Markov Chain algorithm including full set of interactions between attribute levels. Models with and without interactions compared. Model with interactions used for final analysis.
- Validation conducted using the fixed choice holdout.
- Bayesian model output utilities for each respondent; utilities generated for each attribute level, first-order interactions, and none (keep doing what they are doing).
- Bayesian modelling done using Sawtooth software; utilities exported to STATA SE 17 for further analysis.
- Strength of preference calculated for each of 700 clusters of attribute levels; includes utility of each attribute level (n=4) and utilities of interactions between attribute levels (n=6).

Illustrative example: strength of preference for a method you swallow x multiple times a year x no side effects x regular period

$[utility_swallow + utility_multipleyear + utility_nosideeffect + utility_regperiod] + [utility_swallow \times multipleyear + utility_swallow \times nosideeffect + utility_swallow \times regperiod + utility_multipleyear \times bosideeffect + utility_multipleyear \times regperiod + utility_nosideeffect \times regperiod]$

$[[utility_swallow + utility_multipleyear + utility_nosideeffect + utility_regperiod] + [utility_swallow \times multipleyear + utility_swallow \times nosideeffect + utility_swallow \times regperiod + utility_multipleyear \times bosideeffect + utility_multipleyear \times regperiod + utility_nosideeffect \times regperiod]] + utility_none$

Utility of alternative choice: (A) utility of each attribute level

Utility of alternative choice: (B) utility of interactions between attribute levels


Utility of current choice

DEVELOPING STRENGTH OF PREFERENCE SCORES

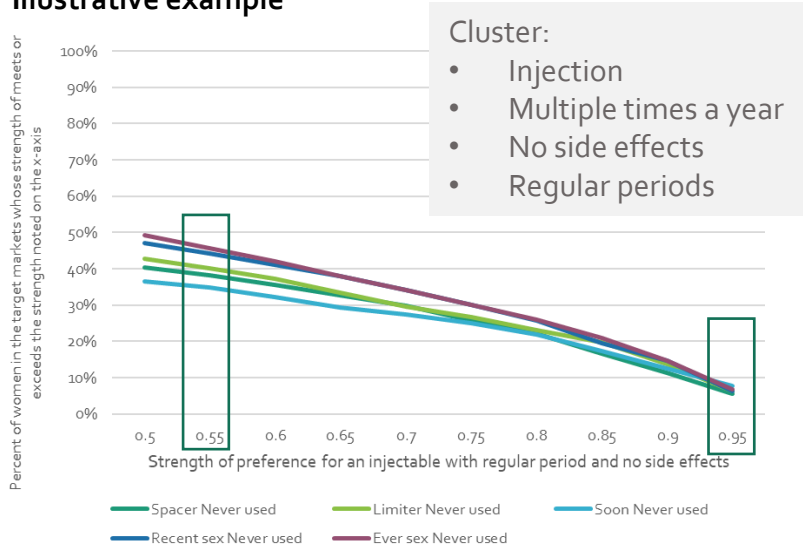
- Strength of preference ideally calculated by:
 - **Method** → must have as measure is relative to current method/no method
 - Demographic segment
 - Geographic region

Hypothesis that preferences vary by these characteristics
- 12 methods x 6 demographic segments x 20 sub-regions = **1,440 preference scores**
- Based on analysis set threshold of at **least 100 respondents** to generate reliable preference score
- In some cases, sample size insufficient to calculate score fully disaggregated (see slide 20)

STRENGTHEN OF PREFERENCE CUTOFFS

- Every respondent has a different value for the **strength of preference** that falls between: zero  one
no interest in the alternative choice *no interest in continuing with current choice*

Illustrative example



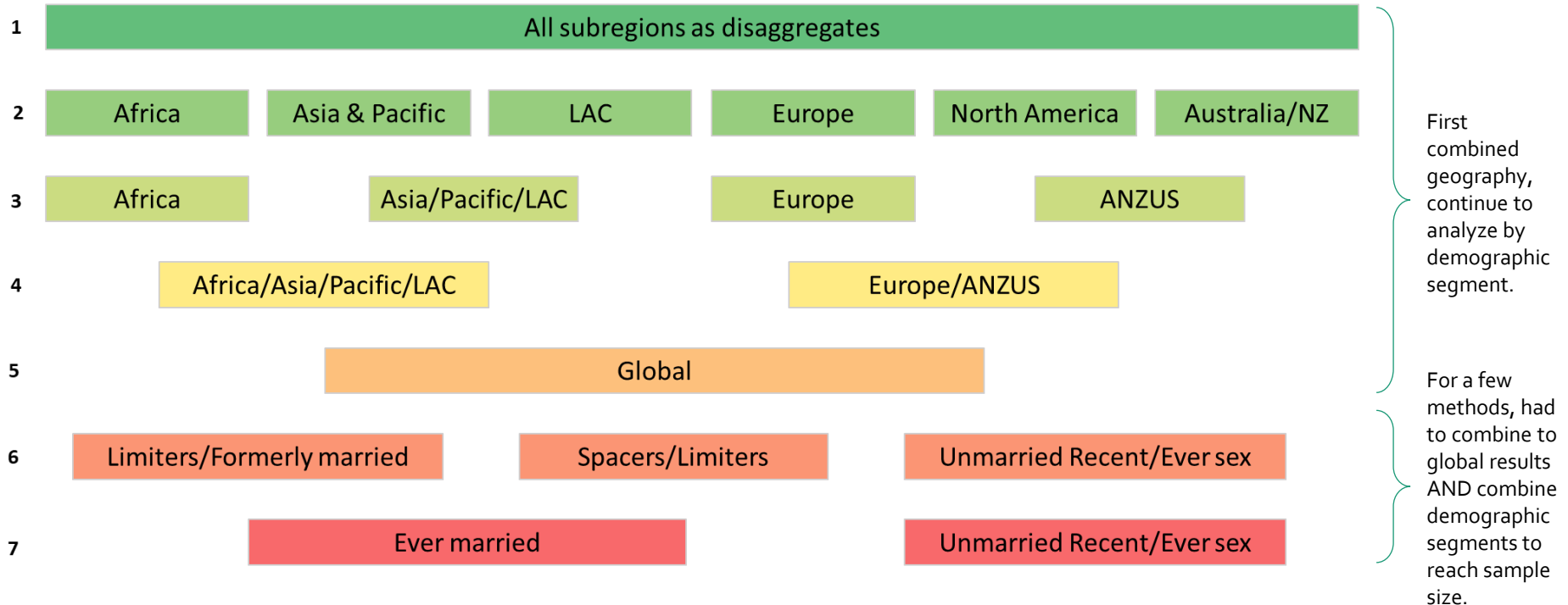
For uptake apply the proportion of respondents with $>x$ strength of preference:

- .95 for non-users
- .90 for users

See sensitivity testing results for variation in thresholds

DEVELOPING STRENGTH OF PREFERENCE SCORES: REGIONAL DISAGGREGATION APPROACH

Analysis always done by **method**, but in some cases had to combine geographies and demographic segments to reach the 100+ minimum sample as follows:



DEVELOPING STRENGTH OF PREFERENCE SCORES: REGIONAL DISAGGREGATION APPROACH RESULTS

- Africa and Asia often reliant on aggregates; most commonly borrowing responses from LAC

Africa

	NotUsing	F.Ster	M.Ster	IUD	Implant	Inject	Pill	Condom	EC	OthMod	Trad
Limit	4	4	4	4	4	4	4	4	7	4	4
Space	4			4	4	4	4	4	7	5	4
Soon	2			4	5	6	4	4	7	5	4
Recent	2	6	5	4	4	4	4	2	5	4	4
Ever	1	6	6	4	4	4	4	4	6	4	4
Formerly	4	5	6	4	6	6	4	4	7	6	5

Latin America

	NotUsing	F.Ster	M.Ster	IUD	Implant	Inject	Pill	Condom	EC	OthMod	Trad
Limit	1	1	1	1	1	1	1	1	7	3	1
Space	1			1	2	2	1	1	7	5	2
Soon	1			2	5	6	1	1	7	5	2
Recent	1	6	5	1	1	1	1	1	5	2	1
Ever	1	6	6	1	1	1	1	1	6	2	2
Formerly	1	5	6	2	6	6	3	1	7	6	5

Asia

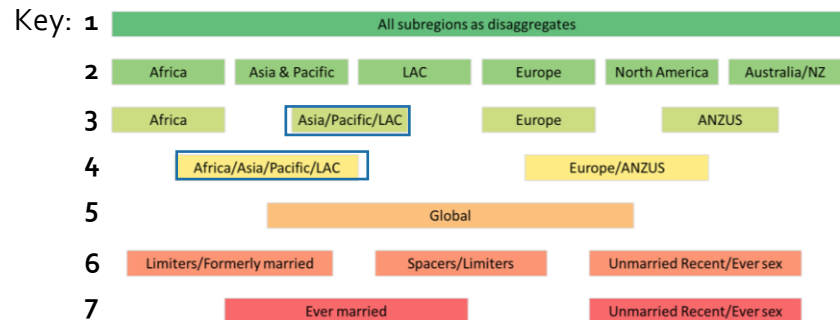
	NotUsing	F.Ster	M.Ster	IUD	Implant	Inject	Pill	Condom	EC	OthMod	Trad
Limit	1	3	3	3	3	3	3	2	1	7	3
Space	2			3	3	3	3	2	7	5	3
Soon	1			3	5	6	3	2	7	5	3
Recent	1	6	5	3	3	3	3	2	1	5	3
Ever	1	6	6	3	3	3	3	2	1	6	3
Formerly	3	5	6	3	6	6	3	3	7	6	5

North America / Australia/New Zealand

	NotUsing	F.Ster	M.Ster	IUD	Implant	Inject	Pill	Condom	EC	OthMod	Trad
Limit	1	1	1	1	1	5	1	1	7	1	1
Space	1			1	3	5	1	1	7	4	1
Soon	1			1	4	6	1	1	7	4	1
Recent	1	6	5	1	1	5	1	1	5	1	1
Ever	1	6	6	1	1	5	1	1	6	1	4
Formerly	1	5	6	1	6	6	4	1	7	6	4

Europe

	NotUsing	F.Ster	M.Ster	IUD	Implant	Inject	Pill	Condom	EC	OthMod	Trad
Limit	1	2	1	1	1	5	1	1	7	2	1
Space	1			1	1	5	1	1	7	4	1
Soon	1			1	4	6	1	1	7	4	1
Recent	1	6	5	1	1	5	1	1	5	2	1
Ever	1	6	6	1	1	5	1	1	6	4	4
Formerly	1	5	6	2	6	6	4	1	7	6	4



Note: Number indicates at least one sub-region with data at level shown

DCE ANALYSIS OUTPUT

- Database with **1,008,000** entries:
 - Demographic (n=6) x Method (n=12) x Sub-Region (n=20) x Cluster (700)
 - Main result = preference score (e.g. the share of respondents with a strength preference that exceeds 90% for switchers and 95% for adopters (no method))

Demographic (n=6)	Method (n=12)		Sub-Region (n=20)	
Married: wants soon	No Method		Eastern Africa	South-Eastern Asia
Married: wants to space	Sterilization (f)	Condom	Middle Africa	Southern Asia
Married: wants no more (limit)	Sterilization (m)	EC	Southern Africa	Western Asia
Never married: recent sex	IUD	LAM	Western Africa	Oceania
Never married: sex not recently	Implant	Other Modern	Northern Africa	Eastern Europe
Formerly married	Injectable	Traditional	Caribbean	Southern Europe
	Pill		Central America	Northern Europe
			South America	Western Europe
			Central Asia	Northern America
			Eastern Asia	Australia/New Zealand

ROLE OF CLUE RESPONDENTS IN DCE

- Clue is a period tracking app with more than 12 million users globally. Under a separate investment Clue piloted using their app to conduct sexual and reproductive health research. As an informal collaboration, Clue agreed to send a link to the LPPP DCE survey to some of their user-base; Clue respondents account for a large share of overall DCE responses.
- Clue users are *not* representative of the countries they live in (skew younger, more educated). **LPPP forecasts apply DCE preference results by segment (demographic x method x geography) to LPPP projections so adjusts for compositional differences** (e.g. overall representativeness of DCE sample is not important for LPPP forecasts).
- It is possible preferences could vary between Clue vs non-Clue users within the same segment (e.g. never married non-users who had sex recently in Country X). Exploratory analysis of preference differences was conducted, but data does not allow for robust conclusions.*
- If there were a difference in preferences between Clue and non-Clue users for a given segment; reliance on Clue respondents likely to improve forecasts as they are informed FP users who may better represent future preferences in 20+ years time.

*Cannot directly identify Clue respondents in dataset but have proxied Clue vs non-Clue based on date of completion and country. Sample size for non-Clue users is small making comparisons difficult as need to compare similar women (e.g. segment x method use x country). Speculative analysis shows generally similar desirability between Clue and non-Clue respondents in N. America/Europe and LAC in terms of side effects. Larger differences seen in Asia/Africa; could indicate Clue users are “ahead of the curve” and/or that consumer panel respondents (many of the non-Clue respondents) are not as good at responding about their preferences.

FINAL THOUGHTS ON DCE SAMPLE

- Final DCE analysis from sample of over 100,000 respondents; provides unique ability to analyze contraceptive preferences (most DCE survey samples limited to a few hundred or at most a few thousand respondents)
- Large sample allows for preferences to be analyzed by detailed segment (demographic, method, and sub-region) in most cases
- For Asia and Africa often have to borrow LAC respondents to reach sufficient sample sizes
 - Likely reflective of where preferences are headed in these regions; forecasting to 2040
 - Few respondents from China (n=101) although globally large percentage of population
- **Preferences calculated by segment** (demographic x method x geography); **applied within demographic projection model to “weight” to 2040 population** so addresses concerns around “representativeness” of DCE sample (see previous slide)

LINKING DEMOGRAPHIC PROJECTIONS & DCE RESULTS TO FORECAST UPTAKE

FROM DCE RESULTS TO FORECASTS

- Database of preference scores merged into demographic projection model to forecast uptake for each cluster (analysis done using STATA SE17)
- Additional discounts introduced to forecasts:
 - Only **5%** of sterilization users (m&f) are eligible to uptake new method, representing those that would be sterilized in that year and could make a different choice (based on median age of sterilization)
 - Married women who want a child soon have a **50%** uptake discount applied
 - Show similar strength of preference to married spacers
 - Based on survey data, mCPR in this group is around ½ of the other married segments
 - Self-declared infecund non-users in the married limiter and formerly married segments were removed from forecast model. These women are considered not to have uptake potential as their non-use is likely reflective of their perceived inability to get pregnant.
 - Analysis conducted on DHS surveys from 70 countries; regional averages used for remaining countries. Proportion self-declared infecund ranged from 3%-43% (median = 11%) for limiters and 0% - 73% (median = 8%) for formerly married.
- Results exported to Excel for analysis; forecasts for # of women that would uptake each cluster segmented by sub-region, demographic segment, and method
 - Analysis can be aggregated to combine multiple groups or look at full global picture
 - All results 'weighted' by demographic model segments

LIMITATIONS OF LPPP FORECASTS

- Results are best placed to indicate **broad directionality** and not a precise market demand forecast given the broad and future looking remit (global scope, consider all possible methods, project to 2040)
- Reliant on demographic projections; especially sensitive to assumptions around changes in premarital sexual activity, which is the most uncertain and challenging to project
- Forecasts apply strengths of preference to projected future women by segment. Forecasts account for compositional changes in the size of each segment, but may not be able to fully capture expected changes to preferences *within* a specific segment (e.g. never married non-users who had recent sex)
 - By 'borrowing' respondents from more developed regions (e.g., LAC respondents inform scores for Africa and Asia in some instances), we account for some potential shifts over time
 - Unable to account for are large shocks or societal changes that could fundamentally change preferences, for example widespread shift in preferences for user-controlled methods (linked to de-medicalization of health care) or preference for methods with less environmental impact.
- Analysis is focused on individual preferences and does not reflect broader cultural and structural issues that influence method availability and uptake

ADDITIONAL RESULTS: PREGNANCIES AVERTED

- Although not included within final outputs, model also forecasts pregnancies averted as a result of uptake.
- Accounts for differential impact depending what a women was doing before uptake of new CT
 - Switching from highly effective method → minimal or even *negative* impact
 - Switching from not very effective method → some impact
 - Switching from no method → most impact
- Therefore, metric is useful when want to consider both switchers & adopters together and to capture public health impact beyond just scale of up uptake.
- Need to take into consideration:
 - Effectiveness of existing methods
 - Effectiveness of new CT
 - Pregnancy rates for non-users

ILLUSTRATIVE RESULTS: UPTAKE VS PREGNANCIES AVERTED

Demographic	Method	Region
All	All	All

Cluster shown: Injectable given multiple times a year, shorter periods, may cause physical side effects (mild nausea, headaches, fatigue)

With 98% effectiveness

Users

	Married			Never Married	
	Soon	Spacer	Limiter	Recent	Ever
Switch	6.9M	13.6M	69.3M	6.5M	3.6M
Adopt	6.1M	8.6M	21.4M	3.7M	4.3M

Uptake dominated by switchers

Pregnancies

	Married			Never Married	
	Soon	Spacer	Limiter	Recent	Ever
Switch	334.7K	476.7K	2.9M	370.7K	196.1K
Adopt	1.0M	1.5M	3.6M	635.0K	731.6K

Pregnancy impact greatest from adopters

METHOD FAILURE & PREGNANCY RATES

- Method Failure Rates

Largely based on Bradley et al. (2019); some matching for missing methods

	Sterilization	IUD	Implant	Injectable	Pill	Condom	Other Modern	LAM	EC	Trad.
Effectiveness	99.7%	98.8%	99.7%	98.0%	93.7%	91.4%	91.4%	81.0%	98.0%	81.9%

- Non-user pregnancy rates by segment

Note: self-declared infecund non-users removed from model

	Married: Soon	Married: Space	Married: Limit	Never married: recent sex	Never married: ever sex	Formerly married
Pregnancy rate	70%	40%	30%	40%	19%	19%

- Effectiveness of new method

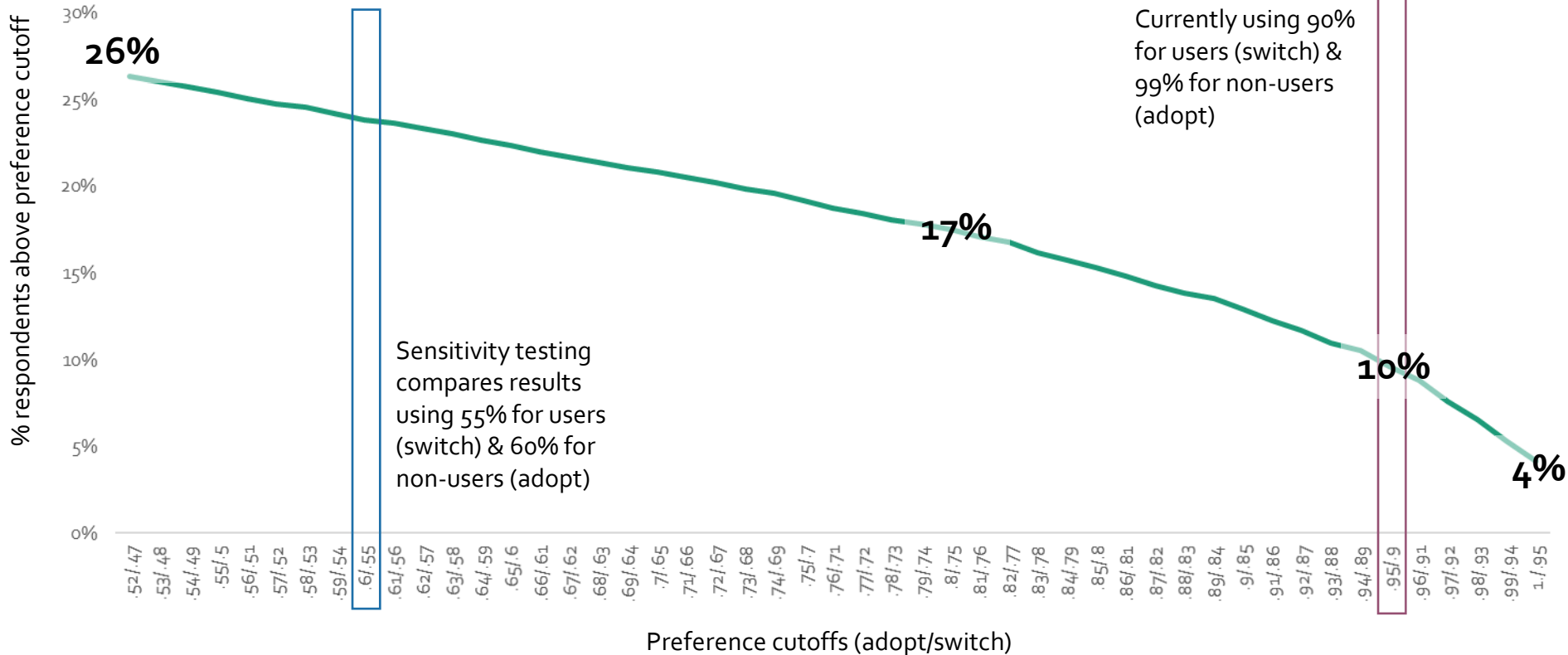
Preliminary analysis conducted but results not finalized. Could be produced based on interest from the Foundation.

SENSITIVITY TESTING

SENSITIVITY TESTING: STRENGTH OF PREFERENCE

Demographic	Method	Region
All	All	All

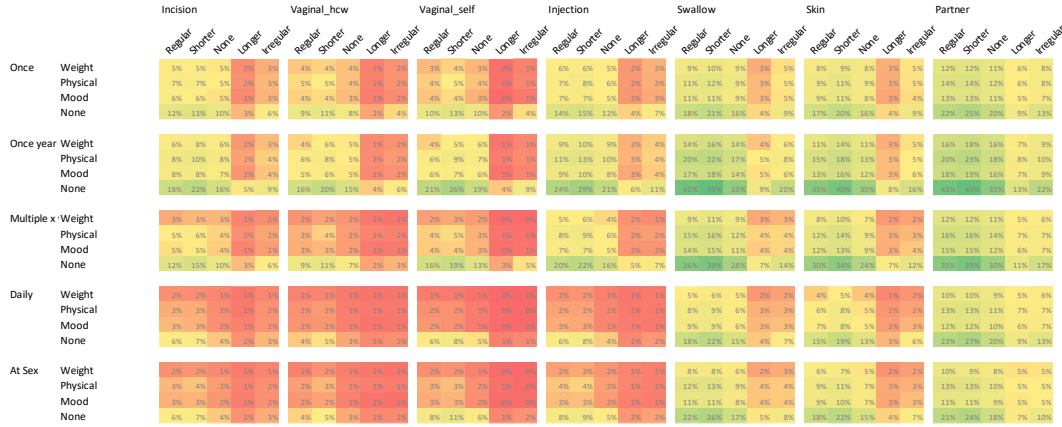
Cluster shown: Injectable given once a year or more infrequently, regular periods & may cause occasional mood changes, changes to sex drive



SENSITIVITY TESTING RESULTS: FORECASTED 2040 UPTAKE, GLOBAL

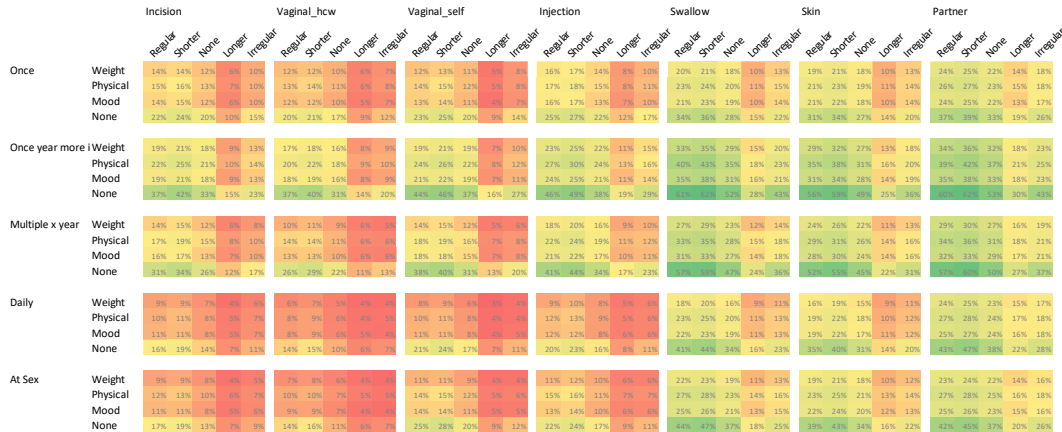
Demographic	Method	Region
All	All	All

Using 95% for switching and 90% for adoption



Maximum uptake = 45%
Minimum uptake = 0.2%

If lowered to 60% for switching and 55% for adoption



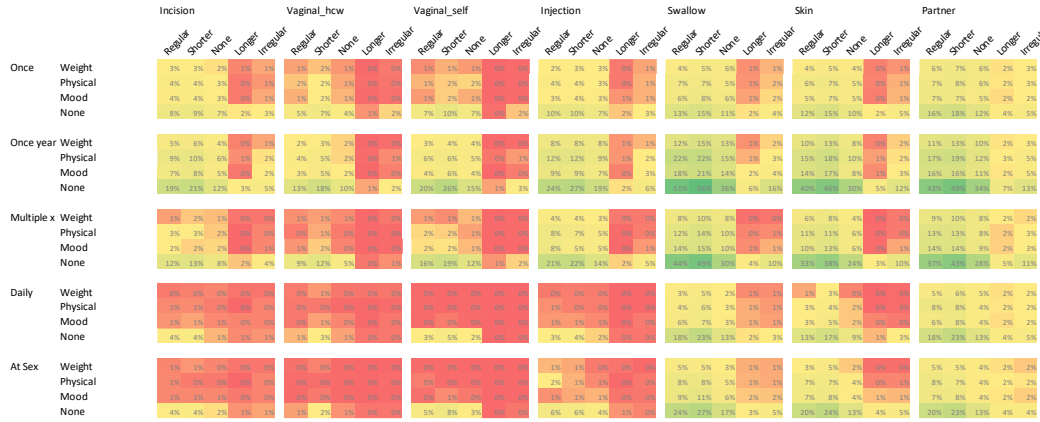
Maximum uptake = 62%
Minimum uptake = 3%

Some increase in uptake, but overall pattern similar

SENSITIVITY TESTING RESULTS: FORECASTED 2040 UPTAKE, SSA NON-USERS

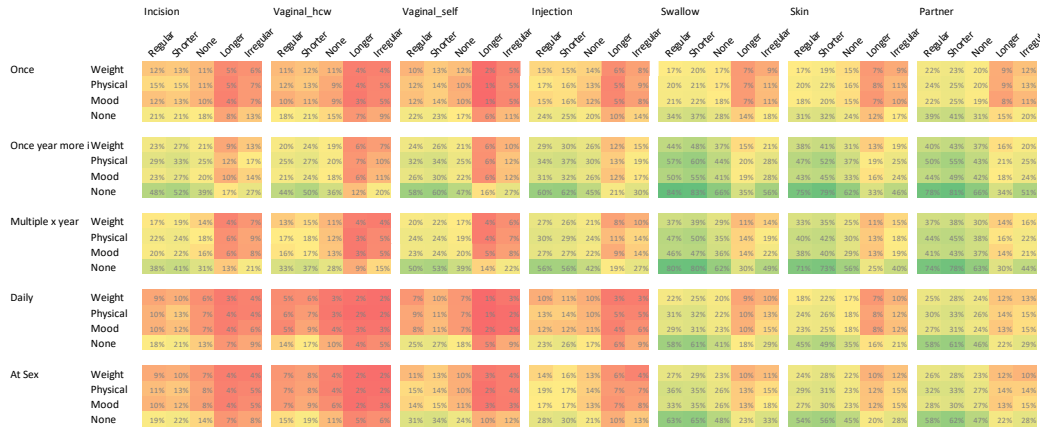
Demographic	Method	Region
Never Married	No Method	SSA

Using 95% for switching and 90% for adoption



Maximum uptake = 56%
Minimum uptake = 0.0%

If lowered to 60% for switching and 55% for adoption



Maximum uptake = 84%
Minimum uptake = 1%

Some increase in uptake, but overall pattern similar

SENSITIVITY TESTING CONCLUSIONS

- Using lower strength of preference cutoffs would *increase* forecasted uptake of methods but would have limited impact on the relative differences/ranking of clusters.
- Increases in uptake using lower preference cutoffs are fairly modest. The most desirable method (swallow, once a year or more infrequently, no side effects, shorter periods) would shift from to 45% uptake to 62% uptake globally.
- Given barriers to adopt a method or switch to a new method, the higher strength of preference cut off selected for analysis (90% for switching, 95% for adoption) likely reflects a more accurate forecast of market potential.
- Sensitivity analysis on other model inputs explored (demographic model inputs & user discounts), but also unlikely to change directionality of findings.

RESULTS ANNEX

RESULTS ANNEX OUTLINE

Additional detailed results are available upon request.

■ PROJECTIONS FROM LPPP DEMOGRAPHIC MODEL

- Women by Demographic Segment Detailed Results
 - Estimated Women by Demographic Segment in 2020 by Detailed Sub-Region
 - Projected Women by Demographic Segment in 2040 by Detailed Sub-Region
 - Change in Women by Demographic Segment (2020 to 2040) by Detailed Sub-Region
- Users by Demographic Segment Detailed Results
 - Estimated Users by Demographic Segment in 2020 by Detailed Sub-Region
 - Projected Users by Demographic Segment in 2040 by Detailed Sub-Region
 - Change in Users by Demographic Segment (2020 to 2040) by Detailed Sub-Region

■ LPPP FORECASTS OF METHOD UPTAKE

- Global 2040 picture by #
- Pipeline Methods Supplemental Results:
 - Pipeline methods: more detailed regional results
 - Pipeline methods: results for alternative side effect profiles
 - Pipeline methods: biodegradable implant uptake
- Promising Clusters Supplemental Results:
 - Cluster Ranking and New CT Potential
 - Promising clusters: SSA non-user results above 5% (only results above 15% shown in main deck)
 - Promising clusters: Dual Market View

PROJECTIONS FROM LPPP DEMOGRAPHIC MODEL

Results by Detailed Sub-Region

ESTIMATED WOMEN BY DEMOGRAPHIC SEGMENT IN 2020

BY DETAILED SUB-REGION

	Married Women by Segment			Unmarried Women by Segment			
	Wants soon	Wants later (space)	Wants no more (limit)	Never Married, Recent Sex	Never Married, Non-Recent Sex	Never Married, Never had sex	Formerly Married
Eastern Africa	10,514,083	22,225,352	33,672,766	2,351,073	7,970,699	19,310,630	13,350,978
Middle Africa	4,804,445	9,629,570	10,709,076	2,594,638	4,131,762	5,093,636	4,274,535
Northern Africa	6,054,335	7,667,255	23,274,850	4,128,109	5,590,885	7,615,407	7,340,099
Southern Africa	979,459	1,062,213	4,513,017	3,533,820	4,871,706	2,252,075	1,066,386
Western Africa	17,242,493	22,904,260	22,118,681	3,932,912	7,101,617	14,920,674	5,826,341
Eastern Asia	25,793,952	36,787,629	216,967,209	12,312,739	30,510,157	59,945,457	11,719,168
Central Asia	1,574,820	2,205,959	8,861,594	206,258	291,512	4,192,399	1,671,030
Southern Asia	47,907,899	50,024,635	269,368,123	344,874	1,168,246	114,394,876	22,776,972
South-Eastern Asia	12,851,796	21,717,380	81,574,328	407,196	2,194,419	47,536,839	8,913,185
Western Asia	5,126,561	7,528,202	29,610,025	92,617	63,468	23,611,350	4,166,137
Eastern Europe	3,584,947	5,204,644	29,131,820	4,339,503	4,773,217	10,571,063	9,953,701
Northern Europe	1,161,075	1,673,114	9,447,975	6,575,070	2,203,823	872,465	1,346,597
Southern Europe	1,473,597	1,996,566	14,419,245	2,210,946	1,737,608	9,024,502	1,527,421
Western Europe	2,072,732	2,966,240	17,247,872	11,174,005	3,745,288	1,482,711	2,123,853
Caribbean	626,295	1,038,902	4,180,308	716,646	894,863	1,358,448	1,873,270
Central America	3,014,712	4,880,473	20,353,385	2,028,989	3,950,666	8,295,936	6,095,265
South America	5,543,778	9,203,312	48,352,396	6,367,479	8,979,156	23,661,000	11,710,940
NORTHERN AMERICA	3,928,426	5,668,151	31,831,781	24,224,058	3,086,976	7,796,297	7,410,844
Australia/New Zealand	373,974	544,038	2,947,828	1,848,020	235,501	594,769	475,642
Melanesia	262,879	435,633	1,085,497	69,670	217,784	552,948	173,297
Micronesia	6,920	11,125	34,933	26,362	3,359	8,484	8,333
Polynesia	7,635	12,375	36,652	53,840	6,861	17,328	6,592

PROJECTED WOMEN BY DEMOGRAPHIC SEGMENT IN 2040

BY DETAILED SUB-REGION

	Married Women by Segment			Unmarried Women by Segment			
	Wants soon	Wants later (space)	Wants no more (limit)	Never Married, Recent Sex	Never Married, Recent Sex	Never Married, Never had sex	Formerly Married
Eastern Africa	13,447,794	24,678,441	64,236,392	13,950,903	16,756,281	25,672,875	25,997,393
Middle Africa	6,185,639	11,477,112	23,473,520	10,559,273	9,146,814	6,504,876	9,524,418
Northern Africa	5,946,099	7,812,701	29,488,426	11,183,810	9,405,613	5,870,710	11,204,309
Southern Africa	864,390	1,336,497	6,292,975	4,171,690	5,201,773	2,396,945	1,188,774
Western Africa	18,977,869	26,006,068	47,422,640	13,602,181	19,485,295	23,396,914	12,709,928
Eastern Asia	18,567,466	26,660,542	152,854,591	22,085,199	39,025,423	44,841,458	11,904,842
Central Asia	1,525,055	1,976,230	9,313,933	619,175	1,276,434	5,500,772	2,612,776
Southern Asia	46,489,900	50,941,561	282,400,261	9,935,005	22,107,430	123,828,384	31,009,712
South-Eastern Asia	10,881,724	16,956,829	85,342,137	4,820,510	10,020,829	44,647,388	10,592,640
Western Asia	5,014,120	7,424,790	33,822,375	2,066,831	4,599,125	25,760,671	5,670,288
Eastern Europe	2,494,111	3,637,547	19,905,479	4,448,190	6,822,184	7,344,156	9,586,877
Northern Europe	1,091,102	1,575,757	8,814,166	6,949,928	2,329,467	922,206	1,412,345
Southern Europe	1,117,882	1,551,411	10,258,194	2,288,398	4,047,935	4,761,200	1,298,965
Western Europe	1,934,459	2,784,465	15,798,660	10,636,128	3,565,003	1,411,338	2,020,699
Caribbean	575,932	859,997	4,450,328	1,144,083	1,109,484	840,040	1,851,432
Central America	3,351,358	4,410,325	21,970,364	3,299,573	5,708,920	7,541,187	7,010,119
South America	5,482,849	8,745,927	48,497,637	8,927,447	14,159,625	15,499,796	11,507,331
NORTHERN AMERICA	4,254,425	6,157,357	34,124,076	15,484,729	13,022,697	8,128,388	7,717,182
Australia/New Zealand	378,646	544,806	3,096,442	1,365,894	1,148,721	716,998	571,528
Melanesia	294,175	470,386	1,531,980	275,554	486,914	559,480	273,960
Micronesia	7,479	11,617	45,300	18,346	15,429	9,630	9,468
Polynesia	8,677	13,602	50,218	32,316	27,177	16,963	7,941

CHANGE IN NUMBER OF WOMEN BY DEMOGRAPHIC SEGMENT (2020 TO 2040)

BY DETAILED SUB-REGION

	Change in Married Women by Segment			Change in Unmarried Women by Segment			
	Wants soon	Wants later (space)	Wants no more (limit)	Never Married, Recent Sex	Never Married, Non-Recent Sex	Never Married, Never had sex	Formerly Married
Eastern Africa	2,933,710	2,453,089	30,563,626	11,599,830	8,785,582	6,362,244	12,646,415
Middle Africa	1,381,194	1,847,542	12,764,444	7,964,635	5,015,053	1,411,240	5,249,883
Northern Africa	-108,236	145,445	6,213,576	7,055,700	3,814,728	-1,744,698	3,864,210
Southern Africa	-115,069	274,284	1,779,958	637,870	330,067	144,870	122,388
Western Africa	1,735,376	3,101,808	25,303,960	9,669,269	12,383,678	8,476,240	6,883,587
Eastern Asia	-7,226,486	-10,127,088	-64,112,618	9,772,461	8,515,266	-15,103,999	185,673
Central Asia	-49,765	-229,730	452,339	412,917	984,922	1,308,373	941,746
Southern Asia	-1,417,999	916,926	13,032,138	9,590,132	20,939,184	9,433,508	8,232,739
South-Eastern Asia	-1,970,072	-4,760,552	3,767,809	4,413,314	7,826,410	-2,889,450	1,679,455
Western Asia	-112,441	-103,413	4,212,351	1,974,214	4,535,658	2,149,321	1,504,151
Eastern Europe	-1,090,836	-1,567,097	-9,226,341	108,686	2,048,967	-3,226,907	-366,824
Northern Europe	-69,973	-97,357	-633,809	374,859	125,645	49,741	65,748
Southern Europe	-355,715	-445,155	-4,161,051	77,452	2,310,326	-4,263,302	-228,456
Western Europe	-138,272	-181,775	-1,449,212	-537,876	-180,285	-71,372	-103,153
Caribbean	-50,362	-178,905	270,020	427,436	214,621	-518,408	-21,839
Central America	336,645	-470,148	1,616,979	1,270,584	1,758,254	-754,749	914,854
South America	-60,929	-457,384	145,241	2,559,968	5,180,469	-8,161,204	-203,609
NORTHERN AMERICA	325,999	489,206	2,292,295	-8,739,329	9,935,722	332,092	306,338
Australia/New Zealand	4,672	768	148,614	-482,125	913,220	122,229	95,885
Melanesia	31,296	34,752	446,483	205,883	269,131	6,533	100,663
Micronesia	559	492	10,367	-8,015	12,070	1,146	1,134
Polynesia	1,042	1,227	13,566	-21,525	20,316	-365	1,350

ESTIMATED USERS IN 2020 BY DEMOGRAPHIC SEGMENT

BY DETAILED SUB-REGION

	Married Users by Segment			Unmarried Users by Segment			
	Wants soon	Wants later (space)	Wants no more (limit)	Never Married, Recent Sex	Never Married, Non-Recent Sex	Never Married, Never had sex*	Formerly Married
Eastern Africa	2,571,267	10,275,509	16,723,587	1,152,140	1,631,184		3,285,056
Middle Africa	651,168	2,584,502	2,787,161	1,226,588	1,138,123		857,049
Northern Africa	1,624,060	4,433,536	14,010,397	1,997,555	1,739,591		1,680,133
Southern Africa	302,675	721,523	2,777,980	2,312,976	2,345,735		461,936
Western Africa	2,215,812	5,974,488	7,202,959	1,637,380	1,463,003		817,631
Eastern Asia	16,872,122	31,906,257	182,890,701	5,443,358	4,472,695		3,218,498
Central Asia	483,250	1,110,815	5,731,506	138,213	29,970		452,657
Southern Asia	6,679,692	16,828,488	181,575,232	89,847	110,892		7,007,565
South-Eastern Asia	3,072,319	14,476,408	57,020,786	129,947	174,860		494,711
Western Asia	1,380,259	4,075,257	18,761,331	33,074	5,470		112,335
Eastern Europe	1,476,235	3,655,045	20,541,522	3,523,626	1,807,634		3,232,065
Northern Europe	521,348	1,427,910	7,663,142	4,620,425	1,015,102		552,357
Southern Europe	536,373	1,280,731	9,944,360	1,515,853	381,220		165,986
Western Europe	897,430	2,442,236	13,467,798	7,852,183	1,725,116		871,177
Caribbean	142,913	579,228	2,844,604	444,240	274,714		969,137
Central America	1,291,902	3,147,677	15,680,821	1,044,160	1,111,453		3,028,202
South America	2,818,278	7,385,861	38,851,976	5,055,531	1,901,391		5,541,205
NORTHERN AMERICA	1,684,656	4,619,184	24,672,243	17,022,701	1,421,891		3,039,834
Australia/New Zealand	145,330	401,957	2,067,215	1,298,638	108,474		195,102
Melanesia	58,523	181,237	457,690	34,202	41,971		40,806
Micronesia	1,530	4,610	15,076	18,525	1,547		3,418
Polynesia	1,370	4,236	11,585	37,835	3,160		2,704

*model does not include contraceptive use among this segment

Users include women using both modern and traditional methods

PROJECTED USERS IN 2040 BY DEMOGRAPHIC SEGMENT BY DETAILED SUB-REGION

	Married Users by Segment			Unmarried Users by Segment			
	Wants soon	Wants later (space)	Wants no more (limit)	Never Married, Recent Sex	Never Married, Non-Recent Sex	Never Married, Never had sex*	Formerly Married
Eastern Africa	4,323,057	15,027,409	41,013,609	8,390,733	5,506,559		8,196,352
Middle Africa	1,348,717	4,999,865	10,021,920	6,304,898	3,834,822		3,448,469
Northern Africa	1,840,539	4,958,149	18,923,538	6,306,053	3,676,504		4,025,876
Southern Africa	289,215	977,278	4,322,290	2,755,352	2,505,591		518,444
Western Africa	4,256,086	11,530,242	23,121,069	7,888,254	6,498,447		3,989,209
Eastern Asia	9,948,031	23,659,089	132,020,727	13,038,809	12,652,356		3,723,655
Central Asia	507,552	1,231,029	6,469,272	408,381	237,198		725,154
Southern Asia	12,740,190	30,449,001	201,871,576	5,523,131	3,759,328		9,561,108
South-Eastern Asia	3,485,488	12,159,640	62,712,984	2,650,465	1,844,287		2,252,049
Western Asia	1,589,308	4,606,920	23,864,095	1,149,006	782,073		1,112,488
Eastern Europe	1,058,369	2,631,662	14,474,548	3,639,197	2,616,419		3,239,630
Northern Europe	493,304	1,354,190	7,196,513	4,883,845	1,072,976		579,326
Southern Europe	426,935	1,041,923	7,386,510	1,570,684	1,303,190		405,925
Western Europe	844,051	2,309,963	12,437,976	7,474,207	1,642,075		828,865
Caribbean	166,006	555,085	3,179,734	719,405	469,357		1,000,605
Central America	1,362,063	2,968,502	17,507,845	2,015,936	1,753,357		3,468,359
South America	2,686,358	7,100,825	39,427,254	7,110,752	4,688,490		5,388,959
NORTHERN AMERICA	1,836,128	5,050,196	26,614,292	10,881,410	5,998,382		3,165,490
Australia/New Zealand	151,341	413,968	2,233,965	959,840	529,112		234,433
Melanesia	86,841	259,712	850,250	162,683	157,862		85,690
Micronesia	2,136	6,266	24,084	12,892	7,107		3,884
Polynesia	2,263	6,760	23,353	22,709	12,518		3,257

*model does not include contraceptive use among this segment

Users include women using both modern and traditional methods

CHANGE IN USERS BY DEMOGRAPHIC SEGMENT (2020 TO 2040)

BY DETAILED SUB-REGION

	Change in Married Users by Segment			Change in Unmarried Users by Segment			
	Wants soon	Wants later (space)	Wants no more (limit)	Never Married, Recent Sex	Never Married, Non-Recent Sex	Never Married, Never had sex*	Formerly Married
Eastern Africa	1,751,789	4,751,900	24,290,022	7,238,592	3,875,375		4,911,296
Middle Africa	697,549	2,445,363	7,234,758	5,078,310	2,696,700		2,591,421
Northern Africa	216,478	524,613	4,913,141	4,308,498	1,936,913		2,345,743
Southern Africa	-13,460	255,755	1,544,310	442,375	159,856		56,508
Western Africa	2,040,274	5,555,753	15,918,110	6,250,873	5,035,445		3,171,578
Eastern Asia	-6,924,090	-8,247,168	-50,869,974	7,595,451	8,179,660		505,157
Central Asia	24,301	120,214	737,766	270,168	207,228		272,497
Southern Asia	6,060,497	13,620,513	20,296,344	5,433,284	3,648,436		2,553,543
South-Eastern Asia	413,169	-2,316,768	5,692,198	2,520,517	1,669,427		1,757,338
Western Asia	209,049	531,663	5,102,764	1,115,932	776,603		1,000,153
Eastern Europe	-417,866	-1,023,383	-6,066,974	115,571	808,785		7,565
Northern Europe	-28,044	-73,720	-466,628	263,420	57,873		26,969
Southern Europe	-109,439	-238,808	-2,557,851	54,831	921,970		239,939
Western Europe	-53,379	-132,273	-1,029,822	-377,976	-83,041		-42,312
Caribbean	23,094	-24,144	335,130	275,165	194,643		31,468
Central America	70,161	-179,175	1,827,024	971,776	641,905		440,157
South America	-131,920	-285,036	575,278	2,055,221	2,787,099		-152,246
NORTHERN AMERICA	151,472	431,012	1,942,049	-6,141,291	4,576,491		125,656
Australia/New Zealand	6,011	12,011	166,749	-338,799	420,638		39,331
Melanesia	28,318	78,475	392,560	128,481	115,891		44,885
Micronesia	607	1,656	9,008	-5,632	5,560		465
Polynesia	893	2,524	11,768	-15,126	9,358		554

*model does not include contraceptive use among this segment

Users include women using both modern and traditional methods

LPPP FORECASTS OF METHOD UPTAKE

Additional Results to Supplement Results Shown in Main Deck

GLOBAL PICTURE OF FORECASTED 2040 UPTAKE ALL POSSIBLE CLUSTERS

Demographic	Method	Region
All	All	All

- Strong preference for no side effects, no bleeding disruption and less invasive modes of delivery
- Far less tolerance for longer and irregular periods than other side effects

How often you use it

Effect on menstruation

How you get it or use it

		Incision					Vaginal_hcw					Vaginal_self					Injection					Swallow					Skin					Partner				
		Regular	Shorter	None	Longer	Irregular	Regular	Shorter	None	Longer	Irregular	Regular	Shorter	None	Longer	Irregular	Regular	Shorter	None	Longer	Irregular	Regular	Shorter	None	Longer	Irregular	Regular	Shorter	None	Longer	Irregular					
Once	Weight	95.18M	102.92M	90.80M	28.64M	52.56M	71.97M	80.23M	65.88M	21.05M	32.11M	61.24M	79.91M	56.74M	8.29M	19.86M	108.91M	123.07M	100.90M	37.20M	55.36M	165.00M	184.96M	159.70M	53.12M	86.02M	139.83M	174.59M	148.03M	51.83M	87.73M	226.46M	235.60M	211.15M	106.40M	143.08M
	Physical	116.70M	136.56M	106.89M	34.65M	61.65M	86.73M	102.50M	70.80M	22.25M	35.97M	83.92M	105.84M	75.59M	14.40M	25.40M	128.46M	151.45M	113.71M	40.53M	54.93M	200.45M	226.34M	179.75M	65.48M	95.60M	172.44M	214.57M	162.95M	54.41M	91.02M	261.11M	275.41M	229.62M	112.20M	144.73M
	Mood	111.37M	110.84M	89.09M	27.16M	58.18M	79.94M	87.44M	63.58M	18.89M	30.13M	74.49M	93.54M	58.82M	7.16M	15.13M	123.64M	136.56M	97.84M	36.80M	49.61M	201.25M	211.72M	164.23M	63.95M	92.16M	174.06M	200.93M	152.88M	48.69M	86.57M	242.82M	252.70M	209.77M	100.19M	130.82M
	None	217.92M	251.21M	193.74M	61.91M	120.09M	181.20M	210.33M	151.07M	47.30M	85.80M	202.51M	250.98M	182.21M	40.26M	86.44M	254.09M	287.52M	218.39M	75.69M	128.78M	346.52M	392.10M	299.70M	86.39M	173.37M	318.81M	377.10M	292.38M	83.03M	173.03M	416.45M	466.63M	372.97M	195.33M	254.21M
Once year more infrequent	Weight	121.93M	147.35M	123.45M	39.02M	63.77M	83.88M	110.12M	93.77M	27.54M	32.99M	84.08M	106.82M	105.69M	13.47M	22.96M	164.21M	193.19M	163.86M	58.19M	72.94M	268.00M	309.30M	261.45M	71.86M	110.13M	209.05M	263.60M	214.04M	56.85M	88.93M	309.57M	329.83M	295.61M	131.67M	175.36M
	Physical	160.36M	196.21M	152.93M	49.51M	79.83M	116.36M	149.30M	105.99M	30.35M	40.80M	132.26M	168.63M	140.66M	24.59M	29.23M	207.07M	242.01M	186.69M	62.78M	79.83M	372.92M	420.49M	316.72M	103.67M	144.94M	281.28M	340.02M	258.93M	74.09M	108.34M	378.93M	420.74M	349.20M	150.61M	190.94M
	Mood	143.11M	158.00M	125.02M	38.29M	69.43M	105.79M	119.56M	94.58M	28.25M	34.43M	116.92M	133.99M	112.27M	15.89M	24.29M	179.16M	193.29M	155.36M	51.08M	75.16M	316.61M	349.93M	268.78M	92.90M	126.27M	261.13M	304.21M	230.87M	70.21M	113.22M	295.52M	352.20M	297.13M	133.87M	171.06M
	None	351.30M	425.21M	302.30M	97.13M	182.18M	316.82M	379.14M	276.29M	76.52M	121.24M	441.02M	497.68M	357.79M	79.07M	164.83M	460.40M	539.43M	395.52M	120.28M	208.26M	774.22M	848.62M	619.62M	180.02M	373.33M	460.69M	533.87M	355.69M	159.63M	302.20M	745.79M	814.02M	648.59M	247.44M	410.88M
Multiple x year	Weight	60.32M	70.24M	62.94M	24.69M	31.25M	40.54M	51.27M	37.74M	16.17M	24.17M	51.50M	56.69M	42.66M	8.58M	7.08M	104.09M	119.29M	89.74M	35.70M	29.49M	184.49M	208.65M	165.30M	52.91M	59.00M	155.40M	188.52M	136.65M	44.60M	60.00M	238.94M	233.83M	220.25M	106.49M	116.05M
	Physical	104.09M	119.56M	85.44M	24.69M	47.35M	60.12M	81.36M	43.90M	23.84M	24.57M	83.24M	92.22M	61.88M	14.96M	10.67M	149.39M	167.89M	110.74M	43.79M	43.39M	271.09M	300.39M	221.42M	81.68M	83.03M	223.03M	266.50M	182.00M	62.72M	66.07M	306.89M	310.41M	263.74M	132.11M	141.29M
	Mood	89.49M	98.13M	77.59M	24.13M	42.62M	57.92M	65.93M	43.43M	15.89M	16.50M	78.21M	84.20M	59.49M	10.63M	12.52M	128.60M	140.98M	100.32M	36.00M	36.33M	260.43M	276.85M	206.90M	74.63M	83.21M	225.31M	259.16M	184.93M	59.02M	78.46M	288.77M	289.61M	237.78M	119.14M	132.42M
	None	239.74M	288.36M	198.46M	66.14M	108.95M	185.83M	221.16M	143.10M	47.91M	63.57M	307.22M	358.80M	249.25M	51.44M	90.56M	399.63M	422.03M	299.59M	92.32M	139.15M	654.81M	718.82M	513.20M	139.27M	262.33M	555.65M	631.33M	459.89M	128.08M	226.10M	649.52M	724.30M	557.08M	209.87M	321.52M
Daily	Weight	34.94M	35.16M	25.68M	16.09M	26.55M	24.57M	25.05M	15.72M	12.16M	13.72M	19.64M	18.75M	11.45M	4.11M	4.20M	34.29M	39.10M	22.11M	15.12M	16.81M	105.87M	124.76M	95.80M	39.09M	45.80M	81.34M	105.20M	71.46M	27.40M	36.39M	198.90M	198.75M	178.81M	108.01M	119.60M
	Physical	55.36M	56.60M	35.51M	19.82M	35.16M	36.13M	41.92M	22.26M	16.35M	18.58M	37.17M	40.65M	24.81M	8.81M	6.48M	47.99M	50.90M	30.54M	17.50M	18.39M	153.99M	174.24M	125.09M	57.09M	59.20M	115.68M	155.66M	98.71M	41.54M	50.23M	244.30M	253.65M	214.73M	133.09M	133.07M
	Mood	64.33M	59.53M	35.14M	24.14M	37.98M	38.58M	39.80M	21.89M	13.18M	14.77M	42.11M	40.36M	20.43M	7.47M	7.04M	52.68M	53.23M	29.83M	19.79M	18.39M	163.41M	175.54M	121.42M	61.68M	69.79M	129.65M	162.98M	104.81M	45.52M	64.40M	227.49M	237.73M	195.09M	121.35M	135.09M
	None	115.92M	135.52M	76.28M	34.29M	65.22M	77.24M	96.18M	52.43M	27.85M	36.84M	123.51M	163.29M	93.79M	21.98M	30.75M	120.86M	193.46M	78.89M	27.00M	39.60M	346.31M	419.70M	279.56M	73.26M	133.06M	281.72M	367.08M	247.63M	62.10M	118.70M	449.73M	498.40M	373.76M	172.51M	242.12M
At Sex	Weight	33.18M	37.83M	27.74M	19.00M	24.44M	22.82M	34.07M	18.28M	14.88M	16.25M	31.86M	35.26M	21.76M	6.71M	4.54M	46.22M	52.71M	36.95M	25.61M	19.91M	145.98M	155.39M	121.36M	48.11M	53.83M	114.13M	137.45M	92.33M	35.87M	43.87M	184.71M	177.36M	158.22M	90.24M	91.61M
	Physical	60.91M	70.87M	45.83M	24.79M	31.92M	41.96M	60.17M	26.68M	20.68M	17.40M	59.86M	70.07M	39.13M	13.85M	6.62M	70.71M	83.49M	50.15M	28.20M	20.58M	229.92M	250.37M	177.57M	75.68M	78.03M	173.76M	205.86M	147.53M	56.56M	59.94M	244.71M	244.40M	206.03M	108.24M	105.61M
	Mood	54.56M	57.18M	36.47M	20.27M	31.60M	36.04M	46.35M	20.72M	12.89M	10.44M	53.81M	60.72M	33.53M	8.96M	8.14M	62.95M	68.46M	40.40M	23.18M	18.89M	208.31M	215.75M	153.73M	72.58M	77.67M	173.35M	196.29M	138.47M	51.68M	68.89M	211.29M	209.89M	175.96M	93.32M	99.63M
	None	115.45M	133.03M	77.71M	36.16M	55.32M	82.03M	103.17M	53.45M	27.84M	28.72M	165.97M	210.22M	124.20M	27.28M	35.15M	147.93M	175.01M	101.53M	37.60M	46.61M	421.44M	479.09M	329.78M	95.98M	160.46M	351.67M	419.57M	286.12M	83.02M	132.34M	398.35M	453.31M	335.89M	135.48M	193.04M

Side effects

Male partner uses method included in DCE for completeness, but study not designed to explore attributes of male method. This attribute ranks highly and should be explored elsewhere.

MONTHLY PILL: VARIATION IN FORECASTED 2040 UPTAKE (% OF ALL WOMEN) BY DETAILED REGION & DEMOGRAPHIC SEGMENT

Pill used multiple times a year with regular period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method							
	Married			Never Married			Formerly Married	Married			Never Married			Formerly Married
	Soon	Spacer	Limiter	Recent	Ever	Soon		Spacer	Limiter	Recent	Ever			
Eastern Africa	25%	23%	17%	14%	19%	18%	12%	25%	17%	17%	9%	23%		
Middle Africa	26%	22%	20%	14%	17%	17%	12%	24%	21%	14%	9%	23%		
Southern Africa	25%	23%	17%	14%	20%	19%	12%	25%	17%	17%	9%	23%		
Western Africa	25%	23%	17%	14%	19%	17%	12%	25%	17%	17%	9%	23%		
Northern Africa	26%	21%	16%	13%	20%	18%	12%	25%	17%	17%	9%	23%		
Caribbean	22%	22%	8%	15%	16%	13%	14%	25%	16%	15%	14%	23%		
Central America	20%	21%	7%	14%	15%	7%	14%	26%	16%	15%	14%	23%		
South America	26%	21%	13%	15%	15%	15%	12%	24%	21%	14%	9%	23%		
Central Asia	20%	15%	14%	13%	14%	14%	12%	24%	21%	14%	9%	23%		
Eastern Asia	22%	17%	14%	13%	14%	19%	12%	24%	21%	14%	9%	23%		
South-Eastern Asia	26%	22%	20%	14%	17%	15%	12%	24%	21%	14%	9%	23%		
Southern Asia	27%	22%	19%	14%	15%	2%	12%	24%	20%	14%	12%	23%		
Western Asia	24%	18%	18%	16%	16%	19%	12%	24%	21%	14%	9%	23%		
Melanesia/Micronesia/Polynesia	27%	21%	17%	14%	15%	17%	12%	24%	21%	14%	9%	23%		
Eastern Europe	5%	8%	4%	8%	8%	8%	4%	8%	4%	7%	4%	13%		
Southern Europe	7%	10%	5%	7%	8%	9%	5%	9%	7%	9%	6%	13%		
Northern Europe	6%	9%	2%	8%	8%	8%	3%	4%	3%	6%	4%	11%		
Western Europe	7%	10%	4%	8%	9%	8%	4%	9%	3%	6%	3%	11%		
Northern America	5%	9%	3%	8%	9%	6%	3%	10%	5%	9%	4%	12%		
Australia/New Zealand	6%	8%	3%	7%	9%	9%	2%	9%	5%	7%	4%	11%		
Total	23%	20%	15%	12%	15%	12%	11%	24%	18%	14%	9%	21%		

0% 10% 30%

% indicates share of women forecasted to uptake method:



MONTHLY PILL: VARIATION IN 2040 SWITCHERS & ADOPTERS BY DETAILED REGION & DEMOGRAPHIC SEGMENT

Pill used multiple times a year with regular period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method					
	Married			Never Married		Formerly Married	Married			Never Married		Formerly Married
	Soon	Spacer	Limiter	Recent	Ever		Soon	Spacer	Limiter	Recent	Ever	
Eastern Africa	1.07M	3.41M	6.78M	1.18M	1.04M	1.47M	1.07M	2.42M	3.65M	0.96M	0.99M	3.88M
Middle Africa	0.35M	1.10M	2.05M	0.87M	0.64M	0.60M	0.58M	1.56M	2.37M	0.60M	0.50M	1.22M
Southern Africa	0.07M	0.22M	0.71M	0.38M	0.49M	0.10M	0.07M	0.09M	0.31M	0.25M	0.24M	0.15M
Western Africa	1.06M	2.61M	3.83M	1.10M	1.23M	0.69M	1.73M	3.63M	3.62M	0.99M	1.15M	1.82M
Northern Africa	0.47M	1.04M	3.09M	0.82M	0.73M	0.74M	0.48M	0.72M	1.53M	0.84M	0.51M	0.95M
Caribbean	0.04M	0.12M	0.27M	0.11M	0.08M	0.13M	0.06M	0.08M	0.18M	0.06M	0.09M	0.18M
Central America	0.27M	0.62M	1.27M	0.29M	0.26M	0.25M	0.28M	0.38M	0.62M	0.20M	0.56M	0.76M
South America	0.70M	1.50M	5.28M	1.07M	0.70M	0.83M	0.34M	0.40M	1.51M	0.26M	0.89M	1.28M
Central Asia	0.10M	0.18M	0.88M	0.05M	0.03M	0.10M	0.12M	0.18M	0.50M	0.03M	0.10M	0.39M
Eastern Asia	2.18M	3.98M	18.68M	1.68M	1.80M	0.70M	1.04M	0.72M	3.66M	1.27M	2.47M	1.59M
South-Eastern Asia	0.90M	2.67M	12.61M	0.38M	0.31M	0.35M	0.89M	1.15M	4.33M	0.31M	0.76M	1.77M
Southern Asia	3.47M	6.58M	37.71M	0.78M	0.55M	0.19M	4.07M	4.93M	13.74M	0.62M	2.19M	3.67M
Western Asia	0.38M	0.82M	4.22M	0.18M	0.13M	0.21M	0.41M	0.68M	1.57M	0.13M	0.36M	0.84M
Melanesia/Micronesia/Polynesia	0.02M	0.06M	0.15M	0.03M	0.03M	0.02M	0.03M	0.05M	0.13M	0.02M	0.03M	0.04M
Eastern Europe	0.05M	0.21M	0.58M	0.30M	0.22M	0.25M	0.05M	0.08M	0.16M	0.05M	0.18M	0.73M
Southern Europe	0.03M	0.10M	0.36M	0.10M	0.10M	0.04M	0.04M	0.05M	0.18M	0.06M	0.17M	0.11M
Northern Europe	0.03M	0.12M	0.16M	0.37M	0.09M	0.04M	0.02M	0.01M	0.04M	0.13M	0.05M	0.08M
Western Europe	0.06M	0.22M	0.48M	0.61M	0.15M	0.06M	0.04M	0.04M	0.08M	0.19M	0.06M	0.12M
Northern America	0.10M	0.47M	0.77M	0.89M	0.51M	0.21M	0.08M	0.11M	0.29M	0.39M	0.30M	0.51M
Australia/New Zealand	0.01M	0.03M	0.07M	0.06M	0.05M	0.02M	0.00M	0.01M	0.03M	0.03M	0.03M	0.04M
Total	11.38M	26.07M	99.95M	11.27M	9.13M	6.99M	11.41M	17.28M	38.49M	7.39M	11.61M	20.14M

Note: Color formatting shows lowest to highest value within each row

MICROARRAY PATCH: VARIATION IN FORECASTED 2040 UPTAKE (% OF ALL WOMEN) BY DETAILED REGION & DEMOGRAPHIC SEGMENT

Patch put on skin multiple times a year with irregular period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method							
	Married			Never Married			Formerly Married	Married			Never Married			Formerly Married
	Soon	Spacer	Limiter	Recent	Ever	Soon		Spacer	Limiter	Recent	Ever			
Eastern Africa	9%	6%	5%	2%	3%	8%	3%	4%	3%	1%	0%	16%		
Middle Africa	10%	6%	6%	2%	2%	8%	2%	4%	3%	0%	0%	16%		
Southern Africa	9%	6%	5%	2%	3%	9%	3%	4%	3%	1%	0%	16%		
Western Africa	9%	6%	5%	2%	3%	8%	3%	4%	3%	1%	0%	16%		
Northern Africa	9%	4%	4%	1%	2%	9%	3%	4%	3%	1%	0%	16%		
Caribbean	7%	5%	2%	3%	2%	7%	3%	5%	3%	1%	1%	15%		
Central America	7%	6%	2%	3%	2%	4%	4%	5%	3%	1%	1%	18%		
South America	9%	4%	4%	2%	1%	9%	2%	4%	3%	0%	0%	16%		
Central Asia	7%	3%	3%	2%	1%	9%	2%	4%	3%	0%	0%	16%		
Eastern Asia	8%	4%	3%	2%	1%	11%	2%	4%	3%	0%	0%	16%		
South-Eastern Asia	10%	6%	6%	2%	2%	7%	2%	4%	3%	0%	0%	16%		
Southern Asia	10%	5%	5%	2%	1%	1%	2%	4%	2%	0%	0%	16%		
Western Asia	9%	3%	5%	2%	1%	11%	2%	4%	3%	0%	0%	16%		
Melanesia/Micronesia/Polynesia	10%	5%	5%	2%	1%	8%	2%	4%	3%	0%	0%	16%		
Eastern Europe	1%	1%	1%	1%	0%	3%	1%	2%	1%	0%	0%	6%		
Southern Europe	1%	1%	1%	1%	0%	4%	0%	3%	1%	0%	0%	6%		
Northern Europe	1%	1%	0%	1%	0%	3%	1%	2%	1%	1%	0%	5%		
Western Europe	1%	1%	1%	1%	1%	3%	1%	2%	0%	0%	0%	5%		
Northern America	1%	1%	0%	1%	1%	2%	1%	1%	1%	0%	0%	7%		
Australia/New Zealand	1%	1%	1%	0%	1%	3%	0%	1%	0%	1%	1%	6%		
Total	8%	5%	4%	2%	1%	6%	2%	4%	3%	0%	0%	14%		

0% 10% 30%

% indicates share of women forecasted to uptake method:



MICROARRAY PATCH: VARIATION IN 2040 SWITCHERS & ADOPTERS BY DETAILED REGION & DEMOGRAPHIC SEGMENT

Patch put on skin multiple times a year with irregular period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method						
	Married			Never Married			Married			Never Married			Formerly Married
	Soon	Spacer	Limiter	Recent	Ever	Formerly Married	Soon	Spacer	Limiter	Recent	Ever	Formerly Married	
Eastern Africa	0.40M	0.96M	1.99M	0.16M	0.14M	0.67M	0.31M	0.43M	0.68M	0.05M	0.00M	2.67M	
Middle Africa	0.13M	0.30M	0.57M	0.14M	0.06M	0.29M	0.11M	0.25M	0.31M	0.00M	0.02M	0.84M	
Southern Africa	0.03M	0.06M	0.21M	0.05M	0.08M	0.05M	0.02M	0.02M	0.06M	0.01M	0.00M	0.10M	
Western Africa	0.39M	0.71M	1.11M	0.15M	0.17M	0.33M	0.49M	0.65M	0.67M	0.05M	0.00M	1.25M	
Northern Africa	0.16M	0.21M	0.85M	0.09M	0.08M	0.36M	0.14M	0.13M	0.28M	0.05M	0.00M	0.65M	
Caribbean	0.01M	0.03M	0.07M	0.02M	0.01M	0.07M	0.01M	0.01M	0.04M	0.01M	0.01M	0.12M	
Central America	0.10M	0.18M	0.38M	0.05M	0.03M	0.14M	0.07M	0.07M	0.13M	0.02M	0.04M	0.62M	
South America	0.25M	0.31M	1.46M	0.16M	0.05M	0.46M	0.06M	0.06M	0.20M	0.00M	0.03M	0.88M	
Central Asia	0.03M	0.04M	0.21M	0.01M	0.00M	0.06M	0.02M	0.03M	0.07M	0.00M	0.00M	0.27M	
Eastern Asia	0.80M	0.87M	4.21M	0.27M	0.10M	0.39M	0.19M	0.11M	0.48M	0.00M	0.08M	1.09M	
South-Eastern Asia	0.34M	0.73M	3.49M	0.06M	0.03M	0.17M	0.16M	0.18M	0.57M	0.00M	0.02M	1.22M	
Southern Asia	1.28M	1.41M	9.71M	0.12M	0.05M	0.11M	0.73M	0.78M	1.67M	0.00M	0.08M	2.52M	
Western Asia	0.14M	0.15M	1.09M	0.03M	0.01M	0.13M	0.07M	0.11M	0.21M	0.00M	0.01M	0.58M	
Melanesia/Micronesia/Polynesia	0.01M	0.01M	0.04M	0.00M	0.00M	0.01M	0.00M	0.01M	0.02M	0.00M	0.00M	0.03M	
Eastern Europe	0.01M	0.02M	0.08M	0.02M	0.01M	0.11M	0.01M	0.02M	0.03M	0.00M	0.00M	0.33M	
Southern Europe	0.00M	0.01M	0.05M	0.01M	0.00M	0.02M	0.00M	0.01M	0.04M	0.00M	0.01M	0.05M	
Northern Europe	0.00M	0.02M	0.02M	0.03M	0.00M	0.02M	0.00M	0.00M	0.01M	0.02M	0.00M	0.04M	
Western Europe	0.01M	0.02M	0.06M	0.05M	0.01M	0.02M	0.01M	0.01M	0.00M	0.01M	0.00M	0.05M	
Northern America	0.01M	0.05M	0.09M	0.07M	0.04M	0.07M	0.02M	0.01M	0.05M	0.02M	0.03M	0.28M	
Australia/New Zealand	0.00M	0.00M	0.01M	0.00M	0.00M	0.01M	0.00M	0.00M	0.00M	0.01M	0.00M	0.02M	
Total	4.10M	6.10M	25.70M	1.50M	0.90M	3.46M	2.43M	2.89M	5.50M	0.25M	0.33M	13.60M	

Note: Color formatting shows lowest to highest value within each row

PERI-COITAL PILL: VARIATION IN FORECASTED 2040 UPTAKE (% OF ALL WOMEN) BY DETAILED REGION AND DEMOGRAPHIC SEGMENT

Pill used at sex with regular period & may cause physical side effects (mild nausea, headaches, fatigue)

Switch to Method

Adopt Method

	Switch to Method						Adopt Method					
	Married			Never Married		Formerly Married	Married			Never Married		Formerly Married
	Soon	Spacer	Limiters	Recent	Ever		Soon	Spacer	Limiters	Recent	Ever	
Eastern Africa	20%	17%	14%	10%	12%	17%	8%	19%	15%	14%	5%	22%
Middle Africa	21%	17%	18%	11%	10%	17%	10%	22%	20%	9%	7%	22%
Southern Africa	20%	17%	14%	9%	13%	18%	8%	19%	15%	14%	4%	22%
Western Africa	20%	17%	14%	10%	12%	17%	8%	19%	15%	14%	5%	22%
Northern Africa	21%	15%	14%	9%	12%	18%	8%	19%	15%	14%	5%	22%
Caribbean	18%	16%	7%	12%	11%	13%	11%	19%	15%	12%	10%	22%
Central America	15%	16%	6%	11%	10%	7%	11%	18%	15%	12%	10%	22%
South America	21%	15%	12%	10%	9%	16%	10%	22%	20%	9%	7%	22%
Central Asia	16%	11%	12%	10%	9%	14%	10%	22%	20%	9%	7%	23%
Eastern Asia	18%	12%	13%	10%	9%	19%	10%	22%	20%	9%	7%	23%
South-Eastern Asia	21%	17%	18%	11%	11%	15%	10%	22%	20%	9%	7%	22%
Southern Asia	23%	16%	17%	10%	8%	2%	10%	22%	22%	9%	8%	23%
Western Asia	20%	12%	16%	10%	8%	20%	10%	22%	20%	9%	7%	23%
Melanesia/Micronesia/Polynesia	22%	16%	15%	10%	9%	16%	10%	22%	20%	9%	7%	22%
Eastern Europe	3%	4%	3%	5%	3%	7%	2%	5%	3%	4%	2%	13%
Southern Europe	5%	5%	4%	4%	5%	8%	4%	6%	4%	6%	4%	13%
Northern Europe	3%	4%	1%	4%	3%	7%	2%	2%	3%	4%	2%	11%
Western Europe	6%	4%	2%	4%	3%	7%	2%	7%	3%	4%	2%	10%
Northern America	3%	4%	2%	4%	4%	5%	2%	4%	3%	5%	2%	11%
Australia/New Zealand	3%	4%	1%	2%	3%	7%	2%	4%	1%	2%	2%	11%
Total	19%	14%	13%	8%	9%	12%	9%	20%	18%	10%	6%	21%

0% 10% 30%

High adoption for limiters; potentially women having infrequent sex?

% indicates share of women forecasted to uptake method:

PERI-COITAL PILL: REGIONAL VARIATION (#)

BY DETAILED REGION AND DEMOGRAPHIC SEGMENT

Pill used at sex with regular period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method					
	Married			Never Married		Formerly Married	Married			Never Married		Formerly Married
	Soon	Spacer	Limiter	Recent	Ever		Soon	Spacer	Limiter	Recent	Ever	
Eastern Africa	0.85M	2.61M	5.84M	0.83M	0.67M	1.39M	0.69M	1.82M	3.33M	0.80M	0.61M	3.77M
Middle Africa	0.28M	0.83M	1.82M	0.68M	0.40M	0.59M	0.49M	1.39M	2.33M	0.40M	0.36M	1.18M
Southern Africa	0.06M	0.17M	0.62M	0.26M	0.32M	0.09M	0.04M	0.07M	0.28M	0.20M	0.10M	0.14M
Western Africa	0.84M	1.98M	3.30M	0.78M	0.78M	0.66M	1.11M	2.73M	3.30M	0.82M	0.71M	1.77M
Northern Africa	0.39M	0.74M	2.59M	0.58M	0.46M	0.73M	0.31M	0.54M	1.39M	0.70M	0.31M	0.92M
Caribbean	0.03M	0.09M	0.22M	0.08M	0.05M	0.13M	0.04M	0.06M	0.17M	0.05M	0.06M	0.17M
Central America	0.21M	0.47M	1.10M	0.22M	0.17M	0.24M	0.22M	0.26M	0.59M	0.16M	0.40M	0.75M
South America	0.57M	1.08M	4.67M	0.73M	0.41M	0.84M	0.28M	0.35M	1.48M	0.17M	0.64M	1.24M
Central Asia	0.08M	0.13M	0.76M	0.04M	0.02M	0.10M	0.10M	0.16M	0.49M	0.02M	0.07M	0.39M
Eastern Asia	1.75M	2.88M	16.79M	1.24M	1.11M	0.71M	0.87M	0.65M	3.60M	0.85M	1.78M	1.55M
South-Eastern Asia	0.73M	2.03M	11.15M	0.28M	0.20M	0.33M	0.75M	1.03M	4.26M	0.20M	0.55M	1.72M
Southern Asia	2.88M	4.76M	33.95M	0.54M	0.30M	0.19M	3.40M	4.41M	14.58M	0.41M	1.46M	3.58M
Western Asia	0.31M	0.57M	3.72M	0.12M	0.06M	0.22M	0.35M	0.61M	1.55M	0.09M	0.26M	0.82M
Melanesia/Micronesia/Polynesia	0.02M	0.04M	0.14M	0.02M	0.02M	0.02M	0.02M	0.05M	0.13M	0.01M	0.02M	0.04M
Eastern Europe	0.04M	0.10M	0.40M	0.20M	0.09M	0.23M	0.04M	0.05M	0.13M	0.03M	0.07M	0.74M
Southern Europe	0.02M	0.06M	0.27M	0.07M	0.06M	0.03M	0.03M	0.03M	0.11M	0.04M	0.11M	0.11M
Northern Europe	0.01M	0.05M	0.08M	0.18M	0.03M	0.04M	0.01M	0.01M	0.04M	0.08M	0.02M	0.08M
Western Europe	0.05M	0.10M	0.29M	0.31M	0.05M	0.06M	0.03M	0.03M	0.08M	0.11M	0.03M	0.12M
Northern America	0.05M	0.21M	0.43M	0.44M	0.23M	0.16M	0.05M	0.05M	0.20M	0.21M	0.16M	0.45M
Australia/New Zealand	0.00M	0.02M	0.03M	0.02M	0.02M	0.02M	0.00M	0.01M	0.01M	0.01M	0.01M	0.03M
Total	9.17M	18.91M	88.15M	7.60M	5.44M	6.79M	8.83M	14.29M	38.03M	5.38M	7.75M	19.58M

Note: Color formatting shows lowest to highest value within each row

LONG-ACTING INJECTABLE: VARIATION IN FORECASTED 2040 UPTAKE (% OF ALL WOMEN) BY DETAILED REGION & DEMOGRAPHIC SEGMENT

Injectable used multiple times a year with irregular period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method					
	Married			Never Married		Formerly Married	Married			Never Married		Formerly Married
	Soon	Spacer	Limiter	Recent	Ever		Soon	Spacer	Limiter	Recent	Ever	
Eastern Africa	7%	7%	3%	2%	2%	5%	3%	4%	2%	1%	0%	6%
Middle Africa	6%	6%	4%	2%	2%	3%	2%	3%	3%	1%	0%	6%
Southern Africa	6%	6%	3%	3%	3%	5%	3%	4%	2%	1%	0%	6%
Western Africa	6%	6%	3%	2%	2%	4%	3%	4%	2%	1%	0%	6%
Northern Africa	5%	4%	2%	1%	1%	4%	3%	4%	2%	1%	0%	6%
Caribbean	4%	4%	1%	2%	1%	3%	2%	5%	2%	1%	1%	6%
Central America	5%	6%	1%	3%	1%	2%	1%	5%	1%	1%	1%	6%
South America	5%	4%	2%	1%	1%	4%	2%	3%	3%	1%	0%	6%
Central Asia	3%	3%	2%	1%	1%	5%	2%	3%	3%	1%	0%	6%
Eastern Asia	3%	2%	2%	1%	1%	5%	2%	3%	3%	1%	0%	6%
South-Eastern Asia	6%	6%	3%	2%	2%	4%	2%	3%	3%	1%	0%	6%
Southern Asia	5%	4%	2%	1%	1%	1%	2%	3%	4%	1%	0%	6%
Western Asia	4%	3%	2%	0%	0%	5%	2%	3%	3%	1%	0%	6%
Melanesia/Micronesia/Polynesia	5%	4%	2%	2%	1%	5%	2%	3%	3%	1%	0%	6%
Eastern Europe	0%	1%	0%	0%	0%	1%	0%	0%	0%	0%	0%	1%
Southern Europe	1%	1%	1%	0%	0%	1%	0%	1%	0%	0%	0%	1%
Northern Europe	1%	1%	0%	0%	0%	1%	0%	0%	0%	0%	0%	1%
Western Europe	1%	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	1%
Northern America	1%	1%	0%	1%	0%	1%	0%	0%	1%	0%	0%	2%
Australia/New Zealand	1%	1%	0%	0%	0%	2%	0%	0%	0%	0%	0%	2%
Total	5%	4%	2%	1%	1%	3%	2%	3%	3%	1%	0%	5%

0% 10% 30%

% indicates share of women forecasted to uptake method:

LONG-ACTING INJECTABLE: REGIONAL VARIATION (#) BY DETAILED REGION & DEMOGRAPHIC SEGMENT

Injectable used for multiple years with irregular period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method					
	Married			Never Married		Formerly Married	Married			Never Married		Formerly Married
	Soon	Spacer	Limiters	Recent	Ever		Soon	Spacer	Limiters	Recent	Ever	
Eastern Africa	0.28M	1.00M	1.39M	0.19M	0.11M	0.41M	0.27M	0.43M	0.41M	0.05M	0.00M	0.99M
Middle Africa	0.09M	0.30M	0.35M	0.11M	0.06M	0.12M	0.11M	0.16M	0.31M	0.04M	0.01M	0.31M
Southern Africa	0.02M	0.06M	0.14M	0.07M	0.07M	0.03M	0.02M	0.02M	0.03M	0.01M	0.00M	0.04M
Western Africa	0.27M	0.73M	0.76M	0.17M	0.13M	0.16M	0.43M	0.65M	0.40M	0.05M	0.00M	0.46M
Northern Africa	0.09M	0.22M	0.46M	0.08M	0.04M	0.15M	0.12M	0.13M	0.17M	0.05M	0.00M	0.24M
Caribbean	0.01M	0.02M	0.04M	0.02M	0.01M	0.03M	0.01M	0.02M	0.02M	0.00M	0.00M	0.04M
Central America	0.06M	0.18M	0.24M	0.05M	0.02M	0.08M	0.02M	0.07M	0.05M	0.01M	0.03M	0.21M
South America	0.14M	0.28M	0.74M	0.10M	0.05M	0.19M	0.06M	0.04M	0.20M	0.02M	0.01M	0.32M
Central Asia	0.01M	0.04M	0.13M	0.00M	0.00M	0.04M	0.02M	0.02M	0.07M	0.00M	0.00M	0.10M
Eastern Asia	0.33M	0.56M	2.30M	0.14M	0.10M	0.18M	0.19M	0.08M	0.48M	0.08M	0.04M	0.40M
South-Eastern Asia	0.22M	0.76M	2.17M	0.06M	0.03M	0.09M	0.16M	0.12M	0.57M	0.02M	0.01M	0.45M
Southern Asia	0.69M	1.20M	4.92M	0.06M	0.03M	0.06M	0.73M	0.52M	2.50M	0.04M	0.00M	0.92M
Western Asia	0.07M	0.13M	0.55M	0.00M	0.00M	0.05M	0.07M	0.07M	0.21M	0.01M	0.01M	0.21M
Melanesia/Micronesia/Polynesia	0.00M	0.01M	0.02M	0.00M	0.00M	0.00M	0.00M	0.01M	0.02M	0.00M	0.00M	0.01M
Eastern Europe	0.00M	0.01M	0.02M	0.00M	0.00M	0.04M	0.00M	0.00M	0.01M	0.00M	0.00M	0.07M
Southern Europe	0.00M	0.01M	0.04M	0.01M	0.00M	0.00M	0.00M	0.00M	0.00M	0.00M	0.01M	0.01M
Northern Europe	0.01M	0.01M	0.02M	0.02M	0.00M	0.01M	0.00M	0.00M	0.01M	0.00M	0.00M	0.01M
Western Europe	0.01M	0.01M	0.03M	0.03M	0.01M	0.01M	0.00M	0.00M	0.00M	0.00M	0.00M	0.02M
Northern America	0.01M	0.03M	0.08M	0.08M	0.02M	0.03M	0.01M	0.00M	0.04M	0.02M	0.01M	0.09M
Australia/New Zealand	0.00M	0.00M	0.01M	0.00M	0.00M	0.00M	0.00M	0.00M	0.00M	0.00M	0.00M	0.01M
Total	2.32M	5.57M	14.40M	1.19M	0.69M	1.70M	2.24M	2.34M	5.48M	0.42M	0.13M	4.89M

Note: Color formatting shows lowest to highest value within each row

MICROARRAY PATCH: ALTERNATIVE BLEEDING PROFILE RESULTS (SHORTER PERIOD) VARIATION IN FORECASTED 2040 UPTAKE (% OF ALL WOMEN) BY REGION & SEGMENT

Patch put on skin multiple times a year with **shorter period** & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Formerly Married	Adopt Method					
	Married			Never Married				Married			Never Married		
	Soon	Spacer	Limiters	Recent	Ever	Soon		Spacer	Limiters	Recent	Ever		
Eastern Africa	20%	19%	18%	13%	16%	21%	11%	20%	18%	17%	10%	32%	
Middle Africa	21%	18%	22%	13%	14%	21%	8%	16%	20%	9%	8%	32%	
Southern Africa	20%	19%	18%	13%	17%	22%	11%	20%	18%	17%	11%	32%	
Western Africa	20%	18%	18%	13%	16%	20%	11%	20%	18%	17%	10%	32%	
North Africa/West Asia	20%	15%	18%	12%	15%	22%	10%	18%	19%	16%	9%	32%	
East/Central Asia	18%	13%	14%	12%	10%	24%	8%	16%	20%	9%	8%	32%	
South-Eastern Asia	21%	18%	21%	14%	14%	18%	8%	16%	20%	9%	8%	32%	
Southern Asia	22%	16%	19%	12%	10%	3%	8%	16%	22%	9%	9%	32%	
LAC	19%	17%	12%	13%	11%	15%	10%	19%	20%	12%	9%	33%	
Europe	4%	6%	5%	7%	7%	12%	3%	7%	6%	6%	3%	15%	
N. America/Aus	5%	8%	4%	7%	7%	10%	3%	8%	8%	7%	5%	18%	
Total	19%	15%	16%	11%	12%	15%	9%	18%	19%	11%	8%	30%	

0% 10% 30%

% indicates share of women forecasted to uptake method:

MICROARRAY PATCH: ALTERNATIVE BLEEDING PROFILE RESULTS (NO PERIOD)

VARIATION IN FORECASTED 2040 UPTAKE (% OF ALL WOMEN) BY REGION & SEGMENT

Patch put on skin multiple times a year with **no period** & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Formerly Married	Adopt Method					
	Married			Never Married				Married			Never Married		
	Soon	Spacer	Limiters	Recent	Ever			Soon	Spacer	Limiters	Recent	Ever	
Eastern Africa	16%	14%	12%	7%	10%	17%	5%	16%	11%	11%	5%	31%	
Middle Africa	16%	13%	14%	8%	8%	19%	4%	10%	10%	3%	4%	31%	
Southern Africa	16%	14%	12%	7%	11%	18%	5%	16%	11%	11%	6%	31%	
Western Africa	16%	14%	12%	7%	10%	17%	5%	16%	11%	11%	5%	31%	
North Africa/West Asia	16%	11%	13%	7%	9%	20%	4%	13%	11%	9%	4%	31%	
East/Central Asia	14%	11%	10%	8%	5%	22%	4%	10%	10%	3%	4%	31%	
South-Eastern Asia	16%	13%	14%	8%	8%	15%	4%	10%	10%	3%	4%	31%	
Southern Asia	16%	12%	12%	8%	6%	2%	4%	10%	11%	3%	2%	31%	
LAC	15%	12%	8%	8%	7%	13%	6%	14%	11%	6%	5%	32%	
Europe	5%	5%	5%	5%	5%	11%	2%	6%	4%	3%	3%	17%	
N. America/Aus	6%	7%	4%	4%	6%	9%	2%	7%	7%	5%	4%	16%	
Total	14%	12%	11%	7%	7%	13%	4%	12%	10%	6%	4%	29%	

0% 10% 30%

% indicates share of women forecasted to uptake method:



MICROARRAY PATCH: ALTERNATIVE BLEEDING PROFILE RESULTS (SHORTER PERIOD) FORECASTED VARIATION IN 2040 SWITCHERS & ADOPTERS BY REGION & SEGMENT

Patch put on skin multiple times a year with **shorter period** & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method						
	Married			Never Married			Married			Never Married			Formerly Married
	Soon	Spacer	Limiters	Recent	Ever	Soon	Spacer	Limiters	Recent	Ever			
Eastern Africa	0.88M	2.79M	7.46M	1.12M	0.88M	1.69M	1.00M	1.96M	3.93M	0.96M	1.09M	5.39M	
Middle Africa	0.28M	0.88M	2.18M	0.84M	0.52M	0.72M	0.41M	1.07M	2.33M	0.38M	0.41M	1.69M	
Southern Africa	0.06M	0.18M	0.79M	0.36M	0.44M	0.11M	0.06M	0.07M	0.33M	0.25M	0.29M	0.20M	
Western Africa	0.87M	2.12M	4.21M	1.04M	1.04M	0.81M	1.61M	2.95M	3.90M	0.99M	1.26M	2.53M	
North Africa/West Asia	0.68M	1.48M	7.69M	0.92M	0.65M	1.15M	0.74M	1.04M	3.19M	0.93M	0.85M	2.49M	
East/Central Asia	1.90M	3.17M	19.47M	1.63M	1.35M	1.07M	0.82M	0.62M	4.09M	0.83M	2.13M	2.76M	
South-Eastern Asia	0.73M	2.13M	13.36M	0.36M	0.26M	0.40M	0.63M	0.79M	4.26M	0.19M	0.64M	2.46M	
Southern Asia	2.76M	4.73M	38.74M	0.69M	0.39M	0.24M	2.87M	3.37M	14.99M	0.39M	1.70M	5.10M	
LAC	0.82M	1.75M	7.24M	1.30M	0.77M	1.48M	0.52M	0.64M	2.39M	0.42M	1.27M	3.26M	
Europe	0.12M	0.47M	1.88M	1.25M	0.48M	0.59M	0.11M	0.15M	0.66M	0.41M	0.31M	1.28M	
N. America/Aus	0.10M	0.47M	1.19M	0.81M	0.47M	0.34M	0.08M	0.12M	0.58M	0.36M	0.42M	0.86M	
Total	9.21M	20.17M	104.19M	10.32M	7.25M	8.59M	8.84M	12.79M	40.65M	6.10M	10.36M	28.02M	

Note: Color formatting shows lowest to highest value within each row

MICROARRAY PATCH: ALTERNATIVE BLEEDING PROFILE RESULTS (NO PERIOD) FORECASTED VARIATION IN 2040 SWITCHERS & ADOPTERS BY REGION & SEGMENT

Patch put on skin multiple times a year with **no period** & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method						
	Married			Never Married			Married			Never Married			Formerly Married
	Soon	Spacer	Limiters	Recent	Ever	Soon	Spacer	Limiters	Recent	Ever			
Eastern Africa	0.68M	2.09M	5.03M	0.63M	0.56M	1.37M	0.42M	1.51M	2.45M	0.59M	0.52M	5.24M	
Middle Africa	0.21M	0.67M	1.39M	0.51M	0.30M	0.64M	0.21M	0.66M	1.13M	0.14M	0.20M	1.64M	
Southern Africa	0.05M	0.14M	0.53M	0.20M	0.27M	0.09M	0.03M	0.06M	0.21M	0.15M	0.17M	0.20M	
Western Africa	0.67M	1.58M	2.85M	0.59M	0.66M	0.69M	0.68M	2.26M	2.43M	0.60M	0.60M	2.46M	
North Africa/West Asia	0.54M	1.08M	5.35M	0.52M	0.40M	1.01M	0.34M	0.73M	1.77M	0.55M	0.41M	2.42M	
East/Central Asia	1.43M	2.69M	13.80M	1.03M	0.70M	0.96M	0.42M	0.38M	1.98M	0.30M	1.03M	2.68M	
South-Eastern Asia	0.56M	1.62M	8.62M	0.22M	0.15M	0.33M	0.32M	0.49M	2.06M	0.07M	0.31M	2.40M	
Southern Asia	2.07M	3.71M	24.97M	0.43M	0.22M	0.20M	1.47M	2.08M	7.50M	0.14M	0.41M	4.96M	
LAC	0.64M	1.31M	4.80M	0.79M	0.46M	1.27M	0.30M	0.46M	1.32M	0.20M	0.65M	3.12M	
Europe	0.14M	0.38M	2.09M	0.88M	0.31M	0.58M	0.09M	0.13M	0.48M	0.20M	0.26M	1.43M	
N. America/Aus	0.12M	0.42M	1.19M	0.54M	0.37M	0.31M	0.07M	0.10M	0.50M	0.27M	0.35M	0.74M	
Total	7.09M	15.69M	70.63M	6.32M	4.40M	7.45M	4.35M	8.85M	21.81M	3.23M	4.88M	27.30M	

Note: Color formatting shows lowest to highest value within each row

LONG-ACTING INJECTABLE: ALTERNATIVE BLEEDING PROFILE RESULTS (SHORTER PERIOD) VARIATION IN FORECASTED 2040 UPTAKE (% OF ALL WOMEN) BY REGION & SEGMENT

Injectable used for multiple years with **shorter period** & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Formerly Married	Adopt Method					
	Married			Never Married				Married			Never Married		
	Soon	Spacer	Limiters	Recent	Ever	Soon		Spacer	Limiters	Recent	Ever		
Eastern Africa	16%	14%	13%	10%	9%	16%	8%	13%	11%	12%	6%	20%	
Middle Africa	16%	13%	15%	8%	7%	14%	6%	11%	10%	5%	2%	20%	
Southern Africa	16%	14%	13%	11%	11%	17%	8%	13%	11%	12%	5%	20%	
Western Africa	15%	14%	13%	10%	9%	14%	8%	13%	11%	12%	6%	20%	
North Africa/West Asia	14%	10%	11%	9%	7%	15%	7%	12%	10%	11%	5%	20%	
East/Central Asia	14%	7%	9%	7%	5%	16%	6%	11%	10%	5%	2%	20%	
South-Eastern Asia	16%	13%	15%	9%	8%	13%	6%	11%	10%	5%	2%	20%	
Southern Asia	16%	11%	13%	7%	5%	2%	6%	11%	12%	5%	3%	20%	
LAC	14%	11%	8%	8%	5%	10%	6%	12%	10%	7%	3%	21%	
Europe	2%	3%	3%	3%	2%	9%	2%	3%	3%	2%	2%	11%	
N. America/Aus	3%	3%	2%	4%	3%	7%	2%	4%	4%	4%	2%	13%	
Total	14%	10%	11%	7%	6%	11%	6%	12%	10%	7%	3%	19%	

0% 10% 30%

% indicates share of women forecasted to uptake method:



LONG-ACTING INJECTABLE: ALTERNATIVE BLEEDING PROFILE RESULTS (NO PERIOD) VARIATION IN FORECASTED 2040 UPTAKE (% OF ALL WOMEN) BY REGION & SEGMENT

Injectable used for multiple years with **no period** & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Formerly Married	Adopt Method					
	Married			Never Married				Married			Never Married		
	Soon	Spacer	Limiter	Recent	Ever			Soon	Spacer	Limiter	Recent	Ever	
Eastern Africa	12%	9%	9%	8%	7%	12%	5%	7%	6%	9%	4%	19%	
Middle Africa	13%	8%	10%	5%	6%	12%	4%	6%	3%	3%	2%	19%	
Southern Africa	12%	9%	9%	8%	9%	14%	5%	7%	6%	9%	5%	19%	
Western Africa	12%	9%	9%	7%	7%	12%	5%	7%	6%	9%	4%	19%	
North Africa/West Asia	11%	6%	8%	6%	5%	13%	5%	6%	5%	8%	3%	19%	
East/Central Asia	10%	5%	5%	5%	3%	14%	4%	6%	3%	3%	2%	19%	
South-Eastern Asia	13%	8%	10%	7%	6%	11%	4%	6%	3%	3%	2%	19%	
Southern Asia	13%	7%	8%	6%	4%	2%	4%	6%	2%	3%	2%	19%	
LAC	11%	7%	5%	7%	4%	8%	5%	6%	4%	5%	3%	19%	
Europe	3%	2%	2%	3%	2%	8%	2%	3%	2%	2%	1%	11%	
N. America/Aus	3%	3%	2%	3%	3%	6%	2%	2%	3%	4%	2%	11%	
Total	11%	7%	7%	5%	5%	9%	4%	6%	4%	5%	2%	18%	

0% 10% 30%

% indicates share of women forecasted to uptake method:



LONG-ACTING INJECTABLE: ALTERNATIVE BLEEDING PROFILE RESULTS (SHORTER PERIOD) FORECASTED VARIATION IN 2040 SWITCHERS & ADOPTERS BY REGION & SEGMENT

Injectable used for multiple years with **shorter period** & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method					
	Married			Never Married		Formerly Married	Married			Never Married		Formerly Married
	Soon	Spacer	Limiters	Recent	Ever		Soon	Spacer	Limiters	Recent	Ever	
Eastern Africa	0.67M	2.15M	5.53M	0.87M	0.51M	1.30M	0.73M	1.30M	2.28M	0.64M	0.71M	3.42M
Middle Africa	0.22M	0.65M	1.54M	0.50M	0.28M	0.49M	0.28M	0.74M	1.13M	0.22M	0.11M	1.07M
Southern Africa	0.04M	0.14M	0.58M	0.30M	0.27M	0.09M	0.05M	0.05M	0.19M	0.16M	0.14M	0.13M
Western Africa	0.66M	1.60M	3.08M	0.79M	0.60M	0.56M	1.18M	1.95M	2.26M	0.66M	0.82M	1.61M
North Africa/West Asia	0.49M	0.94M	4.86M	0.64M	0.32M	0.76M	0.52M	0.71M	1.70M	0.61M	0.44M	1.57M
East/Central Asia	1.46M	1.66M	12.20M	0.89M	0.61M	0.70M	0.55M	0.43M	1.98M	0.48M	0.55M	1.74M
South-Eastern Asia	0.56M	1.61M	9.56M	0.24M	0.14M	0.30M	0.42M	0.55M	2.06M	0.11M	0.16M	1.56M
Southern Asia	2.09M	3.21M	25.53M	0.40M	0.19M	0.18M	1.93M	2.33M	7.91M	0.23M	0.57M	3.21M
LAC	0.59M	1.22M	4.70M	0.82M	0.37M	0.95M	0.32M	0.41M	1.25M	0.24M	0.47M	2.03M
Europe	0.06M	0.21M	1.13M	0.56M	0.16M	0.46M	0.07M	0.06M	0.36M	0.17M	0.17M	0.92M
N. America/Aus	0.05M	0.19M	0.61M	0.47M	0.17M	0.23M	0.04M	0.06M	0.32M	0.22M	0.16M	0.61M
Total	6.88M	13.57M	69.31M	6.47M	3.61M	6.01M	6.09M	8.58M	21.42M	3.74M	4.30M	17.87M

Note: Color formatting shows lowest to highest value within each row

LONG-ACTING INJECTABLE: ALTERNATIVE BLEEDING PROFILE RESULTS (NO PERIOD) FORECASTED VARIATION IN 2040 SWITCHERS & ADOPTERS BY REGION & SEGMENT

Injectable used for multiple years with **no period** & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method						
	Married			Never Married			Formerly Married	Married			Never Married		Formerly Married
	Soon	Spacer	Limiter	Recent	Ever	Soon		Spacer	Limiter	Recent	Ever		
Eastern Africa	0.53M	1.36M	3.72M	0.63M	0.39M	1.01M	0.46M	0.70M	1.24M	0.48M	0.43M	3.19M	
Middle Africa	0.17M	0.41M	1.02M	0.34M	0.21M	0.43M	0.19M	0.37M	0.35M	0.14M	0.10M	1.00M	
Southern Africa	0.04M	0.09M	0.39M	0.23M	0.22M	0.07M	0.03M	0.03M	0.10M	0.12M	0.14M	0.12M	
Western Africa	0.52M	1.01M	2.07M	0.57M	0.45M	0.47M	0.74M	1.06M	1.23M	0.49M	0.49M	1.50M	
North Africa/West Asia	0.38M	0.59M	3.30M	0.44M	0.21M	0.67M	0.34M	0.37M	0.75M	0.45M	0.29M	1.47M	
East/Central Asia	1.08M	1.26M	7.29M	0.63M	0.43M	0.64M	0.38M	0.21M	0.61M	0.30M	0.51M	1.61M	
South-Eastern Asia	0.44M	1.03M	6.36M	0.18M	0.11M	0.24M	0.29M	0.27M	0.64M	0.07M	0.15M	1.46M	
Southern Asia	1.63M	2.02M	16.21M	0.32M	0.13M	0.15M	1.33M	1.17M	1.67M	0.14M	0.32M	2.98M	
LAC	0.48M	0.78M	3.16M	0.65M	0.29M	0.82M	0.24M	0.21M	0.53M	0.16M	0.38M	1.89M	
Europe	0.07M	0.16M	1.03M	0.48M	0.14M	0.38M	0.06M	0.06M	0.25M	0.14M	0.10M	0.94M	
N. America/Aus	0.06M	0.16M	0.52M	0.40M	0.18M	0.20M	0.05M	0.04M	0.24M	0.21M	0.18M	0.51M	
Total	5.42M	8.88M	45.06M	4.85M	2.78M	5.06M	4.12M	4.49M	7.60M	2.72M	3.09M	16.66M	

Note: Color formatting shows lowest to highest value within each row

MONTHLY PILL: ALTERNATIVE BLEEDING PROFILE RESULTS (IRREGULAR PERIOD)

VARIATION IN FORECASTED 2040 UPTAKE (% OF ALL WOMEN) BY REGION & SEGMENT

Pill used multiple times a year with **irregular** period & may cause physical side effects (mild nausea, headaches, fatigue)

Switch to Method

	Married			Never Married		Formerly Married
	Soon	Spacer	Limiters	Recent	Ever	
Eastern Africa	11%	8%	7%	2%	3%	8%
Middle Africa	12%	7%	9%	2%	2%	6%
Southern Africa	12%	8%	7%	2%	3%	8%
Western Africa	12%	7%	7%	2%	3%	7%
North Africa/West Asia	12%	4%	6%	2%	2%	7%
East/Central Asia	11%	4%	4%	2%	1%	7%
South-Eastern Asia	12%	7%	8%	2%	2%	7%
Southern Asia	13%	6%	7%	2%	2%	1%
LAC	11%	6%	5%	2%	2%	5%
Europe	1%	2%	1%	1%	1%	3%
N. America/Aus	1%	2%	1%	1%	1%	2%
Total	11%	5%	6%	2%	2%	5%

Adopt Method

	Married			Never Married		Formerly Married
	Soon	Spacer	Limiters	Recent	Ever	
Eastern Africa	5%	6%	5%	0%	1%	9%
Middle Africa	5%	6%	5%	0%	1%	9%
Southern Africa	5%	6%	5%	0%	1%	9%
Western Africa	5%	6%	5%	0%	1%	9%
North Africa/West Asia	5%	6%	5%	0%	1%	9%
East/Central Asia	5%	6%	5%	0%	1%	9%
South-Eastern Asia	5%	6%	5%	0%	1%	9%
Southern Asia	5%	6%	5%	0%	0%	9%
LAC	5%	6%	5%	1%	1%	9%
Europe	1%	2%	2%	1%	0%	4%
N. America/Aus	1%	2%	1%	1%	0%	5%
Total	5%	6%	5%	0%	1%	8%

0% 10% 30%

% indicates share of women forecasted to uptake method:



MONTHLY PILL: ALTERNATIVE BLEEDING PROFILE RESULTS (IRREGULAR PERIOD) FORECASTED VARIATION IN 2040 SWITCHERS & ADOPTERS BY REGION & SEGMENT

Pill used multiple times a year with **irregular** period & may cause physical side effects (mild nausea, headaches, fatigue)

Switch to Method

	Married			Never Married		Formerly Married
	Soon	Spacer	Limiters	Recent	Ever	
Eastern Africa	0.50M	1.16M	2.91M	0.18M	0.15M	0.63M
Middle Africa	0.17M	0.35M	0.86M	0.12M	0.08M	0.22M
Southern Africa	0.03M	0.07M	0.30M	0.06M	0.08M	0.04M
Western Africa	0.49M	0.85M	1.63M	0.16M	0.18M	0.28M
North Africa/West Asia	0.40M	0.43M	2.77M	0.12M	0.10M	0.37M
East/Central Asia	1.13M	0.93M	5.50M	0.23M	0.18M	0.32M
South-Eastern Asia	0.43M	0.89M	5.28M	0.06M	0.04M	0.15M
Southern Asia	1.71M	1.73M	14.70M	0.11M	0.06M	0.09M
LAC	0.47M	0.62M	2.86M	0.24M	0.12M	0.53M
Europe	0.04M	0.12M	0.41M	0.16M	0.06M	0.15M
N. America/Aus	0.03M	0.11M	0.24M	0.15M	0.05M	0.08M
Total	5.42M	7.26M	37.46M	1.60M	1.09M	2.86M

Adopt Method

	Married			Never Married		Formerly Married
	Soon	Spacer	Limiters	Recent	Ever	
Eastern Africa	0.46M	0.57M	1.10M	0.00M	0.09M	1.45M
Middle Africa	0.25M	0.37M	0.54M	0.02M	0.04M	0.45M
Southern Africa	0.03M	0.02M	0.09M	0.00M	0.02M	0.05M
Western Africa	0.74M	0.86M	1.09M	0.00M	0.11M	0.68M
North Africa/West Asia	0.38M	0.33M	0.82M	0.00M	0.08M	0.68M
East/Central Asia	0.50M	0.21M	0.95M	0.04M	0.20M	0.76M
South-Eastern Asia	0.38M	0.27M	0.99M	0.01M	0.06M	0.66M
Southern Asia	1.73M	1.17M	3.33M	0.02M	0.08M	1.40M
LAC	0.25M	0.20M	0.59M	0.03M	0.13M	0.84M
Europe	0.04M	0.05M	0.17M	0.04M	0.03M	0.38M
N. America/Aus	0.03M	0.04M	0.10M	0.05M	0.03M	0.22M
Total	4.79M	4.09M	9.79M	0.22M	0.87M	7.58M

Note: Color formatting shows lowest to highest value within each row

PERI-COITAL PILL: ALTERNATIVE BLEEDING PROFILE RESULTS (IRREGULAR PERIOD) VARIATION IN FORECASTED 2040 UPTAKE (% OF ALL WOMEN) BY REGION & SEGMENT

Pill used at sex with **irregular** period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Formerly Married	Adopt Method					
	Married			Never Married				Married			Never Married		
	Soon	Spacer	Limiter	Recent	Ever			Soon	Spacer	Limiter	Recent	Ever	
Eastern Africa	10%	7%	6%	2%	2%	9%	3%	6%	4%	1%	1%	14%	
Middle Africa	11%	7%	7%	3%	2%	9%	4%	3%	4%	1%	1%	14%	
Southern Africa	10%	7%	6%	2%	3%	9%	3%	6%	4%	1%	1%	14%	
Western Africa	10%	7%	6%	2%	2%	9%	3%	6%	4%	1%	1%	14%	
North Africa/West Asia	10%	4%	6%	2%	2%	10%	3%	5%	4%	1%	1%	14%	
East/Central Asia	9%	4%	4%	2%	2%	10%	4%	3%	4%	1%	1%	14%	
South-Eastern Asia	11%	7%	7%	3%	2%	8%	4%	3%	4%	1%	1%	14%	
Southern Asia	12%	6%	6%	2%	1%	1%	4%	3%	4%	1%	0%	14%	
LAC	10%	6%	4%	3%	2%	7%	4%	5%	4%	2%	1%	14%	
Europe	1%	1%	1%	1%	1%	3%	1%	2%	1%	1%	0%	5%	
N. America/Aus	1%	1%	1%	1%	1%	2%	1%	2%	1%	1%	0%	6%	
Total	9%	5%	5%	2%	2%	6%	4%	4%	4%	1%	1%	13%	

0% 10% 30%

% indicates share of women forecasted to uptake method:



PERI-COITAL PILL: ALTERNATIVE BLEEDING PROFILE RESULTS (IRREGULAR PERIOD) FORECASTED VARIATION IN 2040 SWITCHERS & ADOPTERS BY REGION & SEGMENT

Pill used at sex with **irregular** period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Formerly Married	Adopt Method					
	Married			Never Married				Married			Never Married		
	Soon	Spacer	Limiters	Recent	Ever	Soon		Spacer	Limiters	Recent	Ever		
Eastern Africa	0.43M	1.08M	2.42M	0.20M	0.13M	0.70M	0.23M	0.58M	0.84M	0.05M	0.14M	2.38M	
Middle Africa	0.14M	0.33M	0.74M	0.16M	0.07M	0.30M	0.21M	0.20M	0.43M	0.06M	0.05M	0.75M	
Southern Africa	0.03M	0.07M	0.25M	0.07M	0.06M	0.05M	0.01M	0.02M	0.07M	0.01M	0.02M	0.09M	
Western Africa	0.43M	0.79M	1.36M	0.19M	0.16M	0.34M	0.37M	0.87M	0.83M	0.05M	0.16M	1.12M	
North Africa/West Asia	0.35M	0.40M	2.36M	0.13M	0.11M	0.50M	0.25M	0.26M	0.64M	0.06M	0.11M	1.10M	
East/Central Asia	0.91M	1.00M	5.18M	0.29M	0.20M	0.43M	0.42M	0.12M	0.75M	0.13M	0.24M	1.21M	
South-Eastern Asia	0.37M	0.82M	4.45M	0.07M	0.04M	0.17M	0.32M	0.15M	0.78M	0.03M	0.07M	1.09M	
Southern Asia	1.49M	1.72M	12.55M	0.14M	0.06M	0.11M	1.47M	0.65M	2.50M	0.06M	0.08M	2.24M	
LAC	0.40M	0.59M	2.47M	0.28M	0.12M	0.68M	0.21M	0.15M	0.48M	0.06M	0.16M	1.37M	
Europe	0.04M	0.07M	0.33M	0.11M	0.04M	0.17M	0.02M	0.04M	0.10M	0.04M	0.02M	0.41M	
N. America/Aus	0.03M	0.08M	0.20M	0.13M	0.04M	0.08M	0.02M	0.03M	0.09M	0.05M	0.04M	0.27M	
Total	4.62M	6.96M	32.31M	1.75M	1.03M	3.52M	3.54M	3.07M	7.51M	0.62M	1.08M	12.00M	

Note: Color formatting shows lowest to highest value within each row

BIODEGRADABLE IMPLANT: OVERVIEW

Demographic	Method	Region
All	No Method	SSA

- Characteristics similar to existing implant but with shorter duration (generally longer duration preferred).
- **Important note: unable to capture difference between provider-removing implant vs biodegrading within this study so results should be taken with some caution.**

Incision x once a year or more infrequent

	Regular	Shorter	None	Longer	Irregular
Weight	9%	10%	8%	2%	4%
Physical	12%	14%	11%	4%	5%
Mood	10%	11%	8%	2%	5%
None	24%	27%	19%	7%	12%

Incision x multiple times a year

	Regular	Shorter	None	Longer	Irregular
Weight	5%	6%	4%	2%	2%
Physical	7%	8%	6%	2%	3%
Mood	6%	7%	5%	1%	3%
None	17%	20%	13%	5%	7%

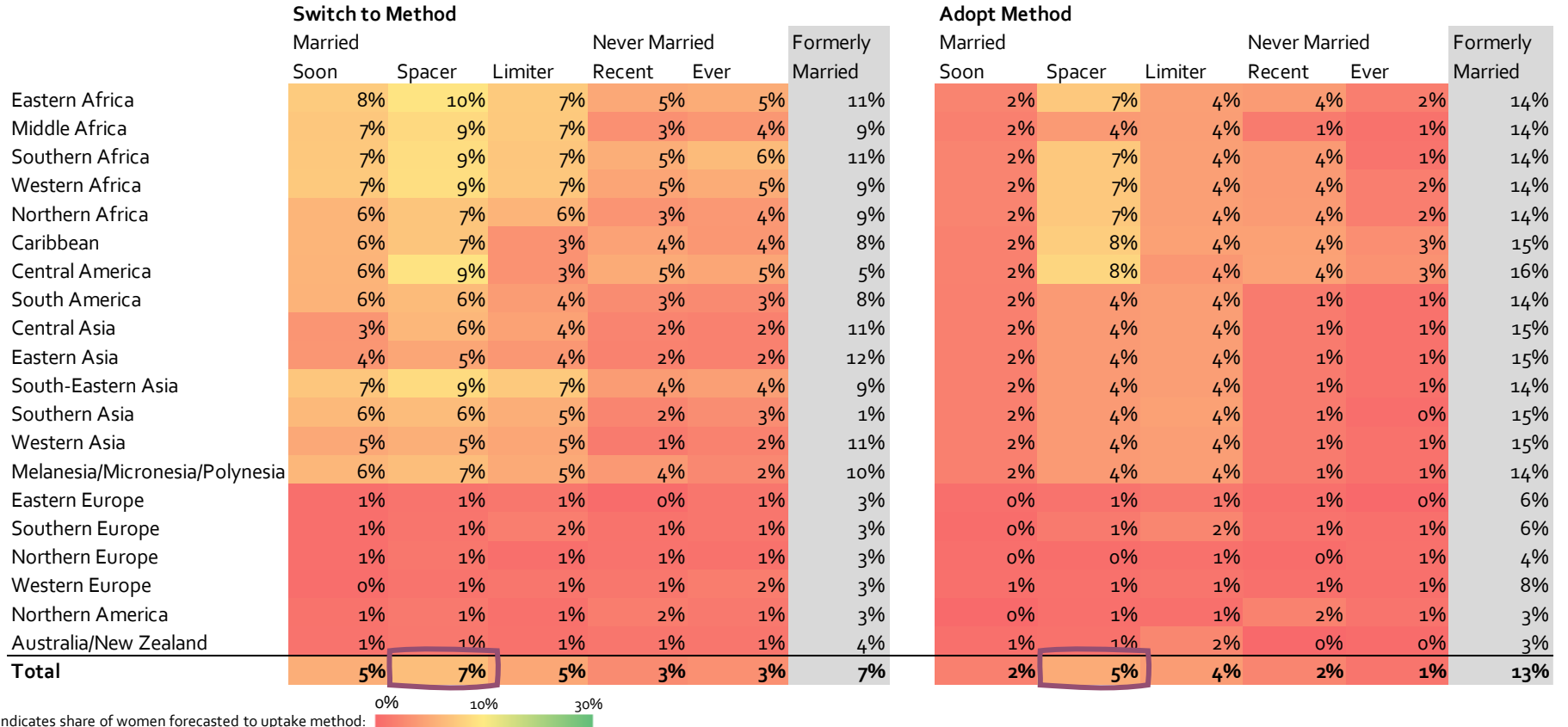
0% 10% 30%

% indicates share of women forecasted to uptake method:

BIODEGRADABLE IMPLANT: VARIATION IN FORECASTED 2040 UPTAKE (% OF ALL WOMEN) BY DETAILED REGION & DEMOGRAPHIC SEGMENT

Note: unable to capture difference between provider-removing implant vs biodegrading within this study so results should be taken with some caution.

Implant used for multiple years with irregular period & may cause physical side effects (mild nausea, headaches, fatigue)



BIODEGRADABLE IMPLANT: FORECASTED VARIATION IN 2040 SWITCHERS & ADOPTERS

BY DETAILED REGION & DEMOGRAPHIC SEGMENT

Note: unable to capture difference between provider-removing implant vs biodegrading within this study so results should be taken with some caution.

Implant used for multiple years with irregular period & may cause physical side effects (mild nausea, headaches, fatigue)

	Switch to Method						Adopt Method						
	Married			Never Married			Married			Never Married			Formerly Married
	Soon	Spacer	Limiter	Recent	Ever	Soon	Spacer	Limiter	Recent	Ever			
Eastern Africa	0.33M	1.43M	3.07M	0.41M	0.29M	0.86M	0.19M	0.71M	0.90M	0.21M	0.19M	2.46M	
Middle Africa	0.10M	0.43M	0.75M	0.19M	0.14M	0.30M	0.09M	0.25M	0.47M	0.06M	0.04M	0.77M	
Southern Africa	0.02M	0.09M	0.31M	0.15M	0.16M	0.06M	0.01M	0.03M	0.08M	0.05M	0.02M	0.09M	
Western Africa	0.32M	1.04M	1.68M	0.37M	0.34M	0.37M	0.31M	1.07M	0.90M	0.22M	0.22M	1.16M	
Northern Africa	0.11M	0.35M	1.10M	0.21M	0.13M	0.37M	0.09M	0.21M	0.38M	0.19M	0.10M	0.60M	
Caribbean	0.01M	0.04M	0.10M	0.03M	0.02M	0.08M	0.01M	0.02M	0.05M	0.02M	0.02M	0.12M	
Central America	0.08M	0.28M	0.55M	0.10M	0.08M	0.17M	0.04M	0.12M	0.14M	0.06M	0.13M	0.54M	
South America	0.15M	0.45M	1.55M	0.19M	0.12M	0.43M	0.05M	0.06M	0.30M	0.03M	0.07M	0.81M	
Central Asia	0.02M	0.07M	0.28M	0.01M	0.00M	0.08M	0.02M	0.03M	0.10M	0.00M	0.01M	0.26M	
Eastern Asia	0.35M	1.12M	4.70M	0.25M	0.24M	0.43M	0.15M	0.11M	0.72M	0.13M	0.19M	1.03M	
South-Eastern Asia	0.25M	1.07M	4.66M	0.10M	0.08M	0.20M	0.13M	0.18M	0.85M	0.03M	0.06M	1.13M	
Southern Asia	0.79M	1.97M	10.78M	0.12M	0.11M	0.13M	0.60M	0.78M	2.92M	0.06M	0.08M	2.38M	
Western Asia	0.08M	0.25M	1.14M	0.02M	0.02M	0.12M	0.06M	0.11M	0.31M	0.01M	0.03M	0.55M	
Melanesia/Micronesia/Polynesia	0.01M	0.02M	0.04M	0.01M	0.00M	0.01M	0.00M	0.01M	0.03M	0.00M	0.00M	0.02M	
Eastern Europe	0.01M	0.02M	0.16M	0.01M	0.03M	0.10M	0.01M	0.01M	0.05M	0.00M	0.00M	0.36M	
Southern Europe	0.00M	0.01M	0.12M	0.01M	0.01M	0.01M	0.00M	0.01M	0.06M	0.01M	0.02M	0.06M	
Northern Europe	0.00M	0.02M	0.04M	0.04M	0.01M	0.02M	0.00M	0.00M	0.01M	0.01M	0.01M	0.03M	
Western Europe	0.00M	0.02M	0.13M	0.08M	0.03M	0.03M	0.01M	0.00M	0.03M	0.02M	0.01M	0.09M	
Northern America	0.01M	0.07M	0.17M	0.17M	0.07M	0.09M	0.00M	0.01M	0.04M	0.09M	0.06M	0.13M	
Australia/New Zealand	0.00M	0.01M	0.02M	0.01M	0.01M	0.01M	0.00M	0.00M	0.02M	0.00M	0.00M	0.01M	
Total	2.64M	8.75M	31.35M	2.49M	1.88M	3.89M	1.77M	3.71M	8.32M	1.20M	1.24M	12.59M	

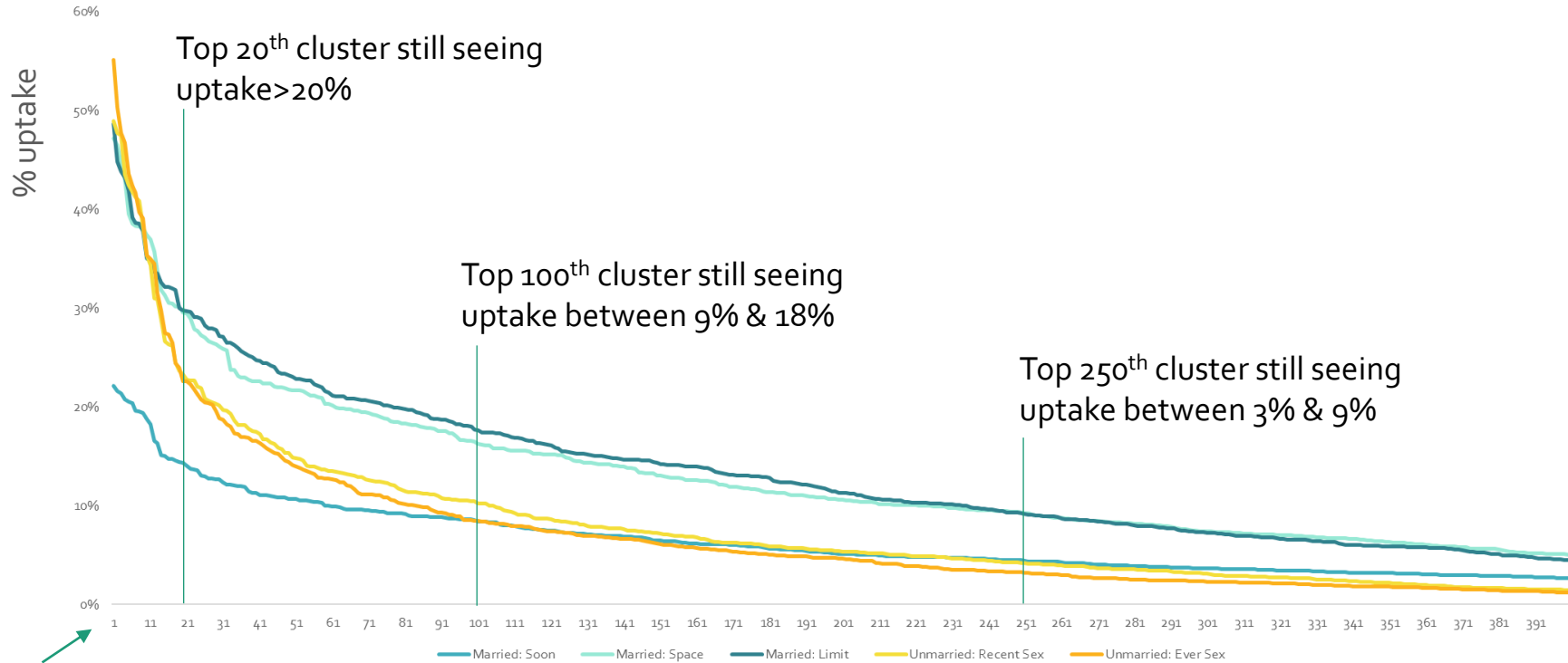
Note: Color formatting shows lowest to highest value within each row

"TOP" CLUSTERS NOT WHOLE PICTURE OF NEW CT POTENTIAL

Updated

Demographic	Method	Region
All	No Method	All

Forecasted 2040 uptake (% of all women) by cluster and demographic segment



Cluster Ranking (from highest to lowest overall uptake)
(showing 400 of 700 possible clusters)

Demographic	Method	Region
All	No Method	SSA

PROMISING CLUSTERS WITH SIDE EFFECTS (1)

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Swallow	Once year more infrequent	Physical	Shorter	51.7M	26%
Swallow	Once year more infrequent	Physical	Regular	49.2M	25%
Swallow	Once year more infrequent	Mood	Shorter	45.7M	23%
Skin	Once year more infrequent	Physical	Shorter	44.2M	22%
Swallow	Once year more infrequent	Mood	Regular	43.7M	22%
Skin	Once year more infrequent	Mood	Shorter	41.1M	21%
Swallow	Once year more infrequent	Physical	None	39.4M	20%
Swallow	Once year more infrequent	Weight	Shorter	38.5M	20%
Skin	Once year more infrequent	Physical	Regular	38.3M	20%
Swallow	Multiple x year	Physical	Shorter	37.6M	19%
Swallow	Multiple x year	Mood	Shorter	37.0M	19%
Skin	Once year more infrequent	Mood	Regular	36.8M	19%
Swallow	Once year more infrequent	Weight	Regular	35.7M	18%
Swallow	Multiple x year	Mood	Regular	35.1M	18%
Skin	Multiple x year	Mood	Shorter	35.1M	18%
Swallow	Once year more infrequent	Mood	None	35.1M	18%
Skin	Multiple x year	Physical	Shorter	35.1M	18%
Skin	Once year more infrequent	Physical	None	34.5M	18%
Swallow	Multiple x year	Physical	Regular	33.8M	17%
Skin	Once year more infrequent	Weight	Shorter	33.5M	17%
Swallow	At Sex	Physical	Shorter	32.4M	16%
Injection	Once year more infrequent	Physical	Shorter	31.9M	16%
Swallow	Once year more infrequent	Weight	None	31.5M	16%
Skin	Multiple x year	Mood	Regular	31.2M	16%
Skin	Once year more infrequent	Mood	None	30.1M	15%
Skin	Multiple x year	Physical	Regular	29.7M	15%
Swallow	At Sex	Mood	Shorter	29.5M	15%
Swallow	At Sex	Physical	Regular	28.4M	14%

Clusters above 15% shown in main deck; this shows all above 5%

Demographic	Method	Region
All	No Method	SSA

PROMISING CLUSTERS WITH SIDE EFFECTS (2)

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Swallow	Once	Physical	Shorter	28.0M	14%
Swallow	Once	Mood	Shorter	27.9M	14%
Swallow	Multiple x year	Physical	None	27.8M	14%
Injection	Once year more infrequent	Physical	Regular	27.7M	14%
Incision	Once year more infrequent	Physical	Shorter	27.6M	14%
Skin	Once year more infrequent	Weight	Regular	27.6M	14%
Swallow	Multiple x year	Weight	Shorter	27.4M	14%
Swallow	Multiple x year	Mood	None	27.0M	14%
Swallow	At Sex	Mood	Regular	26.6M	14%
Skin	Once year more infrequent	Weight	None	26.4M	13%
Skin	Once	Physical	Shorter	25.9M	13%
Injection	Once year more infrequent	Mood	Shorter	25.7M	13%
Skin	Multiple x year	Mood	None	25.6M	13%
Swallow	Multiple x year	Weight	Regular	25.3M	13%
Skin	At Sex	Mood	Shorter	25.3M	13%
Swallow	Once	Mood	Regular	25.2M	13%
Skin	At Sex	Physical	Shorter	25.2M	13%
Skin	Once	Mood	Shorter	25.1M	13%
Injection	Once year more infrequent	Physical	None	24.8M	13%
Skin	Multiple x year	Weight	Shorter	24.6M	13%
Injection	Once year more infrequent	Weight	Shorter	24.6M	13%
Skin	Multiple x year	Physical	None	24.5M	12%
Swallow	Once	Physical	Regular	24.3M	12%
Swallow	Daily	Mood	Shorter	24.1M	12%
Incision	Once year more infrequent	Physical	Regular	23.7M	12%
Injection	Once year more infrequent	Mood	Regular	23.4M	12%
Swallow	At Sex	Physical	None	23.0M	12%
Swallow	Once	Weight	Shorter	22.8M	12%

Clusters above 15% shown in main deck; this shows all above 5%

PROMISING CLUSTERS WITH SIDE EFFECTS (3)

Demographic	Method	Region
All	No Method	SSA

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Vaginal_self	Once year more infrequent	Physical	Shorter	22.6M	12%
Swallow	Daily	Physical	Shorter	22.6M	12%
Skin	Daily	Mood	Shorter	22.3M	11%
Injection	Once year more infrequent	Weight	Regular	22.1M	11%
Incision	Once year more infrequent	Mood	Shorter	21.8M	11%
Skin	At Sex	Mood	Regular	21.8M	11%
Injection	Multiple x year	Physical	Shorter	21.8M	11%
Skin	At Sex	Physical	Regular	21.7M	11%
Swallow	Once	Physical	None	21.6M	11%
Skin	Multiple x year	Weight	Regular	21.4M	11%
Skin	Once	Mood	Regular	21.2M	11%
Swallow	Daily	Mood	Regular	21.2M	11%
Incision	Once year more infrequent	Physical	None	20.9M	11%
Swallow	Once	Mood	None	20.8M	11%
Injection	Once year more infrequent	Weight	None	20.8M	11%
Injection	Multiple x year	Physical	Regular	20.7M	11%
Swallow	Multiple x year	Weight	None	20.6M	10%
Skin	Once	Physical	Regular	20.3M	10%
Vaginal_provider	Once year more infrequent	Physical	Shorter	20.1M	10%
Swallow	At Sex	Mood	None	20.0M	10%
Incision	Once year more infrequent	Weight	Shorter	19.8M	10%
Swallow	At Sex	Weight	Shorter	19.7M	10%
Vaginal_self	Once year more infrequent	Physical	Regular	19.6M	10%
Skin	Once	Weight	Shorter	19.5M	10%
Injection	Once year more infrequent	Mood	None	19.4M	10%
Swallow	Once	Weight	Regular	19.4M	10%
Skin	Once	Physical	None	19.4M	10%
Skin	Daily	Physical	Shorter	19.3M	10%

Demographic	Method	Region
All	No Method	SSA

PROMISING CLUSTERS WITH SIDE EFFECTS (4)

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Incision	Once year more infrequent	Mood	Regular	19.1M	10%
Skin	At Sex	Physical	None	18.8M	10%
Swallow	Once	Weight	None	18.7M	10%
Injection	Once	Physical	Shorter	18.6M	9%
Skin	Once	Mood	None	18.6M	9%
Swallow	At Sex	Weight	Regular	18.6M	9%
Injection	Multiple x year	Mood	Shorter	18.6M	9%
Vaginal_self	Once year more infrequent	Physical	None	18.5M	9%
Vaginal_self	Once year more infrequent	Mood	Shorter	18.3M	9%
Swallow	Daily	Physical	Regular	18.1M	9%
Skin	Multiple x year	Weight	None	18.0M	9%
Skin	At Sex	Mood	None	17.4M	9%
Injection	Multiple x year	Mood	Regular	17.3M	9%
Swallow	Daily	Weight	Shorter	17.3M	9%
Incision	Once year more infrequent	Weight	Regular	17.2M	9%
Skin	Daily	Mood	Regular	17.1M	9%
Swallow	Once year more infrequent	Physical	Irregular	17.0M	9%
Incision	Once	Physical	Shorter	16.7M	9%
Injection	Multiple x year	Weight	Shorter	16.7M	9%
Incision	Once year more infrequent	Mood	None	16.6M	8%
Injection	Once	Mood	Shorter	16.4M	8%
Incision	Multiple x year	Physical	Shorter	16.4M	8%
Swallow	Once year more infrequent	Mood	Irregular	16.2M	8%
Vaginal_provider	Once year more infrequent	Mood	Shorter	16.1M	8%
Vaginal_provider	Once year more infrequent	Physical	Regular	16.1M	8%
Skin	Once	Weight	None	16.1M	8%
Swallow	Daily	Mood	None	16.0M	8%
Incision	Once year more infrequent	Weight	None	16.0M	8%

Demographic	Method	Region
All	No Method	SSA

PROMISING CLUSTERS WITH SIDE EFFECTS (5)

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Vaginal_self	Once year more infrequent	Mood	Regular	15.9M	8%
Skin	Once year more infrequent	Mood	Irregular	15.9M	8%
Swallow	Daily	Physical	None	15.8M	8%
Skin	At Sex	Weight	Shorter	15.7M	8%
Injection	Once	Physical	Regular	15.5M	8%
Incision	Once	Physical	Regular	15.5M	8%
Injection	Multiple x year	Weight	Regular	15.4M	8%
Skin	Once year more infrequent	Physical	Irregular	15.3M	8%
Skin	Once	Weight	Regular	15.3M	8%
Injection	Once	Weight	Shorter	15.1M	8%
Injection	Multiple x year	Physical	None	14.7M	7%
Incision	Once	Mood	Shorter	14.7M	7%
Skin	Daily	Mood	None	14.6M	7%
Incision	Multiple x year	Physical	Regular	14.6M	7%
Vaginal_provider	Once year more infrequent	Mood	Regular	14.6M	7%
Vaginal_self	Once year more infrequent	Weight	Shorter	14.5M	7%
Swallow	At Sex	Weight	None	14.5M	7%
Injection	Once	Mood	Regular	14.4M	7%
Vaginal_self	Once year more infrequent	Mood	None	14.3M	7%
Skin	Daily	Physical	None	14.2M	7%
Vaginal_self	Once	Physical	Shorter	14.0M	7%
Skin	Daily	Physical	Regular	13.9M	7%
Vaginal_provider	Once year more infrequent	Weight	Shorter	13.9M	7%
Injection	Multiple x year	Mood	None	13.7M	7%
Incision	Once	Mood	Regular	13.6M	7%
Injection	Once	Physical	None	13.5M	7%
Swallow	Daily	Weight	Regular	13.5M	7%
Vaginal_provider	Once year more infrequent	Physical	None	13.3M	7%

Demographic	Method	Region
All	No Method	SSA

PROMISING CLUSTERS WITH SIDE EFFECTS (6)

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Incision	Once	Physical	None	13.2M	7%
Vaginal_self	Once	Mood	Shorter	13.2M	7%
Incision	Multiple x year	Mood	Shorter	13.1M	7%
Vaginal_provider	Once	Physical	Shorter	13.1M	7%
Skin	At Sex	Weight	Regular	13.0M	7%
Vaginal_self	Multiple x year	Physical	Shorter	12.9M	7%
Vaginal_self	Multiple x year	Physical	Regular	12.7M	6%
Vaginal_self	Once year more infrequent	Weight	None	12.6M	6%
Injection	Once	Weight	Regular	12.6M	6%
Swallow	Once year more infrequent	Physical	Longer	12.5M	6%
Skin	Daily	Weight	Shorter	12.5M	6%
Incision	Multiple x year	Mood	Regular	12.2M	6%
Injection	Multiple x year	Weight	None	12.2M	6%
Incision	Once	Weight	Shorter	12.2M	6%
Incision	Multiple x year	Weight	Shorter	12.0M	6%
Vaginal_self	Once year more infrequent	Weight	Regular	12.0M	6%
Incision	Multiple x year	Physical	None	11.9M	6%
Vaginal_self	Once	Physical	Regular	11.9M	6%
Vaginal_self	Multiple x year	Mood	Shorter	11.7M	6%
Incision	Once	Weight	Regular	11.5M	6%
Injection	Once	Mood	None	11.4M	6%
Injection	Once	Weight	None	11.4M	6%
Swallow	Daily	Weight	None	11.3M	6%
Vaginal_provider	Once year more infrequent	Mood	None	11.3M	6%
Vaginal_provider	Once	Mood	Shorter	11.2M	6%
Swallow	Once year more infrequent	Mood	Longer	11.1M	6%
Swallow	Once year more infrequent	Weight	Irregular	11.1M	6%
Incision	Once	Mood	None	11.0M	6%

Clusters above 15% shown in main deck; this shows all above 5%

Demographic	Method	Region
All	No Method	SSA

PROMISING CLUSTERS WITH SIDE EFFECTS (6)

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Vaginal_provider	Multiple x year	Physical	Shorter	11.0M	6%
Skin	Multiple x year	Mood	Irregular	10.9M	6%
Injection	At Sex	Physical	Shorter	10.9M	6%
Swallow	Once	Physical	Irregular	10.8M	5%
Vaginal_provider	Once year more infrequent	Weight	Regular	10.7M	5%
Incision	Multiple x year	Weight	Regular	10.7M	5%
Vaginal_provider	Once	Physical	Regular	10.6M	5%
Skin	Once	Physical	Irregular	10.6M	5%
Vaginal_self	Multiple x year	Mood	Regular	10.6M	5%
Skin	Once	Mood	Irregular	10.5M	5%
Swallow	Once	Mood	Irregular	10.5M	5%
Incision	Once year more infrequent	Physical	Irregular	10.5M	5%
Swallow	Multiple x year	Mood	Irregular	10.4M	5%
Skin	Once year more infrequent	Physical	Longer	10.4M	5%
Skin	Daily	Weight	Regular	10.3M	5%
Vaginal_provider	Once year more infrequent	Weight	None	10.3M	5%
Incision	Multiple x year	Mood	None	10.3M	5%
Injection	Once year more infrequent	Physical	Irregular	10.2M	5%
Skin	Once year more infrequent	Weight	Irregular	10.2M	5%
Vaginal_self	Once	Mood	Regular	10.1M	5%
Incision	Once	Weight	None	10.0M	5%
Vaginal_provider	Once	Weight	Shorter	9.9M	5%
Vaginal_self	Once	Physical	None	9.9M	5%

Demographic	Method	Region
All	No Method	SSA

PROMISING CLUSTERS WITH IRREGULAR BLEEDING (1)

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Swallow	Once year more infrequent	None	Irregular	45.1M	23%
Skin	Once year more infrequent	None	Irregular	39.8M	20%
Swallow	Multiple x year	None	Irregular	31.3M	16%
Skin	Multiple x year	None	Irregular	30.5M	16%
Injection	Once year more infrequent	None	Irregular	25.5M	13%
Incision	Once year more infrequent	None	Irregular	24.3M	12%
Skin	Once	None	Irregular	20.3M	10%
Swallow	Once	None	Irregular	20.2M	10%
Swallow	At Sex	None	Irregular	20.2M	10%
Vaginal_self	Once year more infrequent	None	Irregular	18.7M	10%
Skin	At Sex	None	Irregular	18.1M	9%
Injection	Multiple x year	None	Irregular	17.4M	9%
Swallow	Once year more infrequent	Physical	Irregular	17.0M	9%
Swallow	Once year more infrequent	Mood	Irregular	16.2M	8%
Skin	Once year more infrequent	Mood	Irregular	15.9M	8%
Swallow	Daily	None	Irregular	15.7M	8%
Vaginal_provider	Once year more infrequent	None	Irregular	15.7M	8%
Incision	Once	None	Irregular	15.4M	8%
Skin	Once year more infrequent	Physical	Irregular	15.3M	8%
Skin	Daily	None	Irregular	15.2M	8%
Incision	Multiple x year	None	Irregular	14.7M	7%
Injection	Once	None	Irregular	14.4M	7%
Vaginal_provider	Once	None	Irregular	11.3M	6%
Swallow	Once year more infrequent	Weight	Irregular	11.1M	6%
Skin	Multiple x year	Mood	Irregular	10.9M	6%
Swallow	Once	Physical	Irregular	10.8M	5%
Skin	Once	Physical	Irregular	10.6M	5%
Skin	Once	Mood	Irregular	10.5M	5%

Clusters above 15% shown in main deck; this shows all above 5%

Demographic	Method	Region
All	No Method	SSA

PROMISING CLUSTERS WITH IRREGULAR BLEEDING (2)

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Swallow	Once	Mood	Irregular	10.5M	5%
Incision	Once year more infrequent	Physical	Irregular	10.5M	5%
Swallow	Multiple x year	Mood	Irregular	10.4M	5%
Injection	Once year more infrequent	Physical	Irregular	10.2M	5%
Skin	Once year more infrequent	Weight	Irregular	10.2M	5%
Vaginal_self	Once	None	Irregular	10.1M	5%
Vaginal_self	Multiple x year	None	Irregular	10.1M	5%

Clusters above 15% shown in main deck; this shows all above 5%

PROMISING CLUSTERS WITH NO SIDE EFFECTS, BUT EXCLUDE NON-INVASIVE WITH LONG DURATION (1)

Demographic	Method	Region
All	No Method	SSA

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Swallow	Multiple x year	None	Shorter	85.1M	43%
Swallow	Multiple x year	None	Regular	78.4M	40%
Skin	Multiple x year	None	Shorter	75.7M	39%
Skin	Multiple x year	None	Regular	68.1M	35%
Swallow	At Sex	None	Shorter	59.6M	30%
Swallow	Multiple x year	None	None	59.4M	30%
Skin	Multiple x year	None	None	55.6M	28%
Skin	At Sex	None	Shorter	53.4M	27%
Injection	Multiple x year	None	Shorter	53.0M	27%
Incision	Once year more infrequent	None	Shorter	52.9M	27%
Swallow	At Sex	None	Regular	52.9M	27%
Swallow	Daily	None	Shorter	52.2M	27%
Injection	Multiple x year	None	Regular	47.2M	24%
Incision	Once year more infrequent	None	Regular	46.9M	24%
Skin	Daily	None	Shorter	46.5M	24%
Vaginal_provider	Once year more infrequent	None	Shorter	46.0M	23%
Vaginal_self	Multiple x year	None	Shorter	45.3M	23%
Skin	At Sex	None	Regular	44.4M	23%
Swallow	Daily	None	Regular	42.9M	22%
Swallow	At Sex	None	None	42.2M	21%
Vaginal_self	Multiple x year	None	Regular	40.2M	20%
Vaginal_provider	Once year more infrequent	None	Regular	39.7M	20%
Incision	Multiple x year	None	Shorter	38.7M	20%
Incision	Once year more infrequent	None	None	37.6M	19%
Skin	At Sex	None	None	36.7M	19%
Skin	Daily	None	Regular	35.9M	18%
Swallow	Daily	None	None	34.4M	17%
Incision	Multiple x year	None	Regular	34.3M	17%

Clusters above 15% shown in main deck; this shows all above 5%

PROMISING CLUSTERS WITH NO SIDE EFFECTS, BUT EXCLUDE NON-INVASIVE WITH LONG DURATION (2)

Demographic	Method	Region
All	No Method	SSA

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Skin	Daily	None	None	32.3M	16%
Incision	Once	None	Shorter	32.1M	16%
Vaginal_provider	Once year more infrequent	None	None	32.0M	16%
Swallow	Multiple x year	None	Irregular	31.3M	16%
Vaginal_provider	Multiple x year	None	Shorter	31.2M	16%
Skin	Multiple x year	None	Irregular	30.5M	16%
Vaginal_self	Multiple x year	None	None	29.8M	15%
Vaginal_self	At Sex	None	Shorter	28.2M	14%
Incision	Once	None	Regular	27.3M	14%
Vaginal_provider	Multiple x year	None	Regular	27.3M	14%
Vaginal_provider	Once	None	Shorter	27.1M	14%
Incision	Multiple x year	None	None	26.3M	13%
Incision	Once year more infrequent	None	Irregular	24.3M	12%
Injection	At Sex	None	Shorter	23.7M	12%
Vaginal_self	Daily	None	Shorter	23.4M	12%
Vaginal_provider	Once	None	Regular	22.7M	12%
Incision	Once	None	None	22.3M	11%
Vaginal_self	At Sex	None	Regular	21.9M	11%
Injection	Daily	None	Shorter	21.0M	11%
Swallow	At Sex	None	Irregular	20.2M	10%
Incision	Daily	None	Shorter	19.9M	10%
Injection	At Sex	None	Regular	19.7M	10%
Incision	At Sex	None	Shorter	19.5M	10%
Vaginal_provider	Multiple x year	None	None	19.2M	10%
Skin	At Sex	None	Irregular	18.1M	9%
Injection	Multiple x year	None	Irregular	17.4M	9%
Vaginal_provider	Once	None	None	17.3M	9%
Vaginal_self	Daily	None	Regular	16.7M	9%

Clusters above 15% shown in main deck; this shows all above 5%

PROMISING CLUSTERS WITH NO SIDE EFFECTS, BUT EXCLUDE NON-INVASIVE WITH LONG DURATION (3)

Demographic	Method	Region
All	No Method	SSA

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Swallow	Multiple x year	None	Longer	16.5M	8%
Skin	Multiple x year	None	Longer	16.2M	8%
Vaginal_self	At Sex	None	None	16.2M	8%
Incision	Daily	None	Regular	15.8M	8%
Swallow	Daily	None	Irregular	15.7M	8%
Vaginal_provider	Once year more infrequent	None	Irregular	15.7M	8%
Incision	Once	None	Irregular	15.4M	8%
Incision	At Sex	None	Regular	15.3M	8%
Skin	Daily	None	Irregular	15.2M	8%
Injection	Daily	None	Regular	15.0M	8%
Vaginal_provider	Daily	None	Shorter	14.7M	7%
Incision	Multiple x year	None	Irregular	14.7M	7%
Injection	At Sex	None	None	14.2M	7%
Vaginal_provider	At Sex	None	Shorter	14.0M	7%
Incision	Once year more infrequent	None	Longer	13.6M	7%
Vaginal_self	Daily	None	None	12.2M	6%
Swallow	At Sex	None	Longer	11.8M	6%
Vaginal_provider	Once	None	Irregular	11.3M	6%
Injection	Multiple x year	None	Longer	10.9M	6%
Vaginal_provider	Daily	None	Regular	10.9M	6%
Skin	At Sex	None	Longer	10.7M	5%
Vaginal_provider	At Sex	None	Regular	10.6M	5%
Injection	Daily	None	None	10.4M	5%
Incision	Daily	None	None	10.3M	5%
Incision	At Sex	None	None	10.1M	5%
Vaginal_self	Multiple x year	None	Irregular	10.1M	5%

DUAL MARKET POTENTIAL: PROMISING CLUSTERS WITH SIDE EFFECTS (1)

Demographic	Method	Region
All	All	Europe, N. America, Aus

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Swallow	Once year more infrequent	Physical	Shorter	31.9M	15%
Swallow	Once year more infrequent	Physical	None	30.7M	15%
Swallow	Once year more infrequent	Mood	Shorter	22.9M	11%
Swallow	Once year more infrequent	Mood	None	22.8M	11%
Skin	Once year more infrequent	Physical	Shorter	22.1M	11%
Swallow	Once year more infrequent	Weight	None	22.0M	11%
Swallow	Once year more infrequent	Physical	Regular	21.6M	10%
Skin	Once year more infrequent	Physical	None	20.9M	10%
Swallow	Once year more infrequent	Weight	Shorter	20.8M	10%
Swallow	Multiple x year	Physical	Shorter	18.1M	9%
Skin	Once year more infrequent	Mood	Shorter	17.4M	8%
Swallow	Multiple x year	Physical	None	16.6M	8%
Swallow	Once year more infrequent	Mood	Regular	16.3M	8%
Skin	Once year more infrequent	Mood	None	16.1M	8%
Swallow	Multiple x year	Mood	Shorter	15.7M	7%
Skin	Once year more infrequent	Weight	Shorter	14.5M	7%
Skin	Once year more infrequent	Weight	None	14.1M	7%
Swallow	Multiple x year	Mood	None	13.8M	7%
Skin	Once year more infrequent	Physical	Regular	13.8M	7%
Injection	Once year more infrequent	Physical	Shorter	13.6M	7%
Injection	Once year more infrequent	Physical	None	13.6M	6%
Swallow	Once year more infrequent	Weight	Regular	13.2M	6%
Skin	Multiple x year	Physical	Shorter	12.9M	6%
Skin	Multiple x year	Mood	Shorter	12.5M	6%
Swallow	Once	Physical	None	12.5M	6%
Swallow	Multiple x year	Physical	Regular	12.5M	6%
Vaginal_self	Once year more infrequent	Physical	None	12.2M	6%
Skin	Multiple x year	Physical	None	11.6M	6%

DUAL MARKET POTENTIAL: PROMISING CLUSTERS WITH SIDE EFFECTS (2)

Demographic	Method	Region
All	All	Europe, N. America, Aus

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Swallow	Once	Physical	Shorter	11.5M	5%
Swallow	Multiple x year	Mood	Regular	11.3M	5%
Swallow	Multiple x year	Weight	None	11.1M	5%
Swallow	Multiple x year	Weight	Shorter	11.1M	5%
Skin	Once year more infrequent	Mood	Regular	11.0M	5%
Incision	Once year more infrequent	Physical	Shorter	10.7M	5%

- Fewer clusters make it above 5% threshold than for SSA; lower tolerance for side effects in Europe, N. America and Australia.

DUAL MARKET POTENTIAL: PROMISING CLUSTERS WITH IRREGULAR BLEEDING

Demographic	Method	Region
All	All	Europe, N. America, Aus

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Swallow	Once year more infrequent	None	Irregular	34.8M	17%
Skin	Once year more infrequent	None	Irregular	21.9M	10%
Swallow	Multiple x year	None	Irregular	21.3M	10%
Skin	Multiple x year	None	Irregular	14.1M	7%
Injection	Once year more infrequent	None	Irregular	13.5M	6%
Vaginal_self	Once year more infrequent	None	Irregular	11.9M	6%

- Fewer clusters make it above 5% threshold than for SSA; lower tolerance for side effects in Europe, N. America and Australia.

DUAL MARKET POTENTIAL: PROMISING CLUSTERS NO SIDE EFFECTS, BUT EXCLUDE NON-INVASIVE WITH LONG DURATION (1)

Demographic	Method	Region
All	All	Europe, N. America, Aus

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Swallow	Multiple x year	None	Shorter	91.0M	43%
Swallow	Multiple x year	None	Regular	75.3M	36%
Skin	Multiple x year	None	Shorter	73.2M	35%
Swallow	Multiple x year	None	None	69.6M	33%
Skin	Multiple x year	None	Regular	57.1M	27%
Skin	Multiple x year	None	None	57.0M	27%
Injection	Once year more infrequent	None	Shorter	56.0M	27%
Injection	Once year more infrequent	None	None	45.8M	22%
Swallow	At Sex	None	Shorter	44.2M	21%
Injection	Once year more infrequent	None	Regular	39.8M	19%
Incision	Once year more infrequent	None	Shorter	39.7M	19%
Swallow	Daily	None	Shorter	39.1M	19%
Vaginal_provider	Once year more infrequent	None	Shorter	38.4M	18%
Injection	Multiple x year	None	Shorter	38.1M	18%
Vaginal_self	Multiple x year	None	Shorter	35.3M	17%
Skin	At Sex	None	Shorter	34.3M	16%
Swallow	At Sex	None	Regular	33.0M	16%
Vaginal_provider	Once year more infrequent	None	None	32.4M	15%
Swallow	At Sex	None	None	31.1M	15%
Injection	Multiple x year	None	None	30.6M	15%
Incision	Once year more infrequent	None	None	30.5M	15%
Skin	Daily	None	Shorter	28.9M	14%
Swallow	Daily	None	None	28.8M	14%
Injection	Multiple x year	None	Regular	28.5M	14%
Vaginal_self	Multiple x year	None	None	28.1M	13%
Vaginal_provider	Once year more infrequent	None	Regular	27.3M	13%
Swallow	Daily	None	Regular	26.7M	13%
Vaginal_self	Multiple x year	None	Regular	26.1M	12%

DUAL MARKET POTENTIAL: PROMISING CLUSTERS NO SIDE EFFECTS, BUT EXCLUDE NON-INVASIVE WITH LONG DURATION (2)

Demographic	Method	Region
All	All	Europe, N. America, Aus

Mode of delivery	Duration	Side effects	Menstruation	Uptake	%
Incision	Once year more infrequent	None	Regular	25.8M	12%
Skin	At Sex	None	Regular	24.6M	12%
Skin	At Sex	None	None	24.4M	12%
Injection	Once	None	Shorter	21.4M	10%
Swallow	Multiple x year	None	Irregular	21.3M	10%
Skin	Daily	None	None	21.2M	10%
Incision	Multiple x year	None	Shorter	20.2M	10%
Injection	Once	None	None	19.8M	9%
Skin	Daily	None	Regular	18.1M	9%
Incision	Once	None	Shorter	17.1M	8%
Vaginal_provider	Multiple x year	None	Shorter	16.9M	8%
Injection	Once	None	Regular	16.4M	8%
Vaginal_provider	Once	None	Shorter	15.7M	8%
Incision	Once	None	None	15.6M	7%
Incision	Multiple x year	None	None	14.8M	7%
Vaginal_provider	Once	None	None	14.5M	7%
Skin	Multiple x year	None	Irregular	14.1M	7%
Vaginal_provider	At Sex	None	Shorter	13.9M	7%
Incision	Multiple x year	None	Regular	13.8M	7%
Injection	Once year more infrequent	None	Irregular	13.5M	6%
Vaginal_provider	Multiple x year	None	None	13.3M	6%
Incision	Once	None	Regular	13.2M	6%
Vaginal_provider	Multiple x year	None	Regular	12.3M	6%
Vaginal_provider	Once	None	Regular	12.2M	6%

- Fewer clusters make it above 5% threshold than for SSA; lower tolerance for method uptake in Europe, N. America and Australia.