PMA2020

Performance Monitoring and Accountability 2020

Intro to Family Planning Measurement: Understanding and Using Data

JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

Bill & Melinda Gates Institute
for Population and Reproductive Health

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Welcome!

- **After this webinar, you will be able to…**

  - Understand what information is needed to calculate common fertility and family planning indicators

  - Explain common fertility and family planning indicators to non-scientists

  - Tell a story with PMA2020 data using examples from Ethiopia

Outline

- Overview of PMA2020

- Discussion of common fertility and family planning indicators:

  1. Age-Specific Fertility Rates (including Adolescent Birth Rate)

  2. Total Fertility Rate

  3. Modern Contraceptive Prevalence Rate

  4. Unmet Need for family planning

  5. Contraceptive method mix

  6. Adolescent indicators

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If you have questions…

- Please ask!

- We will address as many questions as possible during the webinar, either during or at the end of the presentation

- If we don't have time to address all questions, we will post answers on our Discussion Forum: http://pma2020.org/forum

- The Forum will be open for additional questions about the webinar until October 31st
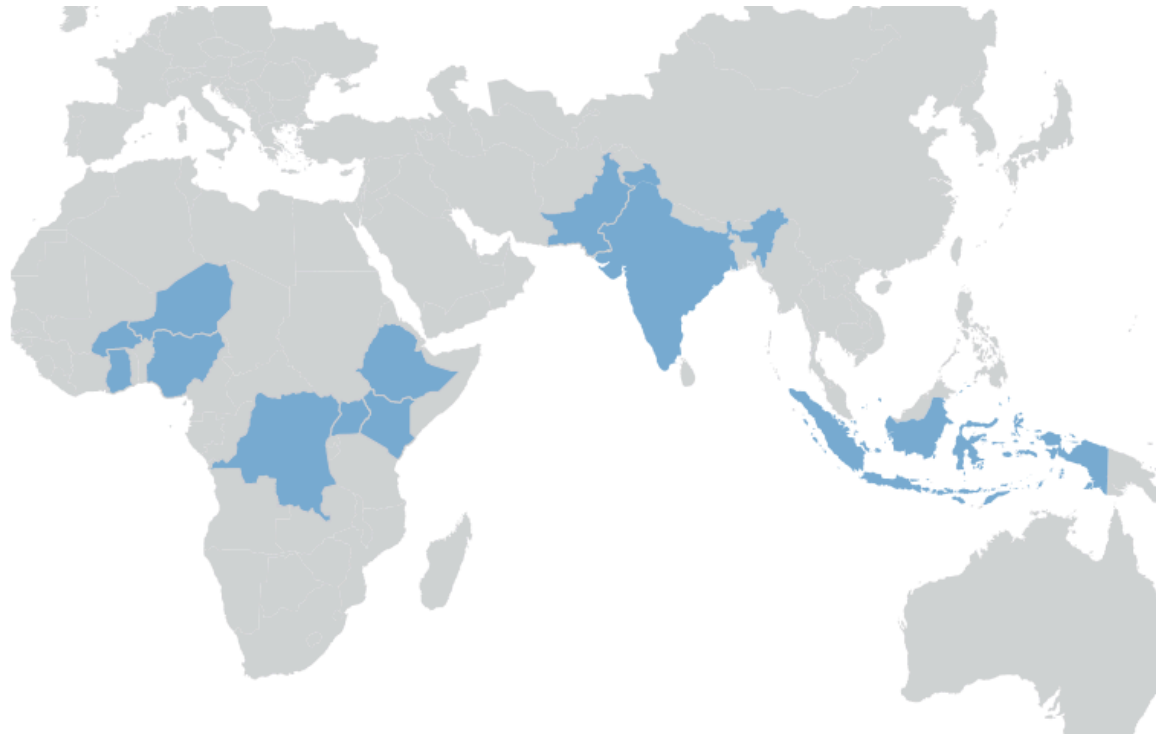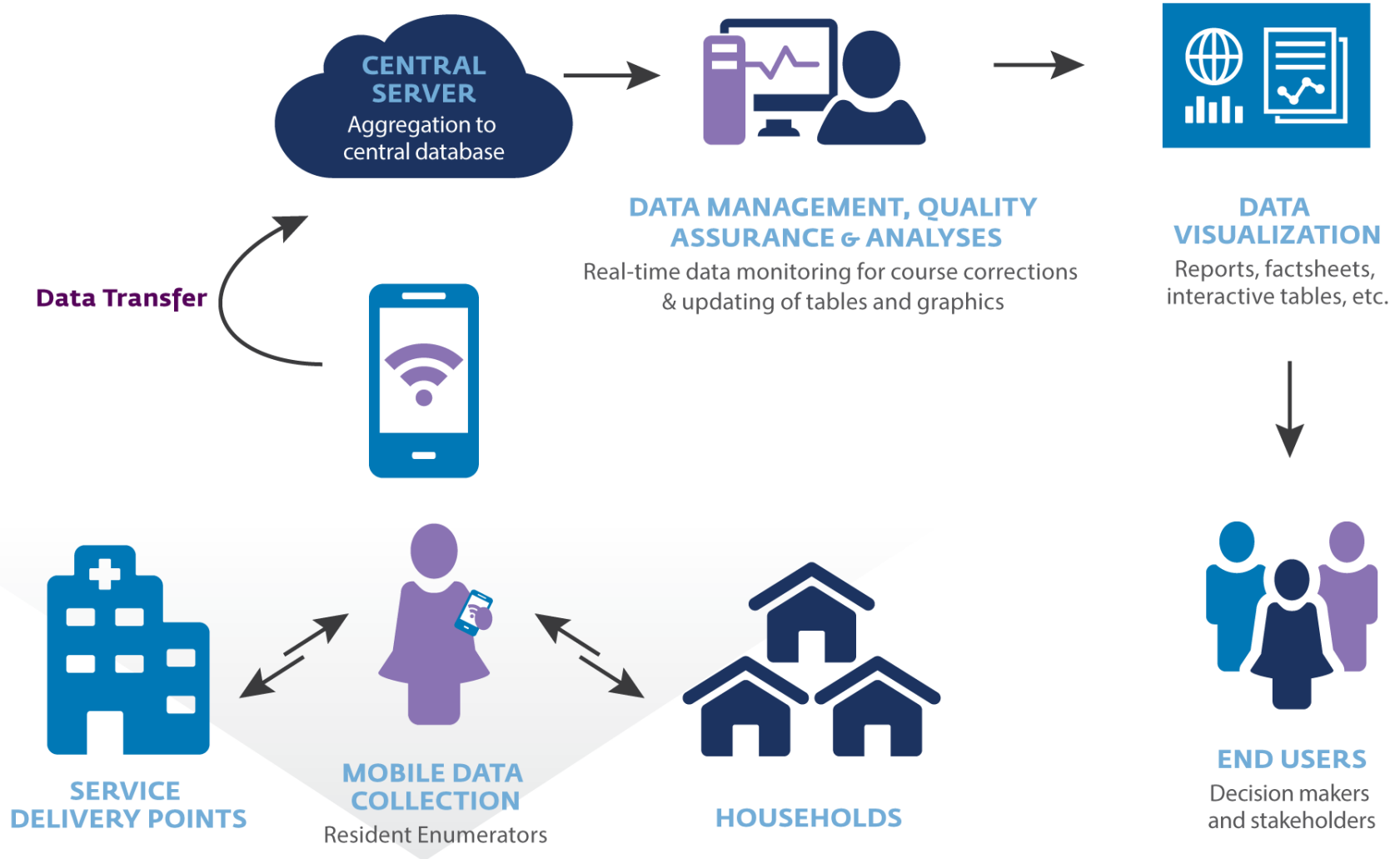
PMA2020

Background on PMA2020

- Responds to FP2020 Initiative: need for frequent data to track progress

- Trains and employs local resident enumerators to conduct household and facility surveys with mobile phones

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Background on PMA2020 (cont.)

- Generates nationally-representative data on key health indicators in real time for 11 countries

- Produces briefs and reports to inform researchers and advocates

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CENTRAL SERVER
Aggregation to central database

Data Transfer

DATA MANAGEMENT, QUALITY ASSURANCE & ANALYSES
Real-time data monitoring for course corrections & updating of tables and graphics

DATA VISUALIZATION
Reports, factsheets, interactive tables, etc.

SERVICE DELIVERY POINTS

MOBILE DATA COLLECTION
Resident Enumerators

HOUSEHOLDS

END USERS
Decision makers and stakeholders

INDICATORS

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KEY FAMILY PLANNING INDICATORS

PMA2015/ETHIOPIA-R3
PERFORMANCE, MONITORING & ACCOUNTABILITY 2020

PMA2020 is a five-year project that uses innovative mobile technology to support low-cost, rapid-turnaround, national-representative surveys to monitor key indicators for family planning. The project is implemented by local university and research organizations in ten countries, deploying a cadre of female resident enumerators trained in mobile-assisted data collection. PMA2020/Ethiopia is led by the Addis Ababa University's School of Public Health at the College of Health Sciences (AAU/SPH/CHS), in collaboration with regional universities, the Federal Ministry of Health and the Central Statistics Agency. Overall direction and support is provided by the Bill & Melinda Gates Institute for Population and Reproductive Health at the Johns Hopkins Bloomberg School of Public Health and funded by the Bill & Melinda Gates Foundation.
For more information on PMA2020 please visit http://www.pma2020.org

Select Family Planning Indicators Across Recent Surveys
(Married and All Women, Age 15-49)

	PMA2014 - R1		PMA2014 - R2		PMA2015 - R3	
	All	Married	All	Married	All	Married
Contraceptive Prevalence						
All Methods CPR	23.7	34.2	24.4	35.0	26.4	37.0
Modern Methods mCPR	23.3	33.8	23.8	34.2	25.6	35.8
Long Acting CPR	4.3	6.1	5.7	8.2	6.3	8.8
Total Unmet Need	15.9	24.4	16.2	24.1	16.5	24.4
For Limiting	6.2	9.4	6.1	9.1	6.3	9.1
For Spacing	9.7	14.9	10.1	15.1	10.3	15.4
Total Demand	39.5	58.6	40.6	59.2	43.0	61.4
Demand Satisfied by Modern Method	59.1	57.7	58.7	57.8	59.5	58.3

Fertility Indicators (All Women)

	PMA2014 Round 1	PMA2014 Round 2	PMA2015 Round 3
Total Fertility Rate*	4.3	4.4	4.2
Adolescent Birth Rate (per 1000, age 15-19)	44.0	71.2	74.9
Recent Births Unintended (%)	41.0	39.0	34.3
Wanted Later	25.3	27.4	23.0
Wanted No More	15.8	11.7	11.3

*PMA2014/Round 1 and PMA2014/Round 2 each cover two years prior to the survey; PMA2015/Round 3 posts all 3 samples and covers three years prior.
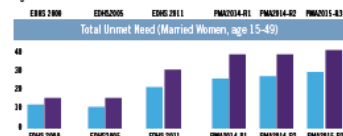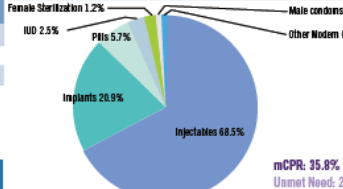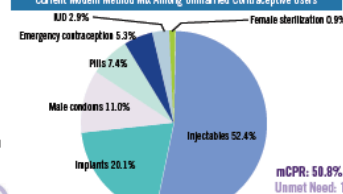
Trends in mCPR and Unmet Need, by Survey
Total Fertility Rate (TFR) - Number Of Children Per Woman

5.5 — 5.4 — 4.8 — 4.3 — 4.4 — 4.2

EDHS 2000, EDHS 2005, EDHS 2011, PMA2014-R1, PMA2014-R2, PMA2015-R3

Total Unmet Need (Married Women, age 15-49)

EDHS 2000, EDHS 2005, EDHS 2011, PMA2014-R1, PMA2014-R2, PMA2015-R3

Legend: All Women / Married Women

Current Modern Method Mix Among Married Contraceptive Users

- Female Sterilization 1.2%
- Male condoms 0.6%
- Other Modern 0.6%
- IUD 2.5%
- Pills 5.7%
- Implants 20.9%
- Injectables 68.5%

mCPR: 35.8%
Unmet Need: 24.4%

Current Use and Unmet Need Among Married Women of Reproductive Age, by Wealth Quintile

	Q1	Q2	Q3	Q4	Q5
Unmet Need	26.6	32.3	24.5	24.2	12.1
% Demand Satisfied by Modern Method	50.3%	46.6%	57.1%	60.9%	77.9%

Q1: Poorest quintile
Q5: Wealthiest quintile

Legend: Unmet Need / Traditional Method / Modern Method

Current Modern Method Mix Among Unmarried Contraceptive Users

- IUD 2.9%
- Female sterilization 0.9%
- Emergency contraception 5.3%
- Pills 7.4%
- Male condoms 11.0%
- Implants 20.1%
- Injectables 52.4%

mCPR: 50.8%
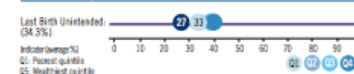Unmet Need: 19.1%

PMA2015/ETHIOPIA-R3
INDICATORS FOR ACCESS, EQUITY, QUALITY AND CHOICE

For Current Female Users (%), Indicators by Wealth Quintile (n=2,071):

- Method Chosen By Self Or Jointly (85.5%)
- Obtained Method Of Choice (94.7%)
- Told Of Other Methods (61.2%)
- Counseled On Side Effects (52.4%)
- Paid For FP Services (22.8%)
- Would Return To Provider & Refer A Friend Or Family Member (73.8%)
- Received Method From Public SDP (80.7%)
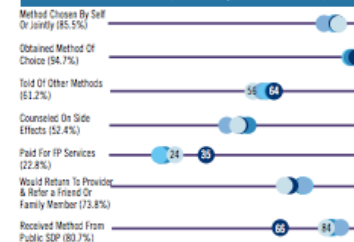
Among All Women Who Have Given Birth in the Last Five Years:

Last Birth Unintended: (34.3%)

Indicator/range(%)
Q1: Poorest quintile
Q5: Wealthiest quintile

For Current Female Non-Users (n=3,635):
Reasons Mentioned For Non-Use Among All Women Wanting To Delay The Next Birth 2 or More Years (%)

Not Married	43.0
Perceived Not-At-Risk/Lack of Need	31.4
Method or Health-related Concerns	11.9
Opposition to Use	9.0
Lack of Access/Knowledge	3.9
Other	15.6

For All Women of Reproductive Age, 15-49:
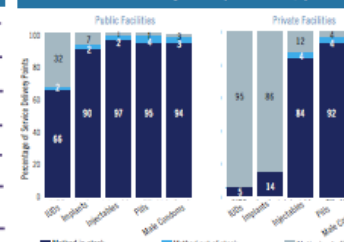
	Total	Rural	Urban
Median Age at First Marriage (25 to 49 years)	17.7	17.4	19.0
Median Age at First Sex (25 to 49 years)	16.4	16.1	18.1
Median Age at First Contraceptive Use	23.1	23.9	21.8
Median Age at First Birth (25 to 49 years)	19.7	19.7	20.1
Mean No. Of Living Children at First Contraceptive Use	2.6	3.0	1.5
Women Having First Birth by Age 18 (ages 18-24) (%)	11.1	14.3	2.9
Received FP Information From Provider In Last 12 Months (%)	31.1	32.1	27.7
Exposed to FP Media in Last Few Months (%)	41.3	29.7	79.8

Percent of Facilities Offering & Currently In/Out of Stock, by Method

Public Facilities / Private Facilities

Legend: Method in stock / Method out of stock / Method not offered

Percent of Public Facilities Offering at Least 3 or 5 Modern Contraceptive Methods

Facility Type	3 or more methods	5 or more methods
Hospital (n=84)	97.4	97.6
Health Center (n=205)	98.5	85.4
Health Post (n=96)	86.5	16.7
Total (n=385)	95.1	70.7

Service Delivery Points (n= 446; 386 public, 60 private)

	Public	Private	Total
Among All Service Delivery Points:			
Percent Offering Family Planning	98.2	93.3	97.5
With Mobile Teams Visiting Facility In Last 12 Months (%)	23.3	25.0	23.5
Supporting CHWs From This Service Delivery Point (%)	27.3	6.1	25.6
Among Service Delivery Points Offering Family Planning Services:			
Average Number Of Days Per Week Family Planning Is Offered	5.4	6.7	5.6
Offering Female Sterilization (%)	18.2	1.8	16.1
Offering Family Planning Counseling/Services To Adolescents (%)	90.2	62.5	85.7
Charging Fees For Family Planning Services (%)	6.9	100.0	18.9
Percent Integrating Family Planning Into Their:			
Maternal/Postnatal Health Services (among all offering postnatal health services)	91.9	70.0	91.3
HIV Services (among all offering HIV services)	97.4	94.4	97.2
Post-Abortion Services (among all offering post-abortion services)	98.6	88.9	98.3

SAMPLE DESIGN

PMA2015/Ethiopia-R3, the third round of data collection in Ethiopia, used a two-stage cluster design with urban-rural, major regions as strata. A sample of 221 enumeration areas (EA) was drawn by the Central Statistical Agency from its master sampling frame. For each EA, 35 households and 3-6 health service delivery points (SDPs) were selected. Households were systematically sampled using random selection. Households with eligible females of reproductive age (15-49) were contacted and consented for interviews. The final sample included 7,643 households, 7,545 females and 446 SDPs (99.2%, 99.2% and 98.2% response rates respectively). Data collection was conducted between April and May, 2015.

A note about numerators & denominators

$$= \frac{6}{10} = 60\%$$

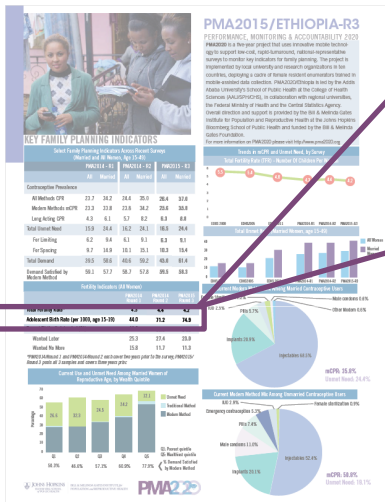# A note about numerators & denominators

$$= \frac{4}{5} = 80\%$$

1. Age-specific fertility rates (ASFR)

- The number of births occurring during a given year per 1,000 women ages 15-49.

  - We usually break down ASFR into five-year age-groups.

  - The ASFR for the 15-19 year olds is also referred to as the **Adolescent Birth Rate**.

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Adolescent Birth Rate: Where to find it on PMA2020 brief

Fertility Indicators (All Women)			
	PMA2014 Round 1	PMA2014 Round 2	PMA2015 Round 3
Adolescent Birth Rate (per 1000, age 15-19)	44.0	71.2	74.9

What do these numbers mean?

- In the first round of data collection, there were 44 births per year per 1,000 women age 15-19

- In the second round of data collection, there were 71 births per year per 1,000 women age 15-19

- What does this increase mean?

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$$\text{ASFR} = \frac{\text{Number of births in age group}}{\text{Number of women in age group}} \times 1000$$

Age group	Number of women	Number of births	Births/ woman	ASFR
15-19	1,776	133	0.0749	74.9
20-24	1,411	265	0.1875	187.5
25-29	1,354	290	0.2142	214.2
30-34	1,003	178	0.1778	177.8
35-39	955	111	0.1163	116.3
40-44	566	38	0.0674	67.4
45-49	481	8	0.0172	17.2

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ASFR: Interpretation and use

- What does it mean if the ASFR for 15-19 year olds, or **Adolescent Birth Rate** is decreasing?

  - Fewer births, which may be related to: later sexual initiation, later marriage, more contraceptive use, changing fertility desires

  - Other factors: changes in girls' education, gender norms, access to health facilities

- What about if the ASFR for 45-49 year old women is decreasing?

  - Fewer births, which may also be related to the above factors and/or increasing desire to limit number of births

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2. Total Fertility Rate (TFR)

- Number of children a woman would have if she were to pass through her reproductive years bearing children according to current age-specific fertility rates (ASFRs).

- In other words, what is the average number of children a 15-year-old woman would have by age 50 according to today's ASFR?

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TFR: Where to find it on PMA2020 brief

Total Fertility Rate (TFR) - Number Of Children Per Woman

EDHS 2000	EDHS2005	EDHS 2011	PMA2014-R1	PMA2014-R2	PMA2015-R3
5.5	5.4	4.8	4.3	4.4	4.2

Fertility Indicators (All Women)

	PMA2014 Round 1	PMA2014 Round 2	PMA2015 Round 3
Total Fertility Rate*	4.3	4.4	4.2
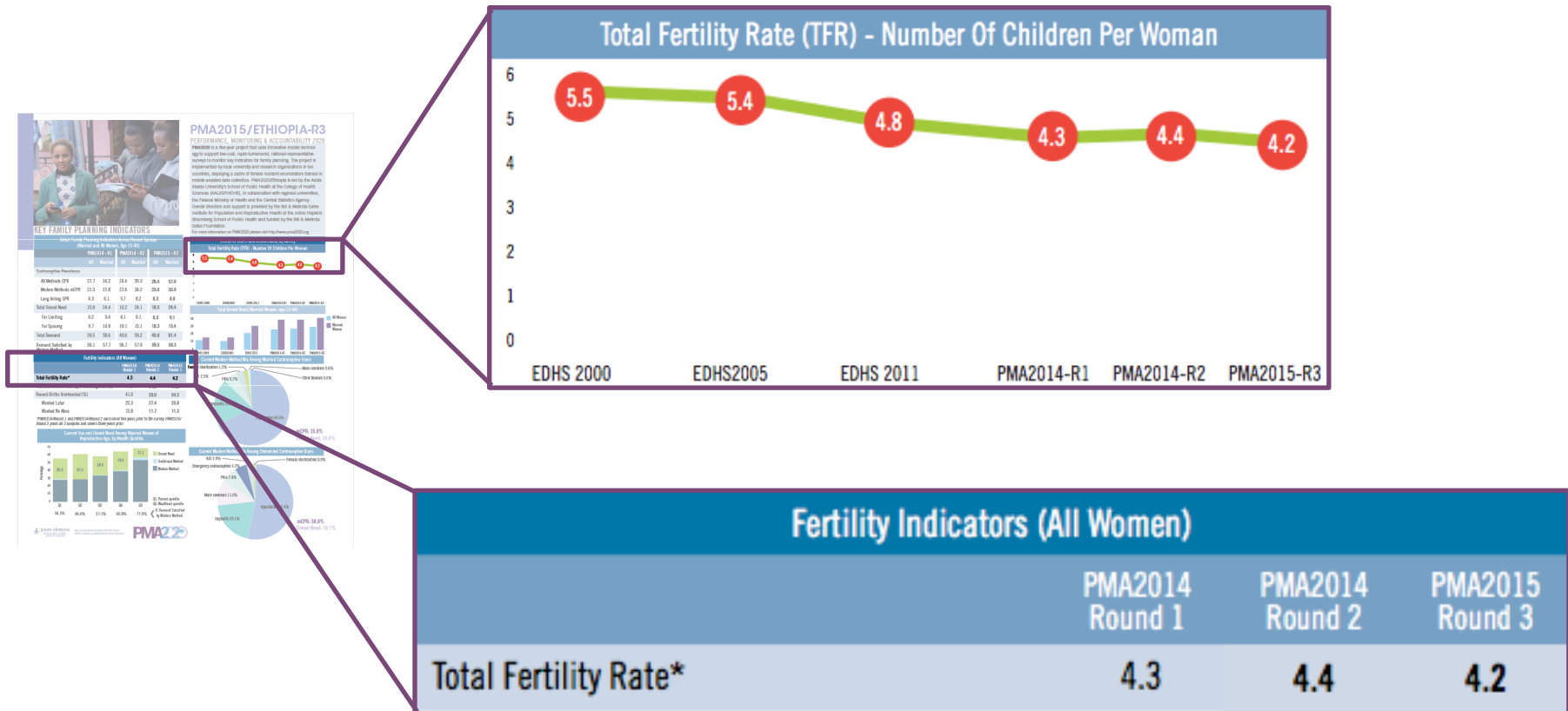
TFR = sum of all ASFRs * 5

Age group	Number of women	Number of births	Births/ woman	ASFR
15-19	1,776	133	0.0749	74.9
20-24	1,411	265	0.1875	187.5
25-29	1,354	290	0.2142	214.2
30-34	1,003	178	0.1778	177.8
35-39	955	111	0.1163	116.3
40-44	566	38	0.0674	67.4
45-49	481	8	0.0172	17.2
TFR			**4.2**	

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TFR: Interpretation and use

- If TFR has decreased over the past several years, what does this suggest about contraceptive use?

  - FP use may be increasing

- What other factors may influence TFR? Why?

  - Later sexual initiation, later marriage, older age at first birth

  - Longer period of time between births

  - Increased desire to have fewer children

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3. Modern Contraceptive Prevalence Rate (mCPR)

- Proportion of women ages 15-49 who are using (or whose partners are using) a modern method of contraception.

- Modern methods
  - **Short-acting**: injectable, pills, condoms, emergency contraception, LAM, and cycle beads
  - **Long-acting**: IUD, implant
  - **Permanent**: sterilization

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mCPR: Where to find it on PMA2020 brief

Select Family Planning Indicators Across Recent Surveys (Married and All Women, Age 15-49)						
	PMA2014 - R1		**PMA2014 - R2**		**PMA2015 - R3**	
	All	**Married**	**All**	**Married**	**All**	**Married**
Contraceptive Prevalence						
All Methods CPR	23.7	34.2	24.4	35.0	26.4	37.0
Modern Methods mCPR	23.3	33.8	23.8	34.2	25.6	35.8
Long Acting CPR	4.3	6.1	5.7	8.2	6.3	8.8

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$$\text{mCPR} = \frac{\text{Number of women using modern contraception}}{\text{Number of women}} \times 100$$

	Number of women ages 15-49	Number who are users of modern contraceptives	mCPR
All women	7,545	1,935	25.6%
Married women only	4,363	1,562	35.8%

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mCPR: Interpretation and use

- What does it mean if mCPR is high for married women, but low for all women?

  - Unmarried women are less likely to be using modern contraceptive methods compared to married women

  - This may be because unmarried women are not sexually active, face barriers to contraceptive use because of stigma, etc.

- Can we calculate mCPR for adolescents only? What would this number mean?

  - Yes! Percent of 15-19 year olds using modern contraceptives

4. Unmet need

- The percentage of women ages 15-49 who:
    1. can get pregnant
    2. are having sex
    3. do not want to get pregnant soon
    4. are NOT using any form of contraception

- Unmet need for <u>limiting</u>: women who do not wish to have any more children
- Unmet need for <u>spacing</u>: women who do not wish to become pregnant within the next two years

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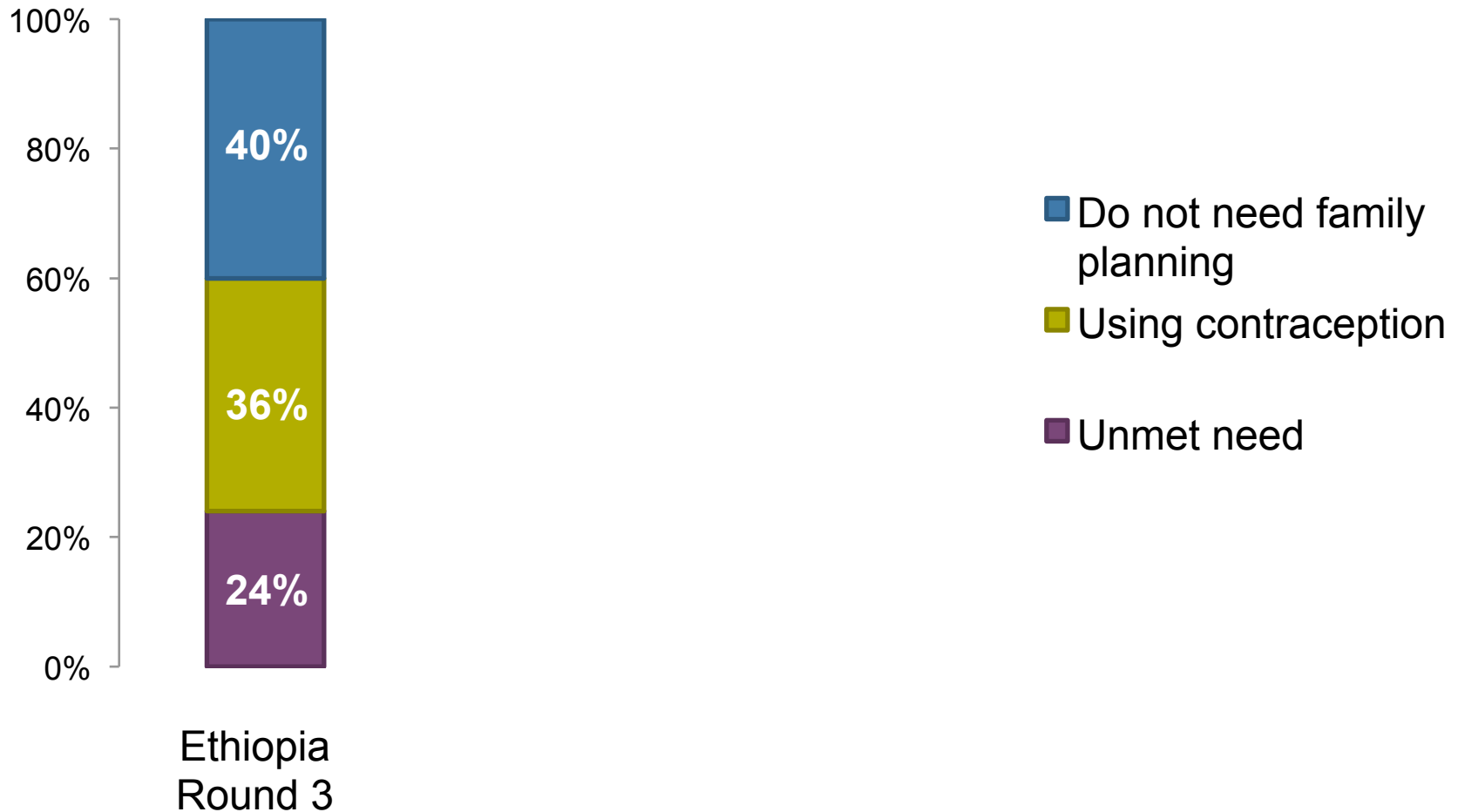
Unmet need: Where to find it on PMA2020 brief
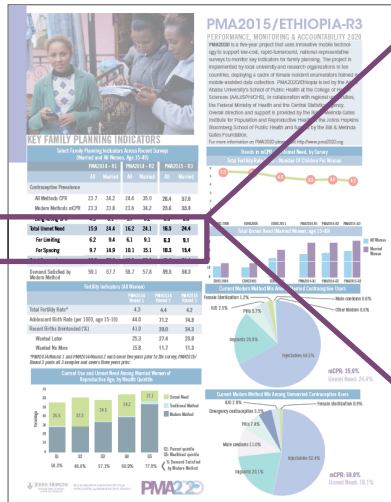
Select Family Planning Indicators Across Recent Surveys (Married and All Women, Age 15-49)						
	PMA2014 - R1		PMA2014 - R2		PMA2015 - R3	
	All	Married	All	Married	All	Married
Total Unmet Need	15.9	24.4	16.2	24.1	16.5	24.4
For Limiting	6.2	9.4	6.1	9.1	6.3	9.1
For Spacing	9.7	14.9	10.1	15.1	10.3	15.4

Unmet need = $\dfrac{\text{Number of women who meet unmet need criteria}}{\text{Number of women}} \times 100$

	Number of women ages 15-49	Number who • can get pregnant • are having sex • do not want to get pregnant • are not using contraception	Unmet need
All women	7,545	1,246	16.5%
Married women only	4,363	1,066	24.4%

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What if unmet need increases?

Ethiopia Round 3

- Do not need family planning — 40%
- Using contraception — 36%
- Unmet need — 24%

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What if unmet need increases?

Legend:
- Do not need family planning
- Using contraception
- Unmet need

Ethiopia Round 3: Do not need family planning 40%, Using contraception 36%, Unmet need 24%

Scenario 1: Do not need family planning 40%, Using contraception 26%, Unmet need 34%

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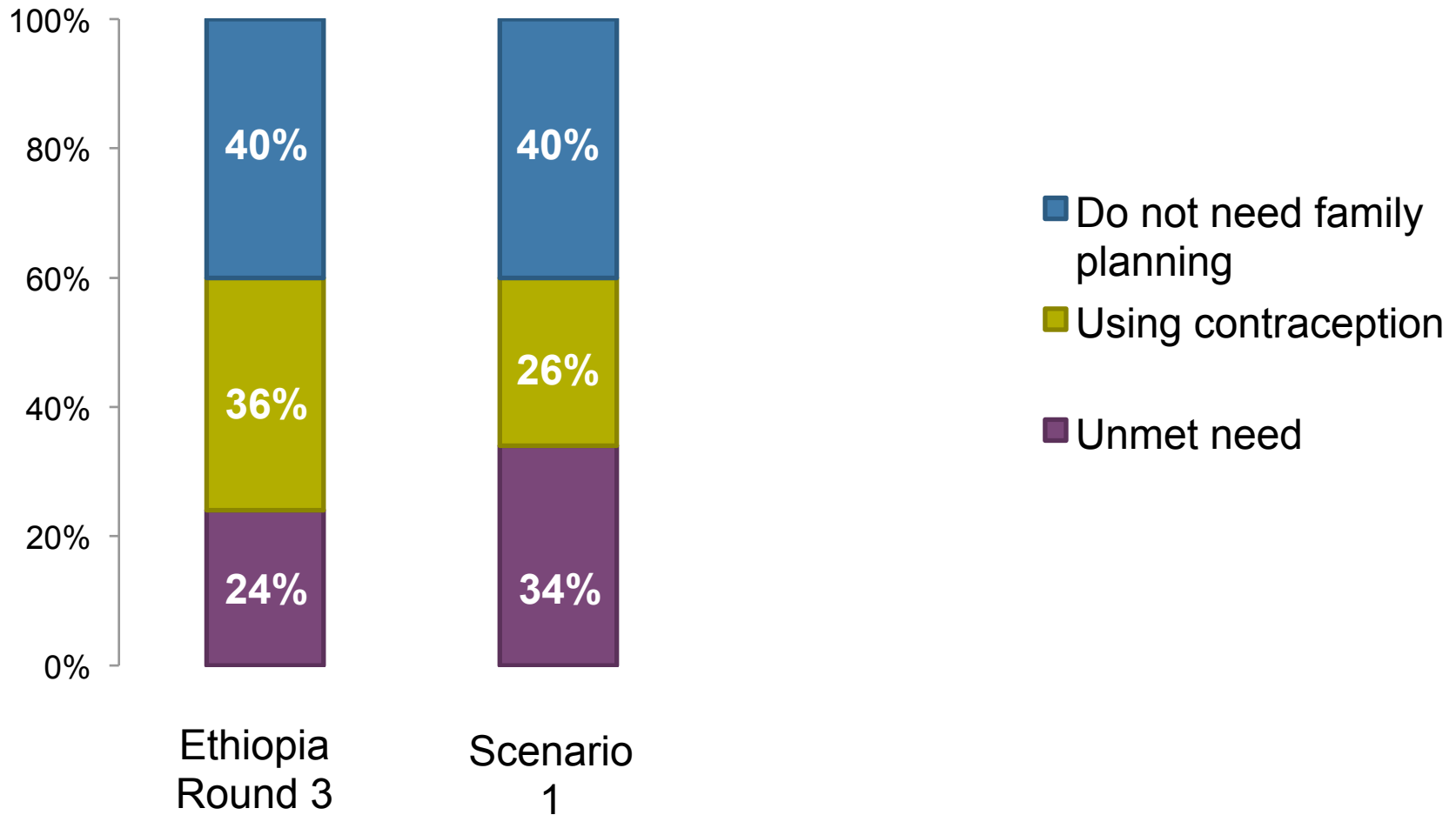
What if unmet need increases?
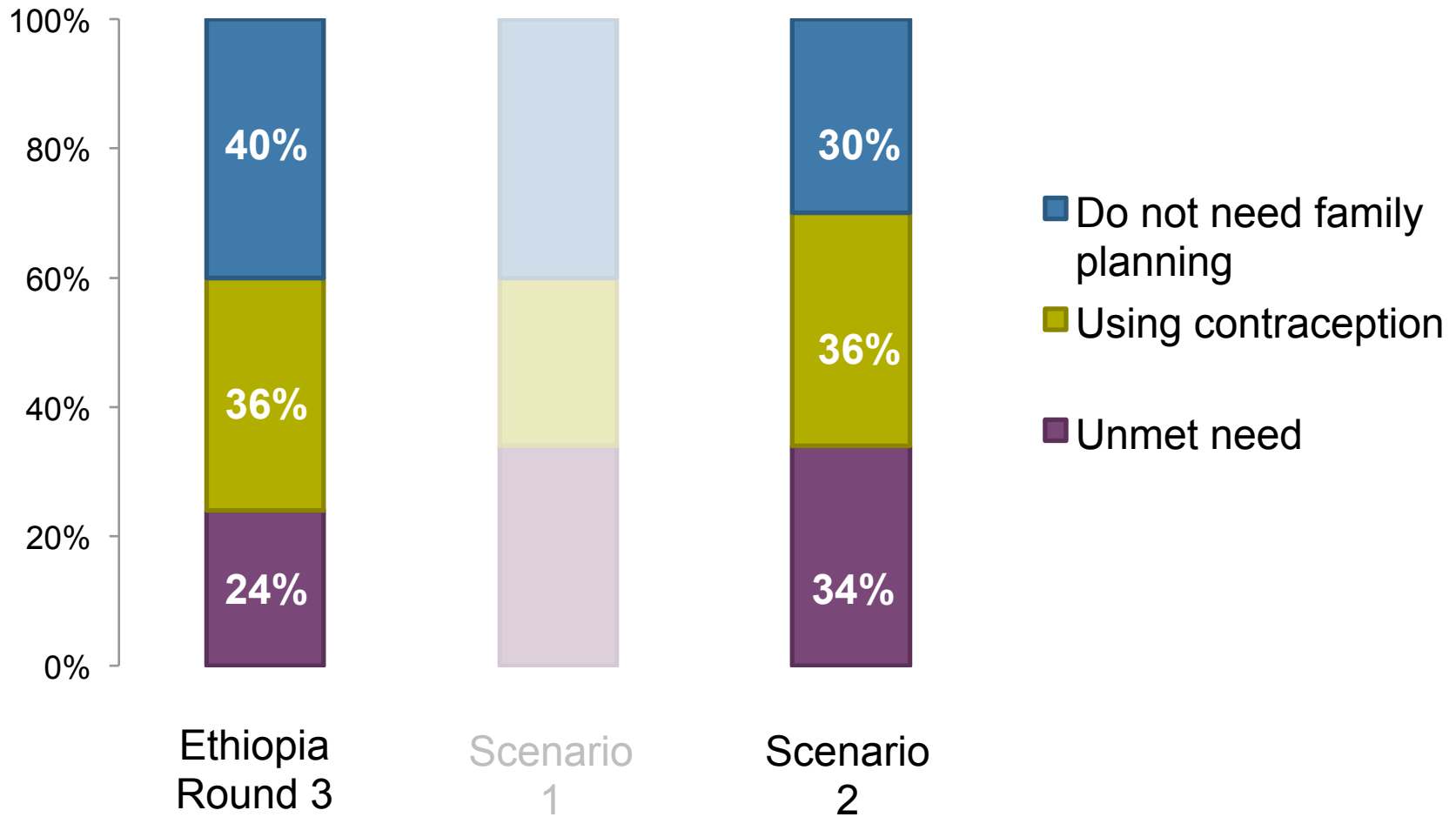
Unmet need: Discussion

- Why might married women have a higher unmet need than all women?

    - A greater proportion of unmarried are not sexually active, and therefore do not have unmet need

- What message could you create for a policy maker if this is the case?

    - Provide married women and couples with family planning counseling and services, but don't forget about the needs of unmarried women

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5. Modern method mix

- The percent distribution of current modern contraceptive users, by type of method being used

Method mix: Where to find it on PMA2020 brief
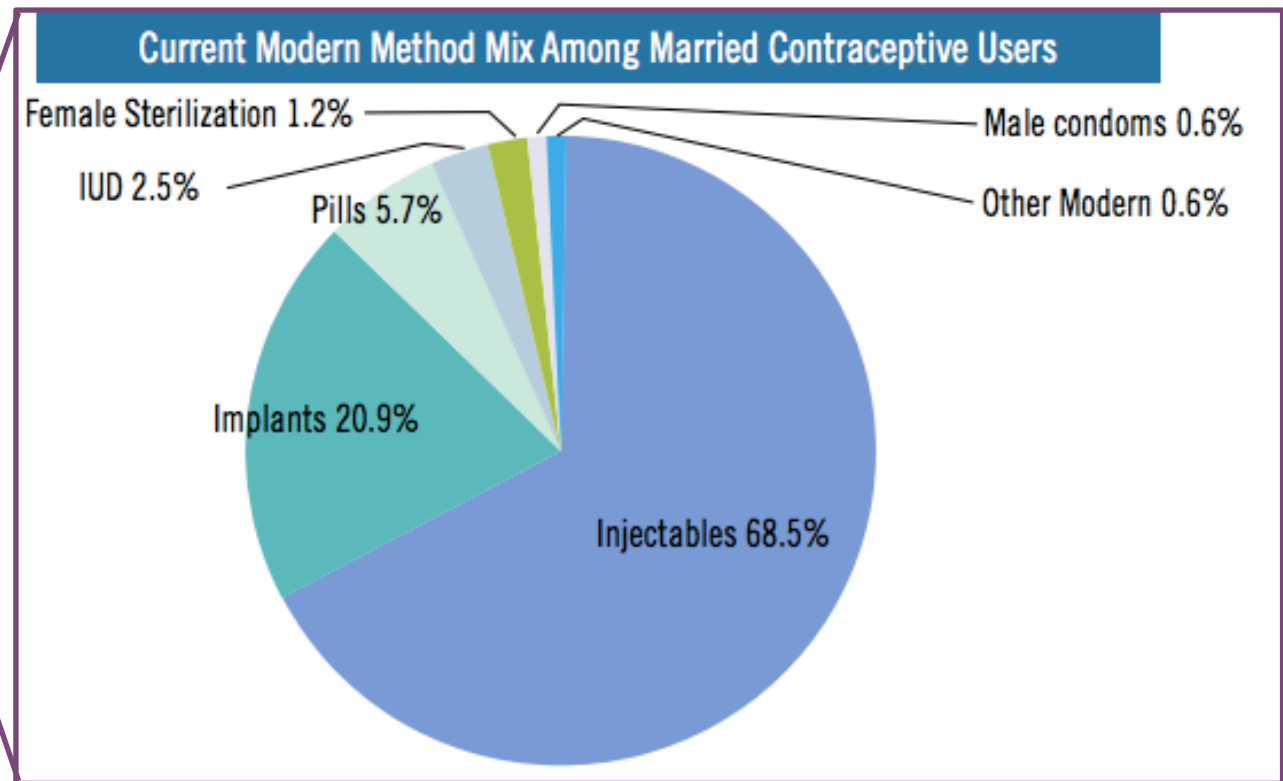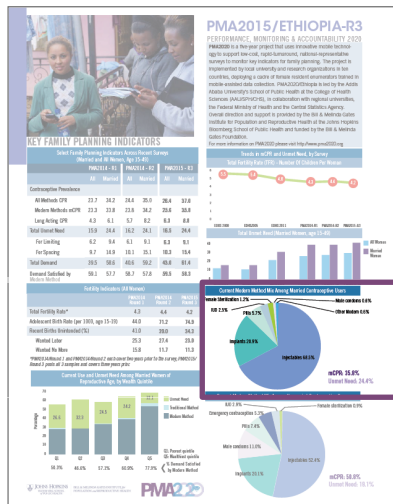
Method mix = $\dfrac{\text{Number of method users}}{\text{Total number of users}} \times 100$

	Number of users	Percent of users
Female sterilization	21	1.2%
Implants	351	20.8%
IUD	42	2.5%
Injectables	1,153	68.5%
Pills	96	5.7%
Male condoms	10	0.6%
Other methods	10	0.6%
TOTAL	**1,684**	**100.0%**

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Method mix: Discussion

- What are some implications if a country's method mix is composed mainly of condom and pill use?

  - Short-acting methods: may or may not match women's fertility desires and contraceptive preferences

- Would you recommend a policy change if this is the case?

  - Look at availability of/ access to other methods

- What if the method mix is composed mainly of sterilization?

  - Permanent method: again, does this match women's desires and preferences, and do women have a choice of methods?

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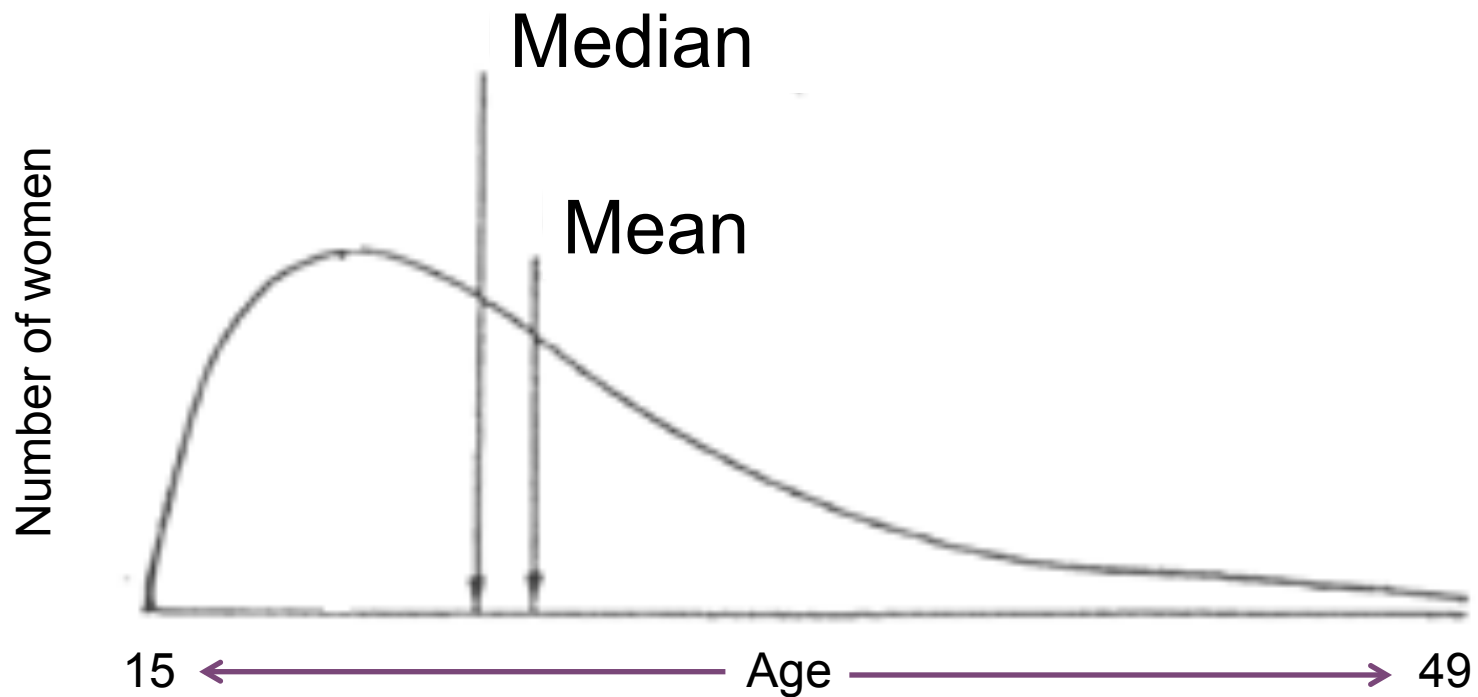
6. Adolescent indicators

- Median age at:
  - First marriage
  - First sex
  - First contraceptive use
  - First birth

- Mean number of living children at first contraceptive use

- Percent of women ages 18-24 having first baby by 18

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Adolescent indicators on the PMA2020 Brief

For All Women of Reproductive Age, 15-49:	Total	Rural	Urban
Median Age at First Marriage (25 to 49 years)	17.7	17.4	19.0
Median Age at First Sex (25 to 49 years)	16.4	16.1	18.1
Median Age at First Contraceptive Use	23.1	23.9	21.8
Median Age at First Birth (25 to 49 years)	19.7	19.7	20.1
Mean No. Of Living Children at First Contraceptive Use	2.6	3.0	1.5
Women Having First Birth by Age 18 (ages 18-24) (%)	11.1	14.3	2.9

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Median versus mean:
Age at first contraceptive use
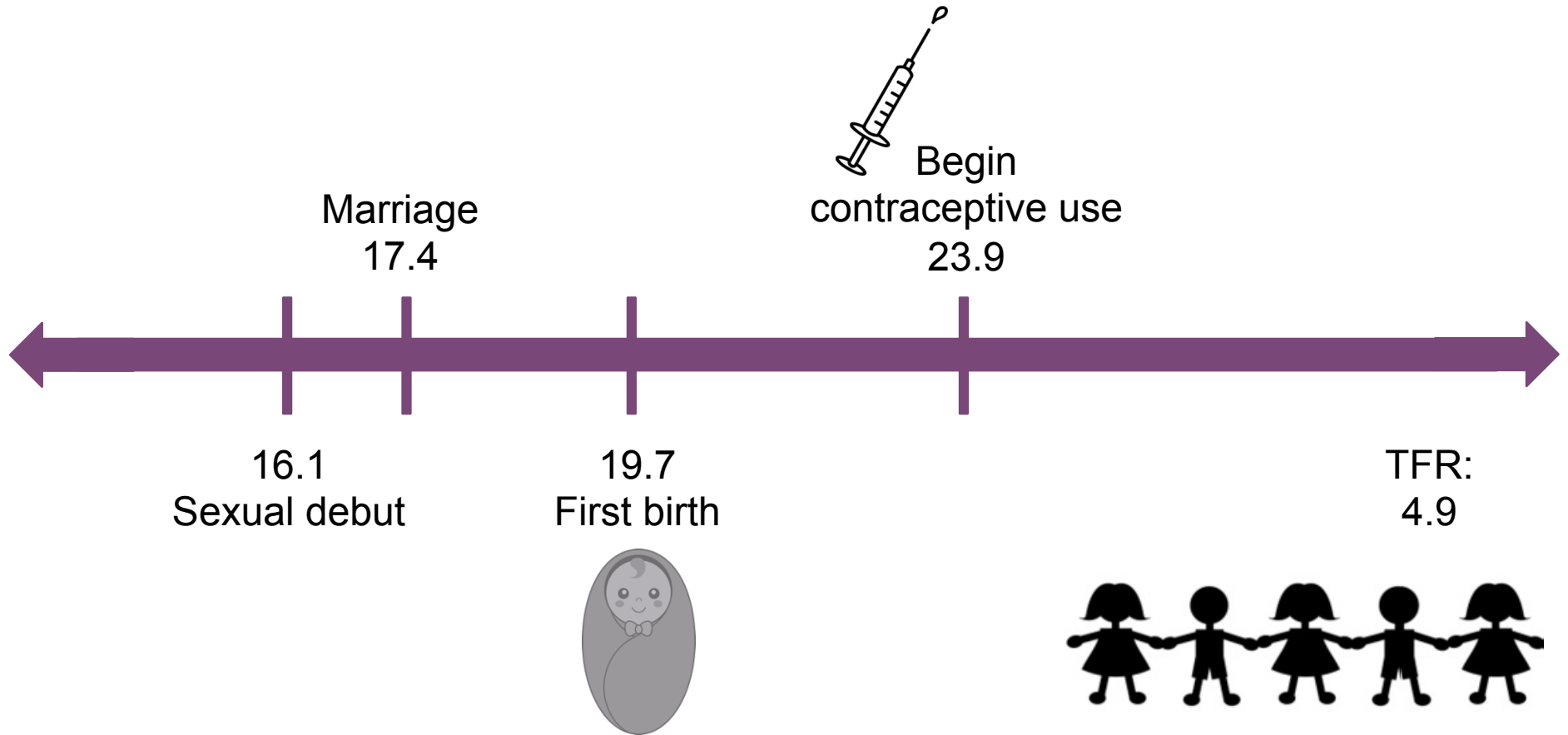
Adolescent indicators: Discussion

- What does it mean if the median age at first contraceptive use is five years higher than median age at first sex?

  - Women are sexually active for several years without using contraception, and many are having children

  - What are women's preferences? Do they have access to contraception?

- In Ethiopia, 14% of women in rural areas and 3% of women in urban areas have their first birth by age 18. Would you make a policy recommendation based on these findings?

  - Is there a difference in access to FP services? Look at women's needs

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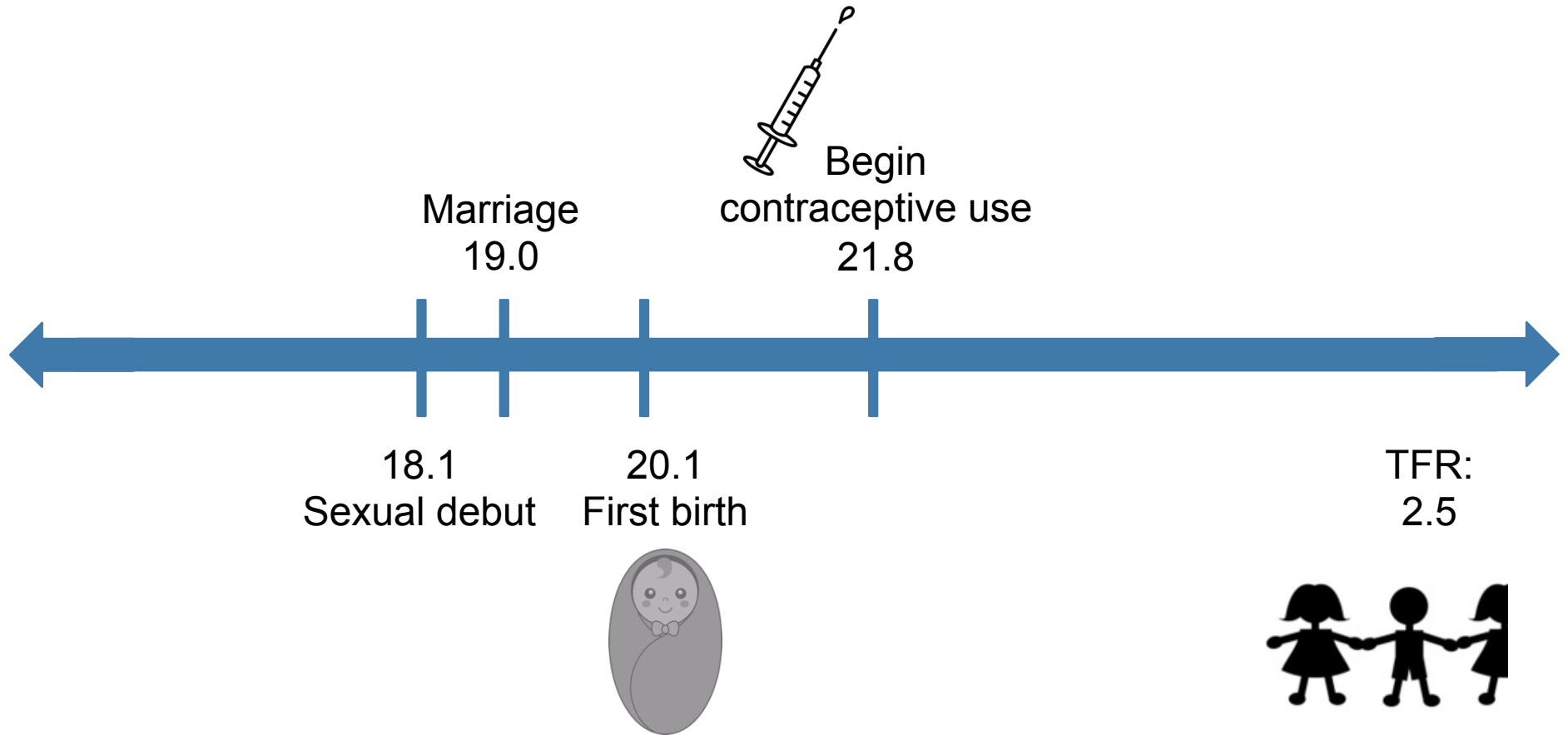# Tying it all together

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What's the big picture?

- What are women's/couples' needs and are these needs being met?
  - When do women start having sex? Having children?
  - Are women using contraception? What are they using?
  - Are women able to delay births if they want to?
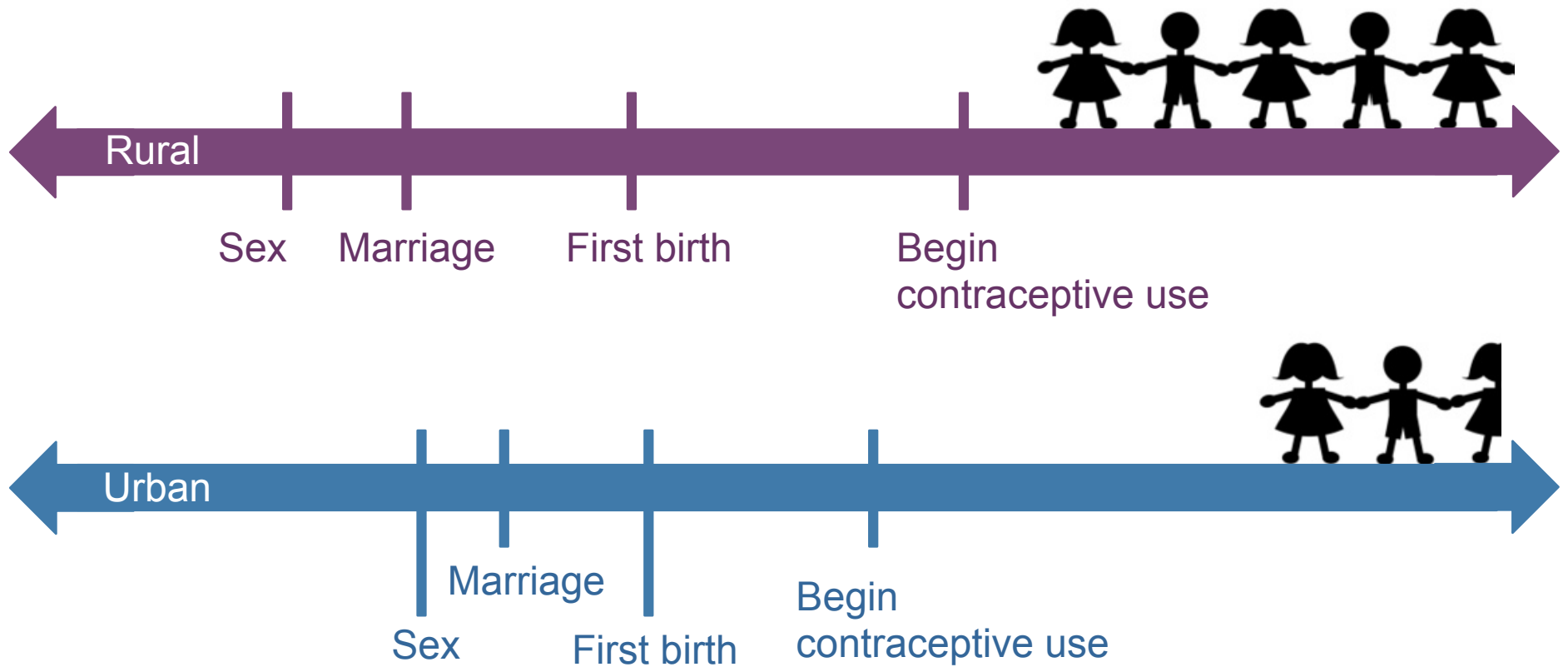 - When women have had as many children as they want, are they able to stop having children?

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For the average rural Ethiopian woman…

Marriage
17.4

Begin
contraceptive use
23.9

16.1
Sexual debut

19.7
First birth

TFR:
4.9

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For the average urban Ethiopian woman…

Marriage
19.0

Begin
contraceptive use
21.8

18.1
Sexual debut

20.1
First birth

TFR:
2.5

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How are the needs and experiences of women in Ethiopia different?

Rural
Sex   Marriage   First birth   Begin contraceptive use

Urban
Marriage   Begin contraceptive use
Sex   First birth

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Thank you! Questions?

We would love your feedback!

- Please fill out our survey to provide feedback on today's and future webinars: https://www.surveymonkey.com/r/WJ6NR2Q

- If you have questions or comments, please share them on the PMA2020 discussion forum: http://pma2020.org/forum

- General questions or comments about PMA2020 can be directed to: info@pma2020.org

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References & Resources

- http://www.pma2020.org/

- https://www.facebook.com/GATES.PMA2020

- https://twitter.com/PMA2020JHU

- PMA2020 2-Page Briefs & Publications & Glossary of Indicators:
  - http://pma2020.org/sites/default/files/ETR3-2PG-FPBrief-v6-2015-09-23_0.pdf
  - http://www.pma2020.org/publications
  - http://www.pma2020.org/glossary-family-planning-indicators

- MEASURE Evaluation Family Planning and Reproductive Health Indicators Database:
  - http://www.cpc.unc.edu/measure/prh/rh_indicators/

- FP2020 Core Indicators:
  - http://progress.familyplanning2020.org/fp2020-core-indicators

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