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Fertility control: what do women want?

Dr. Raymond H.W. Li

MBBS, MMedSC, FRCOG, FHKAM (O&G)

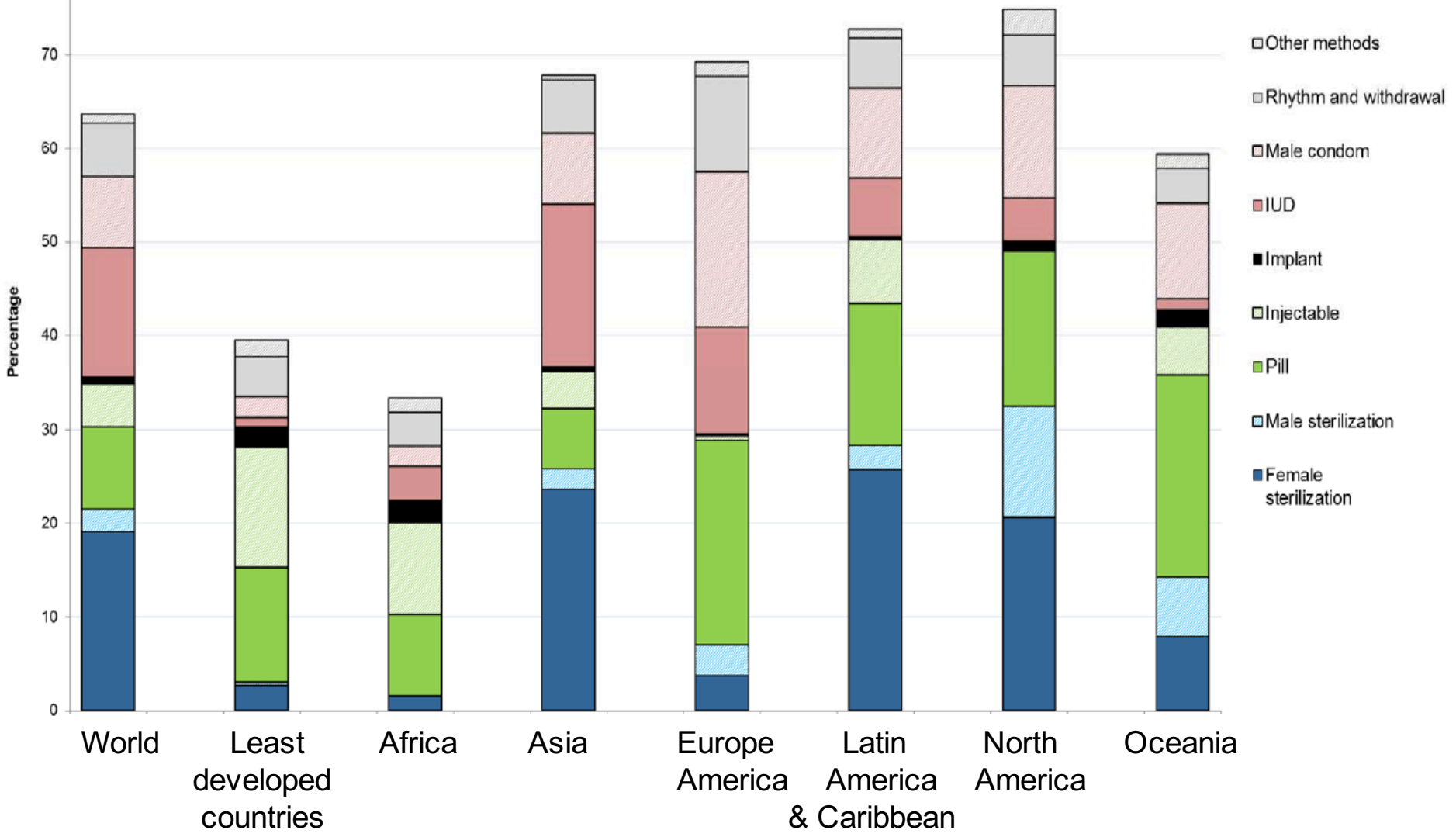
Cert RCOG/HKCOG (Reprod Med)

Department of O&G, The University of Hong Kong

The Family Planning Association of Hong Kong

Figure 13. Contraceptive prevalence among married or in-union women aged 15 to 49 by method and region, 2015

Wide range of choices, pattern differs across different regions



WHO, 2015

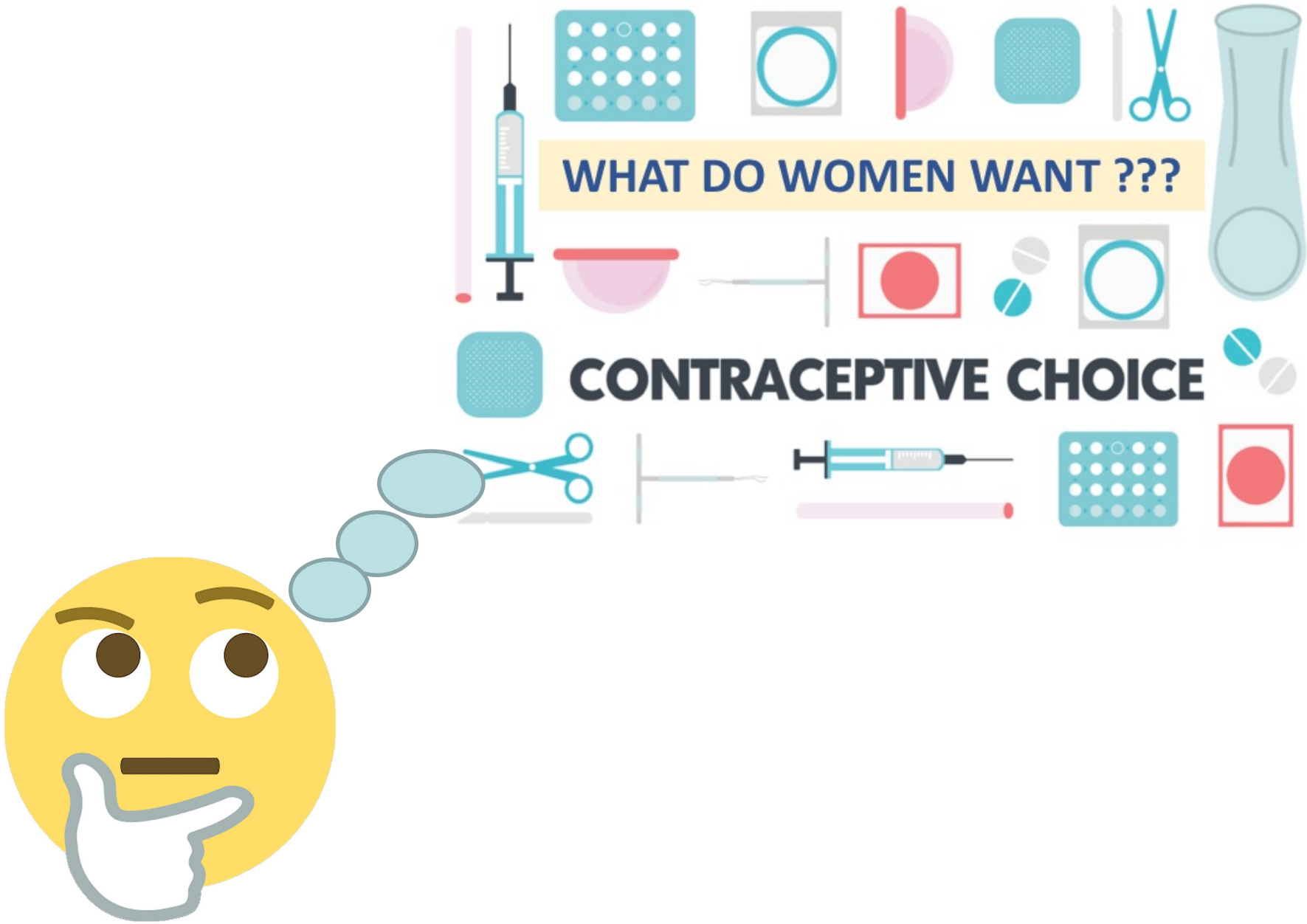

WHAT DO WOMEN WANT ???
CONTRACEPTIVE CHOICE

TABLE 2

Importance of contraceptive attributes

Variable	Mean importance score (SD) (n = 2590)	Most important attribute, n (%) (n = 2476)[a]	Ranked among top 3 most important attributes, n (%) (n = 2476)[a]
Effectiveness	2.97 (0.18)	1093 (44.1)	2084 (84.2)
Safety	2.96 (0.22)	944 (38.1)	1679 (67.8)
Affordability	2.61 (0.61)	77 (3.1)	649 (26.2)
Method is long lasting	2.58 (0.61)	38 (1.5)	421 (17.0)
Forgettable	2.54 (0.66)	75 (3.0)	461 (18.6)
Health care provider's recommendation	2.37 (0.67)	21 (0.8)	147 (5.9)
Not having irregular or unpredictable bleeding	2.32 (0.68)	21 (0.8)	231 (9.3)
Whether it protects against sexually transmitted infections	2.20 (0.83)	46 (1.9)	300 (12.1)
Side effects	2.20 (0.83)	128 (5.2)	1105 (44.6)
Having regular period every month	1.99 (0.78)	23 (0.9)	217 (8.8)
Partner's opinion	1.56 (0.71)	5 (0.2)	59 (2.4)
Nobody knows that you are using birth control method	1.38 (0.66)	1 (0.0)	30 (1.2)
Family's opinion	1.33 (0.60)	2 (0.1)	16 (0.6)
Religious community's opinion	1.22 (0.52)	1 (0.0)	15 (0.6)
Friend's opinion	1.21 (0.49)	0 (0.0)	10 (0.4)

[a] Data missing for 114 participants who did not complete this question.

Madden. Contraceptive preferences. Am J Obstet Gynecol 2015.

Subjects in the Contraceptive CHOICE project choosing LARC (2590 respondents)

Most important:

- Effectiveness
- Safety
- Affordability
- Long acting
- "Forgettable"
- HCP recommend
- Side effects
- STI protection

Is it safe? (e.g., could it interfere with other medications I take, does it increase the risk of specific health problems, does it cause allergic reactions, etc.)

How does it work to prevent pregnancy?

How is it used? (e.g., do I have to swallow a pill, do I have to insert something into my vagina, does a provider have to insert something into my vagina/uterus, do I have to have a needle?)

What are the possible side effects? (e.g., weight gain, headaches, nausea, tender breasts, dry/itchy skin, more/different discharge from my vagina, heavier periods, blood spotting between periods, makes periods stop)

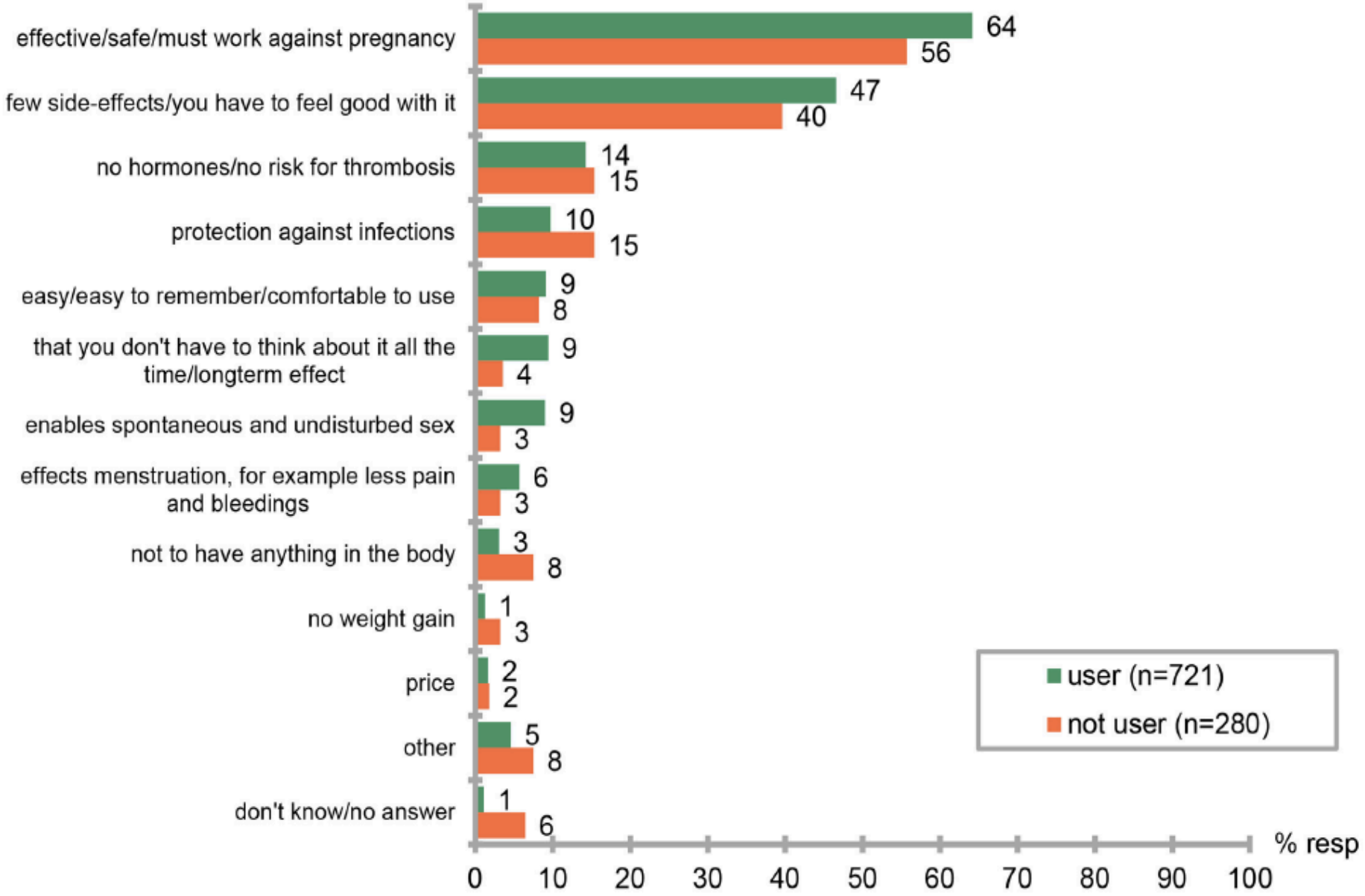
How many women become pregnant when using it the way most people use it?

How many women become pregnant when using it perfectly?

How often do I need to remember to use it?

Attributes ranked top by >10% of respondents

(Donnelly KZ et al, Contraception 2014)



(Kopp Kalner H, Plos One 2015)

TABLE 3. Percentage distribution of women, by opinions of importance of selected contraceptive features

Feature	Extremely important	Somewhat important	Not at all important	No answer	Total
Very effective	84	9	2	5	100
Few/no side effects	78	16	3	2	100
Affordable	76	14	5	6	100
Easy to get	74	17	4	5	100
Easy to use	74	18	3	6	100
Woman controls when and whether to use	70	19	6	4	100
Woman, and not her partner, is responsible for use	69	21	6	4	100
Not used at time of sex	65	19	8	7	100
Does not reduce woman's sexual enjoyment	64	21	9	5	100
Does not reduce partner's sexual enjoyment	61	22	11	6	100
Protects against STDs	61	20	13	6	100
Use is undetectable	57	18	19	6	100
Has a health benefit	56	25	13	7	100
Does not change menstrual period	51	27	17	6	100
Can be stopped at any time	50	29	12	9	100
Pregnancy possible immediately after use ends	50	22	17	11	100
No doctor/clinic visit needed	42	24	25	9	100
Used only at time of sex	35	18	35	12	100

(Lessard LN et al, Perspectives SRH 2012)

Most important factors affecting women's contraceptive choice

- Effectiveness
- Safety and side effects
- Effect on sex life
- Affordability
- User-friendliness: long acting, "forgettability", ease of use
- Non-contraceptive benefits: e.g. STI protection

Effectiveness

EFFECTIVENESS OF FAMILY PLANNING METHODS*

*The percentages indicate the number out of every 100 women who experienced an unintended pregnancy within the first year of typical use of each contraceptive method.

MOST EFFECTIVE

Less than 1 pregnancy per 100 women in a year

6-12 pregnancies per 100 women in a year

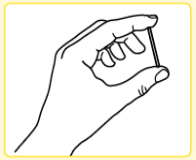
18 or more pregnancies per 100 women in a year

LEAST EFFECTIVE

REVERSIBLE

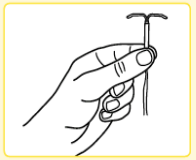
Once in place, little or nothing to do or remember.

Implant



0.05%

Intrauterine Device (IUD)



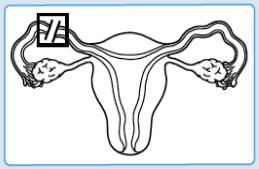
0.2% LNG

0.8% Copper T

PERMANENT STERILIZATION

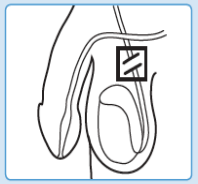
After procedure, little or nothing to do or remember.
Use another method for first 3 months (Hysteroscopic, Vasectomy).

Female (Abdominal, Laparoscopic, and Hysteroscopic)



0.5%

Male (Vasectomy)

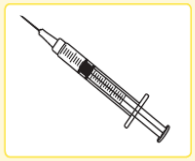


0.15%

REVERSIBLE

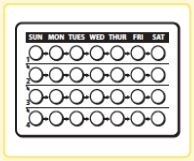
Get repeat injections on time. | *Take a pill each day.* | *Keep in place, change on time.* | *Use correctly every time you have sex.*

Injectable



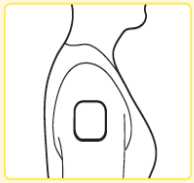
6%

Pill



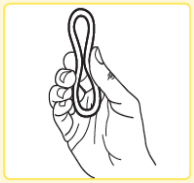
9%

Patch



9%

Ring



9%

Diaphragm

12%

REVERSIBLE

Use correctly every time you have sex.

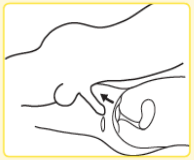
Male Condom

18%

Female Condom

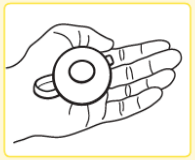
21%

Withdrawal



22%

Sponge



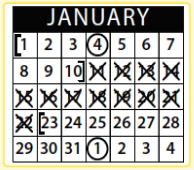
12% Nulliparous Women

24% Parous Women

Condoms should always be used to reduce the risk of sexually transmitted infections.

Fertility Awareness-Based Methods

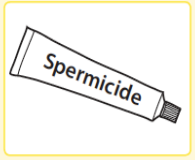
Abstain or use condoms on fertile days.



JANUARY						
[1	2	3	(4)	5	6	7
8	9	10]	X	X	X	X
X	X	X	X	X	X	X
X	[23	24	25	26	27	28
29	30	31	(1)	2	3	4

24%

Spermicide



28%

Other Methods of Contraception: (1) **Lactational Amenorrhea Method (LAM):** is a highly effective, temporary method of contraception; and (2) **Emergency Contraception:** emergency contraceptive pills or a copper IUD after unprotected intercourse substantially reduces risk of pregnancy.

Adapted from World Health Organization (WHO) Department of Reproductive Health and Research, Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs (CCP). Knowledge for health project. Family planning: a global handbook for providers (2011 update). Baltimore, MD; Geneva, Switzerland: CCP and WHO; 2011; and Trussell J. Contraceptive failure in the United States. *Contraception* 2011;83:397–404.

Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion

Effectiveness group	Method	% of women experiencing an unintended pregnancy within the first year of use	
		Typical use	Perfect use
Always very effective (< 1 pregnancy / 100 women in one year)	Male sterilisation	0.15	0.1
	Female sterilisation	0.5	0.5
	Implanon^	0.05	0.05
	Copper T IUCD (ParaGard)	0.8	0.6
	LNG-IUS	0.2	0.2
Very effective when used perfectly (i.e. correctly & consistently. Effective in real-life situation.	Depo-provera injection	6	0.2
	Oral contraceptive pills	9	0.3
	Evra Patch*	9	0.3
	NuvaRing	9	0.3
Effective when used perfectly. Somewhat effective in real-life situation. (~25 pregnancies / 100 women in one year)	Male condom	18	2
	Female condom	21	5
	Diaphragm (with spermicide)	12	6
	Spermicides (film, suppository)	28	18
	Sponge - nulliparous	12	9
	- parous	24	20
	Coitus interruptus	22	4
	Standard days method	24	5
	No method	85	85

(Trussell J. Contraceptive failure in the US. Contraception 2011;83:397-404.)

Effectiveness – the only concern?

- Different contraceptive users may have varying levels of acceptance to the possibility of an unplanned pregnancy
- Some may not consider extremely high effectiveness to be the most important aspect
- Pregnancy intentions are not always binary and ambivalence about reproductive life planning do exist

(Higgins et al, 2017; Callegari et al, 2017)

Safety and side effects

Safety and side effects

- Include:
  - Minor side effects
  - Serious adverse events (mostly rare)

- Population Council report: side-effects and health concerns are the most common reasons for method discontinuation

- Improved counseling could help by addressing potential side effects and bleeding changes, and by dispelling misconceptions *(Castle and Askew, 2015)*

Effect on bleeding pattern

- Some contraceptive methods cause changes in women's menstrual bleeding patterns, e.g. lighter or heavier, longer or shorter, less regular, or may disappear altogether.

- Systematic review of 100 studies from all major continents including Africa (11%), the Americas (32%), Asia (7%), Europe (20%), and Oceania (6%).

(Polis et al, Reprod Health 2018)

Effect on bleeding pattern

Women's views to non-standard bleeding frequencies:

- Amenorrhoea is more commonly preferred in North America, Europe and South America
- More black and Hispanic women prefer monthly menstruation
- Greater preference for amenorrhoea generally observed in either the youngest or oldest groups

Region	Prefers amenorrhoea	Prefers infrequent bleeding
Africa	0 - 36%	5 – 27%
Americas	14 – 65%	2 – 66%
Asia	4.6 – 20%	0 – 60%
Europe	4 – 54%	15 – 60%

Effect on bleeding pattern

Women's views to non-standard bleeding frequencies:

- A survey in US adolescents: those choosing LNG-IUS welcomed the possibility of amenorrhea, while those choosing a copper-IUD desired to retain regular menses

(Schmidt et al, 2015)

Effect on bleeding pattern

Contraceptive-induced menstrual bleeding changes as reason for non-use, dissatisfaction or discontinuation of contraception:

- Spotting, unpredictable, frequent, heavy, prolonged or irregular bleeding were generally viewed as negative side effects in many studies
- Many considered amenorrhoea as problematic
- Many studies found that contraceptive-induced menstrual bleeding changes were a top reason for discontinuation (accounting for 0 to over 50% of discontinuers)

(Polis et al, Reprod Health 2018)

Effect on bleeding pattern

Both positive and negative perceptions of menstrual suppression

- Convenience on social aspects (domestic, work, leisure, praying, sex etc)
- Reduced menstrual flow and pain

→ Deliberate use of hormonal contraception to suppress menses by some users

(Polis et al, Reprod Health 2018)

Effect on bleeding pattern

Both positive and negative perceptions of menstrual suppression

- Some perceived amenorrhoea as abnormal and worry about negative effects on health
- Concerns about long-term fertility
- Concerns about becoming pregnant when menses are missing
- Menstruation as a natural state of womanhood

→ consider it as a disadvantage of the method

(Polis et al, Reprod Health 2018)

Hormonal contraceptives and weight gain

- A Cochrane review indicated no relationship between combined hormonal contraceptives (pills & patch) and weight gain. *(Gallo et al, Cochrane Database Syst Rev 2014)*

- The relationship between weight gain and progestogen-only methods has yielded conflicting results. Small weight gain was found with depot-medroxyprogesterone (DMPA), norplant, and LNG-IUS, but actual gain is small (<2 kg in the first year).

  (Lopez et al, Cochrane Database Syst Rev 2016)

Hormonal contraceptives and weight gain

- Concern about weight gain can deter the initiation of contraceptives and cause early discontinuation among users.

- In an Italian study (n=1809), 4.8% and 3.3% of women discontinued COC and vaginal ring because of weight gain (Fruzzetti et al, 2016)

- Appropriate and accurate counseling may help reduce discontinuation due to perceptions about weight gain.

Perceived risks

- Hormonal: cancer, thromboembolism, cardiovascular risks

- IUD: widespread misconceptions among both providers and users about its association with pelvic infection and fertility impairment in the long term (ESHRE Capri Workshop Group, 2014; Daniele et al, 2017)

Effect on sex life

Effect on sex life

- Current literature reported that both hormonal and non-hormonal contraceptives had mixed effects on sexual function, with either a positive or negative impact reported in some women, although the majority are unaffected

(Burrows et al, J Sex Med 2012;
Casey et al, J Women's Health 2017)

- A systematic review of 36 studies involving >13,000 women reported no significant change in sexual desire with use of combined oral contraceptives

(Pastor et al, EJCRHC 2013)

Effect on sex life

- Use of either hormonal or non-hormonal methods methods was associated with better sexual function than non-use of any contraception *(Skrzypulec et al, 2008; Wallweiner et al, Arch Obs Gyn 2015)*
- ? Less concerns about unintended pregnancies than non-users
- Inconsistent findings reflects the complex and multifactorial nature of female sexual function
- For the individual women who are negatively affected, this can have substantial impact on her quality of life and relationship and her concern needs to be attended to.

User Friendliness

User-Friendliness

Dependence on medical services

- A US study on young women re IUD: the need for provider insertion and removal is itself considered a disadvantage by some women (Gomez et al, 2014)

- Possibility of self-removal is considered appealing (Foster et al, 2011)

User-Friendliness

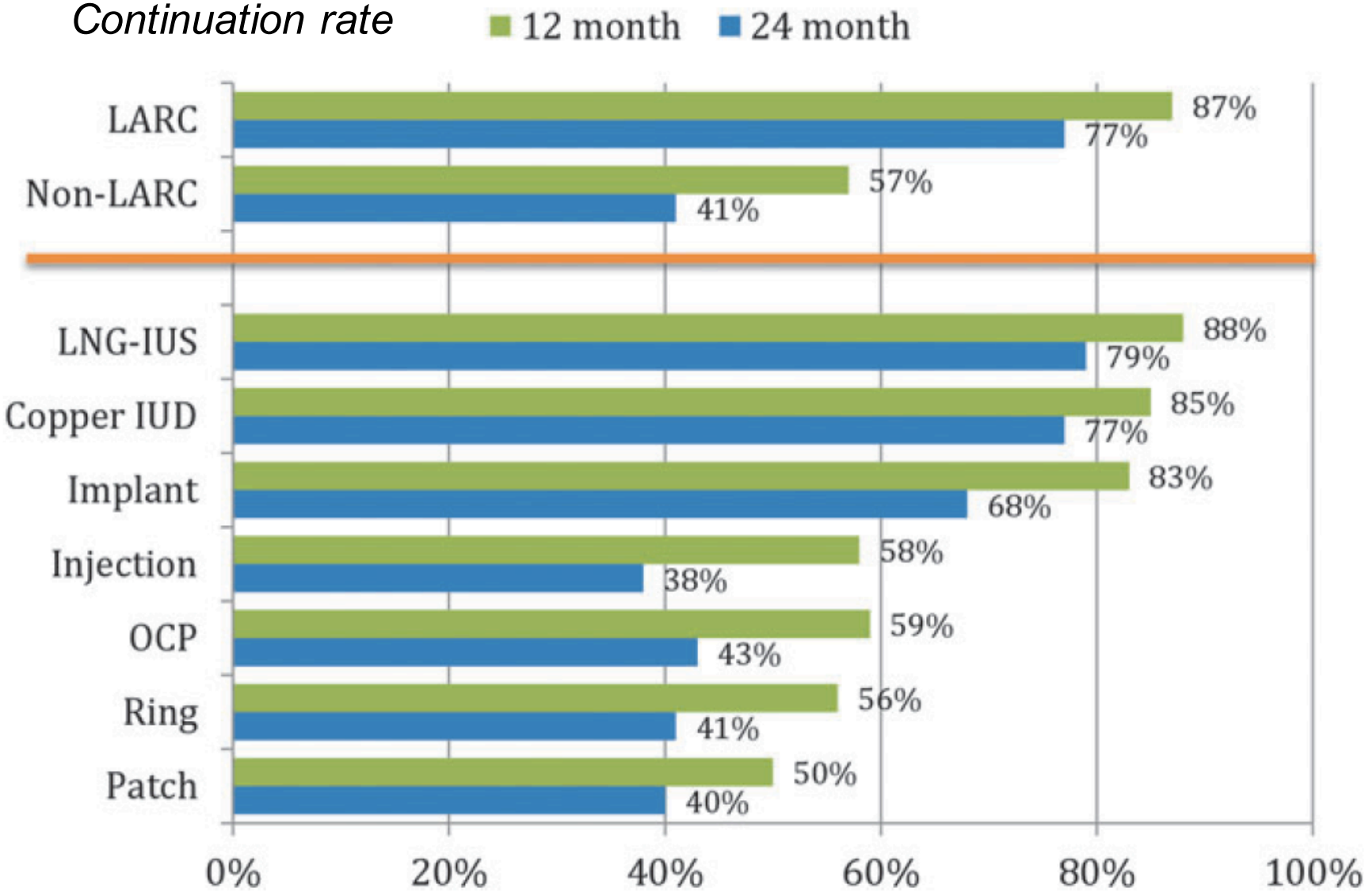
User independence / forgettability

- The concept of Long Acting Reversible Contraception (LARC)

- Multiple studies found that the user independence, long-acting nature and forgettability of IUD is the main positive feature that contribute to user preference and satisfaction (Daniele et al, 2017)

Contraceptive CHOICE project (Birgisson NE et al, 2015)

Continuation rate



Non-contraceptive benefits

Non-contraceptive benefits

- Improvement of menstrual problems and symptoms (hormonal)
- Improvement in body image e.g. acne (hormonal)
- Protection against sexually transmitted infections (STIs) (condom)

Non-contraceptive benefits

Protection against STIs

- Condom effectively reduces the risk of HIV and other STIs, although it is considerably less effective as a contraceptive

- ***Dual method use*** (using an effective contraceptive method together with condom)
- Individuals couples make a choice depending on their perceived riskiness
- Dual method use is generally infrequent: 2.6% (Estonia) ~ 31% (Netherlands)

(ESHRE Capri Workshop Group, HRU 2014)

Endorsement by healthcare provider

Table 3
Women's decision making about the birth control method they currently use

Birth control method (*n*)	How did you choose or decide on what birth control method to currently use?[a]	
	Doctor suggestion or recommendation	Own request
OCs (331)	69.5	30.5
Male condom (126)	17.5	82.5
IUD (107)	79.4	20.6
Withdrawal (16)	0	100
Calendar methods[b] (22)	18.2	81.8
Hormonal injectable (22)	71.4	28.6
Hormonal implant (17)	64.7	35.3
Female barrier[c] (4)	50	50
Vaginal ring (9)	77.8	22.2
Modern FAB methods[d] (5)	40	60
Contraceptive patch (1)	100	0
Male sterilization (12)	25	75

Values are %.

[a] The table displays responses of women using exclusively one birth control method.

Endorsement by healthcare provider

For methods that require medical control or prescription, e.g. hormonal methods and IUDs, the method was chosen based on doctor's recommendation rather than the woman's own choice in the majority of cases

OCs (331)	69.5	30.5
Male condom (126)	17.5	82.5
IUD (107)	79.4	20.6
Withdrawal (16)	0	100
Calendar methods[b] (22)	18.2	81.8
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Male sterilization (12)	25	75

Values are %.

[a] The table displays responses of women using exclusively one birth control method.

Endorsement by healthcare provider

- A survey on women regarding post-abortion contraception revealed that at least 50% of subjects desired some input from their medical provider when making contraceptive decision *(Dehlendorf et al, 2010)*

Endorsement by partner

Table 3
Women's decision making about the birth control method they currently use

Birth control method (*n*)	How, if at all, did your partner participate in the choice of the birth control method?[a]		
	My own decision	My partner's decision	Joint decision
OCs (331)	84.2	0.9	14.8
Male condom (126)	31.7	5.6	62.7
IUD (107)	82.1	0	17.9
Withdrawal (16)	28.6	9.5	61.9
Calendar methods[b] (22)	33.3	0	66.7
Hormonal injectable (22)	95	0	5
Hormonal implant (17)	85.7	0	14.3
Female barrier[c] (4)	33.3	0	66.7
Vaginal ring (9)	88.9	0	11.1
Modern FAB methods[d] (5)	62.5	12.5	25
Contraceptive patch (1)	–	–	–
Male sterilization (12)	16.7	25	58.3

Values are %.

[a] The table displays responses of women using exclusively one birth control method.

Endorsement by partner

For most methods, decision mainly proposed by the woman, although for methods that requires partner's cooperation, e.g. condoms, withdrawal or FAB methods, joint choice is more common (OR=8.18, 95% CI=5.46–12.27).

OCs (331)	84.2	0.9	14.8
Male condom (126)	31.7	5.6	62.7
IUD (107)	82.1	0	17.9
Withdrawal (16)	28.6	9.5	61.9
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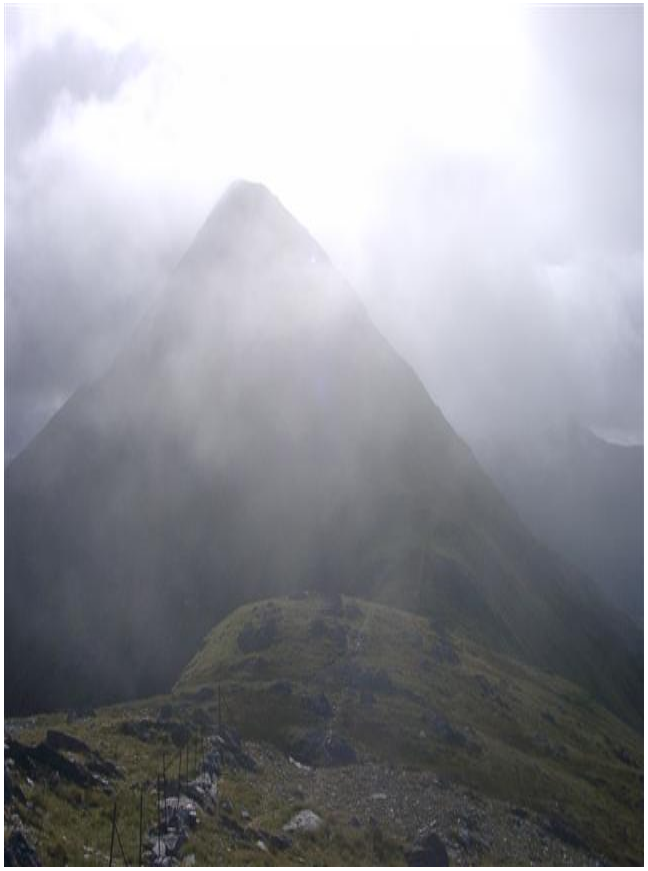
Values are %.

[a] The table displays responses of women using exclusively one birth control method.

Do we need new methods ?

- Range of delivery systems
- Established safety
- BUT inconvenience, side-effects
- Discontinuation high
- Unintended pregnancy



New ‘Estrogen-free’ contraception

Mifepristone – a daily ‘estrogen-free’ pill with potential advantages ?

- Avoid estrogen-related risks eg. VTE
- Less irregular bleeding than a progestogen only method
- Health benefits:
  - Amenorrhoea
  - Normal endogenous estrogen (bone)
  - Anti-proliferative effect on endometrium, breast protection, protection against vaginal infection

(Cameron et al Hum Reprod 1996, Brown et al JCEM 2002
Lakha et al Hum Reprod 2007, Engman et al Hum Reprod 2008
Narvekar et al Contraception 2007)

Approach to contraceptive counselling

1. Autonomous approach:
   - Provide information on all available, medically eligible methods, then user make a decision with minimal provider input
   - Time consuming
   - Lack of tailored counselling to suit user's needs and preferences

2. "Foreclosed approach":
   - Provider counsel only about the method that the user brings up directly
   - Efficient
   - Omits those that the user is not aware of

Approach to contraceptive counselling

3. Directive counselling
   - Clinician has a preferred method in mind for the user and counsels toward it.
   - User's concerns and preferences not fully addressed
   - Limits the users' ability to make a full informed choice

Approach to contraceptive counselling

4. The 'tiered effectiveness' approach:
   - A semi-directive approach
   - clinicians present the most effective options first as starting point, including LARC methods, while also eliciting and discussing the users' other aspects of concerns and preferences

(Schivone and Glish, 2017)

- Patients do prefer providers to make fewer assumptions about their reasons for seeking contraception (Goldhammer et al, 2017) and to be asked specifically about their concerns (Teshome et al, 2017).

Conclusions

- Substantial variability exists in women's views, preferences and acceptability to various contraceptive methods

- Concerns about effectiveness, safety, side effects, costs, user friendliness and non-contraceptive benefits may all influence a women's attitude and acceptance to a regular contraceptive method

- Sexual and reproductive healthcare providers should take women's concerns seriously and address them on individual basis to help them in their informed choice

Thank you!