

Contraceptive methods: overview

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Outline

- Definitions
- Key facts about contraception / family planning
- Benefits of family planning and contraception
- Contraceptive methods
- Comparing effectiveness of family planning methods
- Contraceptive use by method

Definitions

What is contraception?

Contraception is the intentional prevention of pregnancy by artificial or natural means.

What is family planning?

Family planning allows individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births. It is achieved through use of contraceptive methods and the treatment of involuntary infertility.

What is an unmet need for family planning?

An unmet need for family planning is the number of women that want to stop or delay childbearing but are not using any method of contraception to prevent pregnancy, including also pregnant women whose pregnancies were unwanted or mistimed at the time of conception, and postpartum amenorrhoeic women who are not using family planning and whose last birth was unwanted or mistimed.

Key facts about contraception / family planning

Among the 1.9 billion Women of Reproductive Age group (15-49 years) worldwide in 2019, 1.1 billion have a need for family planning; of these, 842 million are using contraceptive methods, and 270 million have an unmet need for contraception.

The proportion of the need for family planning satisfied by modern methods, Sustainable Development Goals (SDG) indicator 3.7.1, was 75.7% globally in 2019, yet less than half of the need for family planning was met in Middle and Western Africa.

Use of contraception prevents pregnancy-related health risks for women, especially for adolescent girls.

Only one contraceptive method, condoms, can prevent both a pregnancy and the transmission of sexually transmitted infections, including HIV.

Use of contraception advances the human right of people to determine the number and spacing of their children.

Contraception offers a range of potential non-health benefits that encompass expanded education opportunities and empowerment for women, and sustainable population growth and economic development for countries.

Increased risk of having problems during pregnancy and delivery

Some women have an increased risk of having problems during pregnancy and delivery. They are women who:

- Are under the age of 18, or over age 35
- Become pregnant less than 2 years after a previous live birth
- Become pregnant less than six months post-abortion or post-miscarriage
- Have too many children (high parity)
- Have certain existing health problems
- Do not have access to skilled health care

Problems are more likely in those with multiple risk factors.

Benefits of family planning and contraception

Prevents maternal morbidity and mortality

Reduces unsafe abortion from unintended pregnancies

Reduces newborn and infant mortality

Helps to prevent HIV/AIDS

Empowers people and enhances education

Reduces adolescent pregnancies

Contributes to Economic Growth

Secures the well-being and autonomy of women

Contraceptive methods

There are different types of contraception. They can be short acting or long acting, reversible or permanent.

The different methods of contraception have varying rates of effectiveness depending on correct usage. (See next few slides)

Health care providers play an important role in helping people find and use a method that is both effective and acceptable.

Contraceptive methods

Hormonal

Progestogen-only contraceptives

1. Progestogen-only pills (POPs)
2. Progestogen-only injectable contraceptives (POIs)
3. Progestogen-only implants
4. Progesterone-Releasing Vaginal Ring

Combined hormonal contraceptives

1. Combined oral contraceptives (COCs)
2. Combined contraceptive patch
3. Combined contraceptive vaginal ring (CVR)
4. Combined injectable contraceptives (CICs)

Emergency contraception (EC) or postcoital contraception

1. Copper-bearing IUDs (Cu-IUD) for EC
2. Emergency contraceptive pills (ECPs)

Intrauterine devices (IUDs)

1. Copper-bearing IUDs (Cu-IUD)
2. Levonorgestrel-releasing IUDs (LNG-IUD)

Permanent methods

1. Female sterilization (tubal ligation)
2. Male sterilization (vasectomy)

Barrier methods

1. Male and female condoms
2. Other barrier methods

Spermicides

Fertility awareness methods

1. Standard Days Method (SDM)
2. Others

Lactational amenorrhea method

Mechanisms of action and effectiveness of contraceptive methods - 1

Method	How it works	Effectiveness: pregnancies per 100 women per year with consistent and correct use	Effectiveness: pregnancies per 100 women per year as commonly used
Combined oral contraceptives (COCs) or “the pill”	Prevents the release of eggs from the ovaries (ovulation)	0.3	7
Progestogen-only pills (POPs) or "the minipill"	Thickens cervical mucous to block sperm and egg from meeting and prevents ovulation	0.3	7
Implants	Thickens cervical mucous to blocks sperm and egg from meeting and prevents ovulation	0.1	0.1
Progestogen only injectables	Thickens cervical mucous to block sperm and egg from meeting and prevents ovulation	0.2	4
Monthly injectables or combined injectable contraceptives (CIC)	Prevents the release of eggs from the ovaries (ovulation)	0.05	3
Combined contraceptive patch and combined contraceptive vaginal ring (CVR)	Prevents the release of eggs from the ovaries (ovulation)	0.3 (for patch) 0.3 (for vaginal ring)	7 (for patch) 7 (for contraceptive vaginal ring)
Intrauterine device (IUD): copper containing	Copper component damages sperm and prevents it from meeting the egg	0.6	0.8
Intrauterine device (IUD) levonorgestrel	Thickens cervical mucous to block sperm and egg from meeting	0.5	0.7
Male condoms	Forms a barrier to prevent sperm and egg from meeting	2	13
Female condoms	Forms a barrier to prevent sperm and egg from meeting	5	21

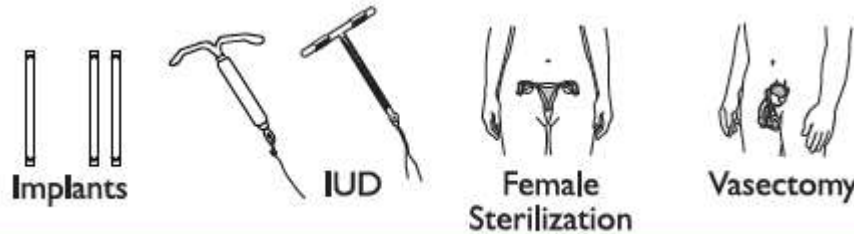
Mechanisms of action and effectiveness of contraceptive methods - 2

Method	How it works	Effectiveness: pregnancies per 100 women per year with consistent and correct use	Effectiveness: pregnancies per 100 women per year as commonly used
Male sterilization (Vasectomy)	Keeps sperm out of ejaculated semen	0.1	0.15
Female sterilization (tubal ligation)	Eggs are blocked from meeting sperm	0.5	0.5
Lactational amenorrhea method (LAM)	Prevents the release of eggs from the ovaries (ovulation)	0.9 (in six months)	2 (in six months)
Standard Days Method or SDM	Prevents pregnancy by avoiding unprotected vaginal sex during most fertile days.	5	12
Basal Body Temperature (BBT) Method	Prevents pregnancy by avoiding unprotected vaginal sex during fertile days	Reliable effectiveness rates are not available	
TwoDay Method	Prevents pregnancy by avoiding unprotected vaginal sex during most fertile days,	4	14
Sympto-thermal Method	Prevents pregnancy by avoiding unprotected vaginal sex during most fertile	<1	2
Emergency contraception pills (ulipristal acetate 30 mg or levonorgestrel 1.5 mg)	Prevents or delays the release of eggs from the ovaries. Pills taken to prevent pregnancy up to 5 days after unprotected sex	< 1 for ulipristal acetate ECPs 1 for progestin-only ECPs 2 for combined estrogen and progestin ECPs	
Calendar method or rhythm method	The couple prevents pregnancy by avoiding unprotected vaginal sex during the 1st and last estimated fertile days, by abstaining or using a condom.	Reliable effectiveness rates are not available	
Withdrawal (coitus interruptus)	Tries to keep sperm out of the woman's body, preventing fertilization	4	20

Comparing Effectiveness of Family Planning Methods

More effective

Less than 1 pregnancy per 100 women in one year

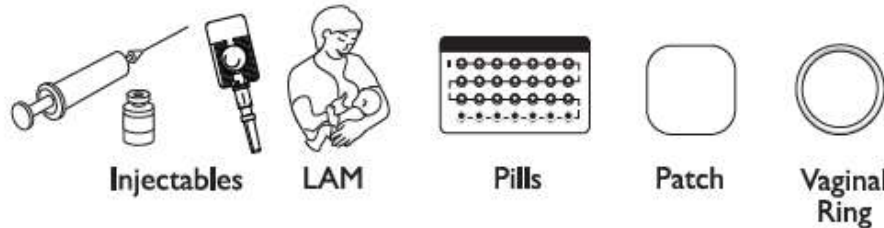


How to make your method more effective

Implants, IUD, female sterilization:

After procedure, little or nothing to do or remember

Vasectomy: Use another method for first 3 months



Injectables: Get repeat injections on time

Lactational Amenorrhea Method (for 6 months):

Breastfeed often, day and night

Pills: Take a pill each day

Patch, ring: Keep in place, change on time



Male condoms, diaphragm: Use correctly every time you have sex

Fertility awareness methods: Abstain or use condoms on fertile days. Standard Days Method and Two-Day Method may be easier to use.

Less effective

About 30 pregnancies per 100 women in one year

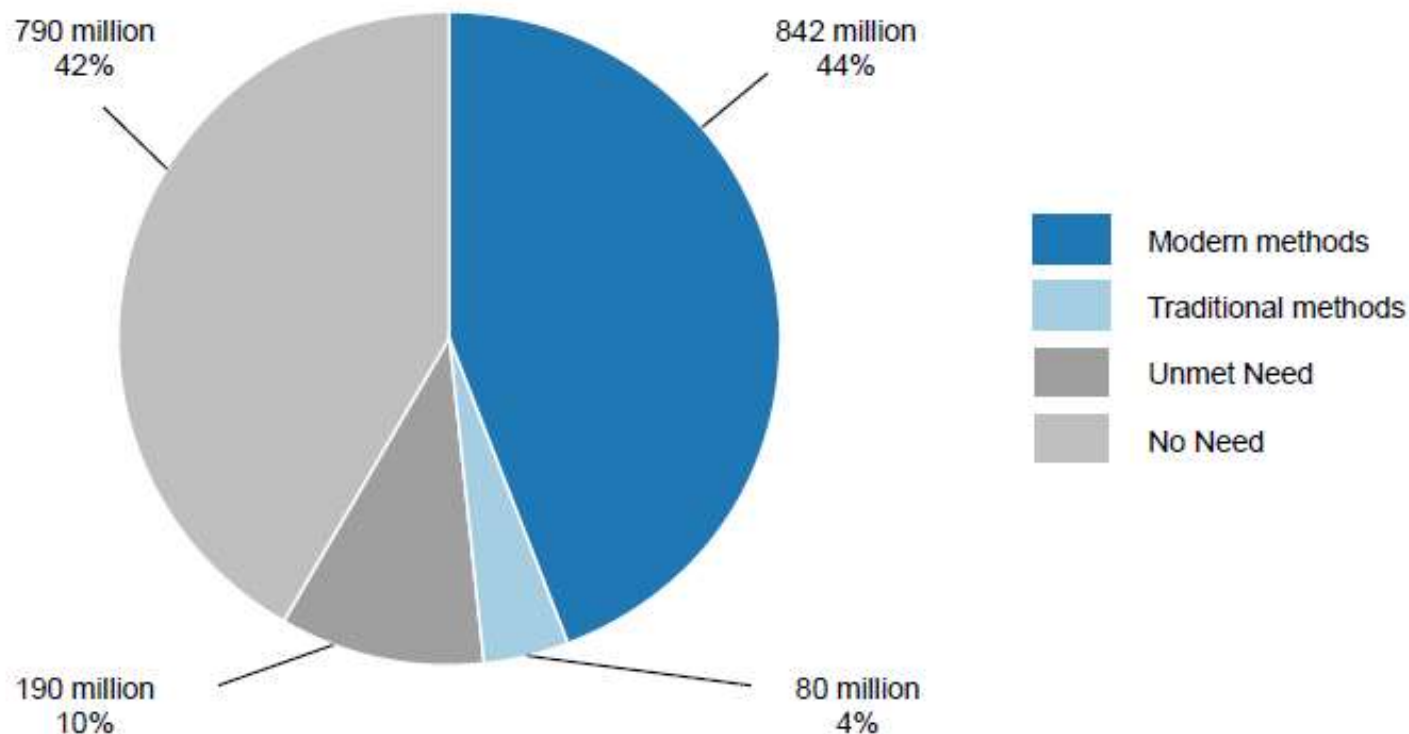


Female condoms, withdrawal, spermicides:

Use correctly every time you have sex

Contraceptive use by method

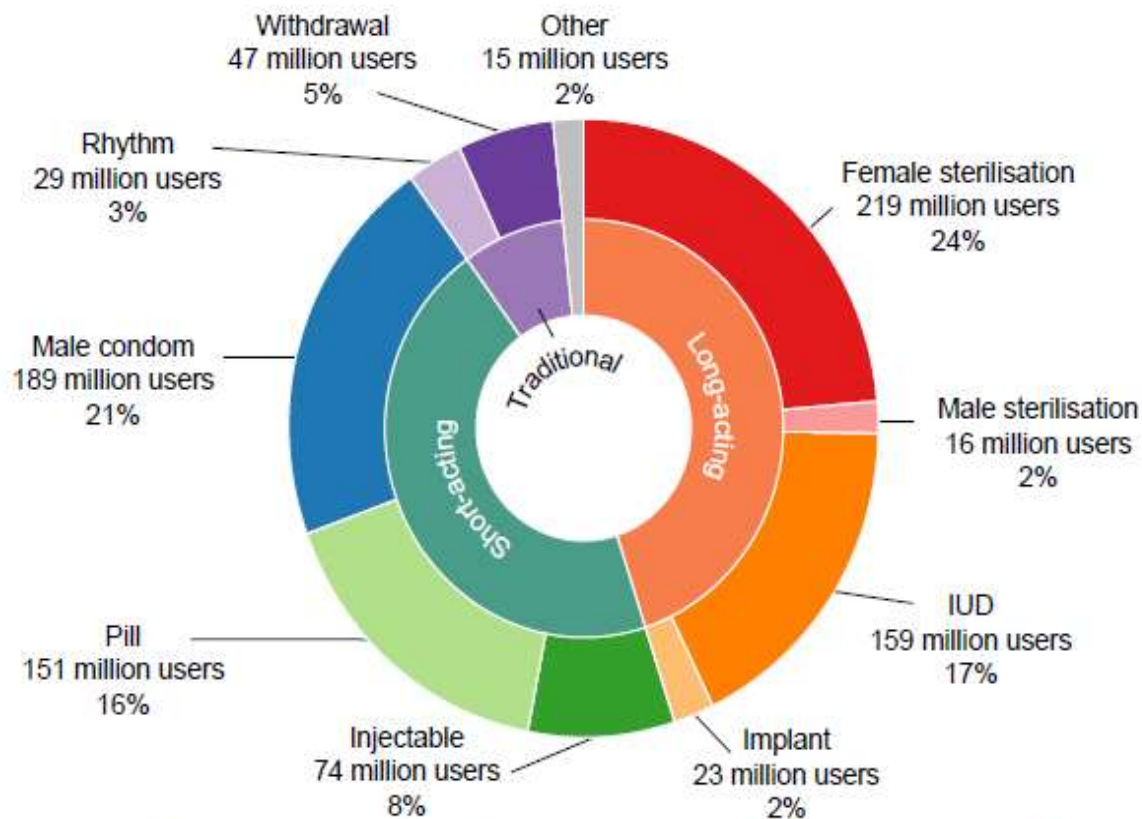
Estimated numbers of women of reproductive age (15-49 years) using modern and traditional contraceptive methods, having an unmet need for family planning and no need for family planning, worldwide, 2019



Data source: *Estimates and Projections of Family Planning Indicators 2019*.

Contraceptive use by method

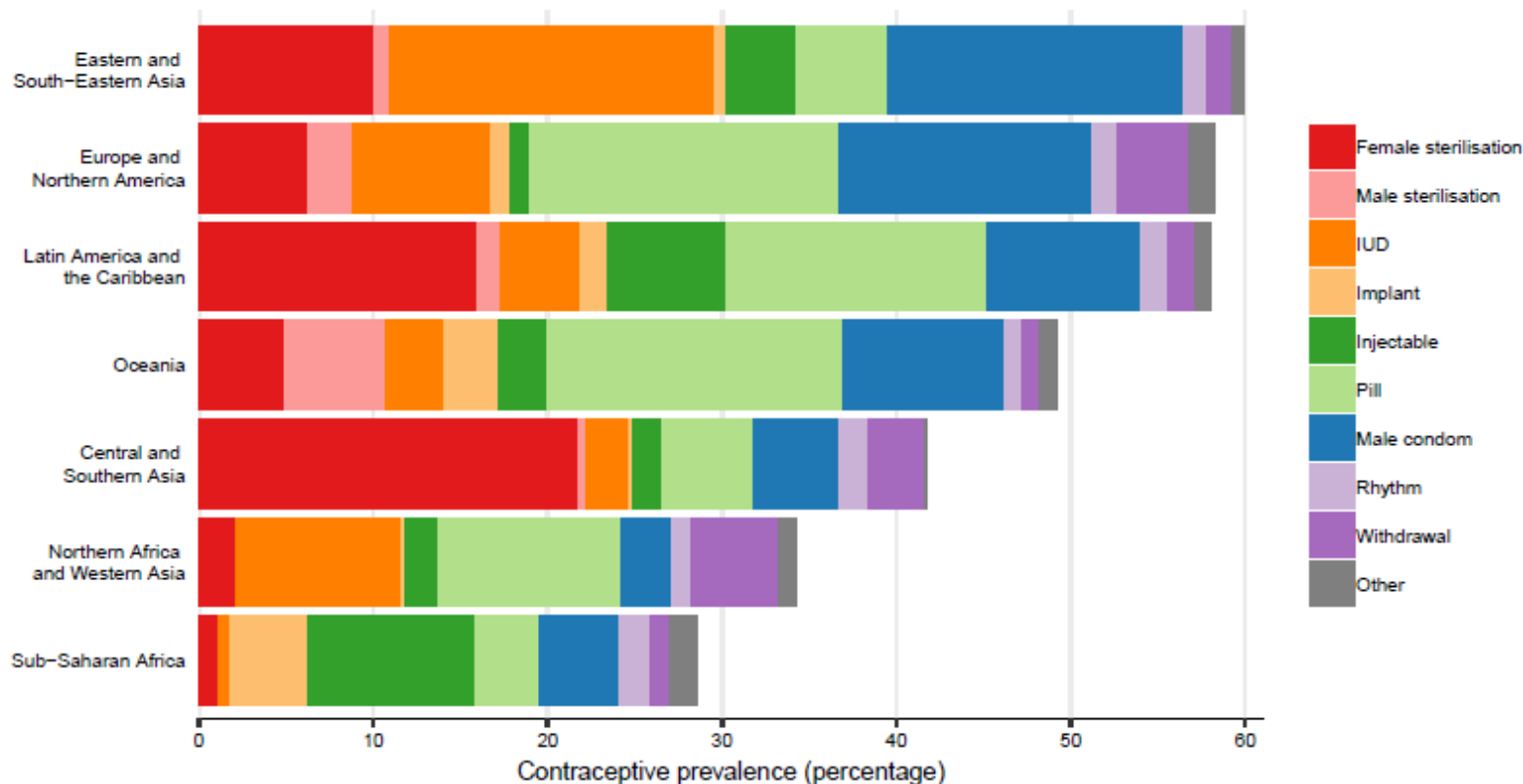
Estimated numbers of women of reproductive age (15-49 years) using various contraceptive methods, worldwide, 2019



Data source: Calculations are based on the data compilation *World Contraceptive Use 2019*, additional tabulations derived from microdata sets and survey reports and estimates of contraceptive prevalence for 2019 from *Estimates and Projections of Family Planning Indicators 2019*. Population-weighted aggregates.

Contraceptive use by method

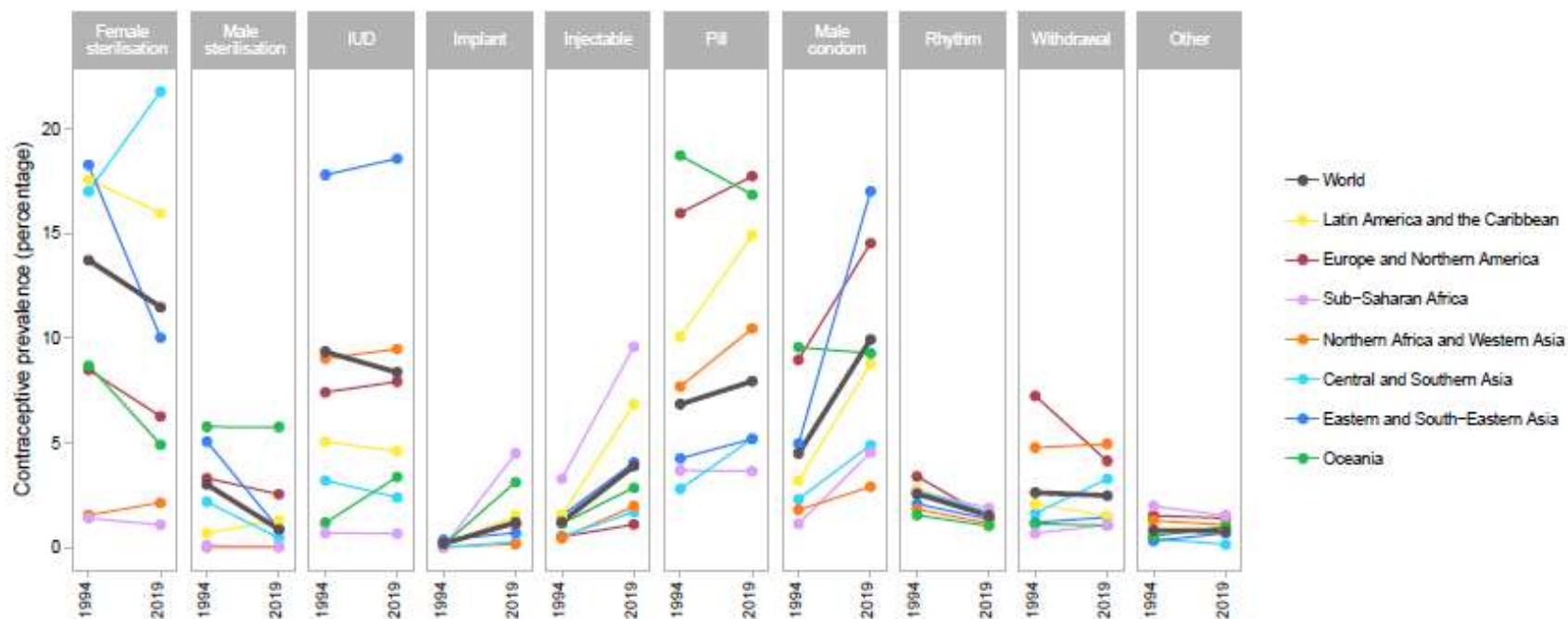
Contraceptive prevalence by method among women of reproductive age (15-49 years), by region, 2019



Data source: Calculations are based on the data compilation *World Contraceptive Use 2019*, additional tabulations derived from microdata sets and survey reports and estimates of contraceptive prevalence for 2019 from *Estimates and Projections of Family Planning Indicators 2019*. Population-weighted aggregates.

Contraceptive use by method

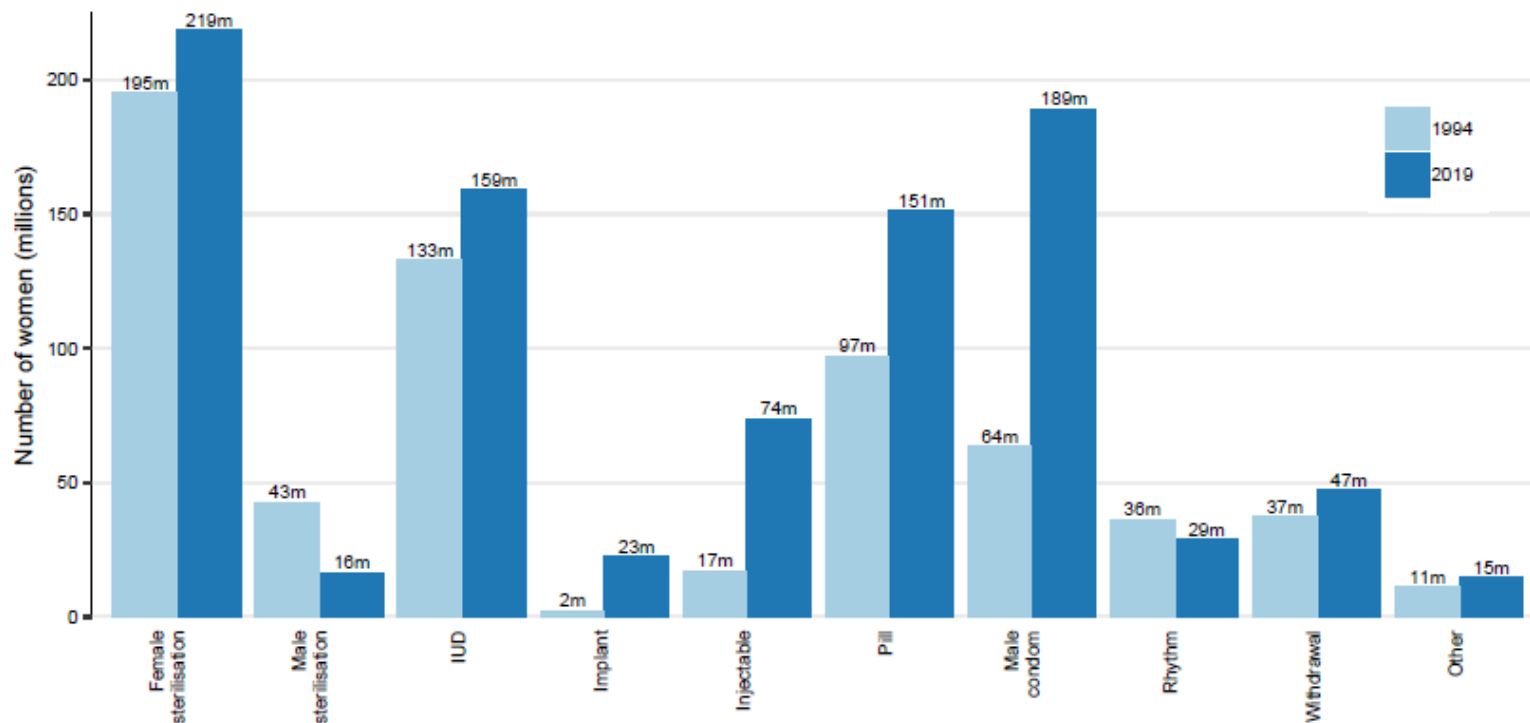
Trends in contraceptive prevalence by method among women of reproductive age (15-49 years), by region, 1994 and 2019



Data source: Calculations are based on the data compilation *World Contraceptive Use 2019*, additional tabulations derived from microdata sets and survey reports and estimates of contraceptive prevalence for 2019 from *Estimates and Projections of Family Planning Indicators 2019*. Population-weighted aggregates.

Contraceptive use by method

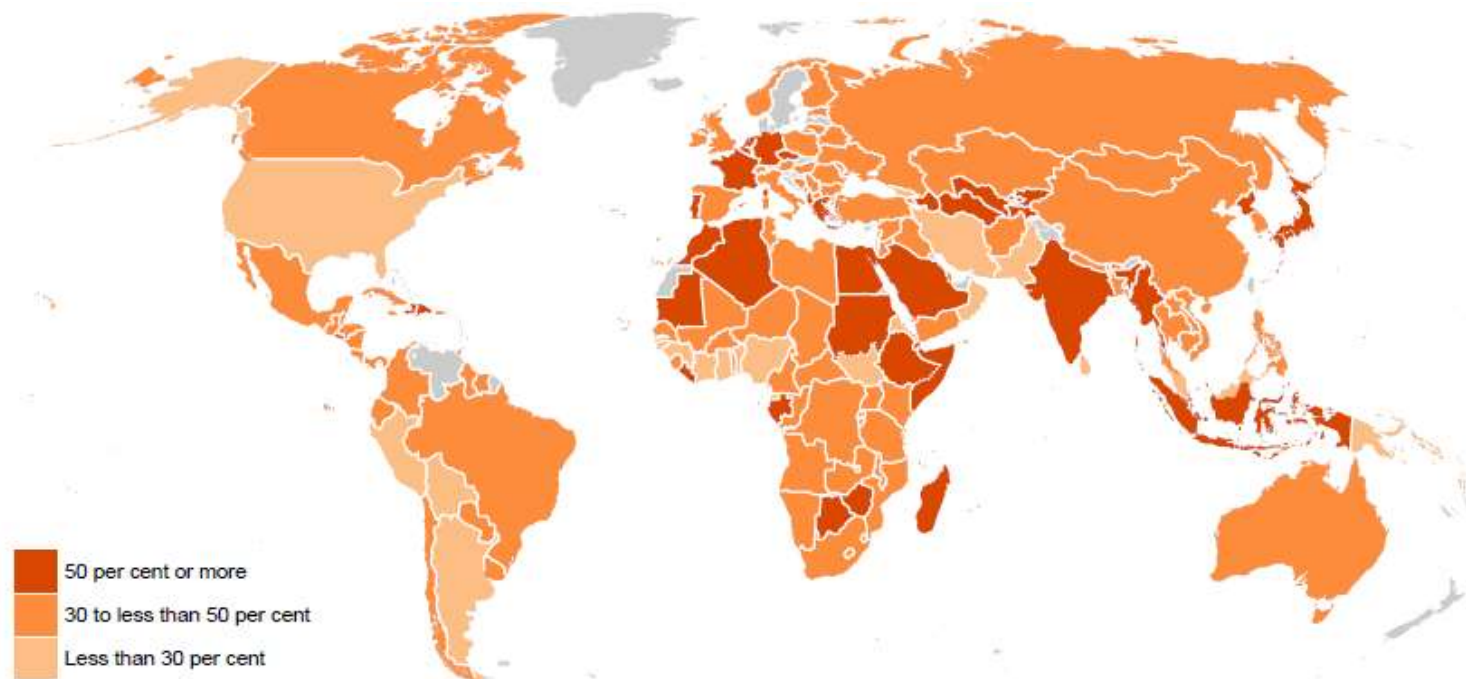
Estimated numbers of women of reproductive age (15-49 years) using various contraceptive methods, 1994 and 2019



Data source: Calculations are based on the data compilation *World Contraceptive Use 2019*, additional tabulations derived from microdata sets and survey reports and estimates of contraceptive prevalence for 2019 from *Estimates and Projections of Family Planning Indicators 2019*. Population-weighted aggregates.

Contraceptive use by method

Percentage share of contraceptive use for the most common method among women of reproductive age (15- 49 years), 2019



Data source: Calculations are based on the data compilation *World Contraceptive Use 2019*, additional tabulations derived from microdata sets and survey reports and estimates of contraceptive prevalence for 2019 from *Estimates and Projections of Family Planning Indicators 2019*. Population-weighted aggregates.

Note: The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas). Countries or areas in grey colour have no data available.

Contraceptive use by method

Estimated prevalence of individual contraceptive methods among women of reproductive age (15-49 years), 2019 - I

(a) Female sterilisation



(c) Injectable



(b) IUD



(d) Implant



Data source: Calculations are based on the data compilation *World Contraceptive Use 2019*, additional tabulations derived from microdata sets and survey reports and estimates of contraceptive prevalence for 2019 from *Estimates and Projections of Family Planning Indicators 2019*. Population-weighted aggregates.

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Contraceptive use by method

Estimated prevalence of individual contraceptive methods among women of reproductive age (15-49 years), by country, 2019 - II

(e) PILL



(g) Male condom



(f) Rhythm



(h) Withdrawal

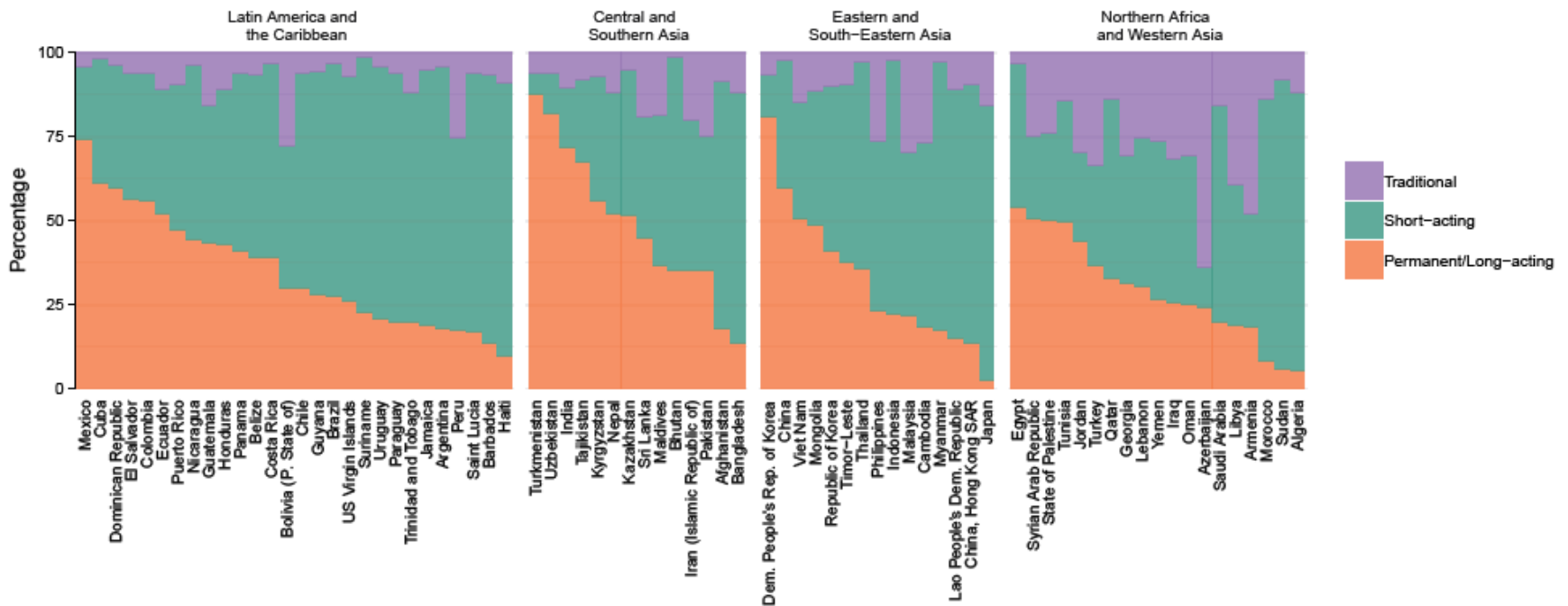


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Contraceptive use by method

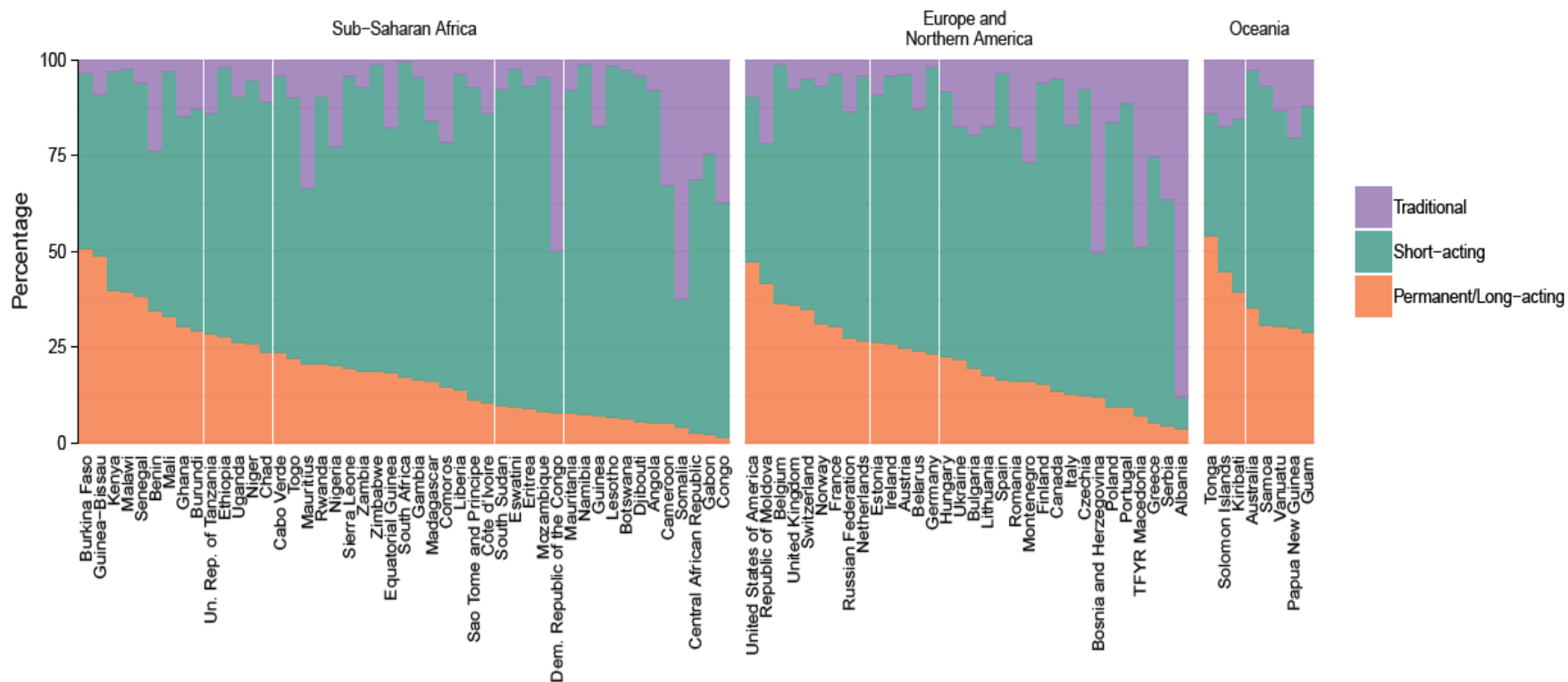
Estimated proportions of contraceptive users among women of reproductive age (15-49 years) using permanent or long-acting modern methods, short-acting modern methods and traditional methods in 2019, by country and region - I



Data source: Calculations are based on the data compilation *World Contraceptive Use 2019*, additional tabulations derived from microdata sets and survey reports and estimates of contraceptive prevalence for 2019 from *Estimates and Projections of Family Planning Indicators 2019*. Population-weighted aggregates.

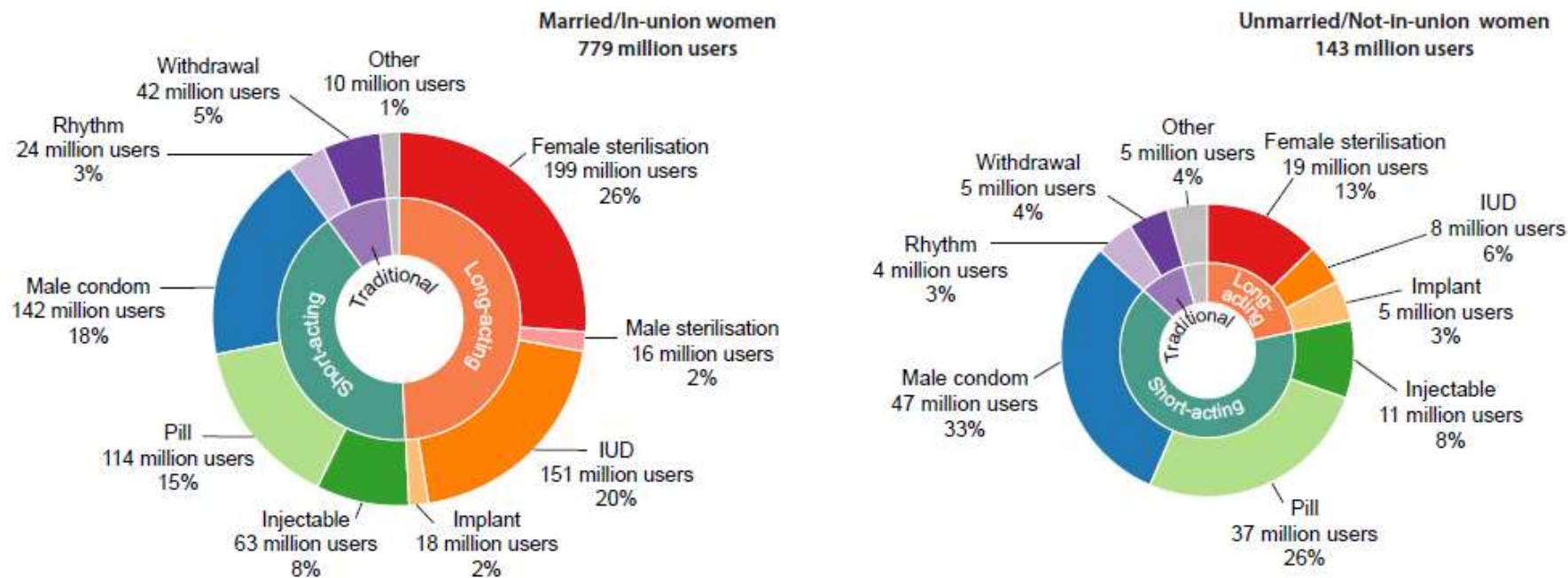
Contraceptive use by method

Estimated proportions of contraceptive users among women of reproductive age (15-49 years) using permanent or long-acting modern methods, short-acting modern methods and traditional methods in 2019, by country and region - II



Contraceptive use by method

Estimated numbers of women of reproductive age (15-49 years) using various contraceptive methods, by marital status, 2019



Data source: Calculations are based on the data compilation *World Contraceptive Use 2019*, additional tabulations derived from microdata sets and survey reports and estimates of contraceptive prevalence for 2019 from *Estimates and Projections of Family Planning Indicators 2019*. Population-weighted aggregates.

Family planning and Human Rights

All individuals and couples have the right:

“...to decide freely and responsibly the number, spacing and timing of their children and to have the information, education, and means to do so, and the right to attain the highest standard of sexual and reproductive health...”

–ICPD Programme of Action

References

Guttmacher Institute. Adding It Up - Investing in Sexual and Reproductive Health in Low- and Middle-Income Countries. Fact Sheet. Guttmacher Institute, 2020 Jul. Available from: <https://www.guttmacher.org/sites/default/files/factsheet/adding-it-up-investing-in-sexual-reproductive-health.pdf>

Training Resource Package for Family Planning. Available from: <https://www.fptraining.org/>

United Nations, Department of Economic and Social Affairs, Population Division. Contraceptive Use by Method 2019: Data Booklet (ST/ESA/SER.A/435). United Nations; 2019. Available from: https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/files/documents/2020/Jan/un_2019_contraceptiveusebymethod_databooklet.pdf

World Health Organization Department of Reproductive Health and Research (WHO/RHR) and Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs (CCP), Knowledge for Health Project. Family Planning: A Global Handbook for Providers (2018 update). Baltimore and Geneva: CCP and WHO; 2018. Available from: <https://www.fphandbook.org/>

WHO. Contraception: Evidence brief. World Health Organization; 2019. Available from: <https://apps.who.int/iris/bitstream/handle/10665/329884/WHO-RHR-19.18-eng.pdf?ua=1>

WHO. Family planning/contraception methods. World Health Organization; 2020. Available from: <https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>

WHO. Contraception. World Health Organization. Available from: <https://www.who.int/health-topics/contraception>