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Updated Guidance for Safe and Effective Use of Contraception

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Abstract

Progress has been made in efforts to reduce unintended pregnancy; however, unintended pregnancy remains a public health issue in the United States. A key component of reducing unintended pregnancy is to increase correct and consistent use of contraception by reducing barriers to access and use. The CDC has recently updated its guidance for the safe and effective use of contraception. The U.S. Medical Eligibility Criteria for Contraceptive Use (US MEC), 2016, and U.S. Selected Practice Recommendations for Contraceptive Use (US SPR), 2016, are intended for healthcare providers to help patients choose a method that is safe and can be used effectively. The recommendations aim to reduce certain barriers to contraception and thus help women, men, and couples to control timing of pregnancies.

Keywords

contraception; guidelines; CDC

Introduction

Reducing unintended pregnancy in the United States is a public health priority. Unintended and teen pregnancies are associated with negative health consequences for mother and infant.[1,2] Recent declines in the rates of unintended and teen pregnancy are encouraging, with the rate of unintended pregnancy decreasing for the first time in several decades and the rate of teen pregnancy reaching the lowest rate in more than 50 years.[3,4] These declines can, in part, be attributed to increased use of contraception, including the most effective methods such as intrauterine devices (IUDs) and implants.[4–6] However, barriers to accessing and using contraception remain; for example, women with medical conditions may be unnecessarily restricted from using certain contraceptive methods, women may be

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required to have several visits or undergo certain examinations or tests before initiating contraceptive methods, and women may discontinue their method if they have side effects. To reduce medical barriers to contraceptive access and use, the CDC developed and recently updated its evidence-based clinical guidance for contraceptive use, the U.S. Medical Eligibility Criteria for Contraceptive Use (US MEC), 2016 and U.S. Selected Practice Recommendations for Contraceptive Use (US SPR), 2016.[7,8] These recommendations are intended for healthcare providers as they assist women, men, and couples to choose contraception and use it safely and effectively. This article describes the recently released 2016 US MEC and 2016 US SPR, which contain updates to certain recommendations as well as new recommendations.

Development of the US MEC and US SPR

CDC's contraceptive guidance is adapted from global guidance for contraception developed by the World Health Organization (WHO).[9] The US MEC provides evidence-based recommendations for the safety of contraceptive use among women with certain characteristics or medical conditions, such as women who are postpartum, women who are obese, and women with hypertension.[8] The US SPR provides recommendations for safe and effective initiation and use of contraception.[7] For example, the US SPR addresses when during a woman's menstrual cycle she can begin contraception, what examinations or tests are needed before a woman begins contraception, and what to do if a woman has irregular bleeding while using contraception.

After the release of the first editions of the US MEC (in 2010) and US SPR (in 2013),[10,11] CDC worked closely with partners to disseminate the guidance to healthcare providers, through activities such as presentations at conferences, publications, and creation of provider tools. Since that time, the guidance has been incorporated into national standards and protocols for family planning and endorsed by national professional organizations.[12–14]

Updating the Guidance

CDC is committed to keeping the guidance up to date and based on the best available evidence. WHO and CDC continuously monitor published literature to assess whether new evidence warrants a new or updated recommendation.[15] In addition, CDC is committed to updating the entire guidance documents every few years. In general, the following scenarios may prompt a change in an existing recommendation or the creation of a new recommendation:

- New evidence is published that is inconsistent with current recommendations.
- WHO updates a recommendation, which CDC then assesses to determine whether the update is appropriate for the United States.
- Feedback is received from healthcare providers and other stakeholders on recommendations that are difficult to understand or implement.
- Feedback is received from healthcare providers and other stakeholders suggesting new topics for which recommendations would be helpful.

As a result of new evidence, WHO updates, and provider feedback, CDC undertook a revision of several priority topics during 2015–2016.[16] Systematic reviews of evidence were conducted and peer reviewed. In August 2015, CDC held a meeting with experts in family planning and the topic areas under consideration, during which the evidence was reviewed and recommendations were discussed. After the meeting, CDC determined the final recommendations and wrote the updated guidelines, which were published in July 2016.

The 2016 US MEC includes revisions to the recommendations for postpartum women; women who are breastfeeding; women with known dyslipidemias, migraine headaches, superficial venous disease, gestational trophoblastic disease, sexually transmitted diseases, and human immunodeficiency virus; women who are using antiretroviral (ARV) therapy; and revisions to the recommendations for emergency contraception, including the addition of ulipristal acetate. The 2016 US MEC also includes the addition of recommendations for women with cystic fibrosis, women with multiple sclerosis, and women using certain psychotropic drugs or St. John's wort. The 2016 US SPR includes revised recommendations for starting regular contraception after the use of emergency contraceptive pills and new recommendations for the use of medications to ease insertion of IUDs. The remaining recommendations in the 2016 US MEC and US SPR remain the same as in the previous versions.

Examples of recommendations that underwent fairly extensive revision are those for women with migraine headaches and women using ARV medications (Table 1).[8] For the 2010 US MEC, the migraine recommendations were adopted from the WHO MEC and the evidence review had not been updated recently. For the 2016 US MEC, expanded evidence on the relationship between migraine with or without aura and stroke, as well as hormonal contraception and stroke, was considered.[17] Based on evidence showing that migraine with aura and use of combined hormonal contraceptives are independently associated with an increased risk of ischemic stroke, women with migraine with aura should avoid combined hormonal contraceptives. Progestin-only contraceptives are considered safe for women with any type of migraine, given the evidence on lack of an association between progestin-only contraceptives and stroke. Based on new evidence, WHO significantly updated the ARV recommendations in 2014, prompting the need to assess whether the changes should be incorporated into the U.S. guidance.[18] New evidence on interactions between hormonal contraceptives and ARVs was considered to make the 2016 US MEC recommendations more specific by individual ARV drug.[8] Most hormonal contraceptives are considered safe for use by women concurrently using ARVs. Most studies found no impact on ARV effectiveness. Although certain combinations may result in a small decrease in contraceptive effectiveness, in most cases, relative contraceptive effectiveness will be preserved.

An example of a new recommendation is the use of medications to ease IUD insertion, which was added to the 2016 US SPR.[7] This topic was identified by providers as an important one for which guidance would be helpful and for which new evidence existed. Studies that examined several medications including misoprostol, paracervical block, nonsteroidal anti-inflammatory drugs, and nitric oxide donors were reviewed.[19] Paracervical block with lidocaine may reduce women's discomfort during IUD insertion. Misoprostol

was not effective in improving ease of insertion and might increase patient pain and side effects and, therefore, is not recommended for routine use, but may be helpful in certain circumstances such as for women with a recent failed insertion.

Using the Guidance

The intent of the US MEC and US SPR is to be a resource for healthcare providers as they counsel women, men, and couples about contraceptive methods. Although not intended to be a comprehensive resource for contraceptive information, the US MEC and US SPR are designed to provide evidence-based guidance on safe and effective use of contraception. Both guidance documents are arranged by the contraceptive method with a section for each method including the following:

- IUDs (including copper and levonorgestrel IUDs)
- Implants
- Depot medroxyprogesterone acetate
- Progestin-only pills
- Combined hormonal contraceptives (including combined oral contraceptives, combined hormonal patch, and combined vaginal ring)
- Female and male sterilization
- Fertility awareness-based methods
- Emergency contraception

In addition, the US MEC provides some guidance on barrier methods (including condoms, spermicides, diaphragm and cervical cap), lactational amenorrhea method, and coitus interruptus.

Providers can use the US MEC to assess whether these contraceptive methods are safe for use by women with any of more than 100 medical conditions or characteristics. Providers can use the US SPR to guide the initiation and use of the chosen method, including when during the woman's menstrual cycle she can initiate the method, what examinations and tests are needed before initiation, routine follow-up after initiation, and how to manage side effects or usage errors. Several tools are being developed or updated to make the guidance more accessible. Providers can download an app of the US MEC and US SPR for iOS and Android devices. Providers can also download an eBook of the US SPR. Several online tools are available to download, print, or order at no cost, including a summary chart of the US MEC in English and Spanish, a chart of contraceptive effectiveness, summary charts and figures from the US SPR, and an US MEC guidance wheel. Continuing education credit can be obtained by reviewing the US MEC and US SPR at the MMWR website (www.cdc.gov/mmwr/cme/serial_conted.html). PowerPoint slidesets are available online describing the US MEC, the US SPR, and application of the guidance to prevent teen pregnancy; these can be reviewed for continuing education and can be used and adapted for presentations. The guidance and tools can be found at CDC's website at: www.cdc.gov/reproductivehealth/contraception/contraception_guidance.htm

Health systems can work to implement the guidance into practice through activities such as provider education, protocol development, and logistics and reimbursement procedures. For example, training sessions can be arranged for healthcare providers to provide education on the guidelines and how providers can incorporate them into their practices. Medical directors can update protocols to be consistent with the US MEC and US SPR guidance, for example, protocols addressing eligibility criteria for specific contraceptive methods or protocols for timing of contraceptive initiation, including same day initiation if appropriate. Health systems can incorporate recommendations into electronic medical systems, including alerts to remind providers to counsel women of reproductive age about contraception and provide links to the US MEC and US SPR. Health systems can also continue to work with insurance providers including private insurers and Medicaid to ensure that all FDA-approved contraceptive methods are fully reimbursed at cost, as well as associated counseling and insertion, removal, and replacement procedures.

Next Steps

CDC is working with partners, including federal agencies, professional organizations, and service providers, to disseminate the guidance to healthcare providers through presentations at national conferences, webinars, and other forums. CDC will continue to monitor published evidence, updates to WHO guidance, and feedback from healthcare providers to assess the need for updates to the recommendations. In addition, CDC will undertake an update of the entire US MEC and US SPR at regular intervals. CDC is conducting a series of surveys of family planning providers before and after the original and updated US MEC and US SPR releases to assess the impact of the guidance on provider attitudes and practices. Finally, CDC published a list of key research gaps in the areas addressed in the updated guidance, which can be used as a guide to prioritize and design future studies on safe and effective use of contraception.[20]

Conclusions

Continued efforts are needed to further reduce unintended pregnancy in the United States. A key component in achieving reduced rates of unintended and teen pregnancy is increasing correct and consistent use of contraception. Evidence-based recommendations can be used to help reduce barriers to contraceptive access and use. Healthcare providers can use the recently updated US MEC and US SPR to assist patients in choosing contraception and using their chosen method effectively.

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Table 1.

Selected New and Updated Recommendations in the U.S. Medical Eligibility Criteria for Contraceptive Use

Condition	Cu-IUD		LNG-IUD		Implants	DMPA	POP	CHCs
Headaches								
Nonmigraine (mild or severe)	1		1		1	1	1	1[a]
Migraine								
Without aura (this category of migraine includes menstrual migraine.)	1		1		1	1	1	2[a]
With aura	1		1		1	1	1	4[a]
Multiple sclerosis								
With prolonged immobility	1		1		1	2	1	3
Without prolonged immobility	1		1		1	2	1	1
Cystic fibrosis								
This condition is associated with increased risk for adverse health events as a result of pregnancy (Box 2).	1[a]		1[a]		1[a]	2[a]	1[a]	1[a]
Antiretroviral therapy	Initiation	Continuation	Initiation	Continuation				
Nucleoside reverse transcriptase inhibitors								
Abacavir (ABC)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Tenofovir (TDF)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Zidovudine (AZT)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Lamivudine (3TC)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Didanosine (DDI)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Emtricitabine (FTC)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Stavudine (D4T)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Nonnucleoside reverse transcriptase inhibitors								
Efavirenz (EFV)	1/2[a]	1[a]	1/2[a]	1[a]	2[a]	1[a]	2[a]	2[a]
Etravirine (ETR)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Nevirapine (NVP)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Rilpivirine (RPV)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Ritonavir-boosted protease inhibitors								
Ritonavir-boosted atazanavir (ATV/r)	1/2[a]	1[a]	1/2[a]	1[a]	2[a]	1[a]	2[a]	2[a]

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Condition	Cu-IUD		LNG-IUD		Implants	DMPA	POP	CHCs
Ritonavir-boosted darunavir (DRV/r)	1/2[a]	1[a]	1/2[a]	1[a]	2[a]	1[a]	2[a]	2[a]
Ritonavir-boosted fosamprenavir (FPV/r)	1/2[a]	1[a]	1/2[a]	1[a]	2[a]	1[a]	2[a]	2[a]
Ritonavir-boosted lopinavir (LPV/r)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Ritonavir-boosted saquinavir (SQV/r)	1/2[a]	1[a]	1/2[a]	1[a]	2[a]	1[a]	2[a]	2[a]
Ritonavir-boosted tipranavir (TPV/r)	1/2[a]	1[a]	1/2[a]	1[a]	2[a]	1[a]	2[a]	2[a]
Protease inhibitors without ritonavir								
Atazanavir (ATV)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	2[a]
Fosamprenavir (FPV)	1/2[a]	1[a]	1/2[a]	1[a]	2[a]	2[a]	2[a]	3[a]
Indinavir (IDV)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Nelfinavir (NFV)	1/2[a]	1[a]	1/2[a]	1[a]	2[a]	1[a]	2[a]	2[a]
CCR5 coreceptor antagonists								
Maraviroc (MVC)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
HIV integrase strand transfer inhibitors								
Raltegravir (RAL)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Dolutegravir (DTG)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Elvitegravir (EVG)	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Fusion inhibitors								
Enfuvirtide	1/2[a]	1[a]	1/2[a]	1[a]	1	1	1	1
Psychotropic medications								
SSRIs	1		1		1	1	1	1
St. John's wort	1		1		2	1	2	2

1 = A condition for which there is no restriction for the use of the contraceptive method.

2 = A condition for which the advantages of using the method generally outweigh the theoretical or proven risks.

3 = A condition for which the theoretical or proven risks usually outweigh the advantages of using the method.

4 = A condition that represents an unacceptable health risk if the contraceptive method is used.

Full guidance available at: www.cdc.gov/reproductivehealth/contraception/contraception_guidance.htm

[a]Consult the appendix in the guidance for this contraceptive method for a clarification to this classification.

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CHCs, combined hormonal contraceptives; Cu-IUD, copper-containing intrauterine device; DMPA, depot medroxyprogesterone acetate; LNG-IUD, levonorgestrel-releasing intrauterine device; POP, progestin-only pill; SSRI, selective serotonin reuptake inhibitor.