Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Society of Family Planning Clinical Recommendations: Contraceptive Care in the Context of Pandemic Response

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ABSTRACT

The coronavirus disease 2019 (COVID-19) pandemic has posed a burden to healthcare systems around the world and has changed the way people access health services, including contraception. This document sets forth guidance from the Society of Family Planning for providing contraceptive care in the context of the COVID-19 pandemic, including when access to healthcare is restricted due to pandemic response. It also outlines the role of telehealth for providing contraceptive care beyond the pandemic. Clinicians can use synchronous telemedicine visits and other forms of telehealth to provide many aspects of contraceptive care. Both audio-video and audio-only visits are acceptable forms of telemedicine. Access to permanent contraception should be maintained, especially in the postpartum period. Combined hormonal contraceptive (CHC) users who have asymptomatic or mild COVID-19 infection may continue their contraceptive method, while those admitted to the hospital with severe infection should suspend CHC use until they are clinically recovered. CHC users who take Paxlovid for mild-moderate COVID-19 infection can consider a back-up contraceptive method for the duration of therapy, but clinically relevant drug interactions are unlikely. Future research should examine contraceptive outcomes in people who receive care via telemedicine; and access to telemedicine among historically excluded populations such as adolescents, people of color, people of low socioeconomic status, disabled people, or people who do not speak English as a primary language.

1. Background

The coronavirus disease 2019 (COVID-19) pandemic has posed significant challenges to healthcare systems around the world. In the United States alone, more than 80 million COVID-19 cases and more than 950,000 deaths have been reported as of April 2022 [1]. Because of existing inequities based on socioeconomic status, race, ethnicity, and gender, the burden of the pandemic has been experienced unequally across different segments of society. African-American and Latinx communities have seen a disproportionate number of COVID-19 cases, hospitalizations, and deaths [2]. Women are more likely than men to have lost their jobs and not all industries were equally affected by the pandemic [3]. The service industries, for example, experienced a higher proportion of layoffs, reduced hours, and reduced pay compared to other sectors [4].

COVID-19 cases, lockdowns and stay-at-home orders have changed all aspects of American society, including healthcare. Given this ongoing public health crisis, it is imperative to outline how clinicians should provide other healthcare services unrelated to COVID-19. In April of 2020, the Society of Family Planning published interim clinical recommendations for contraceptive provision when healthcare access is restricted due to pandemic response [5]. The present document provides additional guidance for all aspects of contraceptive care in the context of the COVID-19 pandemic. It also outlines how clinicians can use telemedicine to provide contraceptive counseling and other contraceptive services even once the pandemic resolves. While this document is primarily intended for clinicians in the United States, many of its recommendations can be applied in other settings.

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1.1. COVID-19, pregnancy, and reproductive life planning

Several studies have demonstrated that pregnant patients with COVID-19 infection have worse clinical courses compared to non-pregnant patients of the same age. They are more likely to be admitted to the ICU, and more likely to receive invasive ventilation and extra-corporeal membrane oxygenation [6–9]. COVID-19 infection in pregnancy is also associated with higher rates of preterm birth, preeclampsia, cesarean delivery, and perinatal death [10,11].

The pandemic has also radically changed people's social and economic realities, thus influencing reproductive life planning. Many individuals around the world decided to delay childbearing or remain childfree due to the pandemic [12–14]. A survey study conducted among mothers of young children in New York City found that increased stress and financial insecurity due to COVID-19 paralleled a reduction in pregnancy intention in the early months of the pandemic [15]. The Guttmacher Institute also conducted a national online survey in the United States and reported that 34% of respondents wanted to get pregnant later or wanted fewer children due to the pandemic [16].

1.2. Contraception is essential healthcare

At various timepoints during the COVID-19 pandemic, hospitals, clinics, and state governments suspended the provision of healthcare services deemed non-essential to meet the needs for care of COVID-19 patients [17]. The World Health Organization, the American College of Obstetricians & Gynecologists (ACOG), the Society of Family Planning, and other national and international organizations have emphasized that sexual and reproductive health care is essential healthcare that cannot be delayed and must be prioritized as part of an organized COVID-19 response [18,19]. Essential sexual and reproductive health services include access to contraception, abortion care, and maternity care [20].

Providing contraception is a time-sensitive healthcare service, and satisfying an unmet need for contraception reduces maternal mortality [21]. During times of crisis, demand for contraception may be even higher, as some individuals may choose to delay or forego pregnancy [22].

1.3. Access to and utilization of reproductive health services during the COVID-19 pandemic

While hospitals have been at capacity due to surges in COVID-19 cases throughout various stages of the pandemic, utilization of healthcare services unrelated to COVID-19 has decreased [23]. Reports of delayed or foregone care during the pandemic abound [24], and the consequences on health outcomes are yet to be fully understood. The Healthcare Cost Institute examined a sample of health claims clearinghouse records from 18 states and found that the claims for preventive care such as pap smears, mammograms, colonoscopies, and childhood immunizations decreased by 60 to 80% in 2020 compared to 2019, for example [25]. The number of reproductive health visits also decreased: 54% OB-GYNs who responded to a Kaiser Family Foundation National Physician Survey reported a decline in patient visits during the pandemic, in large part due to patient reluctance to seek care [26].

Access to contraception also decreased. One study examined a nationwide sample of claims to measure the change in contraceptive visits in the United States during the pandemic [27]. Its authors reported a 65% decline in tubal ligation visits, a 46% decline in LARC visits, and a 45% decline in visits for prescription of the pill, patch, or ring. Visit numbers remained lower than pre-pandemic levels throughout 2020. A social media survey administered to Spanish and English-speaking reproductive aged U.S. women found that in January of 2021, 22% were not using their preferred method of contraception due to the pandemic [28]. Similarly, authors of a cohort study of pregnant patients across the United Kingdom compared those recruited pre-2020 COVID-19 lockdown and post-lockdown [29]. Respondents recruited post-lockdown reported more difficulty accessing contraception and higher rates of unplanned pregnancy.

1.4. The rise of telemedicine

The World Health Organization defines telemedicine as "the delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies" [30]. ACOG specifies that "telehealth" refers to the "technology-enhanced healthcare framework" that includes live, two-way synchronous audio and video, store and forward, remote patient monitoring, and m-health,[1] while "telemedicine" refers to "traditional clinical diagnosis and monitoring that is delivered by technology" [31]. In response to the COVID-19 pandemic, the United States Center for Medicare and Medicaid Services expanded the definition of and coverage for telemedicine to include care provided to patients in their home (rather than only in healthcare facilities); and care provided by clinicians other than physicians [32].

During the COVID-19 pandemic, telemedicine visits became a necessary and appealing alternative to in-person visits. Clinicians across all medical specialties started to provide telemedicine services or expanded the services they provided. A nationally representative survey of OB-GYNs found that by June of 2020, 84% of them incorporated telehealth into their practice, while only 14% had used it prior to the pandemic [26]. A survey of family planning providers also reported that 78% started using telemedicine for the first time during the pandemic, and did so for many visit types, including contraceptive counseling [33].

2. Clinical questions

2.1. Telemedicine for contraceptive services

1. *How should it be determined whether patients need in-person contraceptive care or whether their needs can be met via telemedicine?*

Clinics and offices that provide contraceptive services should implement a screening process to determine which patients require an in-person visit and which can access care with telemedicine. This minimizes unnecessary exposure to COVID-19 for patients and clinicians and decreases the use of personal protective equipment (PPE). Staff members who are answering patient calls and scheduling appointments should be trained to screen patients to determine the appropriate visit type. This process should be adapted to the needs of individual clinical sites, but in general, should include the following questions:

1) Assessment for concerning symptoms that are distressing to the patient – for example heavy bleeding with symptoms of anemia, severe pelvic pain, or symptoms of complications with specific contraceptive methods (eg. non-palpable implant or missing IUD strings).
2) Assessment for desired contraceptive method: for patients who are seeking to initiate a contraceptive method, determine whether they have already made their decision, or whether

[1] "m-health is a term used for medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, Personal Digital Assistants (PDAs), and other wireless devices." World Health Organization 2022. Available from: https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4774 [Accessed April 13, 2022].

Table 1
How CDC measures the COVID-19 community levels

COVID-19 Community Levels - Use the Highest Level that Applies to Your Community				
New COVID-19 Cases Per 100,000 people in the past 7 days	Indicators	Low	Medium	High
Fewer than 200	New COVID-19 admissions per 100,000 population (7-day total)	<10.0	10.0-19.9	>20.0
	Percent of staffed inpatient beds occupied by COVID-19 patients (7-day average)	<10.0%	10.0-14.9%	>15.0%
200 or more	New COVID-19 admissions per 100,000 population (7-day total)	NA	<10.0	>10.0
	Percent of staffed inpatient beds occupied by COVID-19 patients (7-day average)	NA	<10.0%	>10.0%

Source: Centers for Disease Control and Prevention (2022). Available from: https://www.cdc.gov/coronavirus/2019-ncov/science/community-levels.html. Accessed April 1, 2022.

they wish to discuss this decision with a clinician. For patients who are certain they desire a long-acting reversible contraceptive (LARC), offer an in-person visit without delay. For patients who are interested in discussing their options with a clinician, offer a telemedicine visit first. For patients who are requesting replacement of a LARC, train the screener to offer a telemedicine visit to patients who may be eligible for extended use (see below). For patients who are requesting permanent contraception, offer a telemedicine visit first.

Patients who prefer in-person visits regardless of clinical need should be allowed to schedule in-person visits if the local circumstances allow. Offices and clinics should outline protocols in response to local COVID-19 infection rates and available resources, including staffing and PPE. Each site should determine a threshold community transmission rate above which in-person visits will only be allowed if there is an urgent clinical need. The Centers for Disease Control and Prevention COVID-19 Integrated County View on the COVID-19 tracker website tracks community transmission rates at the county level (See Table 1). Community transmission rates are defined as low, medium, or high, depending on the number of new cases and new hospital admissions, and the percentage of occupied hospital beds [34]. We recommend limiting in-person care to clinically necessary and time-sensitive visits if community transmission rates are high. Each site should determine whether patient vaccination status should factor into decisions about in-person versus telemedicine visits.

2. *Which telehealth technologies can* clinicians use to provide *contraceptive services?*

Multiple modalities exist for delivering healthcare remotely utilizing technology. Telehealth technology must be secure and protect patient privacy and confidentiality, in compliance with the Health Insurance Portability and Accountability Act (HIPAA). Here, we describe different types of telehealth technologies that clinicians can use to provide contraceptive services.

Synchronous telemedicine visits

The term "telemedicine" is typically used to refer to "traditional clinical diagnosis and monitoring that is delivered by technology" [31]. Here, we use this term to refer to real-time or synchronous audio-video or audio-only visits. Multiple platforms exist for providing these services, some of which are integrated into electronic medical record systems, while others are not.

Synchronous audio-video visits are the closest alternative to the face-to-face encounter. The type of telemedicine visit has billing implications, as audio-video visits can be billed at office visit rates, unlike audio-only visits. During the COVID-19 public health emergency, Medicare waived the audio-video requirement for many telemedicine visit types, but it will establish new guidelines when this period ends [35]. Some clinicians feel that video also allows for better assessment of the patient's overall state of health and offers more opportunity to build rapport. In a qualitative study, community health center providers in New York State who adopted telemedicine during the COVID-19 pandemic expressed a strong preference for video visits [36]. However, some patients may prefer phone over video visits [37], or may be unable to access or afford video visits due to limited data plans or lack of access to technology. Clinicians and patients in different studies reported that audio-only visits offered more privacy compared to video visits [36,37]. One study of adult and primary care visits found that older patients, Hispanic, Black, or Spanish-speaking patients, and those with low broadband access were less likely to use video visits [38]. For patients who are unable to do video visits or who prefer audio-only visits, clinicians can and should provide care via audio-only visits.

Synchronous phone and video visits are appropriate for providing any of the contraceptive services listed below (clinical question #3). Many obstetrician-gynecologists and other healthcare providers reported an increase in telemedicine use for contraceptive services during the COVID-19 pandemic [26,33]. Yet limited evidence exists comparing the quality of services provided via telemedicine to those provided in-person and examining whether visit modality influences contraceptive choices and outcomes. One potential concern with telemedicine for contraceptive counseling is that patients may be less likely to choose LARC because this would require an additional, in-person visit. In a mixed-methods study, patients who received contraceptive counseling via telemedicine at the beginning of the COVID-19 pandemic were highly satisfied with this service [37]. The same researchers followed patients for six months and reported that almost 70% were still using the same contraceptive method they had selected at the telemedicine visit; however, only 37% of patients could be reached at the six-month mark [39].

Other type of telehealth services

Beyond synchronous telemedicine visits, other forms of telehealth services have also been used, even prior to the pandemic, to provide contraception or support users. These include m-health interventions such as text messages to improve contraceptive adherence or continuation, and mobile apps to aid in contraceptive counseling [40]**.** Numerous websites and apps also exist through which individuals can purchase contraception – a type of asynchronous telemedicine known as telecontraception. Two studies evaluated these platforms and reported that they generally have high rates of adherence to the CDC Medical Eligibility for Contraception criteria, but not all contraceptive options are available (especially LARC) [41,42]. Other telehealth modalities that could be used to provide contraceptive services include store and forward (or asynchronous telemedicine), and live chat, but these have not been specifically studied in the context of contraception.

3. *Which contraceptive services can be provided via telemedicine?*

The following contraceptive services are suitable for provision via telemedicine:

Contraceptive counseling: we define this as an "interactive process between provider and client intended to help the client achieve a reproductive health goal" [43]. Contraceptive counseling typically involves taking a thorough patient history, discussing different contraceptive options, and deciding on a method. During a contraceptive counseling visit patients may decide to initiate or discontinue a method, to continue a method they are already using, or not to use any method. Patient satisfaction with contraceptive counseling provided via telemedicine, including telephone-only visits, appears to be high [37]. Limited data on contraceptive counseling provided via telemedicine suggest that patients find the quality of counseling to be comparable to that provided via in-person visits [44].

Prescription (initiation or continuation) of oral contraceptive pills, transdermal patch, or vaginal ring. Telemedicine allows for an assessment of risk and of contraindications to specific methods. Clinicians should review a patient's medical history and assess for contraindications and concurrent medication use, following the Centers for Disease Control and Prevention's U.S. Medical Eligibility Criteria for Contraceptive Use (U.S. MEC) [45]. Prescribing these methods with more than one cycle dispensed at one time is ideal because it limits the number of pharmacy visits. A one-year supply is appropriate and prescribing to mail-order pharmacies may further facilitate access. For individuals who desire estrogen-containing methods, the U.S. Selected Practice Recommendations for Contraceptive Use (SPR) recommends a blood pressure check prior to initiation and annually with continued use [46]. During the COVID-19 pandemic, we do not recommend withholding estrogen-containing contraceptives from patients who do not have a documented blood pressure check. For persons who are initiating or continuing use of a combined hormonal contraceptive (CHC), we recommend the following instead:

- Persons who have access to a blood pressure cuff at home or at a pharmacy should check their blood pressure and inform the provider of the value.
- Persons who do not have access to a blood pressure cuff and have no history of hypertension or other contraindications to estrogen-containing methods can receive a prescription for such methods. Clinicians should inform them of the risks these methods pose for those who have hypertension and encourage them to schedule a visit with a healthcare provider or go to a pharmacy for blood pressure check.

Follow-up telemedicine visits (virtual "touch-points") may be useful in assessing whether patients are satisfied or if they experience any issues or side effects with the prescribed methods.

Prescription (initiation or continuation) of self-administered subcutaneous depot medroxyprogesterone acetate (DMPA-SC). DMPA is available in a subcutaneous formulation that is not approved by the U.S. Food & Drug Administration (FDA) for self-injection but is well suited for such use. A systematic review and meta-analysis of six prospective studies reported that participants who self-administered DMPA had higher continuation rates than those who relied on provider administration [47]. Further, there were no differences in pregnancy rates or adverse events, except that two cohort studies found an increase in injection site reactions with self-administration. In 2021, the U.S. SPR were updated to include self-administration of subcutaneous DMPA, stating that DMPA-SC is a user-controlled method with the potential to increase access to contraception and improve reproductive autonomy [48]. The authors of a small implementation study conducted in California found that 37% of DMPA-IM users were interested in self-administration, but only 21% successfully self-injected DMPA-SC [49]. The authors of a recent commentary reported that most of their patients interested in DMPA-SC faced delays or were unable to access the method at all due to pharmacies not stocking it and higher out-of-pocket costs [50]. They posited that these access barriers exist because DMPA is unpopular among healthcare professionals, who may therefore not see the benefit of advocating to increase access to this method. The Society of Family Planning recommends the following:

- Offer patients who are current DMPA users or who are interested in starting DMPA the option of self-administered DMPA-SC in the context of shared decision-making. This method is safe for anyone who is eligible to use provider-administered DMPA [45]. Counsel patients that self-administration may include administration by partners, friends, family, or community members (or any trusted person who is not a healthcare provider) [49].
- Provide education on how to self-administer DMPA-SC and how to safely dispose of sharps. Online resources including information sheets and videos are available for this purpose. If clinicians prescribe the method during an in-person visit and DMPA-SC is immediately available in the office or clinic, patients can self-administer the first injection with the supervision and teaching of clinic staff. We recommend that offices stock DMPA-SC for this purpose. If DMPA-SC is not immediately available, consider offering DMPA-IM for the first contraceptive dose and prescribing DMPA-SC for the following injections, as there may be delays in obtaining the subcutaneous formulation. If the first self-administered dose is not available immediately, offer a telemedicine follow up visit for live coaching at the time of self-administration.
- Educate clinic or office staff about logistical barriers to accessing DMPA-SC and provide instructions on how to troubleshoot prior authorizations and other potential barriers to access.

Provision of oral emergency contraception. Clinicians can and should assess pregnancy risk during the telemedicine visit and offer emergency contraception (EC) to all persons who do not desire pregnancy. IUDs are the most effective form of emergency contraception, but their insertion requires an in-person visit [51,52]. For patients who are not interested in IUD insertion or who are unwilling or unable to come in for an IUD insertion visit, prescribe ulipristal acetate, which is more effective than oral levonorgestrel [51]. We also recommend advance provision of oral EC for all patients who are using short-acting or barrier contraception.

Prescription of barrier and other peri-coital methods. Clinicians should recommend internal (female) and external (male) condoms as the only options for preventing transmission of sexually transmitted infections, regardless of the chosen contraceptive method.

Other peri-coital methods - the cervical cap, diaphragm, and sponge – are infrequently used but may be of interest to some patients. All are designed to be used with spermicide for maximal efficacy, and some (diaphragm and cap) require a prescription. The FemCap® cervical cap is available in three sizes – small, medium, and large. Although this cap is ideally fitted by a trained clinician, this is not required, and the appropriate size can be inferred from the patient's prior obstetric history: small for nulliparous patients, medium for patients with prior abortion or Cesarean delivery, large for patients with prior vaginal delivery [53]. With a thorough obstetric history clinicians can prescribe this method via telemedicine.

The single size silicone contraceptive diaphragm (Caya®) has largely replaced the original multi-size diaphragm. It is a "one-size fits most" device that does not require a pelvic examination for fit-

ting and is therefore well suited for prescription via telemedicine [54].

The contraceptive sponge (TodaySponge®) is a single-use device that is impregnated with spermicide and is available over the counter. In the U.S., access to the sponge is currently limited by supply chain disruptions due to the COVID-19 pandemic [55].

Spermicide is also available in gel, cream, film, and foam products, all of which can be used in combination with condoms and purchased without a prescription in pharmacies or online.

A new, prescription-only vaginal pH regulator gel (Phexxi ®) is available that works by creating an acidic environment that immobilizes sperm. This method has few contraindications [56].

Clinicians can use telemedicine to prescribe any of these methods to interested patients. Video visits with pelvic models can help in counseling patients about how to insert diaphragms and cervical caps. Online videos and other resources are also available through the manufacturers and other websites. Some patients may require prescriptions even for the methods that are over the counter to facilitate insurance coverage or flexible spending account reimbursements.

Counseling about fertility-awareness based methods. During telemedicine visits, clinicians can explain to interested patients how to use these methods, with or without additional visual aids.

Counseling prior to LARC insertion, removal, or replacement. Telemedicine visits are ideal for counseling patients about the risk and benefits of procedures including LARC insertion, removal, or replacement. A survey of family planning providers at the beginning of the pandemic found that many respondents saw telemedicine as advantageous because counseling patients before procedures shortened subsequent in-person visits [33]. We recommend using technology to sign procedure consent forms electronically where possible, such that in-person visits for actual procedures are shorter and require no exchange of pens and paper. This requires setting up a system for electronic signatures and forms.

Consultation for permanent contraception. Similarly, telemedicine visits are suitable for counseling patients about permanent contraception via tubal ligation or salpingectomy, or via vasectomy. However, state consent forms for sterilization still require patient signatures and neither CMS nor state Medicaid agencies have made any provisions to allow for oral consent or electronic signature during the COVID-19 pandemic [57]. Until such provisions exist, publicly insured patients will need to come for short in-person visits to sign sterilization consents at least 30 days prior to the scheduled surgery, or they can receive the forms by e-mail or mail then return them in the same format. Provide clear instructions for signature if patients are signing forms remotely and returning them.

Counseling about IUD self-removal. In a nationally representative survey conducted in July of 2020, 51% of OB-GYNs reported that they used telemedicine to prescribe oral contraceptive pills, but only 2% counseled patients on the option of IUD self-removal [26]. A qualitative study of internet forums reported that some IUD users were already considering self-removal prior to the COVID-19 pandemic, at least in part because of difficulties in accessing providers for removals [58]. A survey administered to 602 patients seeking abortion in six U.S. clinics found that 25% of respondents would be more willing to try a hypothetical IUD if they could remove it themselves [59]. A prospective study enrolled 326 patients who were seeking IUD discontinuation from five U.S. health centers and found that 59% were willing to try self-removal, but among those who tried, only 20% were successful [60]. There were no reported adverse events. Other studies have examined online content on IUD self-removal on forums and videos, and found that users overwhelmingly report positive experiences with IUD self-removal on online forums [61,62]. Considering this evidence, we recommend counseling persons who are seeking IUD discontinuation about the option of self-removal. This strategy appears to be safe though not always effective, and clinicians should counsel patients that their attempt may fail. Coaching patients through IUD self-removal via phone or video is an option, though no studies have evaluated whether this results in a higher rate of successful IUD self-removals.

Evaluation & potential management of contraceptive issues or side effects. Many other contraceptive issues, including contraceptive side effects, can also be evaluated, and sometimes managed, via telemedicine. Encourage patients who report concerning symptoms or symptoms that cannot be fully evaluated or managed via telemedicine to come in for in-person visits. Advise patients who report a change in bleeding pattern or other symptoms that may be related to pregnancy to take a home pregnancy test. Unscheduled bleeding, for example, is one of the most common side effects of many contraceptives; once pregnancy is excluded, this can be managed medically (either hormonally or with NSAIDs) [46].

4. *How can clinicians ensure patient privacy and confidentiality when providing contraceptive care via telemedicine?*

Conducting office visits in rooms behind closed doors easily guarantees patient privacy and confidentiality. During telemedicine visits it may be more complicated to guarantee these rights, but it is important to do so. Clinicians should conduct telemedicine visits at their clinic, office, hospital, or home in a room where no other people can hear or see the patient, unless the patient has explicitly consented to the presence of another person at the visit. Patients may join telemedicine visits from their homes or from other locations, including public ones. A study of patient experiences with telemedicine for contraceptive counseling at the beginning of the COVID-19 pandemic, for example, showed that 81% were at home during their virtual visits, but 15% of them were at work [37].

Ensure that the patient feels comfortable discussing sensitive topics in that moment and at that location. For patients who reside in small or overcrowded housing, or who are home alone with children, it may be challenging to find a private location even within their homes. To enquire about privacy in particular situations, ask whether other people are in the same room or within earshot. Patients may find that audio-only visits allow for more privacy, and if requested, clinicians should agree to conduct such visits. When using audio alone and another person is within earshot, it is prudent to phrase sensitive questions in terms of yes or no answers. These strategies may be particularly helpful with adolescent patients [63].

5. *How should clinicians assess pregnancy risk via telemedicine?*

Use a standardized approach to be reasonably certain that a patient is not pregnant prior to prescribing contraception, in line with the U.S. SPR [46] – see Box 1. Urine pregnancy testing is not required for all patients, but it is for those who may be pregnant. Patients in this category who are accessing contraceptive care remotely can take a urine pregnancy test at home. If pregnancy cannot be excluded based on timing, counsel patients about the risk of pregnancy and the potential risks of initiating contraception while pregnant. In general, the benefits of initiating contraception outweigh the potential risks, even when pregnancy cannot be excluded [46]. Patients who choose to initiate a method in these circumstances should repeat a home pregnancy test in 2-4 weeks.

6. *How can clinicians, hospitals and clinics ensure equitable access to telemedicine services?*

Utilization of telemedicine is lower in certain demographic groups [64]. One analysis of telemedicine visits in primary care found that older patients and low-English proficiency patients were less likely to use telemedicine; and that Black, Latinx, and

A health care provider can be reasonably certain that a woman is not pregnant if she has no symptoms or signs of pregnancy and meets any one of the following criteria:

- is ≤7 days after the start of normal menses
- has not had sexual intercourse since the start of last normal menses
- has been correctly and consistently using a reliable method of contraception
- is ≤7 days after spontaneous or induced abortion
- is within 4 weeks postpartum
- is fully or nearly fully breastfeeding (exclusively breastfeeding or the vast majority [≥85%] of feeds are breastfeeds), amenorrheic, and <6 months postpartum

Box 1. How to be reasonably certain that a woman is not pregnant
Source: Centers for Disease Control and Prevention (2016). How to be reasonably certain that a woman is not pregnant. Available from: https://www.cdc.gov/reproductivehealth/contraception/mmwr/spr/notpregnant.html. Accessed April 1, 2022.

poorer patients had less video use [65]. A study of pediatric visits reported similar findings, with Black, Latinx and low-English proficiency patients having fewer telemedicine visits, and publicly insured patients being less likely to access video visits [66].

Hospitals and clinics should ensure that all patients are aware of the telemedicine services offered at that site. Schedulers should offer telemedicine as an option to all patients regardless of age, disabilities, or primary language, and allow patients to select their preferred type of telemedicine visit (audio-video versus audio-only). Telemedicine platforms should be easy to use and accessible from handheld devices, as many patients use smartphones to access telemedicine visits. In a survey study of telemedicine for contraceptive counseling at the beginning of the pandemic, 94% of respondents used a smartphone to access the telemedicine visit [37].

2.2. In-person contraceptive services during the pandemic

1. *Which contraceptive visits require an in-person appointment?*

Telemedicine is not suitable for all contraceptive services. Prior to scheduling an in-person visit, it is appropriate to counsel patients about the risk of COVID-19 exposure associated with any in-person visit to a healthcare clinic or office. It is also appropriate to enquire about vaccination status and remind patients that the risk of infection is higher for those who are unvaccinated [67].

The following contraceptive services typically require a face-to-face visit:

LARC insertion. Schedule patients who desire an intrauterine device (IUD) or contraceptive implant for an in-person visit without delay. This is true even in the context of high community transmission rates if another method is not available or acceptable to the patient. Expedite appointments for IUD insertion for emergency contraception. Offer IUD or implant placement immediately after abortion, management of early pregnancy loss, or vaginal or cesarean delivery to reduce the need for additional in-person visits.

LARC removal. For most patients, LARC removal requires an in-person visit. Patients with IUDs can be counseled about attempting self-removal (see above), but this is not always successful. We do not recommend self-removal of contraceptive implants. Content on implant self-removal exists online, but only case reports have described this in in the scientific literature, and there are no data on safety or efficacy [68]. One possible concern is the lack of aseptic technique potentially leading to infection [69].

Symptoms concerning for ectopic pregnancy. Patients who report a positive pregnancy test and vaginal bleeding or pelvic pain should have an immediate in-person visit with pelvic exam and serum labs with pelvic ultrasound if indicated. This also applies to any patient who is pregnant with an IUD in situ.

Suspected IUD expulsion or non-palpable implant. For asymptomatic patients, prescribe EC if indicated and counsel about using a different form of contraception, such as condoms or a short-acting method until an in-person visit is possible. Severe symptoms require an immediate visit. Mild symptoms that are not bothersome (such as missing IUD strings or non-palpable implant) can be delayed if there is no concern for pregnancy, and if a patient is willing to use an alternate method of contraception or accepts the risk of contraceptive failure.

Administration of DMPA-IM. Counsel patients who desire DMPA about the subcutaneous (SC) formulation (see above). Patients who prefer the intramuscular (IM) formulation or who are delayed in obtaining or unable to get the SC one, need an in-person visit without delay. Telemedicine consult visits prior to the injection visit are an option to shorten the injection visit duration and limit exposure. According to the U.S. SPR, DMPA can be given at intervals of up to 15 weeks, thus injections can be delayed if needed [46].

For patients who require any of the services outlined above, consider hybrid visits, in which the counseling and informed consent process occur virtually and only the procedure occurs in the clinic. This decreases face-to-face time and thus viral exposure. Table 2 summarizes the services that are suitable for telemedicine and those that typically require an in-person visit.

2. *Which precautions should clinicians take while providing in-person contraceptive care during the COVID-19 pandemic?*

Leaders at every clinical site that provides contraceptive care should remain up to date on the ongoing COVID-19 pandemic and should establish a COVID-19 community transmission rate threshold beyond which the site will transition to providing only essential face-to-face care (see above). Follow CDC, state, and local guidelines for healthcare workers in terms of COVID-19 vaccinations, including booster doses [70–74]. Follow CDC guidelines for healthcare workers and healthcare facilities in terms of personal protective equipment [75]. Some emerging variants may be more infectious than others and may require changes in PPE protocols [76].

3. *How should clinicians address requests for LARC removal and/or replacement?*

Offer patients who desire LARC removal an in-person visit without delay. If COVID-19 community transmission rates are medium or high, counsel patients about the risk of exposure associated with an in-person visit but allow them to schedule such visits if they desire prompt LARC removal. Telemedicine is an option for

Table 2
Summary of contraceptive services that are suitable for telemedicine visits, versus services that typically require in-person visits

Contraceptive services that are suitable for telemedicine provision	Contraceptive services that typically require in-person visits
Counseling about IUD self-removal; video or telephone coaching for IUD self-removal	IUD removal (if patient is unable to or unwilling to attempt self-removal)
Prescription (initiation or continuation) of oral contraceptive pills, transdermal patch, or vaginal ring	Implant removal
Provision of oral emergency contraception	Implant or IUD insertion
Prescription (initiation or continuation) of self-administered subcutaneous depot medroxyprogesterone acetate (DMPA-SC), possible video coaching for DMPA-SC self-administration	Administration of DMPA-IM
Prescription of barrier and other peri-coital methods (including diaphragm, spermicides, contraceptive sponge, condoms, vaginal pH regulator gel)	Symptoms concerning for ectopic pregnancy, including pregnancy with IUD in situ
Counseling prior to IUD and implant insertion, removal, or replacement, including counseling about extended use of IUDs and implants	Suspected IUD expulsion or non-palpable implant (if symptomatic and/or if there is concern for pregnancy)
Evaluation and potential management of some contraceptive issues or side effects (eg. Heavy or unscheduled bleeding)	Some contraceptive issues or side effects (if severe symptoms)
Consultation for permanent contraception	Initiation of permanent contraception
Contraceptive counseling, including counseling about fertility-awareness based methods	

DMPA-SC: depot medroxyprogesterone acetate – subcutaneous. IUD: intrauterine device.
DMPA-IM: depot medroxyprogesterone acetate – intramuscular.

counseling on discontinuing a method, reviewing the necessary procedures, and assessing for ongoing contraceptive needs after LARC discontinuation. Counsel patients who desire LARC replacement because their devices are approaching their FDA-approved durations about extended use.

For the **Copper TCu380A (Paragard) IUD**, use beyond 10 years is supported by multiple studies [77–79]. Patients who had the device inserted between age 25 and 34 can use it safely up to 12 years [77,78]; those who had it inserted at 35 or older can leave it in place until menopause [80]. On the other hand, those who had the device inserted before age 25 should have it replaced after 10 years as fertility is higher at younger ages.

The **levonorgestrel 52 mg IUDs** can be used up to seven years. The Mirena is FDA-approved for seven years, while the Liletta is approved for six years but can be used safely up to seven years [79]. The LNG 19.5 (Kyleena) and 13.5 (Skyla) IUDs are approved for five and three years, respectively, and there is no evidence supporting extended use beyond the FDA-approved duration [80].

The etonogestrel implant is FDA-approved for three years of use, but data support its use for up to five years [81,82].

We recommend counseling patients about extended use of these devices. Explain the difference between the initial approval data and subsequent studies where relevant. Patients who are not interested in extended use and request an in-person appointment should be accommodated.

2.3. Contraceptive care for individuals with suspected or confirmed COVID-19 infection

1. *How should patients be screened for COVID-19 prior to in-person contraceptive visits?*

Patients with active COVID-19 infection should not come to any outpatient clinical site as they pose a risk of infection for clinical staff and other patients. To avoid this scenario, office or clinic staff should screen every patient scheduled for an in-person visit for COVID-19 infection. This can be done electronically (via e-mail or text) or via phone, prior to the patient's arrival at the clinical site. The questionnaire should ask about:

- Symptoms experienced in the past 48 hours – present an exhaustive list including fever or chills; cough; shortness of breath; fatigue; muscle or body aches; headache; new loss of taste or smell; sore throat; congestion or runny nose; nausea or vomiting; diarrhea [83]
- History of positive COVID-19 test in the last ten days
- Exposure to someone with laboratory-confirmed COVID-19, defined as close contact within 6 feet for 15 minutes or longer without PPE
- Patient vaccination status, including booster status and time from last mRNA vaccine dose

2. *What is the appropriate management for patients who are seeking in-person contraceptive care and who screen positive for suspected COVID-19 infection?*

Patients who screen positive due to symptoms, positive COVID-19 test, or exposure should postpone outpatient visits. Encourage patients who have symptoms or exposure to get tested for COVID-19. Refer patients who were scheduled for an office visit for an urgent clinical issue to an emergency room instead, unless the office or clinic has a separate clinical space where patients can be examined while being isolated from other patients, and adequate PPE for all staff that interacts with the patient. Postpone other visits until the quarantine or isolation periods end. Quarantine and isolation guidelines depend on patient vaccination and booster status, and CDC guidelines may change as the pandemic evolves [84]. Outpatient practices should follow the latest CDC or local health department guidelines regarding required quarantine periods after exposure or isolation periods after confirmed infection.

3. *What are contraceptive considerations for individuals with active or recent COVID-19 infection?*

Individuals with COVID-19 have coagulation abnormalities that create a hypercoagulable state. This results in a high incidence of venous and arterial thrombosis. Since the beginning of the pandemic, clinicians have reported that the incidence of venous thromboembolism in hospitalized patients with COVID-19 is high, particularly in ICU patients, and even among those who are receiving anticoagulation [85–89]. Although this incidence appears to have decreased later in the pandemic in the context of improved treatment, it remains high. Current guidelines recommend that all patients admitted to the hospital for COVID-19 receive prophylactic dose anticoagulation [90]. Patients who are discharged from the hospital do not need to continue anticoagulation unless they have a documented history of thromboembolic event or additional risk factors [91].

Limited data are available about the incidence of thrombotic events in COVID-19 patients who are not admitted to the hospital. One retrospective study of 72 outpatients with COVID-19 pneumonia who presented to the emergency room and were referred

for CTPA found that 18% had a pulmonary embolism [92]. Current guidelines do not recommend routine thromboprophylaxis for outpatients; however, it can be considered for high-risk individuals [91].

Data are lacking with regards to the proportion of reproductive-aged individuals with COVID-19 affected by venous and arterial thrombosis, and to the effect of hormonal contraceptives on the incidence of thrombotic events. Users of combined hormonal contraceptives also have a three to four times increased risk of venous and arterial thrombosis compared to nonpregnant individuals who are not using CHCs [93]. In contrast, VTE risk is increased at least four times during pregnancy and as much as 20 times during the postpartum period [94]. VTE risk among CHC users is concentrated in higher risk individuals, such as those who are obese or who smoke [95,96]. Older age also increases the risk of VTE in the general population [97].

Given that both CHCs and COVID-19 are thrombogenic, there is a theoretical increased risk of thrombosis among CHC users who are infected with COVID-19. However, this risk must be balanced against the known increased risk of thrombosis associated with pregnancy and the postpartum period, as well as with other medical and social risks of unplanned pregnancy.

Patients hospitalized due to COVID-19: We recommend suspending use of CHCs for patients who are hospitalized due to complications of COVID-19 infection. Patients can resume CHCs after recovering from COVID-19 unless they have new comorbidities or risk factors that would preclude their use (eg. Prolonged immobilization, history of VTE). Progestin-only contraceptive methods do not pose additional thromboembolic risk and should be continued when possible [98,99]. These methods may be an alternative option for those previously using CHC and with recent severe COVID-19 symptoms. Discontinuation of progestin-only methods other than the levonorgestrel-containing IUDs is indicated in critically ill patients with liver failure or markedly elevated liver function tests [100].

Patients with known COVID-19 infection who are asymptomatic or with mild symptoms: CHC continuation is reasonable in this population. Discuss the theoretical increased risk of thromboembolism among CHC users with COVID-19 and use caution in patients with prolonged immobilization from longer COVID-19 disease courses. If patients desire CHC discontinuation, offer progestin-only or non-hormonal methods.

4. *What are contraceptive considerations for patients who take novel COVID-19 antiviral medications?*

The FDA recently authorized the antiviral oral medication Paxlovid to be used for five days by people 12 and over with mild to moderate COVID-19 infection who have underlying conditions that increase their risk of hospitalization and death [101]. Paxlovid (nirmaltrevir/ritonavir) is an inhibitor of CYP3A. The FDA fact sheet states it may decrease the concentration of ethinyl estradiol in combined hormonal contraceptives, and that CHC users should use a back-up method [101]. However, the National Institutes of Health COVID-19 Treatment Guidelines state that any drug interactions between Paxlovid and CHCs are not expected to be clinically significant during the five days of treatment, as the progestin concentration is not affected and maintains the methods' effectiveness [102].

No studies have evaluated drug interactions between Paxlovid and hormonal contraceptives. Drug interaction studies of HIV antiretrovirals boosted with ritonavir have shown a decreased ethinyl estradiol concentration in CHC users [103–106] but no interactions [107] or even increased bioavailability [108,109] with progestin-only methods. None of the studies demonstrated a decreased efficacy of any hormonal method.

Based on this information, we recommend informing CHC users who take a course of Paxlovid that although there is a theoretical concern for a drug interaction with these methods, this is unlikely to decrease contraceptive effectiveness. Use of a back-up method during treatment can be considered but is not required. This concern does not apply to progestin-only methods as their efficacy is not likely to be altered by the drug.

The FDA has also recently released an emergency use authorization for a second oral antiviral medication for adults with mild-moderate COVID-19: molnupiravir. The FDA fact sheet does not list any known drug interactions for this medication [110].

2.4. Permanent contraception and other procedures requiring operating room settings

1. *How should patient requests for permanent contraception during the COVID-19 pandemic be addressed?*

Postpartum setting. Many pregnant persons who desire postpartum tubal ligation or salpingectomy do not actually undergo the procedure during their hospital admission for childbirth, and repeat pregnancy rates among those with unfulfilled requests are as high as 50% [111–114]. Reasons for unfulfilled requests include invalid consent forms, medical conditions, and lack of operating room availability [115]. In this context, the American College of Obstetricians & Gynecologists states that postpartum tubal ligation or salpingectomy is an urgent surgical procedure, and that hospitals should establish policies and procedures to reduce cancellations [111]. We recommend prioritizing access to postpartum permanent contraception regardless of COVID-19 community transmission rates. Postpartum tubal ligation or salpingectomy at the time of Cesarean delivery adds minimal intraoperative time and should be performed as planned. Tubal ligation or salpingectomy after vaginal delivery requires a separate procedure in the operating room but adds little risk of additional COVID-19 exposure for patients. Further, these procedures do not typically require intubation and therefore do not cause additional exposure for clinicians. Where patients are tested for COVID-19 on admission to labor and delivery, provide permanent contraception after vaginal or Cesarean delivery regardless of the patient's COVID-19 status as long as appropriate PPE is available for all clinical staff.

Non-postpartum setting. Interval tubal ligation or salpingectomy is an elective procedure and clinicians should schedule these cases according to hospital guidelines for elective procedures. These guidelines should take into consideration local COVID-19 community transmission rates, staffing limitations, and availability of PPE. Hospitals should implement routine COVID-19 testing for patients scheduled for surgical procedures, and postpone elective procedures if patients test positive to reduce COVID-19 exposure for staff and preserve PPE. Surgeries that require intubation and extubation pose a higher risk of exposure to staff as these are aerosolizing procedures [116]. Surgical smoke may also be aerosolized during laparoscopy and pose additional transmission risks [117]. Offer alternate contraceptive methods to patients who desire permanent contraception at a time where elective procedures cannot be scheduled, or whose surgery is postponed due to COVID-19 infection.

2. *Should other operating room procedures for contraceptive care be performed during the COVID-19 pandemic?*

Patients who are already having an operating room procedure should continue to have access to IUD or implant placement if desired (eg, postabortion contraception). For patients who require an OR setting for IUD or implant placement or removal in the absence of severe symptoms or of any other procedure, schedule these elective procedures according to hospital policies about elective procedures (see above). Offer alternative effective contraception until these patients can have their IUD or implant placed.

3. Clinical recommendations

Please see Appendix 1 and Table A1 for a key to interpreting GRADE.

The following recommendations are based primarily on low quality evidence and expert opinion:

- Telemedicine can be used to provide many aspects of contraceptive care. (GRADE 1C)
- Both audio-video and audio-only visits are acceptable forms of telemedicine and clinicians may use them to provide contraceptive care according to patient preference. (GRADE 1C)
- Hospitals should maintain access to permanent contraception, especially in the immediate postpartum period. (GRADE 1C)
- CHC users who have asymptomatic or mild COVID-19 infection may continue their contraceptive method. (GRADE 1C)
- CHC users who are admitted to the hospital with severe COVID-19 infection should suspend CHC use until they are clinically recovered. (GRADE 1C)
- CHC users who take Paxlovid for mild-moderate COVID-19 infection can consider back-up contraceptive method use for the five-day duration of therapy but this is not required. (GRADE 2C)

4. Recommendations for future research

- Prospective trials examining the contraceptive choices and outcomes following contraceptive care provided via telemedicine.
- Studies examining access to telemedicine among historically excluded populations – including adolescents, people of color, people of low socioeconomic status, disabled people, or people who do not speak English as a primary language.
- Epidemiologic studies examining thromboembolic events among COVID-19 patients who are users of combined hormonal contraception.
- Pharmacokinetic studies examining drug interactions between Paxlovid and hormonal contraceptives.

5. Sources

To prepare this guideline, we searched PubMed and the grey literature, including news reports.

6. Intended audience

This clinical recommendation is intended for Society of Family planning members and for any physicians or advanced-practice clinicians who provide contraceptive care. We wrote this document primarily for clinicians in the United States, but its recommendations can be applied in other settings. The purpose of this document is to review the literature and provide expert opinion on the provision of contraceptive care in the context of the COVID-19 pandemic. This set of recommendations should guide clinicians in their medical decision making but is not intended to dictate clinical care.

Author contribution

BS conducted background research and drafted the initial version of this document. LB drafted the initial version of the interim clinical recommendations document. LB, TM, EM, JT and GM provided feedback on the document. The Society of Family Planning Clinical Affairs Committee reviewed this document and approved its final version.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.contraception.2022.05.006.

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