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Contraceptive Availability During an Emergency Response in the United States

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Abstract

This article provides the evidence for contraceptive need to prevent unintended pregnancy during an emergency response, discusses the most appropriate types of contraceptives for disaster situations, and details the current provisions in place to provide contraceptives during an emergency response.

The impact of a disaster on women's access to reproductive health services is not fully known. Limited evidence indicates that many women have difficulty accessing contraception during a disaster situation. At the same time, the need for such services may be heightened during a mass emergency. Stress caused by a disaster can create comfort-seeking behaviors, which can lead to unprotected sexual encounters.[1] Additionally, disasters may create social disruptions that reduce women's personal safety and protection from sexual violence.[2,3] Contraception is an important consideration in disasters for both victims and first responders. This document outlines the evidence for contraceptive need to prevent unintended pregnancy during emergencies and the most appropriate types of contraceptive availability in such situations.

Why Contraceptives are Needed in Disasters

Few studies have examined the impact of a disaster on women's access to reproductive health services; however, studies that do exist have found many women have difficulty accessing contraception during a disaster situation. Before Hurricane Katrina devastated the U.S. Gulf Coast in 2005, it is estimated that more than one million women of reproductive age (15–44 years) resided in the affected area.[4] Women participating in a vaginal douching prevention study conducted at two family planning clinics in New Orleans before Hurricane

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Katrina were contacted 5–6 months after the hurricane and interviewed to assess their sexual behavior and access to reproductive healthcare services.[5] Fifty-five of 164 women were located. Since evacuating, 86% of the 55 women had lived in three or more places, and 40% had not used birth control, compared with 11% prior to evacuation. Whereas all of the women were obtaining family planning services prior to evacuating, only 40% had attended family planning services after evacuating, and 31% of the 55 women reported having trouble getting birth control. Two women (4%) reported having an unintended pregnancy as a result of lack of access to health care.[5] Another study examined women's access to various types of contraception following Hurricane Ike in the Gulf Coast region of the United States in 2008.[6] Of 975 women using contraception before the hurricane, 13% reported difficulty in obtaining contraception following the hurricane. Race and evacuation from primary residence were significantly associated with lack of access to contraception. Black women had more difficulty compared to white and Hispanic women (odds ratio [OR] 2.25, 95% confidence interval [CI] 1.37–3.73), and were significantly more likely to report being unable to get their injectable contraceptive on time or were unable to get an appointment for their injectable contraceptive. Those who evacuated were more likely to have barriers to contraceptive access (OR 2.17, 95% CI 1.27–3.72).[6]

In a study of 450 married women affected by the 2006 tsunami in Yogyakarta, Indonesia, 81% reported using a modern contraceptive method before the tsunami, primarily injections, followed by intrauterine devices (IUDs) and contraceptive pills.[7] Eleven percent of women reported difficulty in accessing contraception after the disaster. Furthermore, use of more effective methods of contraception, specifically injectables and implants, decreased, and use of pills increased, presumably due to damages to infrastructure (e.g., many health facilities providing injections were heavily damaged) and decreased access to nurses and midwives who deliver these products. The prevalence of unplanned pregnancy was 5.9% among the cohort, and was significantly higher among those who had difficulty obtaining contraception (13.2% vs. 4.9%). There were no unplanned pregnancies among women who used the same method before and after the tsunami or in women who switched from a contraceptive method with a high failure rate to a method with a low failure rate.[7]

These studies indicate that disasters disrupt availability of contraceptives and access to family planning services, which may lead to increased rates of unplanned pregnancy. This evidence underscores the need to ensure availability of contraception in such situations. In 2011, the Pan American Health Organization (PAHO) issued an urgent call to include reproductive healthcare in emergency situations.[8,9] The PAHO Recommendations for Contraceptive Care in Emergencies (Appendix 1) may offer a useful framework for the United States.

Contraceptive Type

The use of injectable contraceptives is recommended during emergency situations by PAHO because injectable contraception confers long protection (at least 3 months) and administration is likely more feasible in emergencies than that needed for longer acting reversible methods. However, women who use injectable contraception have reported barriers to access and delivery of their contraception during a disaster.[6,7] Given that

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injectable contraceptives are administered by a health care provider while oral contraceptives are self administered, and the fact that injectable contraception is not widely used in the United States,[10] oral contraceptives may be more acceptable to many women than injectable contraception during a disaster in the United States, even though the need for pills to be taken daily could be difficult in an emergency.

In addition to unintended pregnancy risk, women (and men) in disaster settings may also be at higher risk for sexually transmitted infections (STIs), including HIV.[9] Again, evidence from disaster situations is scant. Availability and distribution of latex condoms should be promoted among both men and women during a disaster response,[8] as when used consistently and correctly they offer dual protection against both STIs and unintended pregnancy.

Few studies have examined the incidence of sexual assault and rape during disasters and emergency response in the United States. It has, however, been well documented that refugees are vulnerable to crimes, especially sexual violence.[11] In a qualitative study of rape following Hurricane Katrina, it was found that at each phase of the disaster, conditions and opportunities existed for the victimization, particularly sexual assaults, of women.[12]

Given the expected interruptions in the supply and use of regular contraception and family planning services and the potential for sexual violence incidents, emergency contraception should be accessible to women in emergency situations, including emergency responders. PAHO estimates that 1% of women of childbearing age will require emergency contraception.[8] It is preferable to have a dedicated oral emergency contraception product available that is a levonorgestrel-only formulation, which has fewer side effects and greater effectiveness than combined oral contraceptives (containing both estrogen and a progestin).[13,14] However, combined oral contraceptives may also be used as emergency contraception if necessary (see Table 1 for converting 19 brands of oral contraception to emergency contraception).

Current Situation

The Strategic National Stockpile (SNS) maintains large quantities of pharmaceutical agents, vaccines, medical supplies, and equipment to support state and local resources during a large-scale disaster or bioterrorism event.[15] Currently, there are no provisions or guidance to provide contraception in an emergency situation as part of the SNS, as it is not configured for inclusion of medications for chronic diseases or conditions. Contraceptives could be sourced through the SNS's procurement partners at the time of an event and be delivered as part of the support provided to affected populations to supplement local supplies during a disaster. Additionally, Federal Medical Stations (FMS), which are deployable medical facilities that can be setup as a non-acute care shelter within an existing building or structure during a disaster response, could dispense contraception to women during a disaster.[16] The FMS have a pharmacy module with enough medications to support 250 individuals for 72 hours, mostly consisting of chronic disease medications. Additional medications can be resupplied by the Department of Health and Human Services Incident Response Coordination Team (IRCT). Currently, the reproductive health supplies of the FMS include

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condoms, folic acid, pregnancy test kits (urine one-step single), prenatal vitamins and three types of combined oral contraceptives (personal communication, S. Gorman, Centers for Disease Control and Prevention Division of Strategic National Stockpile).

Many unintended pregnancies occur during lapses in contraceptive use, so it is important that a woman has continued contraceptive coverage and critical for providers and women to understand instructions for use so that women adhere to them. If a woman needs to switch contraceptive methods during a disaster situation due to non-availability of her current method, standard recommendations for switching to a new method should be followed, which generally allow for immediate switch to the new method if a woman has been using her prior method correctly and consistently. If an oral contraceptive user has missed pills, she should follow recommendations for missed pills, which generally include instructions to abstain from sex or to use additional contraceptive protection (e.g., condoms) until she has taken pills for 7 consecutive days. She should also be offered emergency contraception as appropriate. If a depot-medroxyprogesterone acetate (DMPA) user has missed the time for her next injection, she should follow recommendations for late reinjection or starting a new method and be offered emergency contraception as appropriate. When switching to a new method, the woman should be counseled in the same way as a new user and be informed about how to use the method, potential side effects such as irregular bleeding, when/where to return for resupply of pills or reinjection of DMPA, and whom to contact about questions and problems. Additional guidance on starting and switching contraceptive methods can be found in the package insert of the contraceptive method. Individual considerations and contraindications regarding the use of specific contraceptives are detailed in the *U.S. Medical Eligibility Criteria for Contraceptive Use*.[17]

Conclusion

Contraceptive availability to women and men in emergency situations needs to be ensured. Injectable contraceptive methods (DMPA, Depo-Provera) are optimal for a disaster situation because they are highly effective, easy for health care providers to administer, and they provide contraceptive protection for at least 3 months. However, most women in the United States do not have experience using injectable contraceptives and access to providers for injections may be limited in an emergency situation. Most women have current or past experience using oral contraceptive pills,[10] which are self-administered, making this an ideal method to also have available during a disaster situation. Furthermore, since women affected by a disaster may move often in a short period of time,[5] a minimum of a 3-month supply of oral contraceptives should be provided in order to prevent lapses in contraceptive coverage. A dedicated emergency contraception (e.g., Plan B One-Step, Next Choice, or Ella) should also be available for distribution during an emergency response, with an estimate that 1% of women of reproductive age will require them.[8] Lastly, latex male condoms should be made available and directly promoted to both men and women, as they provide dual protection against both STIs and unintended pregnancy when used consistently and correctly. As systems are designed and implemented to ensure availability and provision of contraceptive services in emergencies, careful monitoring will be needed to identify optimal approaches for contraceptive storage, counseling, and delivery, with recognition that such approaches may vary according to specific characteristics of the emergency.

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Appendix 1

Pan American Health Organization Recommendations for Contraceptive Care in Emergencies

1. Identify current needs, conditions, and availability of contraceptive stocks by type and quantity, safe storage mechanisms, expiration dates, and resources for distribution to users. It is necessary to know if supplies are available in neighboring regions of the country, which could be drawn on rapidly and sent to consumption points.
2. Include emergency contraceptives in the supplies to distribute. The interruption or suspension in the supply and regular use of contraceptive methods, and the increase in sexual violence incidents make it crucial that women have access to emergency contraceptives. As a starting point, it is recommended to estimate that 1% of women of childbearing age will require them.
3. Confirm the availability and distribution of latex condoms. The use of condoms should be promoted directly among both men and women in order to contribute effectively to the prevention of unwanted pregnancies, and to reduce the risk of sexually transmitted diseases.
4. Maintain the ongoing delivery of oral and injectable hormone-based contraceptives and barrier methods to users. It is important to review the physical condition of contraceptive supplies before distributing them.
5. Promote the use of injectable methods. During the emergency stage, the use of injectable contraceptives (preferably) is recommended, in view of the limited availability of water to clean and disinfect devices and medical equipment utilized for insertion of intrauterine devices, tubal ligations, and vasectomies.
6. Insofar as is possible, establish obstetric/gynecological health care services in the shelters and temporary refuges, with trained staff.
7. Conduct information and education sessions in the temporary shelters and refuges, and other public places, geared toward men and women of childbearing age, with regard to sexuality, sexual and reproductive rights, and shared responsibilities in the prevention of unwanted pregnancies.
8. Prepare and disseminate protection-driven messages directed to the general population on how to prevent health risks and obtain basic services relating thereto.
9. Ensure the availability, at all times, of educational supplies concerning the reproductive health actions that the population should carry out in emergencies so that, in the event of need, these can be drawn on for health promotion activities.

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Table 1

Oral Contraceptives that Can be Used for Emergency Contraception in the United States

Brand	Company	First dose[a]	Second dose[a] (12 hours later)	Ulipristal Acetate per dose (mg)	Ethinyl Estradiol per dose (μg)	Levonorgestrel per dose (mg)[b]
Ulipristal acetate pills						
ella	Watson	1 white pill	None[a]	30	-	-
Progestin-only pills						
Levonorgestrel Tablets	Perrigo	2 white pills	None[a]	-	-	1.5
Next Choice	Watson	2 peach pills	None[a]	-	-	1.5
Next Choice One Dose	Watson	1 peach pill	None	-	-	1.5
Plan B One-Step	Teva	1 white pill	None	-	-	1.5
Combined progestin and estrogen pills						
Altavera	Sandoz	4 peach pills	4 peach pills	-	120	0.60
Amethia	Watson	4 white pills	4 white pills	-	120	0.60
Amethia Lo	Watson	5 white pills	5 white pills	-	100	0.50
Amethyst	Watson	6 white pills	6 white pills	-	120	0.54
Aviane	Teva	5 orange pills	5 orange pills	-	100	0.50
Camrese	Teva	4 light blue-green pills	4 light blue-green pills	-	120	0.60
CamreseLo	Teva	5 orange pills	5 orange pills	-	100	0.50
Cryselle	Teva	4 white pills	4 white pills	-	120	0.60
Enpresse	Teva	4 orange pills	4 orange pills	-	120	0.50
Introvale	Sandoz	4 peach pills	4 peach pills	-	120	0.60
Jolessa	Teva	4 pink pills	4 pink pills	-	120	0.60
Lessina	Teva	5 pink pills	5 pink pills	-	100	0.50
Levora	Watson	4 white pills	4 white pills	-	120	0.60
Lo/Ovral	Akrimax	4 white pills	4 white pills	-	120	0.60
LoSeasonique	Teva	5 orange pills	5 orange pills	-	100	0.50
Low-Ogestrel	Watson	4 white pills	4 white pills	-	120	0.60
Lutera	Watson	5 white pills	5 white pills	-	100	0.50
Lybrel	Wyeth	6 yellow pills	6 yellow pills	-	120	0.54
Nordette	Teva	4 light-orange pills	4 light-orange pills	-	120	0.60

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Brand	Company	First dose[a]	Second dose[a] (12 hours later)	Ulipristal Acetate per dose (mg)	Ethinyl Estradiol per dose (μg)	Levonorgestrel per dose (mg)[b]
Ogestrel	Watson	2 white pills	2 white pills	-	100	0.50
Portia	Teva	4 pink pills	4 pink pills	-	120	0.60
Quasense	Watson	4 white pills	4 white pills	-	120	0.60
Seasonale	Teva	4 pink pills	4 pink pills	-	120	0.60
Seasonique	Teva	4 light-blue-green pills	4 light-blue-green pills	-	120	0.60
Sronyx	Watson	5 white pills	5 while pills	-	100	0.50
Trivora	Watson	4 pink pills	4 pink pills	-	120	0.50

Source: The emergency contraception website. Available from: http://ec.princeton.edu/questions/dosc.html#dose Accessed January 28, 2013

ella, Plan B One-Step, Next Choice One Dose, Next Choice and *Levonorgestrel Tablets* are the only dedicated product specifically marketed for emergency contraception. The regular oral contraceptives listed above have been declared safe and effective for use as emergency contraceptive pills (ECPs) by the United States Food and Drug Administration. Outside the United States, about 100 emergency contraceptive products are specifically packaged, labeled, and marketed. Levonorgestrel-only ECPs are available either over-the-counter or from a pharmacist without having to see a clinician in 60 countries. In the U.S., *Plan B One-Step, Next Choice One Dose, Next Choice* and *Levonorgestrel Pills* are available over-the counter to women and men aged 17 and older. You can buy these pills by prescription if you are younger. *ella* is available by prescription only.

[a]The labels for *Next Choice* and *Levonorgestrel Tablets* say to take one pill within 72 hours after unprotected intercourse, and another pill 12 hours later. However, recent research has found that both pills can be taken at the same time. All of the brands listed here may be effective when used within 120 hours after unprotected sex, but should be taken as soon as possible.

[b]The progestin in Cryselle, Lo/Ovral, Low-Ogestrel and Ogestrel is norgestrel, which contains two isomers, only one of which (levonorgestrel) is bioactive; the amount of norgestrel in each tablet is twice the amount of levonorgestrel.

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