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Clinical availability of the copper IUD in rural versus urban settings: A simulated patient study ☆,☆☆

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ABSTRACT

Objective: To assess the proportion of Washington state clinics that offer the copper IUD in rural vs urban settings.
Study design: We employed a simulated patient model to survey clinics in the Human Health Resources and Services Administration 340B database to primarily assess the availability of the copper IUD.
Results: We successfully surveyed 194/212 (92%) clinics. More urban than rural clinics reported copper IUD availability (76/97 [78%] vs 49/97 [51%]; $p < 0.01$).
Conclusions: Rural clinics are less likely than urban clinics to have the copper IUD available.
Implications: The frequency of unintended pregnancies is high in the United States. We should focus our attention on decreasing barriers to the copper IUD as a long-acting reversible contraceptive, particularly for women living in rural settings.

1. Introduction

The copper IUD is a reliable, long-acting reversible, nonhormonal contraceptive option for women. It is also the most effective form of emergency contraception (EC), providing 99.9% efficacy when placed within 5 days of unprotected intercourse [1]. A recent simulated patient study showed that only 21% of urban clinics could provide the copper IUD for EC [2]. Women who live in rural areas often have to travel further for reproductive healthcare [3]. We aimed to examine the availability of the copper IUD in rural vs urban clinics in Washington, and, if it was available, additionally explore if the IUD could be placed within 5 days. This additional information was collected to assess availability in a time frame that would allow for its use as EC. We hypothesized that availability of the copper IUD would be more limited in rural vs urban clinics.

2. Materials and methods

We identified 1156 urban clinics and 232 rural clinics listed in the Washington Human Health Resources and Services Administration (HRSA) 340B database [4,5]. We chose this database as clinics must serve primarily indigenous low-income patients, and we wanted to capture availability for this potentially vulnerable population. We classified clinics as urban or rural based on the Office of Management and Budget's assignment of metropolitan or nonmetropolitan, which considers degrees of economic and social integration in addition to population size [6–8]. We categorized clinics into 4 categories: family planning, obstetrics and gynecology (Ob/Gyn), primary care, and multispecialty. We defined family planning as those that predominantly provided abortion and contraception services, such as Planned Parenthood, and differentiated these from Ob/Gyn as we wanted to assess whether there was a difference in IUD availability in general or ability to place within 5 days if available. We defined multispecialty as those that included a combination of specialists in addition to primary care providers. We searched all clinic websites to ensure they provided preventative health services. We excluded clinics if they did not have contact information, were specialty specific, or served only special populations. Out of 232 rural and 1156 urban clinics, we

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Table 1
Call outcomes when inquiring about copper IUD availability at rural vs urban clinics.

	Rural ($n=97$)	Urban ($n=97$)	Total ($N=194$)	p value
Clinic type				0.51
Family planning	14 (14)	14 (14)	28 (14)	
Multispecialty	10 (10)	15 (15)	25 (13)	
OB/GYN	11 (11)	15 (15)	26 (13)	
Primary care	62 (64)	53 (55)	115 (59)	
Copper IUD availability				< 0.01
Available within 5 days	10 (10)	22 (23)	32 (16)	
Not available within 5 days but available in a single visit	7 (7)	9 (9)	16 (8)	
Not available within 5 days and requires 2 visits	32 (33)	45 (46)	77 (40)	
Not available	43 (44)	13 (13)	56 (29)	
Uncertain availability	5 (5)	8 (8)	13 (7)	
Oral emergency contraception availability				
Levonorgestrel	60 (62)	62 (64)	122 (63)	0.51
Ulipristal acetate	55 (57)	54 (56)	109 (56)	0.10
Same-day availability of any oral EC	29 (30)	21 (22)	50 (26)	0.17
Referred to another clinic	53 (55)	48 (50)	101 (52)	0.14
Referred to planned parenthood	17 (18)	24 (25)	41 (21)	0.22

EC, emergency contraception; IUD, intrauterine device.
Data presented as n (%).
We used chi-square tests for these analyses.

determined that 116 rural clinics and 677 urban clinics were eligible. We then randomized both clinic lists using a random number generator in Excel and called them in order until we reached our desired sample size.

We collected data using a simulated patient method. A single-trained researcher called clinics using a standardized script, which is shown in Supplementary Appendix 1. The researcher first asked if the copper IUD was available, and if it was, asked if it could be placed within the next 5 days. The researcher spoke to the first person who answered and was transferred at the discretion of that individual. Insurance status was reported as uninsured if asked. We identified specific referrals to assess the knowledge of Planned Parenthood as a resource. We made all calls between June and August of 2017.

Previous research has shown an approximately 30% lower availability to abortion services for women living in rural areas [3]. We expected a 20% lower availability of the copper IUD in rural vs urban clinics as we anticipated IUD provision would be more accessible than abortion services, but still more limited in rural areas. Using a 2-tailed hypothesis with an α of 0.05 and 80% power, we calculated our sample size to be 97 clinics per group. We analyzed collected data using a chi-square or Fisher's exact test as appropriate using STATA/SE 13.1. The University of Washington Institutional Review Board (IRB) granted our study IRB exemption as we included the examination of policies, procedures, and practices rather than persons.

3. Results

We achieved our desired sample size of 97 rural clinics and 97 urban clinics by contacting 103 eligible rural clinics and 109 eligible urban clinics. Overall response rate was 92%.

Call outcomes are shown in Table 1. Of eligible clinics, 49 (51%) rural and 76 (78%) had the copper IUD available ($p < 0.01$). We found an association between clinic type and copper IUD availability, with the majority of family planning (24, 85%), multispecialty (20, 80%), and Ob/Gyn clinics (25, 96%) offering the IUD, compared with 56 (49%) of primary care clinics ($p < 0.01$). Over half (66, 53%) of clinics able to place the IUD within 5 days were family planning, compared with only 4 (7%) of clinics not able to place the IUD within 5 days ($p < 0.01$).

Among clinics that offered placement within 5 days, 11 (34%) required two appointments. For a minority of clinics (32, 16%), the individual who answered the call transferred to someone else, usually a nurse (14, 44%). Among clinics that asked about insurance status, 12 (30%) offered IUD placement within 5 days as opposed to 20 (13%) of clinics who did not ask about insurance status ($p=0.01$).

4. Discussion

Our study shows that the copper IUD is significantly less available in rural settings. Furthermore, we found limited availability among all clinics for IUD placement within 5 days.

Many clinics required 2 visits prior to having the IUD placed. This requirement may result from insurance restrictions, lack of clinic stock, or the belief that patients must have negative infectious testing and repeat negative pregnancy tests prior to insertion [9]. Multiple clinic appointments may prohibit its use as EC. A high proportion of clinics referred specifically to Planned Parenthood when asked about the ability to place the copper IUD within 5 days, even if the clinic had the IUD available. This emphasizes the importance of Planned Parenthood as a community resource, as all Planned Parenthood clinics in Washington are able to place the copper IUD within 5 days (E. Berry, personal communication, November 22, 2020).

The strengths of our study include the consistency of a single caller and a scripted conversation. Researchers have had success in evaluating access to contraception with simulated patient studies [10]. We note that several methods are available to define urban and rural, so use of other methods could result in different findings. An additional limitation is that we only ensured that all clinics provided preventative care and not women's healthcare. Lastly, as we only included clinics in Washington, the results may not be generalizable to clinics in other states. Newer research has shown a low likelihood of pregnancy with copper IUD placement up to 14 days after unprotected intercourse [11]. This could significantly impact its use as EC. Further research is needed to determine how to effectively reduce barriers to access for the copper IUD, specifically in rural settings.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.conx.2021.100059.

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