Provider Perspective on Contraception Barriers Among Reproductive-Age Women in North Carolina

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Abstract

Background: The United States has a high unintended pregnancy rate. Many public health and health care efforts attempt to increase contraceptive access for U.S. women to prevent unintended pregnancy. However, many barriers to contraceptive access exist. A systematic review was performed to examine published literature about contraceptive barriers for underserved, reproductive-age women in the United States. The objective of this study is to build upon published literature to examine barriers to contraception for women specifically in North Carolina.

Methods: I identified contraception providers using the NC Medical Board’s list of practicing OBGYN physicians. I contacted providers by telephone and performed telephone interviews about contraception barriers, according to an interview guide. I transcribed and performed thematic analysis of survey data to identify contraceptive barriers.

Results: I contacted 35 providers and 3 providers participated (response rate 8.6%), including 2 OBYGN physicians and 1 nurse practitioner. Thematic analysis identified an array of barriers to contraception, including patient financial and logistical barriers (financial cost to patients, insurance status, type of insurance, transportation, language), health system and structural barriers (reimbursement policies, insurance authorization, requirement of multiple clinic visits for IUD/implant insertion, administrative demands on patients and practices, and schedule of health care appointments/services and time constraints), knowledge gap barriers (patient misconceptions and misinformation, provider knowledge/comfort), culture and ideology barriers (patient cultural/religious beliefs, family/friend influence, partner influence, relationship between provider/educator and patient, patient age, personal competing demands), and medical barriers (contraceptive side effects, medical comorbidities).

Discussion: Based on provider perspective, there are many barriers to contraception access for women in North Carolina. Examination of barriers and gaps in contraceptive access provides insight for North Carolina women’s health initiatives and health care policy.
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Introduction

In the United States, about 45% of all pregnancies are unintended, including mistimed (27%) and unwanted (18%) pregnancies\(^1\). The U.S. unintended pregnancy rate correlates to about 3 million unintended pregnancies annually, or 5% of reproductive-age women having an unintended pregnancy each year. Unintended pregnancy results in a large public health burden of adverse maternal and child outcomes, including increased rates of late prenatal care, premature birth, and poor physical and mental health in children\(^1\). Public health and medical efforts largely focus on modern contraceptive methods to lower rates of unintended pregnancy and help reproductive-age women achieve their individual fertility desires. However, about 10% of all women at risk for unintended pregnancy are not using any contraceptive method, and these rates are higher among underserved populations\(^2, 3\). The American College of Obstetricians and Gynecologists (ACOG) recognizes unintended pregnancy and lack of contraceptive access as a public health gap, especially among underserved women. ACOG recommends contraception access and family planning to all women of reproductive age as a method to prevent unintended pregnancy\(^4\).

This paper examines the problem in two ways. First, I conducted a systematic review to examine literature about barriers to contraceptive access among underserved, reproductive-age (15-49 years) women in the U.S. The full systematic review is provided in Appendix 1. The systematic review identified many barriers to contraception for women in the United States. These barriers included: lack of insurance coverage or finances, role of family and partners, side effects of contraceptive methods, patient knowledge, requirements of health care appointments, limitations within the clinic or health system, provider knowledge, inconvenience of contraceptive methods, language, confidentiality for adolescents, low perceived priority among other demands, cultural and religious beliefs, and location. These barriers influence reproductive age women’s access to contraceptives in the United States. However, laws, policies, and health care cultures vary across states, which may affect barriers experienced.
Second, then, this study builds on the systematic literature review to further examine barriers to contraception specifically experienced in North Carolina, via in-depth interviews with stakeholders. Characterizing contraceptive barriers for women in North Carolina may inform future health care decisions and policies to improve contraceptive access and women’s health care.

Methods

Study design

I collected survey data through telephone interviews with contraception providers in North Carolina. I identified my sample from the NC Medical Board’s list of practicing OBGYN and family medicine providers. The provider’s office contact information was obtained through web searches, and I contacted the offices via telephone to ask for participation in the study. I invited the participants I had identified by name, with expansion to the rest of the office. For example, I inquired if “provider name, or any other provider in the office” was available for study participation. Each practice was contacted by telephone with one initial phone call and one follow-up phone call to request provider participation.

I am the single researcher who conducted the interviews presented in this study, after having developed an interview guide. The interview included data collection about practice demographics, open-ended questions about contraception barriers, and direct assessment of 11 potential barriers (including socioeconomic status or finances, education level or literacy, employment status, citizenship status, geographic location, health insurance status, household composition, transportation, cultural beliefs, and contraception knowledge). The interview guide is provided in Appendix 2. The project was approved by the University of North Carolina Institutional Review Board.
Study Population

The study population includes licensed North Carolina contraception providers, including physicians, physician assistants, and nurse practitioners. The providers were required to be licensed and actively practicing in North Carolina.

Data Analysis

Each interview was recorded and transcribed by me; I also performed the thematic analysis for all interviews.

Results

I contacted n=35 practices (which corresponds to 35 providers, with the additional option to pass on participation to another willing provider in the same practice). I targeted these 35 providers to represent underserved practices in a variety of settings, including a mix of rural/urban, practice type (private practice, health department, academic institution), region within North Carolina (western, piedmont, eastern), provider sex, provider age, and provider ethnicity. Of these, 3 providers (from different practices) agreed to participate in the study, which corresponds to an 8.6% response rate.

The participants included 2 physicians (MD’s, OBGYN), and 1 nurse practitioner. All 3 participants were female (100%, n=3). They worked in private practice (n=2) and health department (n=2) settings (participants concurrently work in multiple clinical setting). They had an average of 19.6 total years of practice (range 9-27 yrs), and 8.8 years of practice at their current clinical site (range 2.5-15 yrs). Interviews lasted 30-35 minutes. The interviews were guided by the interview guide questions, though the tone was conversational as providers were eager to discuss their perspectives.

I asked providers about barriers in two different ways: first, I asked a series of open-ended questions to enable them to tell me what was important to them, without prompting.
Second, after they had commented from their own perspectives, I read them a list of barriers identified in the literature, and asked for their evaluation of them (see Appendix 2 for the interview protocol). Thematic analysis from the open-ended portion of the provider interviews identified a rich array of barriers to contraception, including patient financial and logistical barriers, health system and structural barriers, knowledge gap barriers, culture and ideology barriers, and medical barriers. Patient financial and logistical barriers include financial cost to patients, insurance status, type of insurance, transportation, and language. Health system and structural barriers include reimbursement policies, insurance authorization, requirement of multiple clinic visits for IUD/implant insertion, administrative demands on patients and practices, and schedule of health care appointments/services and time constraints. Knowledge gap barriers include patient misconception and misinformation, and provider knowledge/comfort. Culture and ideology barriers include patient cultural/religious beliefs, family/friend influence, partner influence, relationship between provider/educator and patient, patient age, and personal competing demands. Medical barriers include concerns about contraceptive side effects and medical comorbidities. Table 1 displays each barrier, frequency of responses in thematic analysis, and details pertaining to each barrier identified.

The readiness with which providers mentioned a wide array of barriers suggests the degree to which these providers experience and think about barriers. In addition, the providers consistently discussed the interlacing of many of these individual barriers. Frequently, multiple themes emerged within a single response, indicating the interconnectedness of these barriers.

When I asked them directly about 11 specified potential barriers, all respondents (100%, n=3) said that socioeconomic status or finances, education level or literacy, language, health insurance status, transportation, cultural beliefs, and contraception knowledge are barriers to contraception. Employment status was noted as a barrier by two providers (66%, n=2). Citizenship status, patient’s geographic location, and household composition were each identified as a barrier by 1 provider (33%, n=1). Many of these responses were confirmatory of
ideas already expressed in the open-ended portion of the interview. However, providers readily answered and frequently elaborated on their responses. In this portion, the providers continued to note the interconnectedness of barriers, and specifically noted how individual characteristics relate to larger structural barriers.

**Discussion**

Although this study’s short time line and restriction to what a single researcher could accomplish limited the number of providers I could interview, the providers who did agree to participate clearly seemed to understand a range of structural barriers to contraception faced both by their patients and their own practices. These providers were clearly able to spontaneously name a wide range of barriers to contraception in several important domains. This preliminary study suggests that further in-depth interviews with a larger number of providers could generate an important additional understanding of North Carolina women’s reproductive needs and the policy directions that might best help meet those needs.

**Limitations**

The study methodology is subject to some risk of bias. There may be bias among providers who chose to participate in a study examining contraception barriers. In addition, only female providers participated in the study. A larger number of provider participants may be interviewed to expand diversity of responses and reach improved thematic saturation. In addition, data coding and theme extraction may be subject to the bias of having been performed only by me; this bias could be attenuated by using multiple coders for thematic analysis of interview data.

Participation is always potentially influenced by response rates, and the response rate in this study is low. Many elements contribute to low physician response rates, including survey fatigue, busy schedules, opportunity costs, survey method, and gatekeepers. Survey fatigue has
become a general problem for research, as the number of studies conducted expands. In addition, physicians have demanding schedules, and extra time spent completing surveys or interviews comes at a high opportunity cost. Telephone survey methods are not greatly effective at achieving high response rates, though other methods (including mail or internet surveys) have not been shown to greatly improve response.

Likely the largest contributor to non-response rates in this study was the role of the "gatekeeper". Reaching physicians to request participation in survey studies may be more difficult than offering participation among individuals in the general public. Physicians frequently have "gatekeepers" such as front desk staff, receptionists, or nursing staff that prohibit open access to communication with the physician. In addition, physicians do not typically offer direct email addresses or phone numbers as public information. Therefore, when attempting to invite physicians for survey or interview participation, the principal investigator must frequently go through two steps of contact e.g. after being able to pass the "gatekeepers" – if that is possible – the researcher must then find a way to speak to the physicians themselves). Initial contact may only meet the gatekeeper (for example, in a phone call received by the receptionist or nurse). This extra step may contribute to non-response rates, given the potential that the gatekeeper may decline before an investigator ever reaches the physician. This study was also unable to provide any compensation for participation, although the degree to which compensation increases physician response rates remains a vexed question. These high non-response rates may introduce bias and contribute to smaller sample sizes.

Implications

The study provides insight about physicians’ awareness of barriers to contraceptive access for reproductive age women in North Carolina. The findings call for more research to understand these barriers, including a wider sample of participants from across the state and practice settings. In addition, an effort should be made to correlate contraceptive barriers with
patient outcomes to further patient-centered research. This information may be used collectively to further public health efforts and health care policy.
References:


### Table 1. Contraception Barriers Thematic Analysis Data

<table>
<thead>
<tr>
<th>Theme</th>
<th>1</th>
<th>Provider Interview</th>
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<th>3</th>
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<tbody>
<tr>
<td><strong>Patient Financial and Logistical Barriers</strong></td>
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<tr>
<td>Financial cost to patient</td>
<td>Related to uninsured patients</td>
<td>Sliding scale costs for uninsured, Prescription co-pays for insured, affects accessibility and method choice</td>
<td>Insurance not covering full service, co-pays and out of pocket costs, cost of various methods</td>
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<tr>
<td>Insurance Status</td>
<td>Affecting price of contraception / various methods</td>
<td>Sliding scale prices</td>
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<td></td>
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<td>Type of insurance</td>
<td>Medicare as barrier for contraceptive devices, commercial insurance more difficult to know coverage, private practice doesn’t accept family planning Medicaid</td>
<td>Co-pays to pick up prescriptions</td>
<td>Difficulty with Medicare paperwork requirements</td>
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<td>Transportation</td>
<td>Lack of reliable transportation inhibiting getting to pharmacy regularly for prescription</td>
<td>Transportation to clinic</td>
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<tr>
<td>Language</td>
<td></td>
<td></td>
<td>Harder for non-English speakers</td>
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<td><strong>Health System and Structural Barriers</strong></td>
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<tr>
<td>Reimbursement policies</td>
<td>Medicaid won’t pay for IUD device in postpartum insertions (set global delivery reimbursement rate). Reimbursement for IUD insertion at annual exam</td>
<td>Reduced reimbursement when doing multiple services in one visit</td>
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<tr>
<td>Insurance authorization</td>
<td>Authorization for IUDs, Medicaid 30-day window for tubal ligation paperwork</td>
<td></td>
<td>Time required for authorization, patient vs provider responsibility, Medicaid 30-day window for tubal ligation paperwork</td>
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<tr>
<td>Requiring multiple clinic visits for IUD/implant insertion</td>
<td>Related to insurance authorization, insurance reimbursement policies around reimbursement for IUD and annuals, return for depo provera administration</td>
<td>Due to clinic schedule, reimbursement policies, want patient to think about method choice longer</td>
<td>Desire to perform H&amp;P and get to know patient, insurance authorization needs time, 2 visit minimum for LARC</td>
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<tr>
<td>Administrative demands on patients and practices</td>
<td>Paperwork required for the subdermal implant, Medicaid 30-day paperwork</td>
<td>Title X, state, federal funding demands for paperwork</td>
<td>Medicaid 30-day paperwork requirement</td>
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<td>Schedule of health care appointments / services and time constraints</td>
<td>Time to perform IUD insertion, scheduling in OR for tubal ligations</td>
<td>Schedule doesn’t allow for same day IUD or implant insertion, waiting times causing patients to leave</td>
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<td>Knowledge Gap Barriers</td>
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<tr>
<td>Patient misconceptions and misinformation</td>
<td>Dr. Google, Dr. Pinterest, stigma related to utilizing health department</td>
<td>Misinformation about contraception from trusted sources (family, leaders, etc)</td>
<td>Engrained ideas that are medically incorrect</td>
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<tr>
<td>Provider knowledge and</td>
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<tr>
<td>comfort</td>
<td>Knowledge of community resources</td>
<td>Physicians incorrectly addressing contraceptive side effects</td>
<td>Comfort or ability to use IUD in young nulliparous women</td>
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<td></td>
<td>Knowledge and comfort with IUDs for nulliparous women</td>
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**Culture and Ideology Barriers**

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<tr>
<th>Patient cultural and religious beliefs</th>
<th>Bleeding profiles</th>
<th>Religion and beliefs about contraception, Bleeding profiles keeping them from sex or outside of community</th>
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<tbody>
<tr>
<td>Patient cultural and religious beliefs</td>
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<td>Family/ Friend Influence</td>
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<td>Family/ Friend Influence</td>
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<td>partner influence</td>
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<tr>
<td>Relationship between provider/educator and patient</td>
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<td>Lack of trust between patient and provider (compared to trust in family members)</td>
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<td>Relationship between provider/educator and patient</td>
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<tr>
<td>Patient age</td>
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<td></td>
<td>Younger women apprehensive</td>
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<tr>
<td>Competing demands</td>
<td></td>
<td>Difficulty attending clinic visits due to work schedules, Putting others needs before own</td>
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<tr>
<td>Specific Medical Barriers</td>
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<td>Competeceive side effects</td>
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<td></td>
<td>Concern for bleeding and cramping with IUD</td>
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<tr>
<td>Medical comorbidities</td>
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<td></td>
<td>Make it difficult to go to pharmacy regularly</td>
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Appendix 1: Systematic Review

Introduction

Reproductive age women in the U.S. remain at high risk for unintended pregnancy, in part due to low contraceptive use rates\(^1\). ACOG recommends contraception access and family planning to all reproductive age women to decrease unintended pregnancy\(^4\). However, there are many barriers to family planning for women in the U.S., and many research studies have examined these barriers though no recent systematic review has been performed to synthesize the literature findings. The aim of this systematic review was to examine the following question: What are the barriers to contraceptive access among underserved, reproductive-age (15-49 years) women in the U.S.? The analysis included all empirical study designs and all studies performed after the major health care reform in 2010 (with passage of the Affordable Care Act).

Methods

Scope of Review

The review aimed to create a descriptive analysis of evidence regarding contraception barriers experienced by underserved U.S. women. Though many publications examine subgroups of underserved women, subgroup analyses were not performed on the literature due to the type of outcomes examined. Instead, the review identified a broad set of barriers that encompasses experiences of many subgroup populations and representative samples within the larger context of U.S. underserved women.

Search Strategy

PubMed and Cochrane Library databases were searched for studies. The following search criteria was used in both searches: *(Barriers OR barrier OR challenge OR challenges) AND (contraception OR contraceptive OR "birth control" OR "family planning") AND (Underserved*
OR minority OR "under served" OR socioeconomic OR marginalized OR disadvantaged OR disadvantage).

The PubMed search results were automatically filtered to include only studies published after 2010. The PubMed search identified 315 publications, and the Cochrane search identified 14 publications. Hand searching was also performed and reference lists of expert opinion publications were examined for any additional empirical studies (including the American College of Obstetricians and Gynecologist Committee Opinions). The last searches were performed on March 29, 2018.

ClinicalTrials.gov was also searched for grey literature and multiple relevant studies were noted. All studies were qualitative and included small sample sizes of subpopulations. There was not a large scale study examining contraception barriers in the U.S. Though the small studies may include evidence that could be added to the review, no study was identified that would highly alter data or fill a gap of missing evidence. These studies will have a chance for inclusion in future systematic reviews regarding barriers to contraception.

**Article Inclusion and Exclusion**

The search results were first screened by title and abstract. After exclusion of irrelevant studies based on title and abstract, full text articles were screened for inclusion. Inclusion criteria specified studies examining underserved, reproductive-age females (15-49 years) in the U.S., and any subpopulations. Studies of only males were not included. Studies were included if they occurred in the U.S. setting after 2010. Studies performed outside the U.S. were excluded. The review was conducted of studies after 2010 due to the passage of the Affordable Care Act (ACA) because large health care reform greatly influences contraception barriers. Though implementation of ACA policy did not occur immediately at passage, 2010 was chosen as a conservative cut-off year for study inclusion. Studies that had recruitment and data collection prior to 2010 were excluded. Studies that were published after 2010 and had unclear data
collection timing were included (n=2 studies). The exposure of interest was women (who do not desire pregnancy) experiencing difficulty accessing contraception. Studies examining abortion access or condom use specifically for STI/HIV prevention were excluded. Publications with any outcomes (quantitative or descriptive) of contraception barriers were included (including barriers such as cost, transportation, cultural beliefs, patient/provider knowledge, etc). Studies without outcomes related to contraception barriers were excluded. All empirical study designs were included, including observational and intervention studies, such as control trials, cohort studies, cross sectional studies, case studies, descriptive/ qualitative studies, and systematic reviews. Publications of expert opinion or non-empirical evidence were excluded. A summary of inclusion and exclusion criteria is listed in Appendix 1a.

Quality Assessment

Each publication was assessed for risk of bias using a modified version of the Mays & Pope (2000) criteria, which is an accepted technique for assessing descriptive or qualitative research. The criteria assesses worth or relevance, clarity of research question, appropriateness of the design of the question, context, sampling, data collection and analysis, and reflexivity of the account. The risk of bias assessment was performed by one reviewer. Studies were not excluded based on quality issues, in order to avoid excluding relevant findings. However, quality of studies was considered during summarization of evidence.

Data Extraction

Data extraction was performed manually by a single researcher and organized into a table. Extracted data was examined twice to ensure completeness. The principal summary measures include any barriers identified in publications' thematic analysis and quantitative data, including proportions reporting various barriers among survey data.
Results

The search identified 329 publications. The publications underwent screening by title and abstract, and 279 were determined to be irrelevant to the present study. The remaining 50 were screened with full text review. Studies were excluded for setting (studies performed outside of the U.S.), timing (such as recruitment or data collection prior to 2010), and study design (for example, publications of expert opinion without empirical data). The final analysis included 14 publications (which relate to 13 studies, as one study published two articles). Appendix 1b describes the article flow for exclusion/inclusion in the systematic review. The study characteristics and abstracted data for each of the 14 included publications is represented in Appendix 1c.

The studies included a broad range of study designs. Four (4) publications used a multi-method study design including a survey and interview/focus group (including Biggs et al 2018, Beeson et al 2016, Paterno et al 2016, Mead et al 2015). Four studies used only survey data (Grindlay et al 2016, Yarger et al 2016, Dirksen et al 2014, Biggs et al 2012). In addition, 5 studies used only interviews/focus groups to collect descriptive data (Hopkins et al 2015, Potter et al 2014, Hogson et al 2013, Gurnah et al 2011, Colarossi et al 2010). One study was a randomized control trial that provided information about barriers (Simmons et al 2013).

These various study designs also included a range of sample sizes. The studies examined underserved reproductive-age women in the United States, though the samples for many individual studies are more narrowed subgroups. For example, multiple studies address women who seek care specifically at community health centers. In addition, two studies examine immigrant populations (Gurnah et al, 2011, Colarossi et al, 2010). Studies examine samples of women from a broad geographic distribution, including representation of women from California, Maryland, Texas, Colorado, New York, Connecticut, Oregon, Tennessee, New Jersey, Florida, and Michigan. In addition, a few studies attempt to include samples that are representative of the U.S. Most studies include a broad range of reproductive ages, and overall
the samples range from age 14 to 49 years. Multiple studies include a broad range of ages, and 3 studies specifically examine adolescent-age women (Beeson et al 2018 & Mead et al 2015; Yarger et al 2016; Potter et al 2014).

The individual risk of bias assessment using the Mays and Pope criteria is shown in Appendix 1d. Overall, there was moderate risk of bias across most studies. The greatest concerns regarding risk of bias were related to sampling (including the full range of possible cases or cases that may contradict/modify the analysis) and searching for disconfirming cases.

Synthesis of outcomes based on thematic prevalence is presented in Appendix 1e. Multiple themes emerged from the studies collectively. The most common theme among the studies was evidence for lack of insurance coverage or finances as a barrier to contraception (cited in 7 out of 13 studies). In addition, the role of partners and family members as a barrier to family planning was cited in 5 studies. Side effects of contraceptive methods were noted in 5 out of 13 studies. Patient knowledge, requirement of health care appointments, and limitations within the clinic or health care system were each also commonly cited barriers to contraception (cited in 4 out of 13 studies). Provider knowledge was also a barrier to family planning (cited in 3 studies). Inconvenience of a barrier method as an obstacle to effective contraception was cited among 3 studies. A patient speaking a language other than English was also identified as a barrier in 3 studies. Other themes included lack of transportation (cited in 2 studies); consent versus confidentiality in care of adolescents (cited in 2 studies); lack of priority and competing demands (cited in 2 studies); cultural and religious beliefs (cited in 1 study); and location as a barrier (cited in 1 study).

**Discussion**

**Summary of Evidence**

The synthesis of study outcomes characterizes family planning barriers experienced by underserved, reproductive-age women in the U.S. Evidence identified the following barriers:
Lack of insurance coverage or finances

The most commonly referenced barrier across all studies was the lack of insurance coverage or finances as an obstacle to access and use of family planning. Studies specifically noted lack of finances for health care appointments, prescription costs, and unprotected intercourse due to inability to afford birth control.

Role of family and partners

Studies frequently described the role of family or partners as an obstacle to contraception. Within this theme, examples included beliefs about the family’s role for making contraceptive decisions, types of relationships that are appropriate for various contraceptive methods, a partner’s desire or acceptance of contraceptive choices, and lack of contraception information while growing up within a family.

Side effects of contraceptive methods

Studies provided evidence supporting that side effects of various contraceptive methods are a barrier to access and use. They were further characterized by discomfort with methods (IUD and condoms), weight gain (injectables), aesthetic dislike, safety of methods (specifically emergency contraception), and side effects affecting perceived effectiveness.

Patient knowledge

Patient knowledge was identified as a barrier to contraception among multiple studies. Lack of knowledge included sexual debut prior to adequate knowledge, inability to figure out how methods worked, incorrect beliefs about efficacy and appropriateness of methods, and incorrect myths about pregnancy prevention.
**Requirement of health care appointment**

Studies cited evidence that requirement of a health care appointment was a barrier to contraceptive access and use, including requirement of an appointment for a pap smear or STI testing prior to prescription, requirement of multiple visits for IUD placement, and inability to schedule an appointment when needed.

**Limitations within the clinic or health care system**

Limitations within the clinic or health care system acted as a barrier to family planning access, including time and scheduling restrictions (related to overall counseling and specifically IUD insertion), pressures to meet patient quotas, and restrictive school clinic policies regarding contraception. Of note, insurance coverage issues were not included in health care system limitations, as this barrier was referenced separately.

**Provider knowledge**

Provider knowledge was a barrier to contraceptive access among multiple studies, including perceived lack of knowledge regarding counseling, inexperience placing an IUD, lack of knowledge about available services, and poor understanding of policies surrounding contraception for minors.

**Inconvenience of method**

Multiple studies provided evidence for inconvenience of contraceptive methods as a barrier to access and use. Examples included difficulty remembering to use method daily, lack of time to use method, and difficulty using method at time of intercourse.

**Language**
Studies identified speaking a non-English language as an obstacle to contraception access and use. Specifically, non-English speakers had more difficulty obtaining and refilling contraceptive prescriptions, accessing healthcare, and understanding contraception (specifically emergency contraception). Studies specifically included Spanish speaking women and Somali Bantu immigrants.

Other important barriers

Many important barriers were also cited less frequently among studies included in the systematic review. Transportation was a barrier to family planning, specifically related to the inability to get to the clinic in order to obtain contraceptive methods. In addition, the issue surrounding consent and confidentiality for adolescents was a barrier to contraception. Studies specifically noted issues with confidentiality of health records and insurance records with respect to parents, and requirement of parental consent for treatment. Another barrier to contraception was low perceived priority for family planning given other competing demands in the clinical atmosphere. Studies cited perception of more urgent issues and overall low importance of family planning counseling. In addition, cultural and religious beliefs were a barrier to contraception among some women, including direct restriction of contraception and lack of understanding of beliefs between patient and provider. In addition, patient location was a barrier to family planning, and one study provided evidence that women in rural areas experience more difficulty accessing contraception.

Strength of Evidence

Overall, the summary of evidence provides a descriptive analysis of barriers to family planning among underserved, reproductive-age women in the United States. Though individual studies have risk of bias issues related to small sample sizes and study designs, the overall strength of evidence is good due to clear emergence of themes within the study outcomes. The
included studies provided evidence of similar barriers and themes, and descriptive analysis of the studies together improves the overall strength of evidence characterizing barriers to family planning. In addition, the study samples represent a wide range and distribution of underserved, reproductive-age women in the U.S. While this population may not be directly generalizable to every subgroup population within underserved women in the U.S., the outcomes are still valuable in providing insight into potential barriers to address.

**Limitations**

The study also has limitations. Only one reviewer performed the systematic review, including inclusion/exclusion of studies, data extraction, and risk of bias assessment. This is a limitation to the study, as one reviewer may be subject to higher risk of bias. Future reviews may consider addition of a second reviewer to decrease potential bias. Another limitation of the review is that many included studies examine small sub-group populations. The descriptive question characterizing contraceptive barriers is best answered by qualitative study designs. However, these study designs frequently utilize small samples within subpopulations. This may limit generalizability and applicability to individual subgroups and the larger population of underserved women.

**Conclusions**

Overall, the findings of this systematic review are consistent with expert opinion and ACOG committee opinion literature regarding barriers to family planning for underserved women in the U.S. The review provides insight into family planning barriers, and may inform future public health and health care policy efforts. However, barriers to family planning change over time, especially among evolving health care reform, politics, and outreach efforts. The systematic review should be update in 5 years in order to examine new studies and changes with an evolving system.
Appendix 1a. Inclusion and Exclusion Criteria

**Inclusion Criteria**

*Population:* Underserved, reproductive age females (15-49 yrs) in U.S. Included studies examining subpopulations of this group.

*Setting:* Studies performed in the U.S. after 2010 (Passage of the Affordable Care Act).

*Exposure/Intervention:* Women not desiring pregnancy who experience difficulty in access of contraception. Included interventions examining contraception access if studies examined underlying barrier.

*Outcome:* Included any outcomes (quantitative or descriptive) of contraception barriers (including cost, transportation, cultural beliefs, patient knowledge, provider knowledge, etc).

*Study Design:* All empirical study designs, including observational and intervention studies such as control trials, cohort studies, cross sectional studies, case studies, and descriptive/qualitative studies. Included systematic reviews.

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**Exclusion Criteria**

*Population:* Studies of only males

*Setting:* Studies performed outside of the U.S. and studies that performed recruitment/data collection prior to 2010.

*Exposure/Intervention:* Studies regarding access to abortion issues, or condom use specifically for STI/HIV prevention.

*Outcome:* Excluded studies without outcomes related to barriers to contraception

*Study Design:* Publications of expert opinion or non-empirical evidence

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Appendix 1b. PICOTSS Study inclusion/exclusion flow chart

[Diagram showing the flow of records through identification, screening, eligibility, and inclusion stages with numbers for each stage and reasons for exclusion at each step.]
## Appendix 1c. Study Characteristics and Evidence Table

<table>
<thead>
<tr>
<th>Study</th>
<th>Setting</th>
<th>Purpose</th>
<th>Sample</th>
<th>Methods</th>
<th>Outcomes of Interest</th>
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<tbody>
<tr>
<td>Biggs et al, 2018&lt;sup&gt;7&lt;/sup&gt;</td>
<td>California, U.S. Community Health Centers April 2015 – June 2015</td>
<td>To assess community health centers’ (CHCs) capacity to offer stream-lined intrauterine devices (IUDs) services</td>
<td>Staff at Community Health Centers Survey sample: n = 91 from 11 community health centers Interview sample: n = 20</td>
<td>Observational survey research Survey health care staff from community health centers. Addition qualitative interviews with subset of providers.</td>
<td>- 66% of providers had placed an IUD - 56% of responders reported IUD placement usually required 2+ visits Hindering streamlined IUD provision: - Time related challenges to offering IUD’s (especially for EC) - Pressures to meet patient quotas - Need for screening tests and results prior to method initiation - Scheduling challenges - Lack of priority given to women’s health (other perceived more urgent issues)</td>
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<tr>
<td>Beeson et al, 2016&lt;sup&gt;8&lt;/sup&gt; Same study ad Mead et al publication</td>
<td>U.S. Federally qualified health centers 2011</td>
<td>Examining confidentiality practices at FQHCs as a barrier to providing FP services to adolescents</td>
<td>Federally qualified health centers Survey data portion n = 423 FQHCs Case study portion n = 6</td>
<td>Observational, survey and in-depth case study Survey data: National survey of FQHC organizations Case studies: FQHC’s, including interview with executives, FP coordinators, clinicians, administrative staff. Themes were identified by 3 investigators (unclear blinded to each other)</td>
<td>Survey data: Percentages that agree to confidentiality compared to procedures ensuring confidentiality Case studies: - Biggest challenge was in providing confidential care for adolescent population - FQHC staff’s lack of clarity regarding state minor consent policies - Absence of confidentiality protocols for FP services - Staff at Title X funded FQHCs were clearer on adolescent confidentiality requirements (Title X requires confidential care for adolescents)</td>
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<tr>
<td>Grindlay et al, 2016&lt;sup&gt;9&lt;/sup&gt;</td>
<td>U.S. Nov 2011 – Dec 2011</td>
<td>To assess the prevalence of and factors associated with U.S. women’s difficulty accessing prescription contraception (pill, patch, or ring)</td>
<td>Women age 18-44 years Women not pregnant or seeking pregnancy, sexually active, not sterilized, who have ever tried to obtain prescription for hormonal contraception n = 1385</td>
<td>Observational survey research Survey administered by GFK KnowledgePanel as part of larger study</td>
<td>Barriers related to obtaining/refilling prescription for hormonal contraception, percent of patients reported - Cost barriers or lack of insurance coverage: 13.5% - Challenges related to obtaining an appointment or getting to a clinic: 13.4% - Clinician required clinic visit, exam, or pap smear before providing refill: 12.7% - Not having a regular doctor or clinic: 10.0% - Difficulty accessing a pharmacy: 3.5% Other reason: 3.6% Adjusted OR of difficulty obtaining/refilling prescription: - Significantly higher likelihood of difficulty with: Spanish speaking (OR 3.42 compared to English speaking), no health insurance (OR 3.41 compared to private insurance)</td>
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<tr>
<td>Paterno et al, 2016</td>
<td>Baltimore, Maryland, U.S. Nov 2011 – June 2012</td>
<td>Examine effectiveness of contraceptive use in context of attitudes about pregnancy, motherhood, and relationships</td>
<td>Women age 18-29 years Women at OBYGN/ FP clinics, who engaged in sex in past 90 days Sample primarily African American women with low income. Survey n = 130 Interview n=12</td>
<td>Survey research and in-depth interview Survey with audio computer-assisted self-interview</td>
<td>Data from qualitative portion: - Avoiding unplanned pregnancy is the responsibility of the individual woman - Motherhood is a very important role, and one must make sure they are stable for motherhood - Difficulty with contraceptives leads to sexual risk taking Challenges with contraceptive methods: - Difficulty remembering to take pill every day - Found IUD uncomfortable - Dislike feel of condoms - Weight gain and excessive bleeding with injectables - Aesthetic dislike of patch, ring - Varying levels of willingness to put up with side effects</td>
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<td>Yarger et al, 2016</td>
<td>California, U.S. Sept 2013 – June 2014</td>
<td>Compare adolescent awareness and use of family planning services by rural and urban program sites</td>
<td>Adolescent females age 14-18 years Sample obtained from individuals participating in federal Personal Responsibility Education Program n = 4,614</td>
<td>Observational cohort study, logistic regression using survey data</td>
<td>- Rural adolescent participants had lower awareness (OR 0.64 95% CI 0.50, 0.81) and use (OR 0.76 95% CI 0.58, 0.99) of family planning services compared to urban participants.</td>
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<td>Hopkins et al, 2015</td>
<td>Texas, U.S. Metropolitan areas July 2012 - Oct 2012</td>
<td>Examine women’s experiences seeking publicly funded family planning services in Texas</td>
<td>Low income adult women and adolescents n = 107</td>
<td>Observational focus group study Performed 11 focus groups with 2 independent coders for theme identification in transcripts</td>
<td>Extracted themes: - Accessing affordable family planning services was difficult - Applying and qualifying for programs was a challenge - Obtaining family planning care was harder than obtaining pregnancy related care - Experienced unplanned pregnancy related to lack of FP - Teens: Additional barrier of needing parental consent</td>
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<td>Mead et al, 2015</td>
<td>U.S. Federally qualified health centers 2011</td>
<td>Examine the role of community health centers (CHCs) in providing comprehensive family planning services to adolescents, looking at the range of services offered and factors associated with provision of these services</td>
<td>Federally qualified health centers Survey data portion n = 423 FQHCs Case study portion n = 6</td>
<td>Observational, survey and in-depth case study Survey data: National survey of FQHC organizations Case studies: FQHC’s, including interview with executives, FP coordinators, clinicians, administrative staff. Themes were identified by 3 investigators (unclear blinded to each other)</td>
<td>Barriers to providers providing adolescent FP: - Inadequate funding - Lack of provider’s knowledge of services → underutilization - Restrictive school policies: inability to dispense birth control at school clinic - Absence of confidentiality protocols for adolescents seeking FP services</td>
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<td>Author(s)</td>
<td>Location</td>
<td>Study Aim</td>
<td>Methods</td>
<td>Key Findings</td>
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<td>Dirksen et al, 2014</td>
<td>Denver, Colorado, U.S. March 2012 – April 2012</td>
<td>To evaluate contraception counseling among internal medicine physicians</td>
<td>Observational survey research</td>
<td>-74% of providers reported perceived inadequate provider knowledge as barrier to contraception counseling -75% of providers reported perceived inadequate time for contraception counseling -21% of providers report low perceived self-efficacy of contraception counseling -3.4% low perceived importance -Reports OR for provision of contraception counseling</td>
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<td>Potter et al, 2014</td>
<td>New York City, NY, U.S. May 2011</td>
<td>Explore urban, minority female adolescents’ attitudes and beliefs about IUDs and to identify barriers to IUD use</td>
<td>Qualitative interviews</td>
<td>- Fear about pain (insertion, removal, and during use) - Fear of expulsion - Fear of a foreign body - Fear of physical harm (IUD stuck inside them or causing infertility) - Lack of control over IUD insertion/removal - Beliefs about an appropriate age-appropriate use (appropriate that it should be used in older or younger people) and types of intimate partner relationships that are appropriate for IUD use</td>
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<td>Hodgson et al, 2013</td>
<td>Connecticut, U.S. March 2011 – Dec 2011</td>
<td>To describe how low-income, African American women approach family planning</td>
<td>Observational focus group</td>
<td>Knowledge: - Sexual debut prior to adequate knowledge about contraception - Experience of UI pregnancy motivated knowledge of contraception Attitudes and beliefs: - Negative attitudes and beliefs as barrier - Women’s having to “match” a specific contraceptive method for it to be effective - Differential experience of side effects affected perception of effectiveness - Idea that pregnancy is not absolutely preventable (in control of God or fate) Subjective Norms: - Family, close friends, religious community, male partners influence contraception choice - Reliance on family members for initial contraception decisions Perceived behavioral control: - Difficulty obtaining desired method of contraception due to insurance and transportation issues - Compliance to pills as a barrier to effective contraception - Difficulty accessing other methods for women with difficulty taking oral contraceptives effectively - Partner as a barrier to contraception (male wanting to have child, or negative attitude toward condoms) - Distrust in quality and effectiveness of condoms</td>
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<td>Simmons et al, 2013</td>
<td>Portland, Oregon, U.S. Oregon Health &amp; Science University May 2011 – Feb 2012</td>
<td>To examine whether personalized contraceptive assistance affects uptake of LARC in postpartum women</td>
<td>RCT with intervention of personal assistant to provide education, facilitation of insurance coverage, appointment assistance, childcare, and transportation</td>
<td>- Telephone assistance to navigate barriers did not significantly increase uptake of LARC (67% in control group vs 72% in intervention group, p=.76) - Personal history of clinic visit no-shows and/or infrequent prenatal visits were related to poor uptake of LARCs postpartum</td>
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<td>Reference</td>
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<td>Description</td>
<td>Participants</td>
<td>Methods</td>
<td>Findings</td>
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<tr>
<td>Biggs et al., 2012</td>
<td>U.S.: California, Colorado, New Jersey, Florida, Michigan, Tennessee, New Jersey, Florida, Michigan</td>
<td>To better understand behaviors associated with unintended pregnancy and the frequency and reasons women engage in unprotected intercourse (UI)</td>
<td>Women (&gt;15 years age) from 13 FP clinics in California, Colorado, Tennessee, New Jersey, Florida, Michigan Total n = 1392 Among participants who had UI in past 3 months, n = 536</td>
<td>Observational survey research Surveyed women without hx of abortion at FP clinics, survey performed in waiting room</td>
<td>Among participants who had unprotected intercourse in past 3 months: - 27% of participants had 1-2 episodes of UI in past 3 months, 73% of participants had ≥3 episodes of UI in past 3 months - 49% of women reported barriers to accessing birth control services as a reason for having had UI in previous 3 months. - 21% reported they ran out of BC method they were using - 11% reported unable to get appointment for BC when needed it - 9% reported they were unable to afford BC or insurance wouldn’t cover it - 7% reported unable to get to the clinic - 6% didn’t know what method to use - 3% did not know where to get a BC method - 3% did not want to go to a clinic or see a doctor - 45% weren’t planning to have sex - 33% were worried about contraceptive side effects - 24% reported partner issues with using BC - 25% reported contraceptives were too difficult to use - 11% sometimes forgot to take/use their BC method - 5% did not have time to use method - 3% difficult to insert/put on method when want to have sex - 2% could not figure out how to use method - 6% didn’t know what method to use - 5% think birth control did not work for them - 19% of women had pregnancy intention ambivalence</td>
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<tr>
<td>Gurnah et al., 2011</td>
<td>Hartford, Connecticut, U.S.</td>
<td>To explore reproductive health care services and potential barriers to care of the one marginalized population</td>
<td>Somali Bantu women (age 22-45) in Hartford, CT and key-informants Focus group: n=10 women Survey participants: n=14 women Key-informant interviews: n=15</td>
<td>Observational study Conducted key informant interviews, a focus group session, and a semi-structured survey</td>
<td>Barriers in accessing health care: (% of survey participants) - Communication, language barriers (93%) - Patient-Provider sex discordance (50%) - Limited financial resources (36%) - Religious restrictions to care offered (7%) - Unsympathetic service providers (7%) - Legal restrictions to accessing services (7%) - Passive acceptance of incorrect care - Cultural discordance in FP services - Patient’s desired but limited scope for decision making (deference to husband or provider)</td>
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<td>Colarossi et al., 2010</td>
<td>Brooklyn, New York, U.S.</td>
<td>Perform focus groups to develop and test messages about emergency contraception that are culturally relevant</td>
<td>Mexican and Caribbean born immigrants (women ages 20-49), and staff from community based organizations in NY Mexican immigrants n=8 Caribbean immigrants n=12 Community based organization staff n=12</td>
<td>Observational focus group study Focus group with Mexican and Caribbean born immigrants (separately). Focus group with community based organization (CBO) staff.</td>
<td>Extracted themes Barriers to emergency contraception: - Cost and lack of health insurance for prescription coverage - distrust of doctors and pharmaceuticals - Language barriers - Fear of being questioned about documentation and immigration status - Discrimination by medical providers Awareness: - Did not know how emergency contraception worked or how to use it - Fears about safety and side effects - Concerns that it was the same as medical abortion pill - Not having enough information about contraception overall from their families while growing up - Numerous myths about how to prevent pregnancy - Having fewer children is a way to achieve more and take better care of the children you already have</td>
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### Appendix 1d. Risk of Bias Assessment Table

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<td><strong>Worth or relevance</strong></td>
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<td>1.1 Was this piece of work worth doing?</td>
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<td>1.2 Has it contributed usefully to knowledge?</td>
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<td><strong>Clarity of research question</strong></td>
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<td>2.1 If not at the outset of the study, by the end of the research process, was the research question clear?</td>
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<td><strong>Appropriateness of the design of the question</strong></td>
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<td>3.1 Was an appropriate method used?</td>
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<td><strong>Context</strong></td>
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<td>4.1 Is the context or setting adequately described so that the reader could relate the findings to other settings?</td>
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<td><strong>Sampling</strong></td>
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<td>5.1 Did the sample include the full range of possible causes or settings?</td>
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<td>5.2 If appropriate were efforts made to obtain data that might contradict or modify the analysis extending or modifying the sample?</td>
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<td><strong>Data Collection and Analysis</strong></td>
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<td>6.1 Were the data collection and analysis procedures systematic?</td>
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<td>6.2 Was an “audit trail” provided?</td>
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<td>6.3 How well did the analysis succeed in incorporating all the observations?</td>
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<td>6.4 Did the analysis develop concepts and categories capable of explaining key processes?</td>
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<td>6.5 Was it possible to follow iteration between data and theory?</td>
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<td>6.6 Did the researcher search for disconfirming cases?</td>
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<td><strong>Reflexivity of the Account</strong></td>
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<td>7.1 Did the researcher assess the likely impact of the methods used on the data obtained?</td>
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<td>7.2 Were sufficient data included in the reports to provide sufficient evidence for readers to assess whether analytical criteria were met?</td>
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| Lack of Insurance coverage or finances    | 7            | Grindlay et al, 2016<sup>6</sup>                                                             | - 13.5% of women report cost barriers or lack of insurance coverage as barrier to obtaining/refilling prescription for hormonal contraception  
- Adjusted OR of difficulty obtaining/refilling contraceptive prescription: OR 3.41 for those with no health insurance compared to private insurance.  
- Difficulty accessing affordable family planning services                                                                 |
|                                           |              | Hopkins et al, 2015<sup>12</sup>                                                            | - Inadequate funding as barriers to providers providing adolescent FP:                                                                                                                                                        |
|                                           |              | Mead et al, 2015<sup>13</sup>                                                               | - Difficulty obtaining desired method of contraception due to insurance issues                                                                                                                                              |
|                                           |              | Hodgson et al, 2013<sup>16</sup>                                                            | - Among women who had unprotected intercourse in the past 3 months, 9% reported they were unable to afford BC or insurance wouldn’t cover it |
|                                           |              | Biggs et al, 2012<sup>18</sup>                                                              | - Among Somali Bantu immigrants 36% report limited financial resources as barrier to accessing healthcare |
|                                           |              | Gurnah et al, 2011<sup>17</sup>                                                             | - Cost and lack of health insurance for prescription coverage as barrier to emergency contraception |
|                                           |              | Colarossi et al, 2010<sup>20</sup>                                                         |                                                                                                                                                                                                                           |
| Role of partners and family members       | 5            | Potter et al, 2014<sup>14</sup>                                                              | - Beliefs about types of intimate partner relationships that are appropriate for IUD use  
- Family, close friends, religious community, male partners influence contraception choice  
- Reliance on family members for initial contraception decisions  
- Partner as a barrier to contraception (male wanting to have child, or negative attitude toward condoms)  
- Among women who had unprotected intercourse in the past 3 months, 24% reported partner issues with using BC  
- Among Somali Bantu immigrants: patient’s desired but limited scope for decision making (deference to husband or provider)  
- Not having enough information about contraception overall from their families while growing up |
|                                           |              | Hodgson et al, 2013<sup>16</sup>                                                            |                                                                                                                                                                                                                           |
|                                           |              | Biggs et al, 2012<sup>18</sup>                                                              |                                                                                                                                                                                                                           |
|                                           |              | Gurnah et al, 2011<sup>17</sup>                                                             |                                                                                                                                                                                                                           |
|                                           |              | Colarossi et al, 2010<sup>20</sup>                                                         |                                                                                                                                                                                                                           |
| Side effects of contraceptive methods     | 5            | Paterno et al, 2016<sup>15</sup>                                                            | - Found IUD uncomfortable  
- Dislike feel of condoms  
- Weight gain and excessive bleeding with injectables  
- Aesthetic dislike of patch, ring  
- Varying levels of willingness to put up with side effects  
- Specifically related to IUDs: Fear about pain (insertion, removal, and during use), Fear of expulsion, Fear of a foreign body, Fear of physical harm (IUD stuck inside or infertility)  
- Differential experience of side effects affected perception of effectiveness  
- Among women who had unprotected intercourse in the past 3 months, 33% were worried about contraceptive side effects  
- Fears about safety and side effects of emergency contraception, and concerns that it was the same as medical abortion pill |
|                                           |              | Potter et al, 2014<sup>15</sup>                                                              |                                                                                                                                                                                                                           |
|                                           |              | Hodgson et al, 2013<sup>16</sup>                                                            |                                                                                                                                                                                                                           |
|                                           |              | Biggs et al, 2012<sup>18</sup>                                                              |                                                                                                                                                                                                                           |
|                                           |              | Colarossi et al, 2010<sup>20</sup>                                                         |                                                                                                                                                                                                                           |
| Patient Knowledge                         | 4            | Hodgson et al, 2013<sup>16</sup>                                                            | - Sexual debut prior to adequate knowledge about contraception  
- Negative attitudes and beliefs as barrier  
- Need to “match” a specific contraceptive method for it to be effective  
- Distrust in quality and effectiveness of condoms  
- Among women who had unprotected intercourse in the past 3 months, 6% didn’t know what method to use and 3% didn’t know where to get a contraceptive method  
- 2% could not figure out how to use method  
- 5% think birth control did not work for them  
- Beliefs about an appropriate age-appropriate use for IUD  
- Did not know how emergency contraception worked or how to use it  
- Numerous myths about how to prevent pregnancy |
|                                           |              | Biggs et al, 2012<sup>18</sup>                                                              |                                                                                                                                                                                                                           |
|                                           |              | Potter et al, 2014<sup>15</sup>                                                              |                                                                                                                                                                                                                           |
|                                           |              | Colarossi et al, 2010<sup>20</sup>                                                         |                                                                                                                                                                                                                           |
| Requirement of appointment | 4 | Biggs et al, 2018<sup>17</sup> | - 56% of responders reported IUD placement usually required 2+ visits  
- Need for screening tests and results prior to method initiation  
- 13.4% of women report challenges related to obtaining an appointment or getting to a clinic as barrier to obtaining/refilling prescription for hormonal contraception.  
12.7% of women reported clinician requiring clinic visit, exam, or pap smear before providing refill as barrier to obtaining/refilling prescription for hormonal contraception.  
- Among women who had unprotected intercourse in the past 3 months, 11% reported unable to get appointment for BC when needed it  
- 3% did not want to go to a clinic or see a doctor  
- Personal history of clinic visit no-shows and/or infrequent prenatal visits were related to poor uptake of LARCs postpartum |
| Limitations within the clinic or health care system | 4 | Biggs et al, 2018<sup>1</sup> | - Pressures to meet patient quotas  
- Time related and scheduling challenges to offering IUD’s (especially for EC)  
- Applying and qualifying for programs to help financially was a challenge for patients  
- Restrictive school policies: inability to dispense birth control at school clinic  
- Among internal medicine providers, 75% of providers reported perceived inadequate time for contraception counseling |
| Provider Knowledge | 3 | Biggs et al, 2018<sup>17</sup> | - Only 66% of providers had placed an IUD  
- FQHC staff's lack of clarity regarding state minor consent policies  
- Lack of provide knowledge of services related to underutilization  
-74% of providers reported perceived inadequate provider knowledge as barrier to contraceptive counseling  
- 21% of providers report low perceived self-efficacy of contraception counseling |
| Inconvenience of method | 3 | Paterno et al, 2016<sup>13</sup> | - Difficulty remembering to take pill every day  
- Compliance to pills as a barrier to effective contraception  
- Among women who had unprotected intercourse in the past 3 months, 25% reported contraceptives were too difficult to use  
- 11% sometimes forgot to take/use their BC method  
- 5% did not have time to use method  
- 3% reported difficult to insert/put on method when wanted to have sex |
| Language | 3 | Grindlay et al, 2016<sup>1</sup> | - Adjusted OR of difficulty obtaining/refilling contraceptive prescription: OR 3.42 for women who speak Spanish compared to English.  
- Among Somali Bantu immigrants 93% report communication and language as barrier to accessing healthcare  
- Language as barrier to emergency contraception access/use |
| Transportation | 2 | Hodgson et al, 2013<sup>13</sup> | - Difficulty obtaining desired method of contraception due to transportation  
- Among women who had unprotected intercourse in the past 3 months, 7% reported unable to get to the clinic |
| Adolescents: Consent vs Confidentiality | 2 | Beeson et al, 2016<sup>13</sup> & Mead et al, 2015<sup>13</sup> | - Biggest challenge was in providing confidential care for adolescent population  
- FQHC staff’s lack of clarity regarding state minor consent policies  
- Absence of confidentiality protocols for FP services  
- Teens: Additional barrier of needing parental consent |
| Lack of priority (competing demands) | 2 | Biggs et al, 2018<sup>17</sup> | - Lack of priority given to women’s health (other perceived more urgent issues)  
- 3.4% of internal medicine providers have perception of contraception counseling as low importance |
| Cultural and Religious Beliefs | 1 | Gurnah et al, 2014<sup>19</sup> | - Religious restrictions to care offered (7%) |
| Location | 1 | Yarger et al, 2016<sup>11</sup> | - Rural adolescent participants had lower awareness (OR 0.64 95% CI 0.50, 0.81) and use (OR 0.76 95% CI 0.58, 0.99) compared to urban participants. |
Appendix 2: Provider Interview Guide

Provide information and obtain verbal consent.

Clinical site (city):

Clinical site type (private practice, health dept, academic):

Provider type:

Years of practice:

Years at that location:

Years practicing in the area:

1. What contraceptive services/methods does your clinic provide?
   
   a. Explore LARC methods specifically
   
   b. If certain methods aren’t provided, explore why (see prompts in #8 as well)

2. What types of insurance do you accept (just public/private or self-pay, not specifics)

3. Describe the population that your clinic serves. How does this population compare to the greater population or community surrounding the clinic? Made need to clarify – In general, what is the age, SES and racial mix of the patients you see?

4. Are there populations in your community that you don’t serve? If so, where do they access contraceptive care?

5. Are there populations that may be easier or more difficult to provide access to contraception?

6. In your experience in caring for women, what problems or barriers have influenced your ability to provide contraception?

7. Are there financial or resource barriers that influence your ability to provide access to contraception?

8. Are there procedures or processes that affect your ability to provide access to contraception?
a. Do you stock IUDs and Implants in your office? Can women get them on the same day or does it require two appointments?

9. Do you ever feel the need to find a work-around to current processes in order to provide access to contraception?

10. Are there perceptions, beliefs, or social/cultural barriers that influence your ability to provide access to contraception?

11. Are there individual patient characteristics that influence your ability to provide access to contraception?

12. What interventions or measures would increase access to contraception for the population you currently serve? For your community as a whole?

13. In your experience, what barriers do the patients you serve face as they access contraception?

14. Are there additional thoughts you would like to share about contraceptive access at your clinic or in your community?

15. I will read a list of factors including demographics and characteristics. I will read the entire list once, and then read more slowly the second time. During the second reading, please indicate whether you feel the factor is or is not a barrier to contraception access. You may elaborate if you feel inclined.

   • Socioeconomic status or finances
   • Education level / Literacy
   • Employment status
   • Citizenship status
   • Language
   • Geographic location
   • Health insurance status
• Household composition (Number of children, Husband)
• Transportation
• Cultural beliefs (of sexuality, fertility, contraception, menstruation)
• Contraception knowledge