A Surveillance Pilot Study of Unintended Pregnancy and Contraceptive Failure in Three Kentucky Title X Family Planning Clinics

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Acknowledgments

I would like to thank all of my partners in this project including The Kentucky Family Planning Program, Division of Women's Health, The Kentucky BRFSS, Division of Prevention and Quality Improvement, The Region IV Data Management and Utilization Project Cecil G. Sheps Center for Health Services Research, UNC – Chapel Hill and HRSA/MCHB Graduate Student Intern Program (GSIP).

Background

Understanding women's decisions about reproductive health is essential to making informed, economical and efficient family planning programs. Due to increased unemployment and budget constraints, the Title X Family Planning Program (FPP) will need to serve a larger number of clients on a more cost-efficient basis. Given that nearly half (49%) of all pregnancies in the US are unintended,[1] pregnancy prevention services present an invaluable opportunity to save money while improving the health of women and families.

Similar to nationwide statistics, Kentucky women experience a high prevalence of unintended pregnancy. A weighted sample of women in Kentucky's 2007 pilot Pregnancy Risk Assessment Monitoring System (PRAMS) study shows that 40.7% of births and 59.2% of Medicaid births were unintended.[2] When a pregnancy is unintended, women are more likely to have an abortion. Nationwide, approximately 31% of women have had an unintended birth while 30% of women have experienced one or more abortions.[3,4]

In addition to an increased abortion rate, unintended pregnancy is associated with adverse maternal and child health outcomes such as low birth weight (LBW) babies.[5] LBW is highly correlated with short-term morbidity, increased medical care costs, and long-term consequences, especially neurologic and developmental handicaps.[6-9] In 2008, Kentucky ranked 11th in the nation in low birth weight babies with approximately 9.2% of all Kentucky infants born at LBW, compared to 8.2% of all US births.[10] Even minor improvements in low birth weight distributions affect mortality, morbidity, and costs especially among very low birth weight infants.[11] Targeting high-risk populations and reducing unintended pregnancies can result in healthier families and a tremendous cost-savings for the Kentucky health care system.

Research shows that spending on preventative family planning services saves a sizable amount of money on Medicaid births and abortions. In 2008, Title X-funded contraceptive services helped Kentucky women prevent 21,500 unintended pregnancies, which would have resulted in 9,600 births and 9,000 abortions.[10] Without these services, the number of unintended pregnancies in Kentucky would be 67% higher, and the number of abortions would be 163% higher.[11] Avoiding these pregnancies and subsequent births, resulted in a significant cost savings of $109,893,000 in public funds in 2008.[12]

In addition to upfront financial savings from pregnancy prevention, there are hidden savings in economic productivity. When women can control their pregnancies, they can invest in higher education and be productive members of the workforce.[13] This idea is widely practiced among young people in the United States who are delaying childbearing in pursuit of educational and career advancement.[14]

To assist low-income individuals prevent unintended pregnancy, the Title X FPP is the largest provider of publicly funded contraceptives and family planning services in Kentucky. Clients are served in 173 Title X funded family planning clinics, located in all 120 counties. These clinics play a vital role in serving the uninsured who often cannot afford out-of-pocket private health care services.[5] Family planning clinics also link patients to care for STD's, cancer screening, and health providers who offer preconception counseling.[11]

In order to provide Title X family planning services, Title X funds are supplemented by state and local funds. Statewide expenditures for the Title X FPP in fiscal year (FY) 2010 were over $21 million, yet the Title X grant award only funded 30% of expenses. Additional funding is provided by client fee collection, Medicaid, private insurance, Title V, state general funds and local tax revenue. Local tax dollars are paying over one quarter of the cost of the program.[15] Kentucky currently does not have a Medicaid family planning state plan amendment, which would expand eligibility for preventative family planning services up to the amount funded for pregnancy-related care. A family planning state plan amendment provides cost benefits through reducing the number of Medicaid funded births and improved maternal child birth outcomes. It significantly saves federal, state and local dollars and has been proved to be budget neutral when calculating the cost of providing family planning services to an expanded population.

Despite the large number of clinics and funds allocated for family planning services, the need for contraceptives is far greater than the supply. As of 2008, Kentucky had a population of 868,294 women of reproductive age (between 15 -44years old).[11] According to the Guttmacher Institute, 264,900 Kentucky residents were in need of publicly funded contraceptive services and supplies in 2008. Women were defined as being in need of contraceptive services if they were sexually active, able to get pregnant, not currently pregnant or trying to get pregnant and had a family income below 250% of the federal poverty level.[16] All women under 20 years old were also considered to need publicly funded contraception due to financial need or confidentiality issues (the need to obtain care without family resources or private insurance). Although Kentucky serves a significant number of women annually, the Title X FPP is only meeting approximately 39% of the women in need of publicly funded contraceptives.[16]

To maximize Title X funding, services should be targeted to populations that are at highest risk of unintended pregnancy. Further research is necessary to describe the most prevalent risk factors of Kentucky women. Obtaining information on women that attend Title X family planning clinics is useful to establish baseline and trend data and to monitor and address high-risk populations. This information will also function to form relevant policies that address the needs of FPP clients.

Although many women utilize Title X services in Kentucky, very limited research has been done on this population. In 2007 and 2009, Kentucky pilot tested PRAMS, an ongoing surveillance system that collects data on maternal attitudes and experiences before, during, and shortly after pregnancy from women who recently had a live birth.[17] Unfortunately, Kentucky was unable to secure grant funding from the Centers for Disease Control and Prevention (CDC) to conduct PRAMS annually. In addition to PRAMS, Kentucky has had BRFSS (Behavioral Risk Factor Surveillance System) since 1985, a telephone health survey co-sponsored by the CDC and the Kentucky Department for Public Health. The survey is randomly administered to non-institutionalized civilian adults 18 years old or older who are living in a household with a telephone. Personal identifying information, such as name or address, is not collected.[18] KY BRFSS's goal is to collect, analyze and interpret locally relevant data on risk behaviors and preventive health measures for use in planning, implementing and measuring the progress of the Department's risk-reduction programs, and for developing policies and legislation. Biennially,

the Kentucky BRFSS survey includes limited family planning questions on contraceptive behavior and pregnancy intention.

Although PRAMS and BRFSS provide valuable data on preconception health and pregnancy intention, both have significant limitations. One limitation of PRAMS is that it fails to capture the considerable amount of women who have not had a live birth, many of whom are FPP users. Additionally, since recent mothers are interviewed about events prior to and during pregnancy, there is most likely a significant amount of recall bias, especially pertaining to questions on pregnancy intention and timing. While BRFSS is an excellent resource to track preconception health indicators, the limited number of family planning questions are not detailed enough to use for program planning purposes.

Beyond measuring pregnancy intention and contraceptive failure, it is important to measure factors that influence reproductive behavior and birth outcomes. Preconception health is the idea that risks associated with poor birth outcomes are present well before conception.[11] Research shows that reproductive age women who are not intending a pregnancy generally have poorer health than those intending a pregnancy.[19] Many risk factors and exposures prior to pregnancy can affect fetal development and subsequent outcomes. Preconception health is especially important because women can be exposed to these factors before they are aware they are pregnant.[20]

Preconception care is of great concern for Kentucky, considering that up to 31% of women smoke regularly and up to 35% of Kentucky mothers continue to smoke during pregnancy.[11] Additionally, 27.8% of non-pregnant women ages 18-44 are overweight, while 30.5% are obese.[21] Furthermore, research shows that 61% of women at risk for an unintended pregnancy were using birth control irregularly or not using birth control at all which puts them at increased risk for pregnancy.[19] Given low rates of regular contraception use, high rates of unintended pregnancy and the poor health status of Kentucky women, preconception risk factors should be monitored and addressed for all women regardless of pregnancy status or intention.[11]

Another factor that influences pregnancy intention and birth outcomes is intimate partner violence (IPV). IPV is defined as a pattern of assaultive and coercive behaviors that may include inflicted physical injury, psychological abuse, sexual assault, progressive isolation, stalking,

deprivation, intimidation and threats.[22] These behaviors are perpetrated by someone who is, was or wishes to be involved in an intimate or dating relationship and are aimed at establishing control by one partner over the other.[23] IPV is a significant concern given that approximately 1 in 4 women have been physically and/or sexually assaulted by a current or former partner.[24] This number increases when looking at family planning clients who experience a higher prevalence of IPV (53%) compared to the general population.[25] IPV is highly correlated with unintended pregnancy[26] and women who have experienced IPV are more likely to report a lack of birth control use.[27] Kentucky's clinics are an optimal setting to provide intervention programs addressing IPV and to link clients to additional services.

Partner congruence on pregnancy intention also influences birth outcomes. When only one partner wants a pregnancy, this is often a source of stress in a relationship.[28] Maternal stress[29-31] and incongruence of pregnancy intention[28] are both associated with increased risk of preterm birth. An analysis of data from The Early Childhood Longitudinal Study shows that the father's intentions have a strong influence on the health of the pregnancy and well-being of the child. Another pertinent finding was that when couples did not share pregnancy intentions and the mother wanted the pregnancy, she more often waited to inform the father and the father more often reported lack of communication about the pregnancy.[28]

To address gaps in Kentucky family planning research, the Kentucky Department for Public Health partnered with Region IV Network for Data Management and Utilization (RNDMU) to conduct a pilot study in three Title X funded family planning clinics. The study measured the prevalence of unintended pregnancy and contraceptive failure among women who attend these clinics for emergency contraception or pregnancy tests. Secondary prevalence measures include intimate partner violence (IPV), access to family planning services, partner congruence and preconception health. This pilot study was implemented in Lexington, Kentucky at Bluegrass Community Health Center, Planned Parenthood of Kentucky – Fayette County, and Lexington Fayette County Health Department. These data will serve as a tracking tool to collect much needed information on public health clinic users. Data will also be used as a planning tool for clinic staff to improve counseling protocols in order to offer appropriate contraceptive methods based on clients' methods and consistency of use. Findings from this pilot study will be used to expand the study for statewide administration.

Methods

Study Design

This pilot study was conducted in three Title X family planning clinics in Lexington, Kentucky. Researchers utilized a cross-sectional, self-report, survey design to measure prevalence of unintended pregnancy and contraceptive failure. Other measures of interest included access to reproductive health services, preconception health, partner influences and partner congruence, intimate partner violence and demographic characteristics. The survey is composed of 34 valid and reliable questions modified from Behavioral Risk Factor Surveillance System (BRFSS), Pregnancy Risk Assessment Monitoring System (PRAMS), National Survey of Family Growth (NSFG) London Measure of Unplanned Pregnancy and past RNDMU state health surveys. BRFSS is a state-based system of health surveys that collects information on behavioral risk factors, preventative health practices, and health care access for the US adult population (18 years of age and older). PRAMS focuses on maternal attitudes and experiences before, during and shortly after pregnancy in order to improve the health of mothers and infants by reducing adverse outcomes including low birth weight, infant mortality and morbidity, and maternal morbidity[23]. The National Survey of Family Growth collects data on family life, marriage, divorce, pregnancy, infertility, contraception use and men's and women's health. London Measure is a 6-item survey tool developed specifically to measure pregnancy planning and intention. All questions were adapted minimally to address the study population while retaining validity. The survey ranged from a 2nd to 12th grade reading level and instructions were always below the 5th grade reading level. Sensitivity to reading level was considered closely but certain sections, such as the list of birth control methods, required more advanced reading skills.

Participants

Participants in this feasibility project were recruited from three Title X family planning clinics in Lexington, KY over a one month period (July-August 2011). Study sites included the Lexington-Fayette Local Health Department Clinic, Planned Parenthood of Kentucky and Bluegrass Community Health Center. These sites were chosen for their convenience, diversity of clientele, and volume of patient traffic. The sampling frame consisted of women over 17 years old who attended any of these clinics for a pregnancy test or emergency contraception. At

all three clinics, many other procedures, such as starting a birth control regimen or having an STD screening, require a pregnancy test. If women attended the clinic for any other services in addition to a pregnancy test or emergency contraception they were excluded from the study. Women who attended Planned Parenthood for both over the counter emergency contraception or a regular EC visit were included. English and Spanish versions of the survey were available and literacy was required of all participants. Patients who spoke neither English nor Spanish or were illiterate were excluded. Potential participants were also excluded if they were emotionally distraught.

Procedure

Potential participants were recruited by either front desk staff or triage nurses, depending on the clinic. If the patient met inclusion criteria specified above, recruiters read a script detailing the purpose of the survey, that the survey is anonymous and voluntary, the estimated time to completion and the incentive for completing the survey. If the patient agreed to do the survey, they were told to complete it in the waiting room prior to their appointment. If the participant could not complete the survey before their appointment, they were allowed to bring it with them and finish afterwards. Once the survey was completed, participants brought it back to either the front desk staff or triage nurse who gave them either a $10 Wal-Mart or Target gift card. After receiving the gift card, the participant was required to sign a sheet verifying that they received the incentive. This sheet was not linked to the participant's survey or their medical records in any manner. All completed surveys, gift cards and gift card tracking sheets were kept behind the counter where only clinic staff were permitted.

Measures/variable definitions

All measures were self-report and none were confirmed with existing medical records. Pregnancy intention was measured by six questions that were scored using the London Measure of Unplanned Pregnancy (LMUP). Missing values for London Measure questions were imputed using LMUP methodology.[32] An additional intention-related question that was utilized in a past RNDMU study asked whether the participant was attempting to get pregnant. This question was analyzed separately. Pregnancy intention questions were placed early in survey to capture feelings about pregnancy prior to receiving test results. Contraceptive failure was determined by

whether the person had used contraception the last time they had sex and the type of method used.[21] Researchers developed an additional question to assess the reason respondents thought they were pregnant (i.e., I was using my birth control but had an accident).

Access was assessed with two questions created by researchers asking whether the participant had attended that family planning clinic in the past and the reasons if they had not previously attended. An additional access question from BRFSS asked where participants obtained their birth control. Measures of partner influence and partner congruence were derived from London Measure and BRFSS. These questions asked about respondent's partner's feelings on pregnancy and whether or not these feelings were discussed. Intimate partner violence was assessed using 4 questions from PRAMS. These questions measured different aspects of IPV including verbal, physical and sexual abuse and isolation from family and friends. Lastly, information on past pregnancies and demographics were collected to better understand the profile of women attending Title X family planning clinics.

Data analysis

Spreadsheets containing all survey responses were created. Additional spreadsheets document coding decisions, skip patterns and 'other' answers from the survey. A codebook was developed that included dummy variables for some measures (0 = not present, 1 = present) and coding schemes for all other variables (Appendix 1). Spreadsheets were imported to SAS 9.3 (Cary, NC) for data cleaning and analysis. Data were reviewed for outliers and logic checks were performed. A total of 101 participants completed the survey, four observations were excluded because they were below 18 years old and an additional observation was excluded due to a significant amount of missing data. All women answered a sufficient (at least 50%) amount of London Measure questions to impute missing values. Frequencies were calculated for each variable and examined to determine whether a question or skip pattern was commonly misunderstood. Frequencies were also compared with the source questions for validation. Frequencies stratified by clinic were also analyzed to gain an understanding of the differences between populations of each clinic. Due to small sample size, limited bivariate statistics were analyzed.

Results

Demographic characteristics of participants show that a majority of women who access family planning services are white (47%) while comparable percentages of African-American (27%) and women of other races (26%) attended the clinics (Table 1). In comparison with Kentucky's female population, a disproportionately large number of women who attended family planning clinics were African American or 'other' races.[10] Participants ranged from 18-47 years old with an average of 25 years (SD = 6 years). Overall, Hispanic clients represented approximately 21% of all participants but only 13% filled out the survey in Spanish. Among participants, a much higher proportion of women were uninsured (73%) followed by women with Medicaid (13%), women with private health insurance that covers birth control (10%) and women with private insurance that does not cover birth control (4%). A majority of women have completed college or some college (55%) compared to those with a high school education or less (45%). While only 17% of women attended these clinics for emergency contraception, most of these clients preferred to buy it over the counter.

The primary measure of interest was pregnancy intention and contraceptive failure. According to London Measure scores, a majority of women (57%) had ambivalent feelings about potential pregnancy followed by women who planned theirs (23%) and women who were not intending a pregnancy (20%) (Figure 1). Despite the fact that only 23% of women were planning a pregnancy, nearly 60% said they would be pleased or very pleased if the pregnancy test was positive and 50% said they were hoping that the test was positive. When asked directly whether a woman was trying to get pregnant, almost three quarters of participants answered that they were not (Table 2).

Table 3 shows contraceptive practices including preferred birth control methods, access to birth control, and reasons for birth control non-use during last sexual intercourse. Slightly over half of participants used condoms, followed by birth control pills, withdrawal method, and the contraceptive patch (Figure 2). Birth control was most commonly accessed at drug stores and was accessed the least through Planned Parenthood, hospital clinics or friends. Approximately 18% of women reported that they suspected they were pregnant due to contraceptive failure (either they forgot to use their birth control or they were using birth control but had an accident). Among women who reported birth control non-use, about one-fifth cited their reason as they 'did not think about it'. Other common responses for non-use included

thinking they or their partner were unable to become pregnant, indifference about pregnancy or wanting a pregnancy.

Measures of access were taken to gain insight on obstacles to family planning services. Over three-quarters of participants attended the clinics for a pregnancy test (Table 4). Among the women who attended for emergency contraception, none tried to access EC elsewhere prior to their visit. A majority of clients (60.4%) were new to Kentucky Title X clinics and often cited lack of need as the reason for no previous visits. Nineteen percent of clients also cited no knowledge of clinic services as a reason for lack of previous attendance.

Given the importance of preconception health and the poor general health of Kentucky residents, preconception health knowledge and actions were measured (Table 4). Over half of women (57.3%) said that a doctor, nurse or other provider spoke with them about ways to prepare for a healthy pregnancy and baby. One-third of participants stated that they took actions to improve their health in preparation for a possible pregnancy. The most frequent preconception health improvements were taking a multi-vitamin, eating healthier, and quitting or reducing smoking (Figure 3).

In addition to health and contraceptive practices, relationship factors such as partner congruence and intimate partner violence were measured. A substantial percentage of participants indicated that their husband or partner was hoping for a pregnancy now or had been for a while (36.4%) (Table 4). Participants often said that their partners wanted them to be pregnant later (30.2%) or they were unsure how their partner felt (24.0%). When asked about communication with their partner, a majority of women stated that they discussed having children with their partner but they both had not intended a pregnancy. Almost 30% of partners wanted a pregnancy while approximately 16% said they never discussed having children. Among women who reported intimate partner violence, verbal abuse was most commonly cited (13.5%), followed by controlling behaviors (11.5%), physical abuse (6.3%) and forced sex (1.0%).

Discussion

The complexity of pregnancy intention measurement is well-documented in past research[33-36] and reflected in the current study. When asked directly, less than one-fifth of women answered

that they were trying to get pregnant while almost three times as many said they would be pleased or very pleased if the pregnancy test results were positive. Additionally, a majority of women surveyed scored within the ambivalent range on the London Measure. Differences between measures of pregnancy intention, feelings about pregnancy, and statements of indifference ('I wouldn't mind getting pregnant') illustrate the complexity of thoughts and behaviors surrounding pregnancy intention in this population. Since unplanned pregnancies generally have poorer birth outcomes[5] and a majority of women surveyed are not planning a pregnancy or ambivalent about their pregnancy intentions, interventions should focus on helping women to reflect on their reproductive goals and ways to meet those goals.

Although a majority of women were not intending a pregnancy, few reported using contraception at last sexual intercourse. Xaverius et al. showed similar results, finding that 61% of women who are not intending a pregnancy often put themselves at increased risk by using no birth control or periodic birth control methods. Among women who used contraception, condoms, birth control pills and withdrawal were the most common methods. These methods are user-controlled and have higher rates of contraceptive failure than long-acting methods such as sterilization, IUD's or hormonal management.[37] Understanding patterns of contraceptive use and women's reproductive objectives helps clinic staff and public health planners to counsel patients on the most efficacious methods that align with long-term family planning goals.

To understand the complex relationship between pregnancy intentions and contraceptive use, participants were asked specific reasons for birth control non-use. A wide range of responses were cited including not minding or wanting a pregnancy, believing they or their partner were infertile, not thinking about pregnancy or disliking the side effects of birth control. By knowing reasons for non-use, clinicians have the opportunity to tailor birth control methods to clients needs while avoiding unwanted side-effects and educating patients on birth control use.

Measuring reasons for lack of previous attendance at family planning clinics helps public health officials to identify and resolve access barriers. Women most commonly did not attend family planning clinics because they did not need or were unaware of services. Additional educational campaigns are necessary to ensure that community members have knowledge of the services that family planning clinics provide. Since this pilot study was conducted in a metropolitan area and Kentucky is composed of approximately half non-metropolitan areas,[10]

barriers to access will vary considerably throughout the state. Public health planners can use this information to tailor educational campaigns in different areas of Kentucky to increase knowledge about Title X clinics.

In addition to pregnancy intention and access, partner influences were measured because of their known effect on pregnancy outcomes. Measures of participant's and their partner's feelings about pregnancy showed that men more often wanted a pregnancy than women. This incongruence can strain relationships, cause stress for the mother and consequently affect birth outcomes.[28] Additionally, a majority of women noted that they discussed having children with their partners but had not agreed to get pregnant. This shows that many couples that attend family planning clinics may be intending a pregnancy but in the future.

While partner influences are an important predictor of birth outcomes, intimate partner violence (IPV) also affects pregnancy intentions and outcomes. Compared to other studies, Kentucky's family planning clinic population shows relatively low rates of IPV. According to past research, over half (53%) of women seen at family planning clinics and 1 in 4 women in the general population reported physical or sexual IPV.[24] In this study only 7% of women reported physical or sexual IPV. Verbal abuse and controlling behaviors were more commonly reported among study participants. One study showed that women's current involvement in verbally abusive relationships was associated with a lack of condom use during last sexual intercourse.[38] Given this information, health care providers should emphasize long-acting methods for women who might have less control over contraceptive practices.

Preconception health is also widely acknowledged as an important predictor of healthy pregnancies and birth outcomes.[20] Since Kentucky women have high rates of obesity, smoking and other health indicators compared to the US population,[21] measuring preconception health and preconception health knowledge is especially important. Among the family planning clinic population we found that over half (57.3%) of women had a medical health provider talk with them about preconception health but only a third of women did anything to improve their health. This underscores the importance of not only a knowledge component but a practical component to empower women to improve their health. Health care providers should help patients develop a preconception health plan and refer them to resources such as dieticians, substance abuse counselors and smoking cessation programs.

Conclusions

This pilot study was developed to test survey measures in a sample of Kentucky Title X family planning clinic users. The research also tested logistics of data collection to find the most efficient and effective ways of maximizing participation while minimizing clinic staff burden. By addressing the following pilot study limitations, researchers can improve the methodology and survey content in preparation for statewide survey administration.

One sampling limitation involves the measurement of pregnancy intention and Women, Infants and Children (WIC) qualification. In order to qualify for WIC, women must certify that they are pregnant through an official pregnancy test which is often done at a Title X clinic. Since many of these women already know they are pregnant, this may have biased pregnancy intention measures. Future studies should provide in-depth screening of women's reasons for a pregnancy test to determine if eligibility criteria are met.

Timing of survey completion may have also affected women's answers to intention questions. Although researchers intended participants to complete the survey before getting their pregnancy test results, women were allowed to bring the survey with them and complete it after their visit if necessary. Completing the survey after receiving pregnancy test results could have altered participants' responses, especially to pregnancy intention questions.

Due to logistical issues and resources, researchers were unable to reach some populations including women below 18 years old and women who were illiterate or spoke a language other than English or Spanish. Surveying these populations could be important especially regarding issues of access, service needs, or pregnancy intention. The expanded study should devise methods to gather information from these populations.

Other logistical issues varied between clinics. While some clinics implemented the survey relatively easily, others had difficulty recruiting participants due to staff overburden or lack of eligible patients. Prior to implementing the study, researchers should discuss patient flow with clinic directors and staff. During the pilot study, researchers learned that in one clinic patients were more likely to attend in the beginning of the month instead of the end due to Medicaid regulations. At another clinic, more patients attended the clinic in the spring instead of

summer. Data collection during the busiest times should be coordinated with each clinic to gain an optimal number of participants.

The development and testing of the survey tool during the pilot study will be useful in statewide implementation. By assessing recurrent themes in the data and commonly misunderstood skip patterns, researchers can reformat the survey prior to administration throughout Kentucky. By redefining answer choices or questions that were misunderstood, researchers can capture more accurate detail about the study population.

Overall, this data is intended to improve reproductive health services in Kentucky Title X family planning clinics. Knowing more about this population empowers clinicians to address women's reproductive goals and fill gaps in education. In addition to clinical practice improvements, having knowledge on the population level provides a baseline measurement for quality improvement and resource allocation. Monitoring and improving measures in this study will lead to improved birth outcomes and healthier families.

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Table 1. Descriptive statistics stratified by clinic (n = 96).

		Mean (SD) or n(%)			
Variable		**Overall**	**Local Health Department Clinic**	**Planned Parenthood**	**Community Health Center**
Age (years)*		25(6.1)	24(5.9)	27(7.5)	24(3.6)
Race	White	43(44.8)	31(42.4)	11(64.7)	1(16.7)
	African American	25(26.0)	20(27.4)	5(29.4)	0
	Other	24(25.0)	18(24.7)	1(5.9)	5(83.3)
	Missing	4(4.2)	4(5.5)	0	0
Hispanic Ethnicity	Hispanic	20(20.8)	14(19.2)	0	6(100.0)
	Non-Hispanic	74(77.1)	57(78.1)	17(100.0)	0
	Missing	2(2.1)	2(2.7)	0	0
Relationship Status	Married	20(20.8)	16(21.9)	2(11.7)	2(33.3)
	Cohabiting	23(24.0)	20(27.4)	2(11.7)	1(16.7)
	Separated	4(4.2)	3(4.1)	1(5.9)	0
	In a relationship but not cohabiting	18(18.7)	10(13.7)	6(35.3)	2(33.3)
	Single	25(26.0)	21(28.8)	3(17.8)	1(16.7)
	Divorced	2(2.1)	0	2(11.7)	0
	Missing	4(4.2)	3(4.1)	1(5.9)	0
Health Insurance Status	Private insurance - birth control coverage	9(9.4)	1(1.4)	8(47.0)	0
	Private insurance - no birth control coverage	4(4.2)	3(4.1)	1(5.9)	0
	Public insurance (Medicaid)	12(12.5)	12(16.4)	0	0
	No insurance	68(70.8)	55(75.3)	7(41.2)	6(100.0)
	Missing	3(3.1)	2(2.8)	1(5.9)	0
Education Attained	Less than high school	12(12.5)	11(15.1)	0	1(16.7)
	High school	31(32.3)	24(32.9)	4(23.5)	3(50.0)
	Some college	34(35.4)	28(38.3)	5(29.4)	1(16.7)
	College	18(18.8)	9(12.3)	8(47.1)	1(16.7)
	Missing	1(1.0)	1(1.4)	0	0
Language of Survey*	English	83(86.5)	63(86.3)	17(100.0)	3(50.0)
	Spanish	13(13.5)	10(13.7)	0	3(50.0)
Over the counter (OTC) vs. regular EC visits*	OTC	-	-	13(92.9)	-
	Regular	-	-	1(7.1)	-
Previous pregnancies*	Yes	62(64.6)	49(67.1)	9(52.9)	4(66.7)
	No	34(35.4)	24(32.9)	8(47.1)	2(33.3)
Number of previous pregnancies	Average	2(1.2)	2(1.2)	2(0.5)	2(1.2)
	Missing	3(3.1)	2(2.7)	1(5.9)	0
	Not Applicable	34(35.4)	24(32.9)	8(47.1)	2(33.3)
Age at first pregnancy (years)	Average	19(3.3)	19(3.0)	19(3.3)	19(5.4)
	Missing	6(6.3)	4(5.5)	2(11.8)	0
	Not Applicable	34(35.4)	24(32.9)	8(47.1)	2(33.3)
Women who have had a live birth	Yes	49(51.0)	41(56.2)	4(23.5)	4(66.7)
	No	10(10.5)	6(8.2)	4(23.5)	0
	Missing	3(3.1)	2(2.7)	1(5.9)	0
	Not Applicable	34(35.4)	24(32.9)	8(47.1)	2(33.3)
Number of children	Average	2(1.0)	2(1.0)	1(0.6)	2(0.5)
	Missing	7(7.3)	5(6.9)	1(5.9)	1(16.7)
	Not Applicable	44(45.8)	30(41.1)	12(70.6)	2(33.3)

* No values were missing

Table 2. Additional measures of pregnancy planning, intention and feelings, stratified by clinic (n = 96).

	n(%)			
	Overall	**Local Health Department Clinic**	**Planned Parenthood**	**Community Health Center**
I hope the pregnancy test result is…				
Positive	48(50.0)	44(60.3)	1(5.9)	3(50.0)
Negative	26(27.1)	10(13.7)	15(88.2)	1(16.7)
Undecided	19(19.8)	16(21.9)	1(5.9)	2(33.3)
Missing	3(3.1)	3(4.1)	0	0
If their pregnancy test was positive, women reported they would feel…				
Very pleased	25(26.0)	24(32.9)	1(5.9)	0
Pleased	33(34.4)	26(35.6)	1(5.9)	6(100.0)
Upset	11(11.5)	5(6.8)	6(35.3)	0
Very Upset	7(7.3)	3(4.1)	4(23.5)	0
Unsure	19(19.8)	14(19.2)	5(29.4)	0
Missing	1(1.0)	1(1.4)	0	0
Feelings about having a child now or in the future.				
Doesn't want to have a child	9(9.4)	3(4.1)	6(35.3)	0
Wants to have a child within the next year	32(33.3)	27(37.0)	1(5.8)	4(66.7)
Wants to have a child within the next two years	12(12.5)	10(13.7)	0	2(33.3)
Wants to have a child 2-5 years from now	14(14.6)	8(11.0)	6(35.3)	0
Wants to have a child after 5 years from now	6(6.3)	4(5.5)	2(11.8)	0
Unsure	20(20.8)	18(24.6)	2(11.8)	0
Missing	3(3.1)	3(4.1)	0	0
Are you trying to get pregnant?				
Yes	17(17.7)	16(21.9)	0	1(16.7)
No	70(72.9)	49(67.1)	16(94.1)	5(83.3)
Missing	9(9.4)	8(11.0)	1(5.9)	0

Table 3. Contraceptive practices and failure at last sexual intercourse among female Title X family planning clinic clients (n = 96).

Variable	n(%) Overall	Local Health Department Clinic	Planned Parenthood	Community Health Center
Contraceptive Use				
Used contraception at last sex	33(34.4)	19(26.0)	11(64.7)	3(50.0)
Did not use contraception at last sex	61(63.5)	53(72.6)	6(35.3)	2(33.3)
Missing	2(2.1)	1(1.4)	0	1(16.7)
Among contraception users				
Methods				
Birth Control Pills	11(33.3)	8(42.1)	2(18.2)	1(33.3)
Condom (Male or Female)	17(51.5)	9(47.4)	7(63.6)	1(33.3)
Contraceptive Patch	1(3.0)	1(5.3)	0	0
Withdrawal, Pulling Out	9(27.3)	5(26.3)	3(27.3)	1(33.3)
Missing	0	0	0	0
Point of Access for Contraception				
Private doctor's office	5(15.2)	3(15.8)	2(18.2)	0
Public Health Department Clinic	7(21.2)	6(31.6)	0	1(33.3)
Planned Parenthood Clinic	1(3.0)	0	1(9.1)	0
Hospital Clinic	1(3.0)	1(5.3)	0	0
Friend	1(3.0)	0	1(9.1)	0
Drug store or pharmacy	10(30.3)	3(15.8)	6(54.6)	1(33.3)
Other	1(3.0)	1(5.3)	0	0
Missing	3(9.1)	3(15.8)	0	0
Not Applicable	5(15.2)	2(10.5)	2(18.2)	1(33.3)
Among Contraception Non-users				
Reasons for non-use				
No regular partner/didn't plan to have sex	3(4.9)	1(1.9)	2(33.3)	0
Didn't think about it	13(21.3)	13(24.5)	0	0
Wouldn't mind getting pregnant	10(16.4)	9(17.0)	1(16.7)	0
Want a pregnancy	10(16.4)	8(15.1)	1(16.7)	1(50.0)
Don't like birth control/side effects (you or your partner)	8(13.1)	7(13.2)	0	1(50.0)
Birth control costs too much	6(9.8)	5(9.4)	1(16.7)	0
Problem getting birth control	5(8.2)	5(9.4)	0	0
Medical reasons	1(1.6)	0	1(16.7)	0
Religious reasons	2(3.3)	2(3.8)	0	0
Using a method, but not regularly	6(9.8)	6(11.3)	0	0
Don't think you or your partner can get pregnant	11(18.0)	11(20.8)	0	0
Other	6(9.8)	3(5.7)	3(50.0)	0
Missing	1(1.6)	1(1.9)	0	0
Reason for Pregnancy Test or Emergency Contraception Visit				
Unprotected sexual intercourse	35(36.5)	24(32.9)	9(52.9)	2(33.3)
More than a week late for period/experiencing morning sickness	37(38.5)	33(45.2)	2(11.8)	2(33.3)
Forgot to use birth control during last intercourse	4(4.2)	2(2.7)	2(11.8)	0
Using birth control but had an accident (e.g. condom broke)	13(13.5)	6(8.2)	6(35.3)	1(16.7)
Other	28(29.2)	27(37.0)	0	1(16.7)
Missing	1(1.0)	0	1(5.9)	0

Table 4. Prevalence of selected measures among female Title X family planning clinic clients (n = 96).

Variable	n(%) Overall	Local Health Department Clinic	Planned Parenthood	Community Health Center
Access to Family Planning Services				
Reason for Visit				
Pregnancy Test	75(78.1)	67(91.8)	3(17.7)	5(83.3)
Emergency Contraception	16(16.7)	2(2.7)	14(82.3)	0
Missing	5(5.2)	4(5.5)	0	1(16.7)
Among emergency contraception clients				
Did not attempt to access EC elsewhere	16 (100.0)	2(100.0)	14(100.0)	0
Previous Family Planning Visits				
Repeat clients	37(38.6)	24(32.9)	11(64.7)	2(33.3)
First-time clients	58(60.4)	48(65.7)	6(35.3)	4(66.7)
Missing	1(1.0)	1(1.4)	0	0
Reason for no previous visit among first-time clients*				
No need	35(60.3)	30(62.5)	3(50.0)	2(50.0)
Unaware of services	11(19.0)	8(16.7)	2(33.3)	1(25.0)
Other	10(17.2)	8(16.7)	1(16.7)	1(25.0)
Missing	5(8.6)	5(10.4)	0	0
Intimate Partner Violence (IPV)				
Over the past 12 months, women who have experienced the following by their partners...				
Verbal Abuse				
Yes	13(13.5)	10(13.7)	3(17.7)	0
No	82(85.4)	63(86.3)	14(82.3)	5(83.3)
No regular partner	1(1.0)	0	0	1(16.7)
Controlling Behaviors				
Yes	11(11.5)	9(12.3)	2(11.8)	0
No	85(88.5)	64(87.7)	15(88.2)	6(100.0)
Physical Abuse				
Yes	6(6.3)	4(5.5)	1(5.9)	1(16.7)
No	90(93.7)	69(94.5)	16(94.1)	5(83.3)
Forced Sex				
Yes	1(1.0)	0	1(5.9)	0
No	95(99.0)	73(100.0)	16(94.1)	6(100.0)
Preconception Health Knowledge				
Women whose healthcare providers spoke with them about preconception health.				
Yes	55(57.3)	43(58.9)	9(52.9)	3(50.0)
No	36(37.5)	27(37.0)	6(35.3)	3(50.0)
Unsure	5(5.2)	3(4.1)	2(11.8)	0
Women who took actions to improve their health in preparation for pregnancy.				
Yes	32(33.3)	25(34.3)	3(17.7)	4(66.7)
No	61(63.5)	46(63.0)	13(76.4)	2(33.3)
Missing	3(3.1)	2(2.7)	1(5.9)	0
Preconception Health Improvements				
Took multi-vitamin	18(56.3)	14(56.0)	2(66.7)	2(50.0)
Quit or reduced smoking	14(43.8)	11(44.0)	2(66.7)	1(25.0)
Quit or reduced alcohol consumption	8(25.0)	8(32.0)	0	0
Ate healthier	16(50.0)	13(52.0)	2(66.7)	1(25.0)
Sought medical/health advice	8(25.0)	6(24.0)	2(66.7)	0
Other	2(6.3)	0	1(33.3)	1(25.0)
Missing	1(3.1)	0	0	1(25.0)

Partner Congruence				
Husband's/partner's feelings about a possible pregnancy				
No regular partner	2(2.1)	2(2.7)	0	0
He has wanted me to be pregnant for a while	11(11.4)	9(12.3)	1(5.9)	1(16.7)
He wants me to be pregnant, but later	29(30.2)	19(26.0)	5(29.4)	5(83.3)
He wants me to be pregnant now	24(25.0)	22(30.1)	2(11.8)	0
He doesn't want me to be pregnant now, or at any time in the future	7(7.3)	3(4.1)	4(23.5)	0
I don't know what they feel about it	23(24.0)	18(24.7)	5(29.4)	0
Discussions about pregnancy between participant and their partner				
Never discussed having children together	15(15.6)	11(15.1)	4(23.5)	0
Discussed having children together, but hadn't agreed for me to get pregnant	50(52.1)	35(48.0)	12(70.6)	3(50.0)
Agreed that we would like me to be pregnant	27(28.1)	23(31.5)	1(5.9)	3(50.0)
Missing	2(2.1)	2(2.7)	0	0
No regular partner	2(2.1)	2(2.7)	0	0

Table 5. Pregnancy planning measured by the London Measure scale, stratified by clinic (n = 96).

	n(%)			
London Measure Score	**Overall**	**Local Health Department Clinic**	**Planned Parenthood**	**Community Health Center**
		Unplanned		
	19(19.9)	**12(16.4)**	**7(41.1)**	**0**
0	6(6.3)	4(5.5)	2(11.7)	0
1	5(5.2)	2(2.7)	3(17.7)	0
2	6(6.3)	4(5.5)	2(11.7)	0
3	2(2.1)	2(2.7)	0	0
		Ambivalent		
	55(57.1)	**41(56.1)**	**9(53.0)**	**5(83.3)**
4	15(15.6)	8(11.0)	6(35.4)	1(16.7)
5	11(11.4)	9(12.3)	2(11.7)	0
6	11(11.4)	9(12.3)	0	2(33.2)
7	3(3.1)	1(1.4)	1(5.9)	1(16.7)
8	13(13.5)	12(16.4)	0	1(16.7)
9	2(2.1)	2(2.7)	0	0
		Planned		
	22(23.0)	**20(27.5)**	**1(5.9)**	**1(16.7)**
10	12(12.5)	12(16.4)	0	0
11	4(4.2)	3(4.2)	0	1(16.7)
12	6(6.3)	5(6.9)	1(5.9)	0

Figure 1. Distribution of London Measure scores in Title X family planning clients (n=96).

Figure 2. Commonly used contraceptive methods among Title X family planning clients (n=38).

*Percentages do not add up to 100 because some clients used multiple methods.

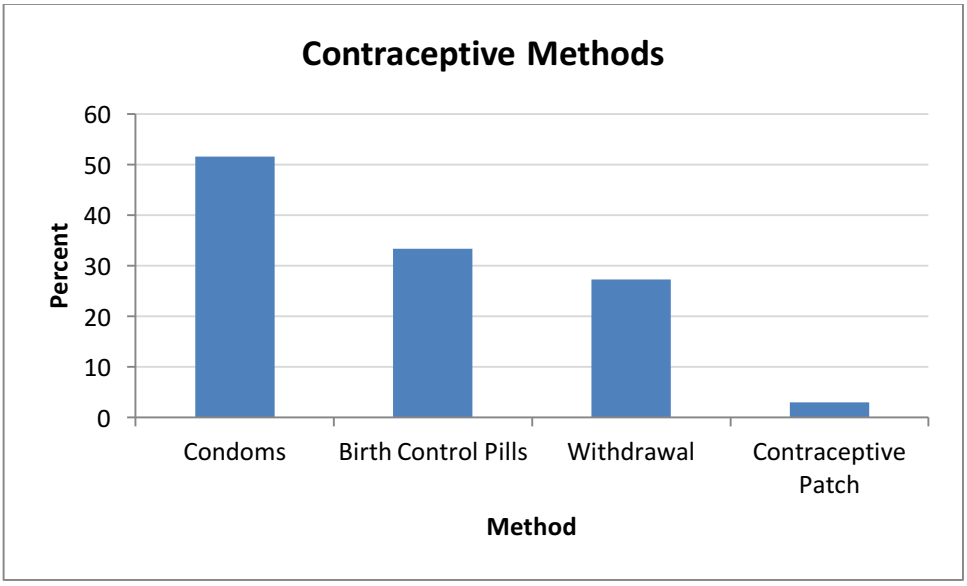

Figure 3. Title X clients' preconception health improvements (n=29).

*Percentages do not add up to 100 because some clients used multiple methods.