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Suboptimal interpregnancy intervals and timing of contraceptive provision among adolescents

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Objectives: To understand how young black women conceptualize contraception and interactions with their clinicians regarding pregnancy prevention.

Methods: We conducted semi-structured qualitative interviews with fifteen young black women, aged 18–23. Qualitative data were analyzed using techniques informed by grounded theory. Initial codes were then grouped thematically into subthemes. We analyzed the relationships among the themes and the ways in which women portrayed themselves and their interactions with clinicians, and grouped the subthemes into larger concepts.

Results: Participants discussed two salient concepts in the context of pregnancy prevention: (1) sexual responsibility and self-efficacy in pregnancy prevention and (2) the perceived role of health care clinicians. Throughout their narratives, women portrayed themselves as responsible actors in control of their contraceptive decision making and practices. Many viewed their life plan, to finish school and gain financial stability, as crucial to their resolve to use contraceptives. Some noted that friends had intended pregnancies, as a result of being lonely, not having other opportunities, or following a social trend. The majority maintained a sense of pride in not being pregnant, and believed others who did get pregnant were lazy and irresponsible for not using contraceptives. Most had limited expectations of clinicians and considered in-depth conversations about sexual behavior or details of contraceptive use to be irrelevant and unnecessary.

Conclusions: These findings may prompt clinicians to better understand how young black women view themselves as actors in the prevention of pregnancy and highlight what this population seeks from caregivers.

P53

CONTRACEPTIVE ADHERENCE IN THE VA HEALTHCARE SYSTEM

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Objectives: To evaluate contraceptive adherence among women veterans who receive care in the Veterans Affairs (VA) Healthcare System.

Methods: We examined national VA databases for women aged 18–45 who had made ≥ 1 visit to a VA primary care clinic and received ≥ 1 VA prescription for contraception (pills, ring, patch or injectable) during 2008. Women who had also used a long-acting or permanent method in 2008 were excluded. Adherence was assessed using several indicators: filling ≥ 10 months of contraceptive supplies, obtaining refills ≥ 7 days late and discontinuation (>90 days without contraception). Key independent variables included race/ethnicity and months of supply dispensed. Multivariable logistic regression models were used to examine associations between independent variables and adherence.

Results: Of the 14,853 women in our sample, 7% were Hispanic, 44% white and 24% were black (21% had missing information on race), and 81% received a 3-month supply of contraceptives. Only 30% of women had ≥ 10 months of contraceptive coverage, 56% obtained refills ≥ 7 days late and 29% discontinued their method during the year. In multivariable analyses, Hispanics and blacks were less likely than whites to have ≥ 10 months of contraceptive supplies (OR 0.60, 95% CI 0.51–0.71 and OR 0.73, 95% CI 0.66–0.81) and more likely to discontinue their method (OR 1.28, 95% CI 1.11–1.48 and OR 1.23, 95% CI 1.12–1.39). Hispanics were more likely than whites to obtain refills late (OR 1.19, 95% CI 1.01–1.40). Compared with receiving a <3 -month supply, receiving a 3-month supply was associated with ≥ 10 months of contraception coverage (OR 1.15, 95% CI 1.04–1.27), lower odds of a gap (OR 0.80, 95% CI 0.73–0.88) and less discontinuation (OR 0.84, 95% CI 0.77–0.92).

Conclusions: Interventions to enhance contraceptive adherence among women veterans are needed.

P54

INCREASING CONTRACEPTION COUNSELING IN SUBSPECIALTY MEDICINE CLINICS WITH A CHART-BASED PROMPT

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Objectives: To measure the impact of a chart-based provider prompts on contraception counseling and provision for women with chronic medical conditions seeing their subspecialty provider at an urban county hospital.

Methods: This is a cross-sectional study at three time-points in neurology, rheumatology and diabetes clinics at San Francisco General Hospital. Reproductive age women who attended the clinics prior to prompt use, immediately after prompt roll-out, and 6 months into prompt use were eligible and completed questionnaires after their provider visits. The prompt was a one-page form listing available contraceptives, with a checklist to assist counseling, provision, and referral for women with medical conditions.

Results: The study included a total of 189 total participants: 77 pre-prompt, 72 post-prompt, 40 6-month; 60.8% from neurology, 24.9% from rheumatology and 14.3% from diabetes. Average age was 32.6 years (18–45), with an ethnically and socioeconomically diverse sample. Contraceptive discussions increased from 9.2% to 36.8% ($p < .0005$), with an adjusted OR of 5.9 (95% CI 2.4–14.4). This increase was sustained at 6 months with a contraception discussion rate of 40%, and was seen in each clinic. A contraceptive plan, which included birth control prescriptions and referrals, increased from 3.6% to 7.9%, but this was not significant ($p = .24$). Amongst those in whom the prompt was located ($N = 95$), use of the prompt was associated with increased contraceptive discussions at an adjusted OR of 7.1 (95% CI 2.3–21.1).

Conclusions: This simple chart prompt was able to significantly increase patient-provider contraceptive discussions across a variety of subspecialty clinics for medically high-risk women. This concept has expansion potential and could be easily integrated into an electronic medical record. Future efforts must focus on facilitating contraceptive prescriptions and referrals.

P55

SUBOPTIMAL INTERPREGNANCY INTERVALS AND TIMING OF CONTRACEPTIVE PROVISION AMONG ADOLESCENTS

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Objectives: The study examined the timing and type of contraceptive uptake among adolescents with suboptimal interpregnancy intervals (IPIs).

Methods: We identified second- or higher order births from California's 2008 Birth Statistical Master File of women aged nineteen and younger at last live birth and calculated the birth-to-conception interval between the date of the previous live birth and the conception date of the birth in 2008. We conducted a probabilistic linking methodology to identify teens receiving contraceptive services from Family PACT (California's Medicaid family planning expansion). Suboptimal IPIs were defined as <18 months.

Results: Among the 32,257 adolescents with second- or higher order births receiving Family PACT services, 37% had suboptimal IPIs. Among this subgroup, 22% received a contraceptive method at first visit, compared to 34% of adolescents with optimal IPIs. Among adolescents who first received a contraceptive method at *any* visit, the highest percentage of suboptimal IPIs occurred among those making 6–10 and 10–15 visits before receiving a method (30% each), while the lowest percentage of suboptimal IPIs (24%) occurred among clients receiving a method at first visit.

Adolescents with the least contraceptive coverage (0–2 months) had the highest percentage of suboptimal IPIs (30%), while adolescents with the most coverage (13–18 months) had the lowest percentage of suboptimal IPIs (13%).

Conclusions: Contraceptive provision at first visit and contraceptive coverage optimization help reduce suboptimal IPIs among adolescents. Further research is needed to understand the personal and systemic factors influencing delays in contraceptive uptake and suboptimal IPIs among adolescents receiving contraception.

P56

HIGH-RISK SEXUAL PRACTICES AND CONTRACEPTION IN COLLEGE FRESHMEN

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Objectives: It is thought the freshman year of college is associated with onset or increase in sexual activity and high-risk behaviors. We aim to describe initial sexual behavior, contraceptive choices and high-risk sexual practices in freshman females at a large state university.

Methods: A total of 700 females randomly selected from the University of California–Los Angeles 2011 incoming freshman class received an e-mail invitation for study participation. Respondents were screened online for eligibility criteria. For those who were eligible, Web-based consent was obtained and subjects completed an anonymous, self-administered electronic questionnaire during the beginning of the academic year. Subjects completing the first survey will be asked to complete a second questionnaire at the end of the academic year (June 2012).

Results: Of the 700 students invited to participate, 230 responded (32.9% response rate); 208 met eligibility criteria and completed the survey. Upon entering freshman year, 39.3% ($n=80$) were sexually active. Among sexually active respondents at last intercourse, 6.2% ($n=5$) reported using no form of contraception; 60% ($n=48$) reported condom use; 66.3% ($n=53$) reported using oral contraceptive pills; 7.6% ($n=8$) reported using LARC (long-acting reversible contraception). Fifty percent ($n=104$) reported alcohol use and 18% ($n=38$) tobacco use before college. When choosing contraception, 76% ($n=155$) trust their clinician most for information; 56.2% ($n=114$) would use a method if their clinician were using.

Conclusions: Rates of unprotected vaginal intercourse were lower than in other published reports on this age-group. Trust in clinicians for contraceptive information is high, and sharing of personal use may influence this population. Prospective follow-up data will be completed in June 2012.

P57

USING CHANGES IN BINDING GLOBULINS TO ASSESS ORAL CONTRACEPTIVE PILL COMPLIANCE

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Objectives: Measuring ethinyl estradiol (EE2) induced changes in binding globulin (BG) levels may provide an effective and convenient approach to distinguishing noncompliant from compliant oral contraceptive pill (OCP) users in research settings. This analysis evaluated the validity of using

changes in corticosteroid-binding globulin (CBG), sex-hormone-binding globulin (SHBG), thyroxine-binding globulin (TBG), as measures of OCP compliance.

Methods: We used frozen serum from a 3-month study that compared ovarian suppression between normal weight and obese women randomized to one of two OCP formulations — either 30 mcg EE2 and 150 mcg levonorgestrel (LNG) or 20 mcg EE2 and 100 mcg LNG. Based on serial LNG measurements, 17% of participants were noncompliant. With only OCP starters included, each noncompliant participant was matched with compliant participants by age, body mass index, OCP formulation, and ethnicity. We measured CBG, SHBG and TBG levels, and compared the changes from baseline to 3-month follow-up between the noncompliant and compliant study participants. We then constructed receiver operator characteristic curves to assess the sensitivity and specificity of using change in BGs to measure OCP compliance.

Results: Change in CBG and TBG had excellent sensitivity and specificity to distinguish OCP noncompliant users from compliant users. SHBG was less useful.

Conclusions: EE2 induced changes in CBG and TBG provide a sensitive integrated marker of compliance with an LNG containing OCP. Measuring BG changes to evaluate OCP compliance can be done with a standardized, readily available kit. This requires drawing only 2 blood samples: at baseline and at a single follow-up. In OCPs containing EE2 and progestin components, SHBG might be useful.

P58

THE EFFECT OF PROGESTIN-ONLY CONTRACEPTION ON POSTPARTUM WEIGHT LOSS (POPP)

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Objectives: Obesity and unplanned pregnancies are leading public health problems. The postpartum period is a unique time when these two conditions overlap. We aim to understand how progestin-only contraceptives affect postpartum weight. We hypothesize that by 6 months after delivery, etonogestrel implant users will lose an amount of weight similar to that lost by women in a control group, while depot medroxyprogesterone acetate (DMPA) users will retain more pregnancy weight.

Methods: A total of 100 women were enrolled immediately postpartum; 34 of these self-selected to leave the hospital without initiating contraception. Sixty-six women randomly received either the etonogestrel implant or DMPA prior to discharge. Descriptive statistics were used to assess differences among the groups. Generalized estimating equations were used to analyze intrapersonal weight changes, which were then adjusted for age, race/ethnicity, parity, income and education.

Results: Compared with controls, randomized women were 5 years younger ($p<.0001$) and more often black ($p=.002$). At 3 months, DMPA users had lost 5.8 lb (2.9%), etonogestrel implant users had lost 12.5 lb (7.1%) and the controls had lost 14.9 lb (8.5%). The difference in percentage weight change at 3 months between the DMPA users and the controls was significant ($p=.012$); however, the change between the etonogestrel implant users and the controls was not ($p=.073$). At 6 months, DMPA users had a significantly different weight-loss trajectory than the control group ($p=.0497$).

Conclusions: Our data demonstrate weight-loss differences between postpartum women using DMPA and those using the etonogestrel implant or non-hormonal contraceptives. Our findings emphasize the importance of understanding the intersection of contraception and obesity, which will aid in the amelioration of these public health epidemics.