Objectives: Intrauterine contraceptives (IUCs) are very effective forgettable forms of contraception, yet their use by US adolescents is low. Although primary care providers (PCPs) can counsel and provide IUCs, adolescents' concerns about clinician's judgment inhibit their seeking preventive reproductive health services. Our objective is to examine how PCPs' judgments of adolescents' behavior may influence IUC provision.
Method: We conducted qualitative semistructured phone interviews with family physicians, generalist pediatricians and obstetrician–gynecologists in New York City. We utilized standard qualitative methods for analysis in this institutional review board-approved study.
Results: We completed 28 interviews with 9 family physicians, 10 pediatricians and 9 obstetrician–gynecologists. Nineteen have ever counseled adolescents about IUCs. Thirteen have ever inserted IUCs for adolescents; most inserted just a handful.
When considering IUC for an adolescent, clinicians assess the adolescents' developmental stage and her sexual behavior and then judge her appropriateness for IUC. Attributes judged as appropriate for IUC use include responsibility, reliability, maturity and monogamy. In contrast, PCPs would not offer IUC to an adolescent who behaves spontaneously, irresponsibly, immaturely, ignorantly and/or "promiscuously."
Conclusions: Our results suggest that PCPs' judgment of adolescents' developmental stage and behavior influences their IUC provision. A number of respondents endorse very high behavioral standards in order to feel comfortable with IUCs in adolescents. These standards are not aligned with adolescents' developmental stage and are more stringent than accepted clinical guidelines. Thus, the PCPs' judgment may limit adolescents' access to IUCs in primary care. Further investigation is needed to assess how PCPs' judgments translate into clinical practice.

A9

THE FOLATE STATUS OF REPRODUCTIVE-AGED WOMEN DESIRING CONTRACEPTION: DIETARY AND BLOOD ASSESSMENTS FROM A RANDOMIZED TRIAL

Castaño P
Columbia University Medical Center, New York, NY, USA

Aydemir A, Lynen R, Sampson-Landers C

Objectives: To assess the folate status of US women in a study of a folate-fortified oral contraceptive (OC).
Method: Women completed the Short Folate Food Frequency Questionnaire and provided plasma and red blood cell (RBC) folate samples at baseline and 6 months after randomization to an OC or folate-fortified OC. We calculated dietary folate equivalents (DFEs) consumed and the proportion of participants meeting the Recommended Daily Allowance (RDA).
Results: Overall, 385 participants were randomized, of whom 262 (68%) represented the per protocol set. Baseline daily DFE consumption was 529.8±342.1 mcg (55% met the RDA). At follow-up, DFE consumption was higher in the fortified OC group (1225.9±346.2 mcg; 100% met the RDA) than the OC group (500.6±361.2 mcg; 45% met the RDA). Mean plasma and RBC folate levels increased from 44.5±17.2 and 996.7±369.8 nmol/L, respectively, to 55.8±21.1 and 1311.9±436.0 nmol/L.
Conclusions: Lack of adequate folate intake from dietary sources or supplements alone suggests the need for novel approaches, such as folate fortified-OCs, to ensure adequate folate levels.

A10

FACTORS ASSOCIATED WITH CONSISTENT USE OF CONDOMS IN COLLEGE WOMEN

Chen T
University Of Central Florida, Orlando, FL, USA

Boardman L, Johnson T

Objectives: Unintended pregnancy and sexually transmitted infections may be prevented by using barrier contraceptives such as condoms. However, condoms are not consistently used by sexually active individuals. This study was conducted to assess patient characteristics and behaviors associated with consistent condom use in college-aged women.
Method: Female college students ≤26 years old were recruited at University of Central Florida Health Services to complete a 19-item questionnaire containing items regarding demographic information, medical history and sexual history. Subjects reporting use of male or female condoms "100% of the time" and "50%–99% of the time" were considered consistent users, while those reporting "0% of the time" were categorized as nonusers.
Results: Of 86 participants, 52.3% reported consistent use of male or female condoms (median age 21), while 26.7% reported no use (median age 23). In a logistic multiple regression model, factors associated with consistent use included younger age [odds ratio (OR) 0.54, 95% confidence interval (CI) 0.33–0.88], increased number of partners in the last 6 months (OR 6.61, 95% CI 1.89–6.61) and never smoking (OR 7.55, 95% CI 1.05–54.55). Race/ethnicity, gravidity, parity, use of hormonal contraception, history of sexually transmitted infections or abnormal cervical cytology, and age at first coitus were not significantly associated with condom use.
Conclusions: Women who consistently use condoms are more likely to have never smoked, to be younger and to have had a greater number of sexual partners in the past 6 months compared to women who never use barrier contraceptives.

A11

ATTITUDES AND PRACTICES OF MALAYSIAN PHARMACISTS REGARDING CONTRACEPTIVES AND ABORTION

Chin KL
Universiti Teknologi MARA, Selangor, Malaysia

Anderson C, Low WY

Objectives: (a) To assess registered pharmacists' attitudes and practices regarding contraceptives and abortion. (b) To explore factors that could shape pharmacists' perception on contraception and abortion issues.
Method: A cross-sectional survey was conducted among registered Malaysian pharmacists in Malaysia during August to December 2011. The survey instrument included both multiple-choice and yes/no questions to assess their practices and Likert-type scales questions regarding attitudes. Internal reliability was established using Cronbach α. Baseline demographic data were analyzed with descriptive statistics. We used χ^2, Mann–Whitney and Kruskal–Wallis to determine differences and associations among different characteristics. A value of $p<.05$ was considered significant.
Results: One hundred forty-nine usable responses were received from registered pharmacists with an average age of 41 years. Cronbach alpha value for contraception domain is 0.652, while that for abortion domain is 0.826. Factors significantly associated with attitudes and practices included gender, age, ethnicity and self-perceived religiousness. Being male, Chinese ethnicity and self-perceived nonreligiousness were associated with agreeing that adolescents have rights to have sex and that they have rights to use emergency contraceptives and other contraceptives ($p<.05$). Pharmacists of Malay ethnicity and those who perceived themselves as religious persons significantly rejected the notion that abortion should be legal and that adolescents and young unmarried women have rights to have abortion more than others ($p<.05$).
Conclusions: New information about Malaysian pharmacists' attitudes and practices towards contraceptives and abortion issues was identified. This study highlights the need to reexamine the content and training

provided in the Malaysian pharmacy programs regarding contraceptive and abortion issues.

A12

EXPLORING MALAYSIAN PHARMACISTS' ATTITUDES TOWARD SEXUAL HEALTH EDUCATION AND SEXUAL HEALTH CLINIC

Chin KL
Universiti Teknologi MARA, Selangor, Malaysia

Anderson C, Low WY

Objectives: (a) To assess registered pharmacists' attitudes toward sexual health education and sexual health clinic. (b) To explore factors that could shape pharmacists' perception on sexual health education and sexual health clinic.
Method: A cross-sectional survey was conducted among registered Malaysian pharmacists in Malaysia during August to December 2011. The survey instrument included both multiple-choice and yes/no questions to assess their practices and Likert-type scales questions regarding attitudes. Internal reliability was established using Cronbach α. Factor analysis was performed using Varimax rotation and parallel analysis. Baseline demographic data were analyzed with descriptive statistics. We used χ^2, Mann–Whitney and Kruskal–Wallis to determine differences and associations among different characteristics. A value of $p<.05$ was considered significant.
Results: Completed surveys were obtained for 149 registered pharmacists with an average age of 41. Cronbach alpha value for sexual health education domain is 0.646., while that for sexual health clinic domain is 0.810. Factor analysis identified two components for sexual health education domain and one component for sexual health clinic domain. A total of 50.3% felt that sexual health education should be provided to children of 13–15 years of age. More than 80% felt that pharmacists should be incorporated into national sexual health education program and encourage the public to practice safe sex. Eighty-seven percent agreed that the society needs sexual health clinic and pharmacists have an important role in sexual health clinic.
Conclusions: This study highlights the recognition of the need for sexual health education and sexual health clinic by pharmacists in Malaysia.

A13

A 90-DAY INTRAVAGINAL RING FOR PREVENTION OF HIV ACQUISITION AND UNPLANNED PREGNANCY

Clark J
University of Utah, Salt Lake City, Utah, USA

Johnson T, Shelke N, Clark M, Doncel G, Friend D, Kiser P

Objectives: A majority of the world's unintended pregnancies occur within resource-poor regions where the HIV/AIDS pandemic also is prevalent. There is a renewed imperative to develop women-controlled drug delivery systems for simultaneous protection against both HIV infection and unwanted pregnancy. Our goal was to design an intravaginal ring (IVR) capable of simultaneous controlled delivery of tenofovir (TFV), an inhibitor of HIV-1 at 10 mg/d, and the progestin contraceptive levonorgestrel (LNG) at 10 or 20 mcg/d for 90 days.
Method: The properties of TFV and LNG necessitated the design of a two-segment IVR. TFV was formulated with glycerol into a paste at 65 wt%, which was loaded into hydrophilic polyurethane tubes. LNG was dissolved into polyurethane reservoir segments (10 or 20 mm in length) by coaxial hot-melt extrusion at 1.25 wt%. Segments were then joined together to form a 55-mm outer diameter IVR by induction welding. IVRs were subjected to in vitro dissolution testing to estimate in vivo drug release rates.
Results: In vitro, IVRs demonstrated near time-independent release of both drugs for 90 days. All IVRs released a minimum of 7–8 mg/day TFV for the entire duration, whereas LNG was released from 10- and 20-mm segments at minimum rates of 7 and 18 mcg/day, respectively.
Conclusions: We were able to fabricate an IVR capable of simultaneously delivering milligram-per-day quantities of TFV and microgram-per-day quantities of LNG for over 90 days, thereby demonstrating the IVR's potential to deliver both a proven antiretroviral and hormonal contraceptive to prevent HIV infection and unintended pregnancy.

A14

IMMEDIATE POSTPLACENTAL IUD PLACEMENT AFTER CESAREAN AND VAGINAL DELIVERIES AT AN ACADEMIC TRAINING CENTER

Curry CL
Boston University Medical Center, Boston, MA, USA

Iverson R, Rindos N, Sonalkar S

Objectives: The immediate postpartum period provides an ideal opportunity for initiation of long-acting reversible contraception to women who are in a hospital setting for their deliveries. The objective of our study was to evaluate the expulsion rate of immediate postplacental intrauterine device (IUD) (Copper T 380A or levonorgestrel-releasing intrauterine system) insertion after cesarean or vaginal delivery at an urban, academic training center.
Method: We performed a retrospective chart review on all patients who had immediate postplacental IUD insertion from October 2010 through November 2011 and evaluated for clinical or radiographic evidence for IUD expulsion in the 6 months afterward.
Results: In the 13 months since programmatic implementation, 44 IUDs were placed after cesarean delivery; 11 patients were lost to follow up, and of those with complete charts, there was a 12% expulsion rate. Thirty-nine IUDs were placed after vaginal deliveries; 13 patients were lost to follow-up, and of those with complete charts, there was a 38% expulsion rate.
Conclusions: Implementation of an immediate postplacental IUD placement system is possible at an urban, safety-net hospital. Our expulsion rate after vaginal deliveries is higher than previously documented, and reasons for this should be explored further.

A15

RANDOMIZED CLINICAL TRIAL OF LIDOCAINE VS. BUPIVACAINE FOR PARACERVICAL BLOCK DURING LAMINARIA PLACEMENT IN SECOND-TRIMESTER ABORTION

Davison J
New York University School of Medicine, New York, NY, USA

Murthy A, Webb A

Objectives: To determine whether paracervical block using 1% lidocaine or 0.25% bupivacaine produces more effective pain control during laminaria placement as measured by the Visual Analog Scale (VAS).
Method: Since 3/2009, 112 participants presenting between 12–23 completed weeks of gestation desiring pregnancy termination enrolled in this double-blind randomized controlled trial. Subjects are randomized to receive either 1% lidocaine or 0.25% bupivicaine for paracervical block prior to laminaria placement. The primary outcome variable is pain control as measured by a 10-cm VAS (0, *no pain*; 10, *worst pain*) immediately following laminaria placement (placement score) as well as the day after placement (follow-up score). *t* tests were performed with $p<.05$.
Results: Of the 112 subjects enrolled thus far, 107 had data recorded for the primary outcome. No significant difference was found in number of laminaria placed, placement or follow-up pain scores for drug A vs. B.
Conclusions: While literature is limited on pain control during laminaria placement, both bupivicaine and lidocaine have been used with similar efficacy during first-trimester abortions. Bupivicaine has a longer duration