Adolescent Medicine

Division Photo

FIRST ROW: S. Brown, G. Weller, C. Lehmann, M. Britto, T. Mullins, L. Ayensu-Coker. SECOND ROW: L. Widdice, P. Benson, J. Huppert, M. Spigarelli, F. Biro, L. Dorn, J. Kahn.

Division Data Summary

Research and Training Details

Number of Faculty	15
Number of Joint Appointment Faculty	2
Number of Research Fellows	3
Number of Research Students	2
Number of Support Personnel	75
Direct Annual Grant Support	$1,965,165
Direct Annual Industry Support	$85,500
Peer Reviewed Publications	65

Clinical Activities and Training

Number of Clinical Staff	5
Number of Clinical Fellows	6
Number of Clinical Students	21
Number of Other Students	4
Inpatient Encounters	4,604
Outpatient Encounters	22,779

Faculty Members

Frank M Biro, MD, Professor Clinical ; *Rauh Chair of Adolescent Medicine; Director, Division of Adolescent Medicine; Member, Search Committee, Director of Clinical Epidemiology & Biostatistics*

Research Interests: Environmental influences on body composition and pubertal timing; impact of peripubertal changes on risk factors for breast cancer.

Paul A S Benson, MD, MPH, Assistant Professor Clinical ; *Co-Director, GLBTA, CCHMC; Faculty Assessor, Univ of*

Cincinnati Annual Cincinnatus Scholarship Comeptition
Research Interests: Health care access for GLBT adolescents; obesity treatment

Paula K Braverman, MD, Professor Clinical ; *Director of Community Programs, Div of Adolescent Medicine*
Research Interests: Program development of community programs, including "FUN & FIT" and the Postponing Sexual Involvement (PSI) Program

Lesley L Breech, MD, Associate Professor Clinical ; *Section Leader, Section of Pediatric & Adolescent Gynecology*

Maria T Britto, MD, MPH, Professor ; *Director, Center for Innovation in Chronic Care; Assistant Vice-President, Chronic Care Programs; Co-Director, Clinical Epidemiology and Clinical Effectiveness Track of the Masters of Science in Clinical Research; Faculty Lead, EPIC-Quality Integration Initiative; Faculty Lead, Patient Portals; Co-Leader, Advanced Improvement Methods Course*
Research Interests: Health care quality, especially for adolescents with chronic illness

Lorah D Dorn, PhD, Professor ; *Director of Research, Div of Adolescent Medicine; Chairman, Fifth Third Bank/Charlotte R Schmidlapp Womens Scholars Program*
Research Interests: Behavioral endocrinology with respect to puberty and adolescence

Jill S Huppert, MD, MPH, Assistant Professor Clinical
Research Interests: Reduction of the negative health consequences of STIs, especially Trichomoniasis, in young women.

Jessica Kahn, MD, MPH, Associate Professor ; *Director of Research Training*
Research Interests: New technologies and strategies for cervical cancer prevention.

Corinne Lehmann, MD, Associate Professor Clinical ; *Director, Medical Student & Resident Rotations; Director, Medical Students Scholar Program in Pediatrics; Medical Director, Special Care Clinic (for pediatric HIV patients)*
Research Interests: Medical education of physician residents

Rachel J Miller, MD, Instructor Clinical

Laurie A P Mitan, MD, Associate Professor Clinical ; *Director, Eating Disorders Program*
Research Interests: Treatment issues in patients with eating disorders

Joseph Rauh, MD, Professor Clinical ; *Emeritus*

Michael G Spigarelli, MD, PhD, Assistant Professor Clinical ; *Director, Adolescent Medicine Fellowship; Director, Clinical Trials Office*

Lea E Widdice, MD, Assistant Professor Clinical
Research Interests: Epidemiology of HPV and effects of HPV vaccination

Michele Zucker, MD, Assistant Professor Clinical

Joint Appointment Faculty Members

Carol Engel, MD, Adjunct Assistant Professor
Child & Adolescent Psychiatry

Bin Huang, PhD, Assistant Professor
Div of Biostatistics & Epidemiology
Mediation analyses for non-normal type of data and robust statistics approach, using statistics modeling to classify pubertal timing, and modeling pubertal growth.

Clinical Staff Members

- **Susan Brown, MD**
- **James Ebert, MD**
- **Tanya Kowalczyk Mullins, MD**
- **Ronna Staley, MD**
- **Giselle Schneider Weller, MD**

Trainees

- **Tanya Mullins, MD,** 4th yr, Medical Univ of South Carolina
- **Kanti Ford, MD,** 3rd yr, Drew/UCLA College of Medicine
- **Jennifer Hillman, MD,** 3rd yr, U Missouri -Columbia School of Medicine
- **Michele Dritz, MD,** 1st yr, St Louis Children's Hospital

- **Jason Mehrtens, MD,** 1st yr, Gen Leonard Wood Army Community Hospital
- **Sonya Negriff, PhD,** 1st yr, Univ of Southern California
- **Lisa Park, MD,** 1st yr, Georgetown University
- **Chad Shenk, PhD,** 1st yr, Univ of Rochester Medical Center

Significant Accomplishments in FY08

New Program: A school-based obesity prevention/intervention program

FUN & FIT is an interactive, six-week, school-based health education program developed by Dr. Paula Braverman of the Division of Adolescent Medicine and Dr. Keith King of the Department of Health Promotion and Education at the University of Cincinnati; it teaches students about healthy eating and physical activity. The program content was developed from the evidence-based guidelines of the 2007 Childhood Obesity Action Network. During the 2007-08 school year, FUN & FIT was implemented and evaluated in five urban middle and high schools, including a total of 722 students (44% male, 52% African American, 33% Caucasian), in 6th through12th grades. There were 607 matched pre *vs* post pairs, and 321 matched pretest *vs* 3 month F/U pairs. Significant increases were observed in both the pre *vs* post test and pre *vs* 3 month F/U comparisons in the total knowledge score; self reported behaviors of daily servings of fruits/vegetables and breads/grains/pasta, and daily minutes of exercise; perceived efficacy in: replacing sugary drinks with healthy drinks; eating recommended servings of dairy and fruits/vegetables; limiting eating out in fast food restaurants; limiting portion sizes, and watching less than two hours daily of TV. Students were also significantly more likely at posttest and F/U to feel confident that they could eat healthy every day and to feel that it was important to eat recommended servings of meat/poultry/beans; increase consumption of meals at home; and to exercise at least one hour per day. This program demonstrated sustainable changes during a three month period in knowledge, self-reported behaviors, attitude, and self-efficacy regarding evidence-based recommendations about healthy eating and physical activity. The prevalence and severity of obesity are rising in the US, and prevention and intervention efforts are on the forefront of health issues in adolescents and adults. These preliminary results are very encouraging, and await larger-scale implementation.

New Program: The implementation of an international network to address urogenital HPV prevention and immunization.

Dr. Jessica Kahn has been a leading researcher in the area of HPV research among adolescents. She is the facilitator of the HPV Vaccine Global Community of Practice, funded by the World Health Organization (WHO). The program is based at CCHMC and represents a collaboration of the WHO, UNFPA, and CCHMC. The HPV Vaccine Global Community is an online global network of people who share an interest in preventing cervical cancer and in the role of HPV vaccines in health programs. The Community utilizes the internet to share and exchange knowledge, ideas and resources to explore the feasibility of introducing HPV vaccines within cervical cancer control programs and thereby ensure that people around the globe have equitable access to the best available health care. The program was launched in June, 2008 with a global videoconference involving nine sites around the world (Geneva, Rabat, Washington DC, Copenhagen, Harare, Cincinnati, New York, Abuja, and Lima). Dr. Kahn facilitated the global videoconference, during which keynote and regional speakers discussed the role of HPV vaccines in global cervical cancer prevention. The videoconference was followed by three weeks of on-line discussions which involved global experts on cervical cancer prevention who responded to members' questions and comments. Each week was guided by a specific theme raised during the global videoconference: 1) integrating HPV vaccination into current or planned cancer control programs, 2) making decisions about prioritizing different cervical cancer control strategies where budgets are limited, and 3) social, cultural, and political issues surrounding HPV vaccine access and delivery. Since June, the program has grown to include approximately 500 members from over 80 countries. Plans include conducting a second videoconference in the Pacific-Asian region, developing technical briefing papers, conducting research through the community of practice to help facilitate implementation of comprehensive cervical control programs including HPV vaccination, and disseminating and evaluating tools for HPV vaccine introduction. Dr. Kahn has also presented summaries of these discussions to the HPV Vaccine Advisory Committee of the WHO, in order to help inform policy decisions related to HPV vaccine recommendations. These programs complement the international efforts of CCHMC.

Significant Publications in FY08

Batalden K, Bria C, Biro FM. Genital herpes and the teen female. J Pediatr Adolesc Gynecol. 2007 Dec;20:319-21.

Recommendation for continuous suppresive therapy of genital herpes in adolescent and young adult women from evidence-based analysis of the literature. Recommendations were forwarded to the CDC for consideration in the new STD Treatment Guidelines.

Britto MT, Schoettker PJ, Pandzik GM, Weiland J, Mandel KE. Improving influenza immunisation for high-risk children and adolescents. Qual Saf Health Care 2007 Oct;16:363-8.

Demonstrated that evidence based approaches to immunization delivery combined with quality improvement techniques could be used in academic and practice-based settings to achieve influenza immunization rates that are substantially higher than those previously reported in the literature.

Huppert JS, Mortensen JE, Reed JL, Kahn JA, Rich KD, Hobbs MM. Mycoplasma genitalium detected by transcription-mediated amplification is associated with Chlamydia trachomatis in adolescent women. Sex Transm Dis 2008 Mar Mar;35(3):250-4.

M. genitalium is a highly prevalent STI (22%) in sexually active female adolescents and is strongly associated with current Chlamydia infection. Further development of sensitive, reliable, and widely available diagnostic methods for MG is needed. Only then can longitudinal studies accurately assess the role of MG as an etiology of symptoms or other adverse outcomes such as pelvic inflammatory disease or acquisition of HIV in women.

Kahn JA, Huang B, Gillman MW, Field AE, Austin SB, Colditz GA, Frazier AL. Patterns and determinants of physical activity in U.S. adolescents. J Adolesc Health 2008 Apr;42:369-77.

Longitudinal trends in adolescent physical activity in a sample of 12,000 U.S. adolescents and their mothers. Physical activity was function of age, increasing until early adolescence and declining after age 13 in boys and girls. Variables associated with physical activity level at baseline in boys and girls were age, body mass index, psychosocial variables, personal attitudes about body shape, perceived peer attitudes about body shape/fitness, parental attitudes about physical activity, parental physical activity, and environmental barriers to physical activity. The study suggests that interventions to increase physical activity in adolescents should begin before adolescence, and that interventions may be more effective if they are multimodal and focus on modifiable individual, parental, and environmental factors.

Kahn JA, Rosenthal SL, Jin Y, Huang B, Namakydoust A, Zimet GD. Rates of human papillomavirus vaccination, attitudes about vaccination, and human papillomavirus prevalence in young women. Obstet Gynecol 2008 May;111:1103-10.

Examination of rates and attitudes about HPV vaccination among girls eligible for "catch-up" immunization (i.e., 13-26 year olds) post-licensing. Key findings: 1) Although almost 70% of these sexually active girls were HPV-positive, few were positive for the types targeted by the quadrivalent HPV vaccine, implying that the vaccine could be effective even in sexually active 13-26 year-old young women; 2) Only 5% of young women had received the vaccine, a concerning finding as most young women were low-income and therefore at increased risk for cervical cancer later in life. This suggests that interventions should ensure that low-income women can access HPV vaccines to avoid increasing disparities in cervical cancer; and 3) Specific factors were associated with intention and self-confidence to receive the HPV vaccine in the next year, including knowledge, personal beliefs, and health-care system factors. These factors may be targeted in interventions designed in improve HPV vaccine uptake in this population.

Division Highlights

Puberty

In the area of pubertal development, the Division has two novel studies examining key issues important to girls in this age group. Puberty and timing of puberty have been shown to be related to a number of negative physical and mental health outcomes in girls, in particular.

In the first study led by Lorah D. Dorn, PhD, over 200 girls age 11-17 years were enrolled in a longitudinal study examining the influence that smoking behavior, anxiety and depression may have on bone (e.g., bone mineral content and density) and reproductive health (menstrual cycles and hormones). Girls were recruited from the community and the Teen Health Center in order to represent a distribution of smoking behaviors and depression. That is, non-smokers and smokers are represented in the sample as well as girls who are depressed and not depressed. At this time only cross-sectional findings are available but they highlight the importance of following these girls across time. At the biennial meeting of the Society for Research on Adolescence Dr. Dorn and colleagues reported for the first time that there was an association of depression and anxiety with bone health in these girls. Higher depression and/or anxiety were related to lower measures of bone health. The strength of this association depended upon the smoking status of the girls and whether the analysis focused on depression or anxiety. A paper elaborating on these findings will be published in December 2008. This is a novel finding as some literature in the adult population reports that those with diagnosable depression or depressive symptoms are more likely to have osteoporosis or low bone mineral density.

Other literature shows that smoking has a negative impact on bone health. What is intriguing about our study is that this is the first time that this association has been shown in adolescent girls. During adolescence and puberty nearly 50% of bone mineral is accrued. If girls do not attain peak bone mass during puberty they enter their reproductive years with a deficit in bone. This deficit may put them at risk during the peri-and post-menopausal years for osteoporosis; a significant problem in public health today. The longitudinal analyses are needed to confirm this association and determine potential mechanisms for depression and/or smoking having a negative impact on bone.

A second study on puberty by Dr. Biro focused on body composition changes during puberty. Girls were recruited at age 9 through the NGHS, and followed annually over ten years. Girls were grouped into low (<20th %tile), middle, and high (>80th %tile) BMI on the basis of race-specific BMI percentile rankings at age 9, and low, middle, and high waist-to-height ratio, on the basis of waist-to-height ratio at age 11. BMI was partitioned into fat mass and fat-free mass index (FMI and FFMI). Girls accrued fat mass at a greater rate than fat-free mass, and the ratio of fat to fat-free mass increased from ages 9 through 18. There was a significant increase in this ratio after age at peak height velocity. Participants with elevated BMI and waist-to-height ratios at age 18 tended to have been elevated at ages 9 and 11, respectively. There were strong correlations between BMI at age 9 with several outcomes at age 18, including BMI, FMI, and with the ratio of fat to fat-free mass. Additionally, there was significant tracking of elevated BMI from ages 9 through 18. In girls, higher BMI levels during childhood lead to greater waist-to-height ratios and greater than expected changes in BMI at age 18, with disproportionate increases in fat mass. These changes are especially evident after the pubertal growth spurt. These findings suggest that interventions for obesity should be implemented by the teen or pre-teen years.

Asthma Innovation Lab

Dr. Maria Britto has continued to study health care quality and to develop new methods to improve outcomes for adolescents with chronic illnesses. The multi-disciplinary team in the Asthma Innovation Lab located in the Teen Health Center further developed its registry containing patient-based outcomes for a population of underserved adolescents with asthma. At the 2008 Pediatric Academic Societies (PAS) meeting, they reported on possible differences between adolescents' perceived global asthma control and their actual control (based on self-report) according to national guidelines. Of the 201 participants only 26% accurately gauged their asthma control. The vast majority overestimated their control while only 1% underestimated it. Activity limitations and daytime symptoms were the most common manifestations of poor control. Participants who were more confident in their asthma management skills or who were African-American were more likely to overestimate their control. The study suggested that clinicians should use structured questions to elicit multi-component asthma control rather than relying on global questions regarding asthma control.

STI Research

Dr. Lea Widdice, working with researchers at Cincinnati Children's and UCSF, studied HPV transmission in 25 young adult couples. She examined multiple sites for HPV presence, by HPV type, in a longitudinal study. Women with HPV persistence are much more likely to have the same type detected in their partners than women with transient HPV infections ($p=0.04$). The high rate of type-specific HPV concordance in the anogenital area between couples was striking, supporting the ease to which HPV is transmitted between couples. Although the palm and mouth were uncommon sources for infections, when discordance occurs, the discordant type can be found in non-genital areas of the partner negative for that HPV type in the anogenital area.

Dr. Tanya Mullins and colleagues have been evaluating adolescent preferences for different HIV testing methods. Three different HIV testing methods were offered to 200 study participants, who also completed a survey assessing HIV/Aids knowledge, beliefs about HIV testing, and HIV risk behaviors. Even when offered a choice of HIV testing methods, only half of adolescents agreed to HIV testing. Of those, 50% chose rapid oral fluid testing, 30% chose traditional venipuncture testing, and 19% chose rapid fingerstick whole blood testing. Agreement to test for HIV was associated with male gender, parental education, perceived likelihood of current HIV infection, and intention to obtain HIV testing if offered by a health care provider. Participants who chose a rapid test method were significantly more likely to receive their HIV test results. With the release of the 2006 Centers for Disease Control and Prevention (CDC) recommendation to test every person for HIV (regardless of risk), insight into adolescent HIV testing preferences and attitudes will allow providers to offer HIV tests that are most acceptable to teens, leading to increased uptake of HIV testing by adolescents and identification of previously undiagnosed HIV positive individuals.

Dr. Jill Huppert demonstrated that the rapid antigen test for Trichomonas could be delayed until after the wet mount, with no loss of sensitivity, and that this wet mount followed by a rapid antigen test for T. vaginalis was the best approach to detect infections. In another presentation, Dr. Huppert reported that women with a positive point of care test were more likely to realize that they had an STI, and to adopt safer behaviors such as abstinence, partner notification, and partner treatment. These results can be useful in evaluating how adolescents may respond to other

point of care tests and even home-based testing. In a collaborative project with the Emergency Department, she noted that a recruitment bias occurs when parental permission is required to enroll minor women in STI research. This work will help inform IRBs to allow minor teens to consent for STI research without parental permission in order to avoid biased scientific results.

Division Collaboration

Collaboration with Behavioral Medicine & Clinical Psychology

Collaborating Faculty: Smolyansky, BH

Collaboration re: ADHD collaborative (Biro)

Collaboration with Behavioral Medicine & Clinical Psychology

Collaborating Faculty: Cotton, S

Collaboration re: HIV support group (Lehmann)

Collaboration with Biomedical Informatics

Collaborating Faculty: Medvedovic, M

Collaborator on molecular mechanisms of endocrine disruptors (Biro)

Collaboration with Biostatistics & Epidemiology

Collaborating Faculty: Huang, B

Collaboration re: manuscript/research project evaluating assessment of pubertal stage from three different perspectives and comparing these pubertal stage assessments to biologic markers of puberty (testicular volume, hormonal concentration of estradiol and testosterone) (Biro)

Collaboration with Career Development

Collaborating Faculty: Degen, S

Collaboration re: Fifth Third Bank/Charlotte R Schmidlapp Womens Scholars Program (Dorn)

Collaboration with Developmental & Behavioral Pediatrics

Collaborating Faculty: Schonfeld, DJ

Collaboration re: ADHD collaborative (Biro)

Collaboration with Emergency Medicine

Collaborating Faculty: Fitzgerald, M

Collaboration re: pilot project for resident feedback (Lehmann)

Collaboration with General & Community Pediatrics

Collaborating Faculty: Siegel, RM

Collaboration re: GIS and reinvesting community physicians (Biro)

Collaboration with General & Community Pediatrics

Collaborating Faculty: Kalkwarf, HJ

Bone Mineral Density in Childhood study (Biro & Dorn)

Collaboration with General & Community Pediatrics

Collaborating Faculty: Kalkwarf, HJ

Collaboration re: study investigating relationships between health behaviors, mental health, and bone density (Dorn)

Collaboration with Hematology/Oncology

Collaborating Faculty: Wells, S

Mentee and member of the HPV Research Symposium (Widdice)

Collaboration with Infectious Diseases

Collaborating Faculty: Bernstein, D

Mentee (Widdice

Collaboration with Infectious Diseases

Collaborating Faculty: Connelly, B

Collaboration with Infectious Diseases fellows to rotate through the pediatric HIV clinic. Provided lectures on pediatric HIV. (Lehmann)

Collaboration with Personalized and Predictive Medicine

Collaborating Faculty: Kovacic, MB

Collaboration re: R01 application on HPV in Fanconis anemia patients (Widdice)

Collaboration with Preventive Cardiology

Collaborating Faculty: Urbina, EM

Collaboration re: cardiovascular risk factors (Biro)

Collaboration with Psychiatry

Collaborating Faculty: Sorter, MT

Collaboration re: improving quality of care of mental health needs for inpatient adolescents (Biro & Mitan)

Collaboration with Sports Medicine Biodynamics Center

Collaborating Faculty: Hewett, TE

Identifying Female Athletes at High Risk for ACL Injury grant (Biro)

Mentions in Consumer Media

- **BIRO F: Young girls may hold key to breast cancer** breastcancerfund.org , Web Site
- **BIRO F: Young girls may hold key to breast cancer** northjersey.com , Web Site
- **BRITTO M: Texting may help teens remember meds** cnn.com , Web Site
- **BRITTO M: Using text messages to improve medication adherence** boston.com , Web Site
- **BRITTO M: Text messaging to keep kids healthy** parentdish.com , Web Site
- **BRITTO M: Texting Health Information to Teens** voanews.com , Web Site
- **BRITTO M: Nagging texts help teens remember to take meds** USA Today , Web Site
- **KAHN J: HPV vaccine more effective than thought** ABC News , Television
- **KAHN J: Is you teen seeing the right doctor?** Prevention Magazine , Magazine
- **KAHN J: Why are HPV vaccine rates so low?** newsweek.com , Web Site
- **KAHN J: Anti-Vaccine Activists vs. Gardasil** time.com , Web Site
- **KAHN J: Poorer women and girls have higher risk of cancer from Human Papillomavirus (HPV), according to new Cincinnati Children's study** PR Newswire , Web Site
- **KAHN J: New HPV Vaccine Found 90% Effective** medpagetoday.com , Web Site
- **KAHN J: PAS: Moms may be waiting too long for daughters' HPV vaccination** medpagetoday.com , Web Site
- **MITAN L: Catch it early** Working Mother Magazine , Magazine

Division Publications

1. Batalden K, Bria C, Biro FM. **Genital herpes and the teen female**. *J Pediatr Adolesc Gynecol.* 2007; 20: 319-21.
2. Biro FM. **Adolescents, sexual activity, and sexually transmitted infections**. *J Pediatr Adolesc Gynecol.* 2007; 20: 219-20.
3. Biro FM. **Puberty**. *Adolesc Med State Art Rev.* 2007; 18: 425-33, v.
4. Biro FM. **"Normal growth and development."** In: GB Slap, ed. *Adolescent medicine: the requisites in pediatrics.* Philadelphia: Mosby/Elsevier; 2008: 3-8.
5. Biro FM. **"Cervicitis."** In: PJA Hillard, ed. *The 5-minute obstetrics and gynecology consult.* Philadelphia: Lippincott Williams & Wilkins; 2008: 86-7.
6. Blake DR, Huppert JS. **Addressing teen contraception.** *Contemp Pediatr.* 2007 ; 24: 38-59.
7. Braverman PK. **"Chronic abdominal pain."** In: LS Neinstein, ed. *Adolescent health care: a practical guide.* Philadelphia: Lippincott Williams & Wilkins; 2008: 508-16.
8. Braverman PK. **"Dysmenorrhea and premenstrual syndrome."** In: LS Neinstein, ed. *Adolescent health care: a practical guide.* Philadelphia: Lippincott Williams & Wilkins; 2008: 674-86.
9. Braverman PK. **"Genital ulcer disease: Herpes simplex virus, syphilis, and chancroid."** In: GB Slap, ed. *Adolescent medicine: the requisites in pediatrics.* Philadelphia: Mosby/Elsevier; 2008: 211-19.
10. Braverman PK. **"Contraception, Hormonal: Transdermal patch."** In: PJA Hillard, ed. *The 5-minute obstetrics and gynecology consult.* Philadelphia: Lippincott Williams & Wilkins; 2008: 254-5.

11. Braverman PK. **"Urethritis, vulvovaginitis, cervicitis."** In: SS Long, LK Pickering, CG Prober, eds. *Principles and practice of pediatric infectious disease.* Philadelphia: Churchill Livingston/Elsevier; 2008 Jan: 357-367.
12. Braverman PK, Breech LL. **"Menstrual disorders."** In: GB Slap, ed. *Adolescent medicine: the requisites in pediatrics.* Philadelphia: Mosby/Elsevier; 2008: 152-64.
13. Breech LL. **"Disorders of the female pelvis."** In: GB Slap, ed. *Adolescent medicine: the requisites in pediatrics.* Philadelphia: Mosby/Elsevier; 2008: 175-83.
14. Breech LL. **"Uterovaginal anomalies."** In: PJA Hillard, ed. *The 5-minute obstetrics and gynecology consult.* Philadelphia: Lippincott Williams & Wilkins; 2008: 196-197.
15. Breech LL. **"Vaginal agenesis."** In: PJA Hillard, ed. *The 5-minute obstetrics and gynecology consult.* Philadelphia: Lippincott Williams & Wilkins; 2008: 198-199.
16. Breech LL. **"Complications of vaginoplasty and clitoroplasty."** In: S Teich, DA Caniano, eds. *Reoperative pediatric surgery.* Totowa, NJ: Humana; 2008 Mar: 499-514.
17. Bria C, Batalden K, Biro FM. **"Sexually transmitted diseases (STDs): Herpes simpex virus."** In: PJA Hillard, ed. *The 5-minute obstetrics and gynecology consult.* Philadelphia: Lippincott Williams & Wilkins; 2008: 170-1.
18. Britto MT. **"Preventive health care."** In: GB Slap, ed. *Adolescent medicine: the requisites in pediatrics.* Philadelphia: Mosby/Elsevier; 2008: 9-13.
19. Britto MT. **"Chronic health conditions."** In: GB Slap, ed. *Adolescent medicine: the requisites in pediatrics.* Philadelphia: Mosby/Elsevier; 2008: 34-8.
20. Britto MT, Schoettker PJ, Pandzik GM, Weiland J, Mandel KE. **Improving influenza immunisation for high-risk children and adolescents**. *Qual Saf Health Care.* 2007; 16: 363-8.
21. Deitch HR, Huppert JS. **"Vulvar ulcers/aphthosis."** In: PJA Hillard, ed. *The 5-minute obstetrics and gynecology consult.* Philadelphia: Lippincott Williams & Wilkins; 2008: 222-3.
22. Dorn LD. **"Adolescent participation in research."** In: GB Slap, ed. *Adolescent medicine: the requisites in pediatrics.* Philadelphia: Mosby/Elsevier; 2008: 48-58.
23. Dorn LD, Rose SR, Rotenstein D, Susman EJ, Huang B, Loucks TL, Berga SL. **Differences in endocrine parameters and psychopathology in girls with premature adrenarche versus on-time adrenarche**. *J Pediatr Endocrinol Metab.* 2008; 21: 439-48.
24. Gray SH, Austin SB, Huang B, Frazier AL, Field AE, Kahn JA. **Predicting sexual initiation in a prospective cohort study of adolescents**. *Arch Pediatr Adolesc Med.* 2008; 162: 55-9.
25. Hillman JB, Lehmann C. **"Cancer screening: Lung cancer."** In: PJA Hillard, ed. *The 5-minute obstetrics and gynecology consult.* Philadelphia: Lippincott Williams & Wilkins; 2008: 234-5.
26. Hillman JB, Lehmann C. **"Anemia."** In: PJA Hillard, ed. *The 5-minute obstetrics and gynecology consult.* Philadelphia: Lippincott Williams & Wilkins; 2008: 68-9.
27. Huppert JS. **"Sexually transmitted diseases (STDs): Trichomonas."** In: PJA Hillard, ed. *The 5-minute obstetrics and gynecology consult.* Philadelphia: Lippincott Williams & Wilkins; 2008: 180-181.
28. Huppert JS, Kollar LM. **"Vaginitis, urinary tract infection, and vulvar lesions."** In: GB Slap, ed. *Adolescent medicine: the requisites in pediatrics.* Philadelphia: Mosby/Elsevier; 2008: 184-93.
29. Huppert JS, Mortensen JE, Reed JL, Kahn JA, Rich KD, Hobbs MM. **Mycoplasma genitalium detected by transcription-mediated amplification is associated with Chlamydia trachomatis in adolescent women**. *Sex Transm Dis.* 2008 Mar; 35: 250-4.
30. Huppert JS, Mortensen JE, Reed JL, Kahn JA, Rich KD, Miller WC, Hobbs MM. **Rapid antigen testing compares favorably with transcription-mediated amplification assay for the detection of Trichomonas vaginalis in young women**. *Clin Infect Dis.* 2007; 45: 194-8.
31. Huppert JS, Zidenberg N. **"Breast disorders in females."** In: GB Slap, ed. *Adolescent medicine: the requisites in pediatrics.* Philadelphia: Mosby/Elsevier; 2008: 146-51.
32. Kahn JA. **"Polycystic ovary syndrome."** In: GB Slap, ed. *Adolescent medicine: the requisites in pediatrics.* Philadelphia: Mosby/Elsevier; 2008: 165-74.
33. Kahn JA. **"Human papillomavirus infection and anogenital warts."** In: LS Neinstein, ed. *Adolescent health care: a practical guide.* Philadelphia: Lippincott Williams & Wilkins; 2008: 842-9.
34. Kahn JA, Huang B, Gillman MW, Field AE, Austin SB, Colditz GA, Frazier AL. **Patterns and determinants of physical activity in U.S. adolescents**. *J Adolesc Health.* 2008; 42: 369-77.
35. Kahn JA, Rosenthal SL, Jin Y, Huang B, Namakydoust A, Zimet GD. **Rates of human papillomavirus vaccination, attitudes about vaccination, and human papillomavirus prevalence in young women**. *Obstet Gynecol.* 2008; 111: 1103-10.
36. Kahn JA, Rosenthal SL, Tissot AM, Bernstein DI, Wetzel C, Zimet GD. **Factors influencing pediatricians' intention**

to recommend human papillomavirus vaccines. *Ambul Pediatr.* 2007; 7: 367-73.

37. Kraus CE, Rauh JL. **"Consent, confidentiality, and privacy."** In: GB Slap, ed. *Adolescent medicine: the requisites in pediatrics.* Philadelphia: Mosby/Elsevier; 2008: 44-7.
38. Lehmann C, Biro FM. **"Testicular and scrotal disorders."** In: GB Slap, ed. *Adolescent medicine: the requisites in pediatrics.* Philadelphia: Mosby/Elsevier; 2008: 140-5.
39. Lehmann C, Britto MT. **"Transition to adult health care."** In: GB Slap, ed. *Adolescent medicine: the requisites in pediatrics.* Philadelphia: Mosby/Elsevier; 2008: 39-43.
40. Linam LE, Darolia R, Naffaa LN, Breech LL, O'Hara S M, Hillard PJ, Huppert JS. US findings of adnexal torsion in children and adolescents: size really does matter. *Pediatr Radiol.* 2007 Oct; 37: 1013-9.
41. Malik AI, Huppert JS. Interval to treatment of sexually transmitted infections in adolescent females. *J Pediatr Adolesc Gynecol.* 2007 Oct; 20: 275-9.
42. Miller RJ. **"Bleeding, abnormal uterine: Oligomenorrhea."** In: PJA Hillard, ed. *The 5-minute obstetrics and gynecology consult.* Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins; 2008: 12-13.
43. Miller RJ. **"Amenorrhea, absence of bleeding."** In: PJA Hillard, ed. *The 5-minute obstetrics and gynecology consult.* Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins; 2008: 2-3.
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Grants, Contracts, and Industry Agreements

Grant and Contract Awards		Annual Direct / Project Period Direct
Biro, F		
Puberty and Cancer Initiation: Environment, Diet, and Obesity National Institutes of Health (University of Cincinnati) U01 ES 012770	09/29/03 - 07/31/10	$236,763 / $1,904,529
Genomic and Proteomic Biomarkers of Biologic Responses to Exposure National Institutes of Health (University of Alabama at Birmingham) U01 ES 016003	08/15/07 - 05/31/11	$47,089 / $219,800
Braverman, P		
Child and Family Health Services - Adolescent Medicine Program Ohio Department of Health (Hamilton County Family & Children First Council) 31000-A	07/01/00 - 07/31/08	$91,203 / $997,875
Abstinence and Adoption Program Development Ohio Department of Health CSP908908	05/15/08 - 06/30/09	$149,000 / $149,000
Britto, M		
UC Clinical Research Curriculum Award National Institutes of Health (University of Cincinnati) K30 RR 022273	08/19/05 - 07/31/08	$34,811 / $222,639
Dorn, L		
Endocrine Changes and Treatment of Conduct Problems National Institutes of Health R01 NR 007615	09/15/03 - 06/30/08	$273,484 / $1,435,122
Smoking and Metabolic Complications in Adolescent Girls National Institutes of Health R01 DA 016402	02/01/04 - 01/31/09	$272,627 / $2,006,939
Huppert, J		
STD/HIV Prevention Training Centers Centers for Disease Control and Prevention (City of Cincinnati Health Department)	04/01/07 - 03/31/09	$22,256 / $43,847
Rapid Trichomonas Tests: A Teen STI Prevention Strategy National Institutes of Health K23 AI 063182	07/01/05 - 06/30/10	$116,500 / $582,500
Center for Point of Care Technologies Research for STD's National Institutes of Health (Johns Hopkins University) U54 EB 007958	09/30/07 - 06/30/12	$32,178 / $245,624
Kahn, J.		
Cancer Prevention Behaviors in Adolescence American Society - National (Brigham & Women's Hospital)	01/01/04 - 12/31/08	$40,529 / $160,976
Behavioral and Virologic Impact of HPV Immunization National Institutes of Health R01 AI 073713	01/15/08 - 12/31/12	$375,116 / $1,906,862
Adolescent Trials Network Coordinating Center		

National Institutes of Health (University of Alabama at Birmingham)
U01 HD 040533 | 03/01/07 - 02/29/09 | $52,974 / $99,029

Braverman, P

Postponing Sexual Involvement Youth Development Program
City of Cincinnati
01/01/08 - 12/31/08 | $100,000 / $100,000

Spigarelli, M

A Pharmacokinetic/Pharmacodynamic and Safety Evaluation of Tamiflu
National Institutes of Health (University of Alabama at Birmingham)
N01 AI 030025 | 10/01/07 - 07/31/10 | $5,615 / $188,691

Widdice, E

Cincinnati Interdisciplinary Women's Health Research Career Training Grant
National Institutes of Health (University of Cincinnati)
K12 HD 051953 | 01/01/07 - 12/31/08 | $115,020 / $219,126

Current Year Direct **$1,965,165**

Industry Contracts

Huppert, J

Duramed Research, Inc.	$ 19,404
Genzyme Corporation	$ 6,949

Spigarelli, M

Novartis Pharmaceuticals	$ 16,867
Procter and Gamble	$ 3,850
Wyeth Pharmaceuticals	$ 11,628

Widdice, E

Merck & Company, Inc.	$ 26,802

Current Year Direct Receipts **$85,500**

Service Collaborations

Braverman, P

United Way of Greater Cincinnati	$ 85,000
Hamilton County Juvenile Court	$ 927,497

Kahn, J

World Health Organization	$ 62,825

Current Year Direct **$1,075,322**

Funded Collaborative Efforts

Biro, F

Bone Mineral Density in Childhood Study
NIHCD
Kalkwarf, H | 05/01/06 - 07/30/09 | 7 %

Identifying Female Athletes at High Risk of ACL Injury
NIH
Hewett, T | 09/21/04 - 08/31/09 | 5 %

Innovative Modeling of Puberty and Substance Abuse Risk
NIH
Huang, B | 04/10/06 - 12/31/09 | 5 %

Britto, M

Determinants of Health-Related Quality of Life for Children With JIA
NIH
Seid, M 05/01/08 - 04/30/13 3 %

Developing an In Vivo Adherence Intervention
NIH
Seid, M 05/01/08 - 04/30/13 5 %

Dorn, L

Innovative Modeling of Puberty and Substance Use Risk
NIH
Huang, B 04/10/06 - 12/31/09 16 %

Puberty and Cancer Initiation: Environment, Diet, and Obesity
NIH
Biro, F 09/01/03 - 08/31/10 5 %

Total $3,125,987