Firearm Access Detection During Routine Health Care Appointments
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Purpose: The American Academy of Pediatrics strongly recommends health care providers (HCPs) inquire about firearms in the home during routine health care appointments. The purpose of this study is to determine 1) whether HCPs document asking youth about access to firearms in the home, and 2) whether HCP documentation coincides with youth response.

Methods: Patients ages 12-17 scheduled for a routine physical exam in an urban, adolescent medicine clinic between Oct 2010-December 2011 were eligible. Assent from adolescents and consent from parents (both by phone) was obtained to participate in a study assessing violence risk. As part of usual care, youth had the opportunity to answer a standardized health assessment, including whether there were guns in their home. Chart review was completed approximately one month after the routine health care appointment. Data collected included whether providers documented presence of firearms in the home, and youth response to whether they had firearms in their home. Rates of documentation of firearm presence and self-reported rates of firearm presence were calculated. Correlations between youth and provider self report were determined; Bivariate analysis was used to determine whether any demographic factors were associated with either youth self-report or provider documentation.

Results: 49/784 (70%) of eligible youth consented, and 85% (n=466) attended the appointment. Mean age was 14.5 (sd 1.6); 65% female, 45 % Hispanic, 38% Black, 17% White. 300/466 (64%) completed the health screening questionnaire. Of those 300 youth who completed the questionnaire, 8.3 % reported having a gun at home, 83.3% reported not having a gun in the home, and 8.3% did not answer the question about firearms. Evaluating provider documentation of firearms in the home, 81% of the time there was no documentation; 17% of the time providers documented that there were no firearms present, and 1.7% of the time providers documented that there was a firearm in the home. When there was actual documentation, 9% of the time providers reported the presence of a firearm. For youth who reported having guns in the home (n=24), 50% of the time providers did not document at all about firearms; 16% of the time there was documentation that there were not firearms when youth reported there were firearms present, and 33% of the time providers documented the presence of firearms. No demographic characteristics, including age, race/ethnicity, gender or SES were associated with whether youth reported a firearm, or whether a provider documented whether a firearm was present in the home.

Conclusions: The vast majority of the time health care providers are not documenting whether there are firearms in the home during routine health care visits. HCPS missed documenting about firearm presence in 67% of youth who report access. However when they did document, they correctly documented 67% of the time. There are significant missed opportunities to counsel families on firearm safety if the topic of firearms is not being addressed during routine health care appointments.
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Association between Victims of Bullying and Weapon Carrying Among High School Students in the United States
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Purpose: In the wake of Columbine and other school-based tragedies, public health efforts have intensified to reduce the incidence of bullying in schools. Although verbal taunts are most common in grade school and middle school, physical assaults with fear of lethal retaliation are likely greatest in the high school setting. To date, there has been no analysis of high school (HS) students nation-wide with respect to weapons carrying by victims of bullying (VoB). Using national data from the CDC's 2011 Youth Risk Behavior Survey, our objectives were to identify the frequency of weapons carrying in school and in general by VoB and to identify demographic and social risk factors.

Methods: Data from the 2011 Youth Risk Behavior Surveillance System were analyzed for HS students grades 9-12 (N=15,425). Being a victim of bullying was measured through a single self-report question (“During the past 12 months, have you ever been bullied on school property?”). VoB were compared with those who denied being a VOB were compared regarding age, sex, grade, race, height, weight, and BMI percentile as well as past threats to property or personal safety. All analyses were done using procedures specifically suited for survey data in SAS 9.2.

Results: 50% of HS students were a VoB within the past 12 months; VoB was more common in younger grades, females, and Caucasians. VoB were more likely to carry weapons in school (8.6% vs 4.6%; p<.0001; OR (95%CI): 1.96 (1.61, 2.38) and carry a gun in general within the last 30 days (6.3% vs 4.8%; p=.02; OR (95% CI): 1.34 (1.04, 1.71). The likelihood of carrying a weapon on school property was higher in VoB who had been threatened or injured with a weapon (28.2% vs. 4.6; p<0.0001; OR = 8.12 (6.2, 10.62)) or been in a physical fight on school property within the last 12 months (23.4% vs. 4.5%; p<0.0001; OR= 6.5 (4.98,8.5)). Carrying a weapon was much more common in VoB previously threatened/injured AND been in a fight (46.3% vs. 4.7%; <0.0001; OR=17.59 (10.73,28.83)). OR for carrying a weapon increased to 31.9 when fear of going to school was added as a risk factor (61.9% vs. 4.9%; p<0.0001; OR= 31.86 (17.74,57.24)). Similar findings were noted for carrying a gun in general.

Conclusions: Bullying remains widespread among high school students. With estimates of more than one million victims of bullying carrying a weapon to high school, More effective prevention efforts and intervention strategies need to be identified, with greatest focus not just on bullies, but on the victims of bullies most likely to carry a weapon and use deadly force if threatened.
Adolescents Involved in the Juvenile Justice System: Epidemiologic Study of Trends from 1999-2011
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Purpose: Approximately 1.65 million adolescents (=18 years) are arrested annually in the US. Of these, about 20% are placed in juvenile or adult correctional facilities. Evidence suggests that rates of juvenile justice involvement are heavily impacted by system-level policies within the juvenile justice system, not necessarily the individual behavior of adolescents. For example, the number of adolescents involved in juvenile justice has declined over the past decade, partially due to new policies for addressing criminal behavior among adolescents. Despite declines, juvenile justice involvement remains biased, with males, ethnic/racial minorities, and urban youths experiencing disproportionate contact within the juvenile justice system. Such disparities have been examined nationally, but few studies have focused on county-level trends. Accordingly, we conducted an epidemiologic study of one heavily-populated, diverse county to understand how penetration in the juvenile justice system has changed over time, and to identify group disparities.

Methods: Data was abstracted from two sources. First, information about the gender and race/ethnicity of all youths (ages 12-17) living in Marion County, Indiana, was gathered from census data. Second, information about juvenile justice involvement was gathered from the Marion County juvenile justice system database. Involvement was defined as deepest penetration in the system across four levels of increasing involvement: arrest, detention, commitment to Department of Corrections/juvenile prison, and waiver to adult prison system. The number/percentage of adolescents who reached each involvement level annually from 1999-2011 were gathered. Data were based on adolescents’ deepest level of involvement, and adolescents could be included in multiple annual estimates. Results were further analyzed across gender and race/ethnicity.

Results: Penetration in the juvenile justice system has steadily declined from 1999 to 2011. Out of approximately 70,000 youths each year, the number of arrested adolescents dropped from 7303 (10.4%) to 5078 (7.25%), detained adolescents dropped from 3607 (5.15%) to 1123 (1.60%), committed adolescents dropped from 676 (0.97%) to 121 (0.17%), and waived adolescents dropped from 224 (0.32%) to 31 (0.004%). Juvenile justice involvement differed significantly across gender and race/ethnicity, with Black males having the highest prevalence of all four levels of involvement. Trends revealed decreasing involvement across all gender and race/ethnicity groups, with the most drastic declines among Black males. Arrest rates for Black males declined from 20.1% in 1999 to 14.2% in 2011, whereas rates were much lower and less drastic for Black females (10.5% in 1999 to 7.27% in 2011), Hispanic males (9.0% to 5.88%), White males (8.6% to 4.9%), White females (4.09% to 2.8%), and Hispanic females (3.02% to 2.4%).
Conclusions: Significant changes have occurred regarding juvenile justice involvement, as evidenced by declining prevalence of arrests, detentions, commitments, and waivers over the past 12 years. These positive trends are likely due to important systematic changes that have occurred, including new judge leadership, efforts of the Juvenile Detention Alternatives Initiative, diversion programs, and policy changes for commitments and waivers to adult court. Despite such improvements, juvenile justice involvement remains a common experience for urban youth, particularly for Black males who are disproportionately involved in all facets of the juvenile justice system.

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Pregnancy History Predicts Sexually Transmitted Infection Acquisition Over 6 Months of Follow-up Among African American Girls Recruited From Juvenile Detention Centers

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Purpose: Girls in juvenile detention have high rates of adverse sexual health outcomes, including pregnancy and sexually transmitted infections (STIs). Few studies have examined associations between pregnancy history and STI acquisition. The objective was to examine pregnancy history as a predictor of STI acquisition over 6 months of follow-up among African American girls recruited from juvenile detention centers.

Methods: Non-pregnant, sexually active, African American girls (n=188), 13-17 years, were recruited from short-term juvenile detention centers and enrolled in a randomized controlled HIV/STI prevention trial. Data were collected at baseline and 3- and 6-month follow-up assessments. At each assessment, participants completed an audio computer-assisted self-interview and provided a self-collected vaginal swab specimen assayed for Chlamydia and gonorrhea. The analytic sample included participants completing ≥1 follow-up assessment. T-tests and chi-square statistics compared selected baseline characteristics among participants who did and did not report a pregnancy history at baseline. Logistic regression models examined associations between baseline pregnancy history and STI acquisition, defined as a positive STI test result during follow-up subsequent to a negative result or documented treatment. Adjusted models controlled for age and baseline differences significant at p<0.1 among participants with and without a pregnancy history. Adjusted analyses did not include study condition since it was not associated with unprotected sex, STI acquisition nor pregnancy history.

Results: Of 179 (95.2%) participants who completed ≥1 follow-up assessment, 45 (25.1%) reported a history of pregnancy. Of those 45, 66.7% reported 1 pregnancy, and 44.4% reported a live birth; 55.6% reported their current age as their age during their last pregnancy. At baseline, girls with a pregnancy
history were more likely to report living in household receiving government assistance (82.2% vs. 66.4%, p=0.045), a history of physical abuse (53.3% vs. 38.1%, p=0.072), male sex partners =4 years older (20% vs. 15.5%, p=0.098), a casual partner (48.9% vs. 31.3%, p=0.034), vaginal sex without a condom in the past 90 days (77.8% vs. 51.5%, p=0.002) and hormonal contraceptive use at last sex (44.4% vs. 20.2%, p=0.001). They also reported higher levels of stress (p=0.005). Nearly half (48.9%) of girls with and 30.6% without a pregnancy history acquired an STI during follow-up (p=0.026). In adjusted analyses, a history of pregnancy was associated with an increased likelihood of STI acquisition (AOR: 2.6, 95% CI: 1.2, 5.9).

**Conclusions:** A high proportion of sexually active detained African American girls reported a history of pregnancy. A history of pregnancy independently predicted laboratory-confirmed STI acquisition over a 6-month follow-up period. Future prevention efforts may benefit by addressing the unique needs of detained African American girls with a history of pregnancy. Research exploring mechanisms by which pregnancy history is associated with elevated STI risk may aid development of prevention interventions for this population.

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**Emergency Contraception for Detained Young Women**

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**Purpose:** Young women in juvenile justice centers participate in high risk sexual behaviors including early coitus initiation, multiple partners, low or no condom use, and low or no contraception use. They are frequently victims of sexual abuse, sexual assault, survival sex and human trafficking. We conducted a quality improvement intervention to improve screening and counseling of detained young women for emergency contraception (EC) services. We aimed to improve the following three items: early recognition of EC eligibility, offering EC and administration of EC from an estimated 15% to 50% among eligible youth.

**Methods:** We conducted a retrospective chart review before and after initiating a quality improvement project (QI) in a large urban juvenile detention center. We reviewed the intake physicals and follow-up encounters from the medical department charts. The QI project began in June 2012. The intervention involved screening each adolescent woman on initial entry to the juvenile detention center for the date of her last sexual encounter using a new emergency contraception screening form approved by medical administrators. Physician notification took place if the last reported sexual encounter occurred within
five days prior to arrival. All eligible patients presented to the medical clinic for counseling the same day of admission or the following day for overnight admissions. When feasible, physicians offered and prescribed emergency contraception immediately. Medical staff and physicians documented screening, counseling, offering of EC and acceptance or refusal of EC in the patient’s medical record. We calculated a sample size of 42 in the pre and post-intervention groups to achieve 90% power, alpha 0.05. We performed statistical analysis using 2 x 2 contingency tables and Fisher’s exact test.

**Results:** The population consisted of young women aged 11 – 17 years seen in the medical department at the juvenile detention center from November 2010 to July 2013. The pre-intervention group included charts reviewed prior to June 2012 (n=49) and the post-intervention group included charts reviewed from June 2012 to July 2013 (n=104). Of those encounters, 14 and 27 adolescents, in the pre and post intervention groups respectively, were eligible to receive emergency contraception by reporting sexual activity within the five days prior to admission. With the addition of the emergency contraception screening form, the number of youth screened for EC eligibility increased significantly from 55% pre-intervention to 80% post-intervention (p<0.05). The number of eligible young women offered EC also increased from 21% pre-intervention to 96% post-intervention (p<0.05). While not statistically significant, the number of eligible young women taking EC likewise increased from 14% pre-intervention to 41% post-intervention. The majority of post-intervention eligible patients declined EC for the following reasons: desired pregnancy, “If I am pregnant, then I am,” and “I don’t want to take it.”

**Conclusions:** Applying a universal and standardized screening and counseling procedure results in increased EC awareness and utilization among detained young women. Timely access to EC may result in decreased unintended pregnancies among these especially high risk teens. Preventing teen pregnancies reduces abortions, miscarriages, teen parenting and its consequences.

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