Universal Screening is Key: Identifying Gaps in Adolescent HIV Infection Diagnosis at Local Pediatric Health System as Compared to Regional Adult Hospital

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Abstract

• Recent data have shown that despite overall national trends towards fewer new HIV diagnoses, the incidence of new HIV infections in adolescents and young adults has not decreased.
• Early diagnosis is important in order to prevent transmission of HIV and to improve outcomes for those infected.
• The Centers for Disease Control and Prevention (CDC) recommends all adolescents should be screened for HIV. The screening should happen in any medical setting including the emergency department.
• Despite this recommendation, most adolescents are not screened for HIV. The screening should happen in any medical setting including the emergency department.

Background

Background: Unscreened sexual partners with HIV infection may contribute to up to 50% of new infections annually. Routine HIV screening of high-risk populations has been shown to be effective and is recommended by the CDC. Despite this recommendation, many adolescents are not screened. The negative impact on the adolescent population from inadequate screening has not been fully quantified.

Methods: Through a retrospective chart review, the course prior to diagnosis of HIV-infected adolescents diagnosed at Children’s Medical Center (CMC) in Dallas, TX and Parkland hospital (PH, the proximate adult county hospital with a universal HIV screening program) was reviewed. Subjects were included if they had a confirmed, positive HIV test between 13 and 21 years of age, and excluded if they had a previous HIV diagnosis, prolonged interval, or CD4 encounter at CMC and PH following the subject’s 13th birthday and before their HIV diagnosis were quantified. Missed opportunity encounters were defined as all subjects encountered where there were no HIV screens performed at that place after the date 3 months following their most recent HIV screen. Data was collected by facility and compared.

Results: 204 subjects met inclusion criteria: 140 (69%) male, 155 (76%) black, and 87 (43%) followed by CMC. There were 412 total diagnoses, AIDS diagnoses, and HIV prevalence in Texas Dallas County has the highest rates of new HIV diagnoses, AIDS diagnoses, and HIV prevalence in Texas

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• Most missed opportunity encounters for HIV screening of adolescents were greater in number in pediatric emergency departments (EDs) vs. CMC, 449 cells/m3, vs. CMC, 449 cells/m3, identified through the PH ED were older (PH, 18.8 yrs vs. CMC, 16.1 yrs, p <0.01), and had a trend towards a lower CD4 count (PH, 337 cells/m3 vs. CMC, 449 cells/m3, p = 0.055). Three adolescents were identified with AIDS (CD4 < 200) through HIV screening at PH, vs 1 at the CMC.

Conclusion

• Most missed opportunity encounters for HIV screening of adolescents were greater in number in pediatric emergency departments vs. CMC.
• Adolescents identified through the PH ED were older, and had a trend towards a lower CD4 count. Three adolescents were identified with AIDS through HIV screening at PH, vs 1 at the CMC. These adolescents were more likely to be male and MSM.

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Methods

• Retrospective chart review
• Inclusion criteria: All individuals with a new HIV infection between ages 13y and 20y from January 2006 through March 2017 at Children’s Health (CMC) and Parkland Hospital (PH)
• Exclusion criteria: Individuals outside the age range, perinatally acquired HIV, those who had positive HIV tests recorded, and those who were previously followed and/or treated for HIV at a previous site

• Future Directions

• Implementation of a universal HIV screening protocol in the CMC emergency department may decrease the number of MOE, and increase the number of undiagnosed adolescents in Dallas County.
• Rapid HIV testing may be the preferred method in the ER setting.
• A QI program which prospectively tracks data including: number of total HIV diagnoses, number of missed opportunities for HIV screening, and number of positive HIV tests screened, confirmed HIV diagnoses, and the number of MOE of newly diagnosed HIV adolescents may be helpful in guiding screening programs at free standing children’s hospitals.

References