Editorial

In Search of the Right Time and Right Place: Screening Adolescents and Youth for Human Immunodeficiency Virus in the United States

Adolescents and youth aged 13–24 years represent almost a quarter (22%) of the approximately 36,700 new human immunodeficiency virus (HIV) infections identified in the United States (US) in 2015 [1]. The majority (80%) of new cases were diagnosed among youth aged 20–24 years, with overwhelming representation by young men who have sex with men (81%) of primarily black (55%) and Hispanic (24%) ethnicity. Despite overall decline in HIV epidemic in the US in recent years and specifically decline of 18% in new cases among men who have sex with men in recent years, young people in the US are most likely to be unaware of their HIV status. Among people aged 13–24 years living with HIV, an estimated 44% do not know their status compared with 15% in the general population [1,2].

To address the need for more robust identification of HIV, several national screening guidance documents have been introduced in the US in the last decade, with diverse thresholds for the initiation of screening among adolescents and youth. The 2006 Centers for Disease Control and Prevention HIV testing recommendations suggested considering routine HIV screening for all patients 13–64 years of age, without risk factors assessment, repeat screening for those at risk, with certain comorbidities, or on basis of clinical judgment [3]. The American Academy of Pediatrics recommended routine HIV screening of adolescents by the age of 16–18 years and sexually active adolescents of all ages in 2011. Both documents suggested that the guidelines should be implemented in settings in which HIV prevalence is 15 or higher. Finally, in 2013, the US Preventive Services Task Force recommended universal routine HIV screening starting at the age of 15 years [4,5]. Despite these recommendations, recent data from the national Youth Risk Behavior Survey indicate that HIV testing uptake remains quite low among high school students (25%) and young adults (33%) in the US [6].

In this issue of the Journal of Adolescent Health, Neilan and coauthors report the findings from their model-based cost-effectiveness and clinical impact analysis to determine the optimal age (beginning at age 13 years) for routine one-time HIV screening among US adolescents and young adults without identified HIV risk factors [7]. The authors hypothesize that offering a one-time HIV screening test “too early” may cause harm by missing infections that occur later and speculate that resources used for HIV screening could detract from other health priorities throughout adolescence and young adulthood. Based on their modeling analysis, the authors conclude that a one-time HIV screening test of the adult at the age of 25 years would be optimal in the US, and lead to the improved clinical outcomes and cost-effectiveness. Because younger adolescents have lower rates of adherence to care and medications, when comparing with one-time HIV testing in adults aged 25 years compared with adolescents and youth aged 13–24 years, it is not surprising that the model predicted significantly higher rates of diagnosis (77% vs. 51%, respectively) and linkage to care (71% vs. 51%), retention in care (68% vs. 44%), and virologic suppression (49% vs. 32%). It is worth mentioning, however, that the most recent Centers for Disease Control and Prevention data show higher national rates of linkage to care among youth aged 13–24 years, with 68% being linked to care within 1 month after being diagnosed with HIV in 2014, compared with the 51% used in this model [1].

The population included in the model includes adolescents and adults aged 13–30 years without identified risk factors for HIV acquisition. One important consideration highlighted by the authors is the need for the health-care providers to routinely screen adolescents and youth for HIV risk factors, such as sexually transmitted diseases, sexual behaviors, and substance use. As a community of pediatric and adolescent health providers, we continue to lag behind in the complex task of ongoing reciprocal communication with our youth patients whose behaviors and risk factors change dramatically over time [8,9]. It is not clear that the model accounts for poorer performance of providers in identifying the true absence of risk factors in adolescents compared with adults. The modeling also may not address the impact of HIV burden variation by geography as well as other factors in the US.

Disclaimer: The findings and conclusions reported herein are those of the author(s) and do not necessarily reflect the official position of the U.S. government.
The premises of the authors’ hypothesis about one-time screening for HIV result in a nonsurprising finding that it is cost-saving to delay testing for a chronic condition, but may not fully capture the benefits and potentially even cost-savings from earlier, more frequent HIV testing in this high-incidence, low-prevalence adolescent age range. The routine approach to HIV testing facilitates high testing uptake (as it did for HIV testing of pregnant women) by reducing the perceived stigma and ascertainment bias of HIV risk assessment in this age group. The testing event also provides a critical opportunity for HIV prevention counseling and determination of the need for specific HIV prevention interventions like pre-exposure prophylaxis.

Perhaps rather than restricting HIV testing to a specific age, it may be more productive to advocate for lowering the cost of HIV screening (cited at 35.92 plus 72.23 USD per completed reactive screen in the study). Additionally, it would be important to further simplify and destigmatize access to and utilization of routine HIV testing in health-care and community settings, including self-testing and repeat screenings among youth populations with low rates of HIV status awareness. Better efforts and strategies such as social marketing and mobile communication are needed to reach youth populations for the evaluation of risk behaviors to close the existing gap in HIV cascade targets between youth and adult populations in the US [10].

Studies indicate high rates of acceptance of routine HIV screening among adolescents and youth and their caregivers across diverse health-care settings in the US including outpatient clinics and emergency departments [10,11]. Whether raising the age of the one-time HIV testing to 25 years will increase the HIV screening rate compared with initiating testing in young adults and adolescents remains to be seen. Independent of the age limits, HIV testing needs to be integrated with both the pediatric and the adult health system; include venue-based testing to promote screening among high-risk youth; and normalize HIV testing across different populations and communities to combat stigma [12].

Finally, Neilan and coauthors provide model-based evidence against focusing routine one-time HIV screening among US youth younger than 18 years that supports the current practice of only 13% of adolescents <18 years being screened for HIV [6,7]. But current practice has been inadequate in addressing the HIV epidemic in youth in the US. Programmatic evidence is needed to understand better the true costs and impact of routine HIV testing in adolescents and inform the testing strategy that can optimize the HIV prevention and treatment outcomes for youth in the US.

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References


