Implementing and Sustaining Routine HIV Screening of Adolescents in Pediatric Emergency Departments

Nicole Ellenberger, MPH[1], Kavitha Ganesan, MPH[1], Jun Payne, MPH[1], Nicole Messenger, MPH[2], Jaclyn Hern, MPH[3], Sephora Morrison, MD[1,4], Shilpa J. Patel, MD[1,4], Natella Rakhmanina, MD, PhD[1,4,5]

[1]Children's National Health System, Washington, DC, USA, [2]Texas Department of State Health Services, Houston, TX, USA [3]University of California Davis, Davis, CA, USA, [4]The George Washington University, Washington, DC, USA, [5]Elizabeth Glaser Pediatric AIDS Foundation, Washington, DC, USA

Introduction

In the US, the incidence of HIV among adolescents ages 13-24 years continues to grow, with up to 26% of new infections occurring among youth.[1-3] Most importantly, a high proportion of youth with HIV are unaware of their HIV positive status.[3,4]

Access to diagnostic services for HIV is highly relevant in Washington, District of Columbia (DC) where 2.5% of residents are infected with HIV.[5] The prevalence of HIV among DC adolescents ages 13-19 years is 0.2%, and rises to 1.0% for those ages 20-29 years.[5] From 2009 to 2011, the rate of new HIV infections increased 36% among 13-29 year olds which is the highest growth rate among all age groups in DC during the same time period.[5] Pediatric emergency departments (ED) provide an opportunity for HIV testing for adolescents and young adults who do not access primary care services, but utilize EDs instead.[6]

Since 2009 Children's National Health System (CNHS) has implemented routine, opt-out, oral HIV screening of adolescents ≥13 years in the pediatric ED. Screening began at the main campus ED in March 2009 and soon after began at the Children's United Medical Center (UMC) community ED at its inception in 2010. The high-acuity main campus ED utilized a dedicated tester model beginning in late 2009 to improve testing rates and transitioned to a sustainable, staff based model in 2011. The ED staff based model was used at the community hospital-satellite ED since 2010. This study reports on the outcomes, successes, and challenges of the designated tester model and the staff based model.

Methods

HIV screening was performed according to the identical standardized algorithm at both EDs.

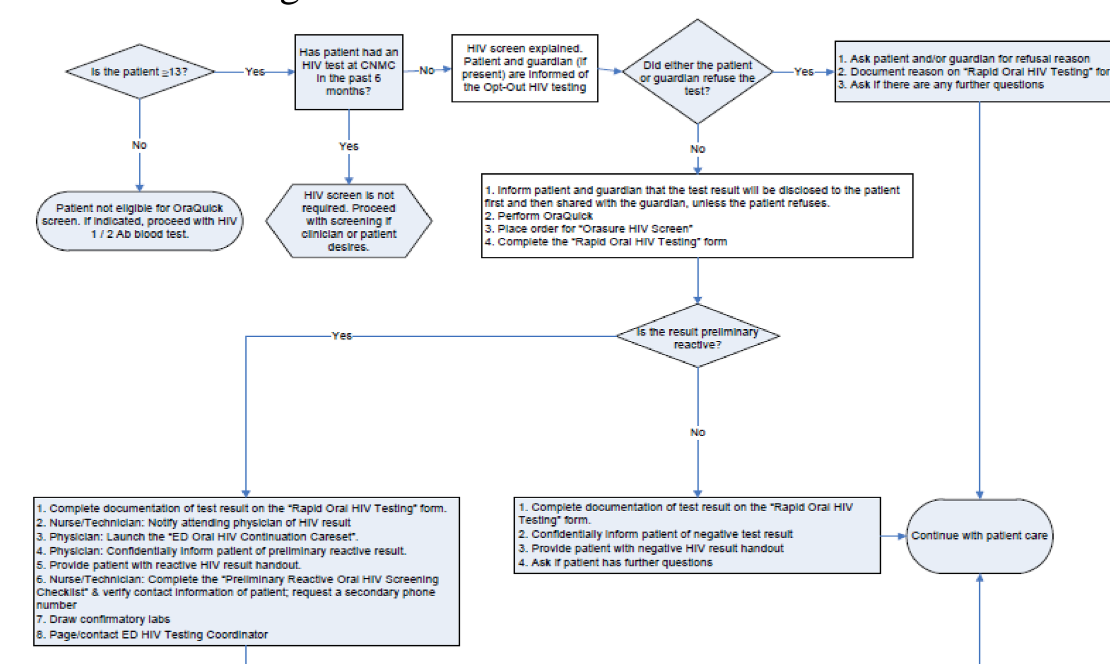

Figure 1: CNHS HIV Screening Algorithm

Methods

- Testers approach all patients ≥13 years old for the HIV screening who are able to provide consent in an effort to comply with the universal screening process. If a guardian is present, the guardian is also consented for the screening.
- Testers at both EDs complete an HIV Screening Form for every patient approached for the test regardless of whether he/she consents. When a patient declines, the decline information is also reported on the screening form. The form is then collected and analyzed by site by the ED HIV screening program coordinators.
- Test results are provided to the patients only after 20 minutes along with educational information and support services as needed.
- In this study we analyzed the performance of both ED programs, based on the model of testing.

Results

- During the 5 years of the program (03.2009 – 06.2014) 23,811 adolescents were approached and 16,294 of them were screened for HIV in both EDs.
- In the first three months of screening implementation in the main campus ED in 2009, an extensive preparatory stage occurred which included training and OraQuick certification of >120 ED personnel, a pre-implementation survey and an educational campaign in the ED. Despite that, the program initiation was extremely slow with minimal tests completed.

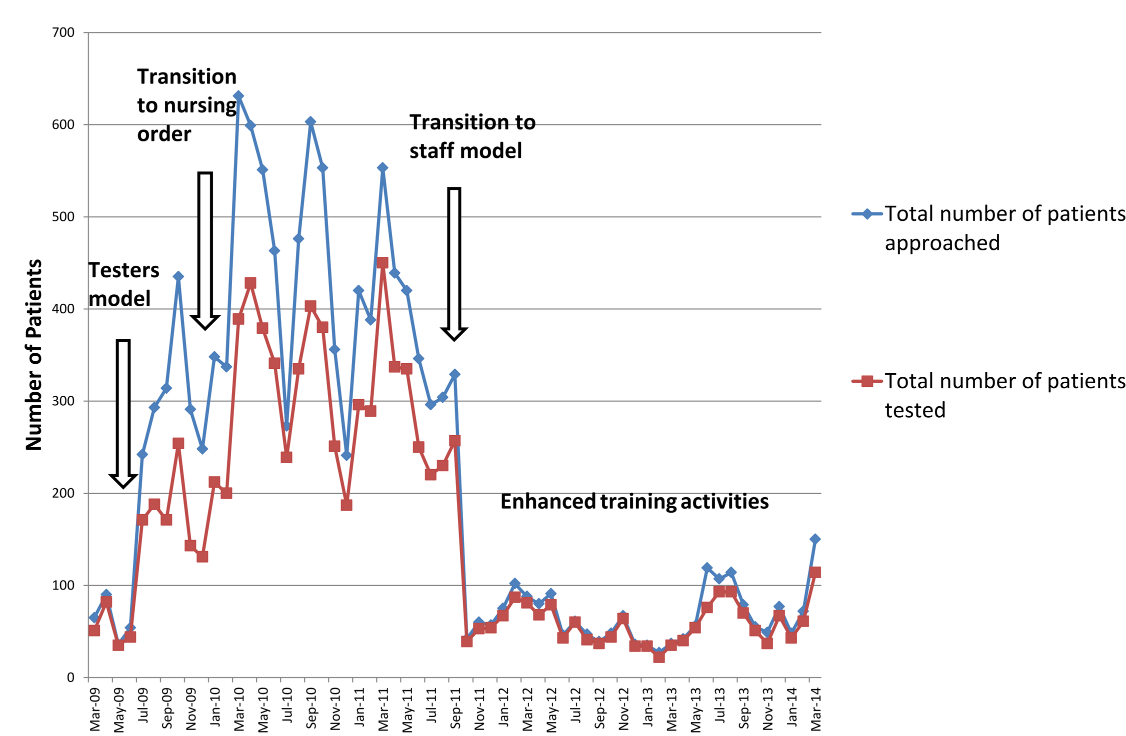

Figure 2: Program Performance at Main Campus ED March 2009-March 2014

Results

- In order to improve low rates of HIV screening, additional staff joined the program with support of the Ryan White HIV/AIDS program. The impact of the designated testers resulted in an increase in the number of approached and screened patients.
- Following the transition to a staff based model at the high-acuity main campus ED, screening rates consistently declined: the rates of eligible patients approached from 30% to 5%, and rates of tested falling from 21% to 4.5% of eligible patients.

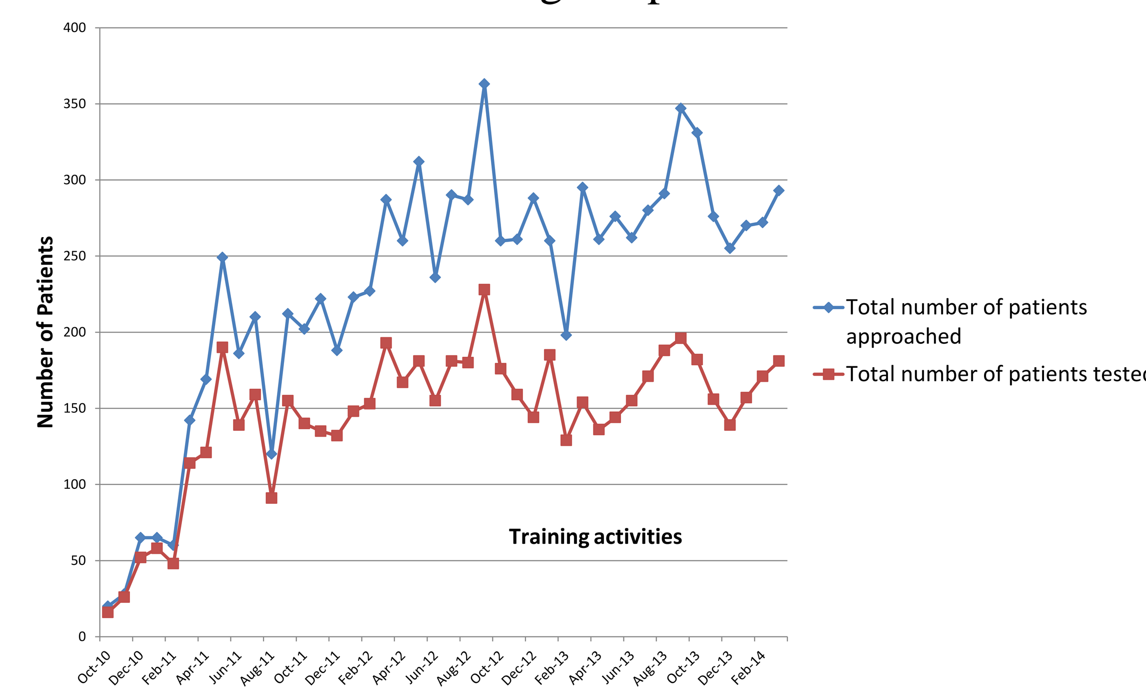

Figure 3: Program Performance at UMC ED October 2010-March 2014

- The staff based model at the community hospital-satellite ED steadily increased the number of patients approached and tested over the first six months of the program. The UMC ED staff maintained high levels of HIV screening consistently approaching an average of 58% (37%-78%) of eligible youth and testing on average 37% (28%-47%) of eligible youth.
- Within both models barriers to testing included high patient volumes, limited access to approach patients in triage, and a delay in placing the screening order.

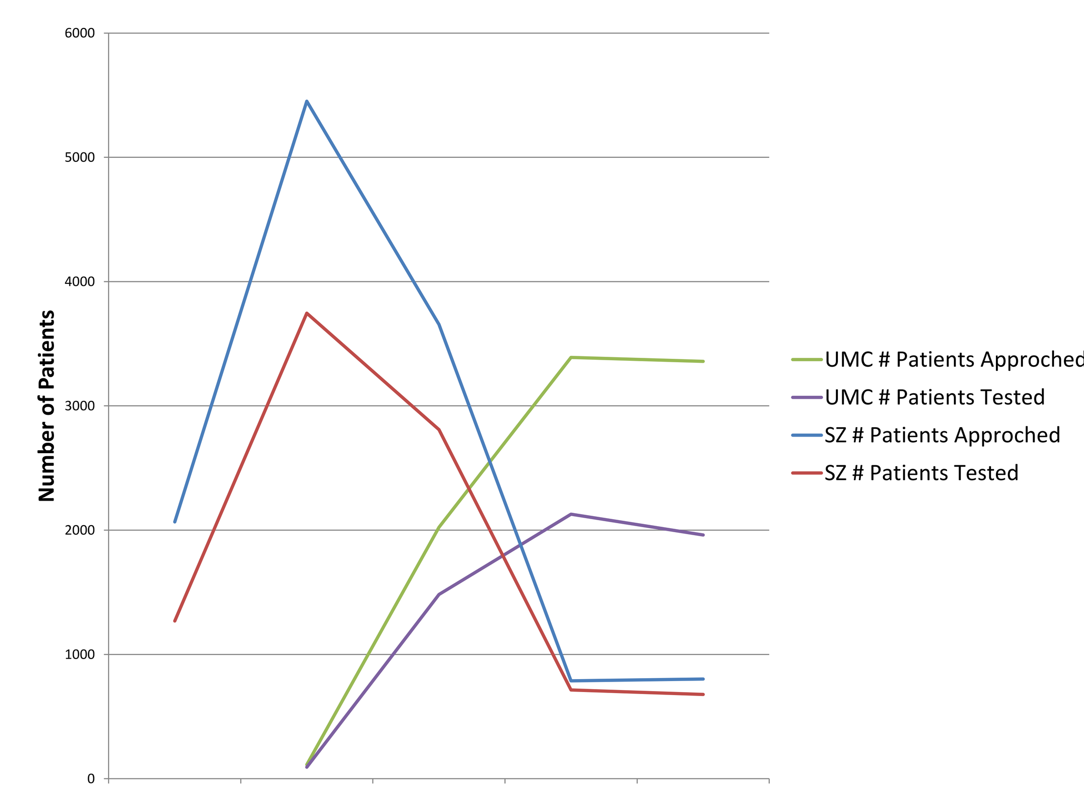

Figure 4: Comparative Program Performance at both EDs from March 2009-March 2013

Conclusions

- Routine HIV screening of adolescents in pediatric EDs is feasible.
- The staff based screening model proved successful in the community pediatric ED, while the larger and busier ED failed to maintain the high rates of testing following transition from the required dedicated testers to the staff based model.
- Enhanced staff education, raised staff awareness about HIV in local settings and detailed planning and resource allocation are necessary components for the initiation of a successful HIV screening program in pediatric healthcare settings.
- Flexibility on the model of HIV screening to adjust to the settings of the ED is more likely to provide higher rates of those approached and screened for HIV.

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