

Building Sustainable Universal HIV Screening Programs in Pediatric Emergency Departments: A Comparison

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Background

Centers for Disease Control (CDC), American College of Physicians (ACP) and American Academy of Pediatrics (AAP) recommend routine HIV screening in health care settings.^[1-3] CDC and AAP recommendations identify Emergency Departments (EDs) among most important healthcare settings for the implementation of the routine HIV screening, particularly when targeting vulnerable populations without regular sources of medical care who might not get tested for HIV elsewhere. Since the release of the CDC recommendations in 2006, many ED based HIV screening programs were developed, and a significant number of studies focused on the implementation of the ED-based HIV screening in the US. The vast majority of these studies were conducted in the adult EDs with limited data on screening of adolescents and young adults. Specifically, the data on developing HIV screening programs in pediatric EDs are limited.

Children's National Medical Center, Washington, District of Columbia (DC), implemented a universal opt-out rapid oral fluid HIV screening of adolescents ≥13 years old in the Sheikh Zayed (SZ) Emergency Department (ED) in March of 2009. In 2010, following the opening of the second Children's National ED at United Medical Center (UMC) in DC, the HIV screening program was extended to the new location. With 7.3% of uninsured children in the DC^[4], both EDs serve as a *safety net* for pediatric and adolescent populations utilizing the ED as a main source of their care.

This study was aimed to evaluate the implementation of HIV screening programs in two pediatric urban EDs located in an area of high HIV prevalence in Washington, DC.

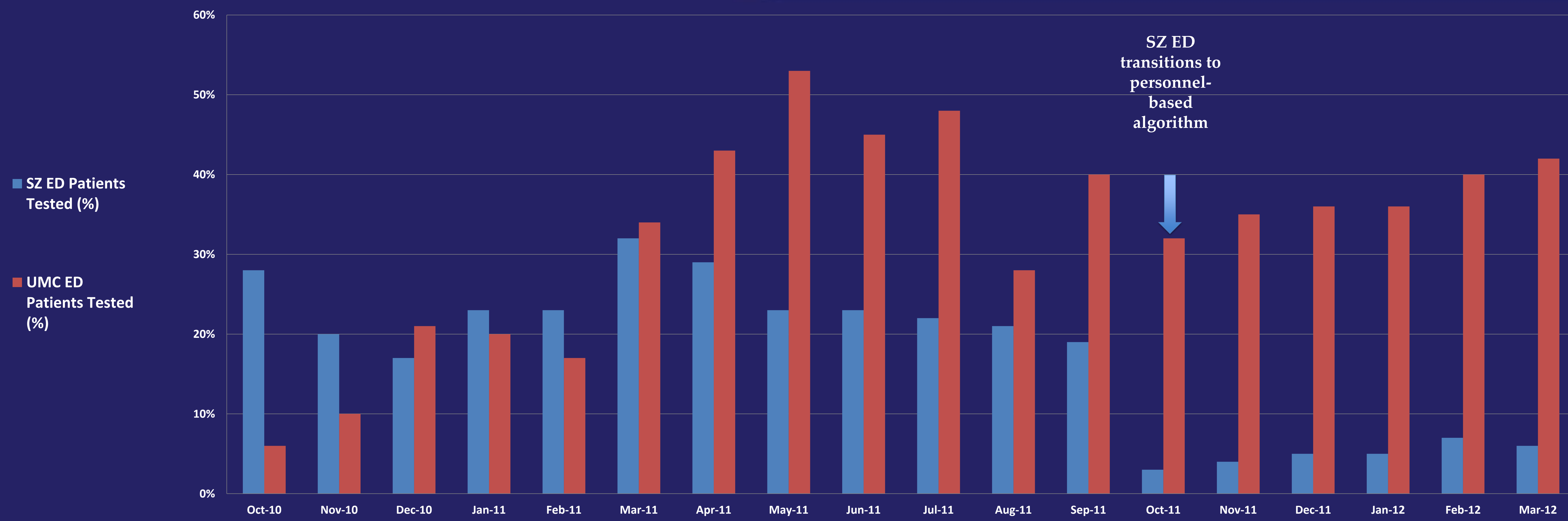


Figure 3. UMC ED and SZ ED screening rates per month

Methods

- A prospective, cross-sectional evaluation of the implementation and performance of diverse rapid HIV screening algorithms at two Children's National EDs (October 2010 – March 2012)
- SZ ED screening program was initiated as a dedicated tester-based algorithm and operated Monday-Friday 08:00-22:00 and Saturday-Sunday 09:00-17:00 (Fig. 1)
- UMC ED screening program was initiated as an ED personnel-based algorithm while UMC ED personnel-based algorithm and operated 24 hours/7 days (Fig. 2)
- Both EDs' algorithms provided universal opt-out rapid oral fluid HIV screening of adolescents and young adults ≥13 years using the OraQuick *ADVANCE* tests provided by the DC Department of Health (DOH)
- Quality Improvement evaluation was conducted with approval of ED leadership at both sites
- Data were collected from the ED HIV screening program database on the rates of patients approached and tested, separated by site-based algorithm
- The rates of screening and staff involvement were compared between the two models

Results

- During the 18 month period, 22,722 patients aged 13-24 years old were seen at SZ ED while 6,095 were seen at UMC ED
- SZ ED:** Of the 22,722 patient visits, 5,069 (22%) were approached for screening and 3,863 (17%) were screened
- UMC ED:** Of the 6,095 patient visits, 2,875 (47%) were approached for screening and 2,070 (34%) were screened
- The SZ ED dedicated tester-based algorithm, implemented in a busier ED setting, is more complex compared to the UMC ED personnel-based algorithm and resulted in fewer patients tested
- Following transition of the SZ ED to a personnel-based algorithm in October 2011, there was no significant change in the rates of the screening at this location compared to steady rates of screening at UMC ED (Fig. 3)

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- Support for HIV screening in SZ ED is provided by Karen Good, MSN, RN, NE-BC and Heather Vaux, MSN, RN, CPN
- Support for HIV screening in UMC ED is provided by Denise Doherty, RN, MSN; and Lin Whetzel, RN, BSN, CPEN and Tricia Ericson, RN, BSN, CPEN
- Support for lab services are provided by Karen Lacy, MT, MA, CPHQ

Results

- The rates of screening at SZ ED were **completely dependent upon** the presence of the dedicated testers and did not demonstrate sustainability in the absence of the funded staff
- The rates of testing within the UMC ED personnel-based algorithm were higher (6%-53% eligible patients tested) when compared to the SZ ED (3%-32% eligible patients tested) dedicated tester-based algorithm (Fig. 3)
- Feedback on the performance of the HIV screening and enhanced education about HIV at both EDs improved the performance of the program at UMC ED for a longer term, while having a significantly smaller short-term effect at SZ ED

Conclusions

- The personnel-based algorithm for universal opt-out HIV screening of adolescents has proven to be more effective over time in pediatric EDs
- At the current stage of weaning from funded support in the pediatric ED HIV screening program, the ED personnel-based algorithm at UMC ED has become the model for sustainability
- The transition from a dedicated tester-based model to the ED personnel-based model is complex and requires ongoing staff education and reinforcement
- Ongoing implementation research will allow for evaluation of the best strategy for transitioning from funded support to standard-of-care for HIV screening in pediatric EDs

Literature cited

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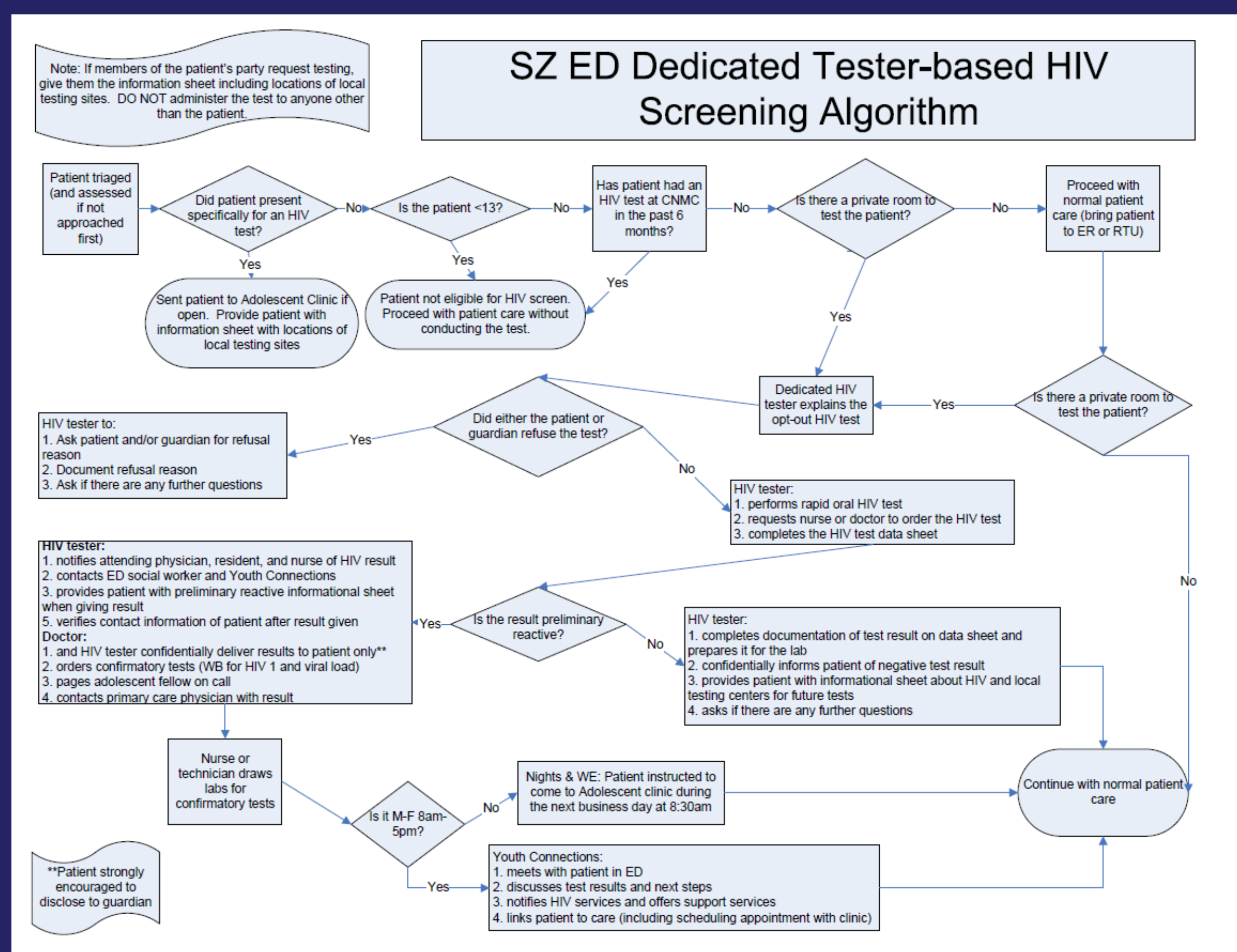


Figure 1. SZ ED Dedicated Tester-based HIV Screening Algorithm

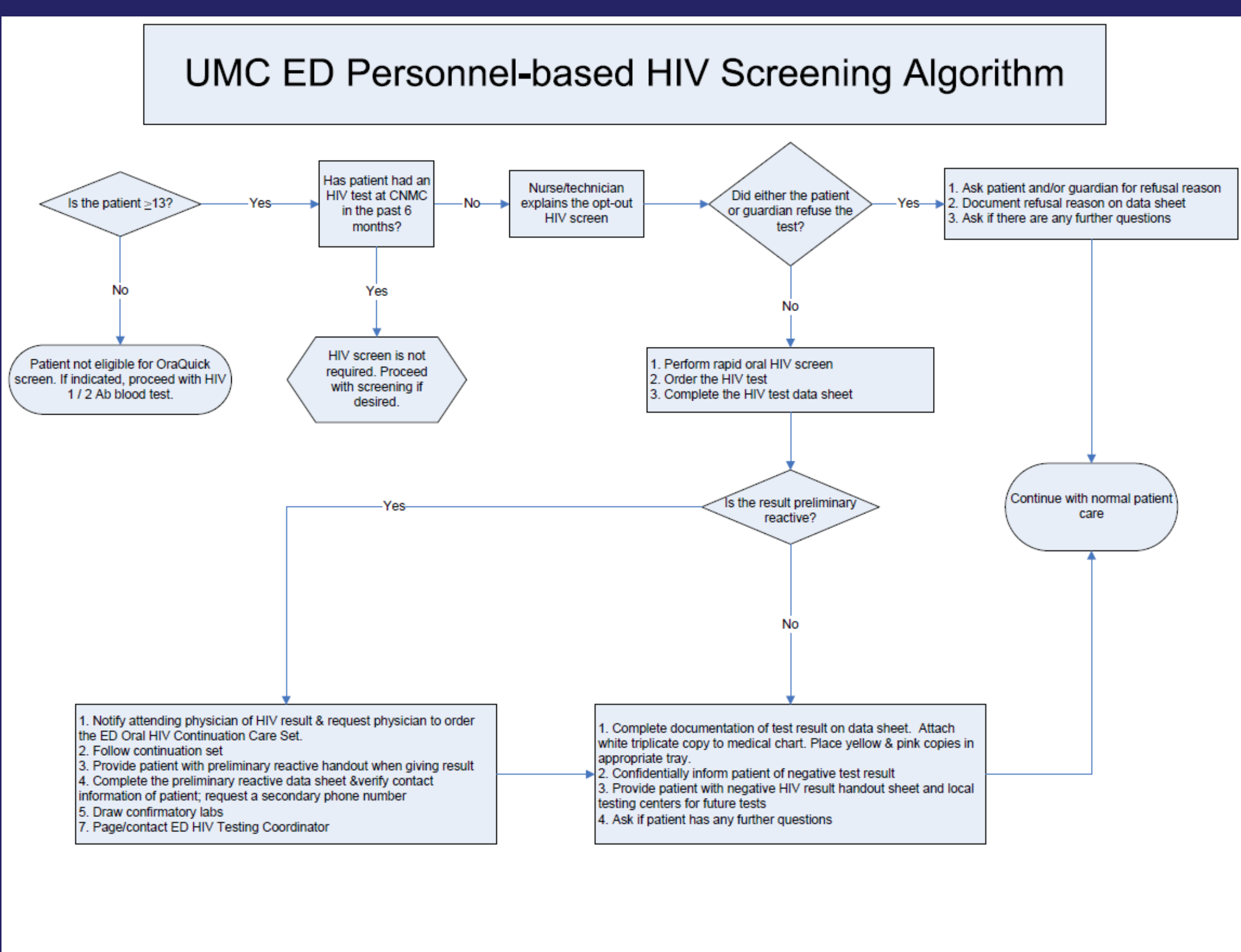


Figure 2. UMC ED Personnel-based HIV Screening Algorithm