HHS Public Access

Author manuscript

J Adolesc Health. Author manuscript; available in PMC 2020 September 01.

Published in final edited form as:

J Adolesc Health. 2019 September ; 65(3): 410–416. doi:10.1016/j.jadohealth.2019.04.005.

Using Chart-Stimulated Recall to Identify Barriers and Facilitators to Routine HIV Testing Among Pediatric Primary Care Providers

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Table of Contents Summary:

This study examined the facilitators and barriers for implementation of routine HIV testing in primary care using chart-stimulated Recall (CSR)

Introduction

The United States Centers for Disease Control and Prevention (CDC) estimates that adolescents and young adults (AYA) account for more than one in five new HIV infections in the U.S.[1] Of concern, most adolescents do not think they are at risk for acquiring HIV. It is estimated that 44% of AYA living with HIV do not know they are infected, in comparison to 13% of the overall HIV-positive population.[1] However, it is clear that early identification and treatment of HIV infection are associated with a decrease in morbidity and mortality, and a lesser chance of transmission to others.[2]

As a result, between 2006 and 2013 the CDC, American Academy of Pediatrics (AAP), and the United States Preventive Services Task Force (USPSTF) all endorsed routine HIV testing for adolescents. The CDC recommends that HIV testing should be routinely performed for all patients aged 13 to 64 years[3]. The AAP recommends that routine HIV screening be offered to adolescents regardless of risk at least once between 16–18 years of age in areas of high HIV prevalence. In areas of lower prevalence, HIV testing is recommended for sexually active adolescents with other risk factors and those tested for other STDs[4]. The USPSTF also endorses routine screening of all adolescents and adults aged 15 to 65 years.[2]

Despite these recommendations, HIV testing prevalence among adolescents did not increase nationally between 2005–2013. In one large study of high school students, only 22% of

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Conflict of Interest: The authors have no conflicts of interest relevant to this article to disclose.

sexually active students were tested for HIV.[5] Given the clear discrepancy between policy recommendations for routine HIV screening in adolescents and their implementation, essential formative work is needed to better understand primary care provider perspectives and reasons for screening or not. When anonymously surveyed, pediatric primary care providers have reported that the most common barriers to providing routine HIV testing in primary care were time and ability to confidentially follow up results[6]. However survey data is limited by recall, and therefore we used the novel chart-stimulated recall (CSR) method where providers review and discuss actual patient encounters. The primary aim of this study was to identify barriers and facilitators to routine HIV testing in higher- and lower-performing pediatric primary care sites.

Methods

A qualitative design was used to conduct semi-structured interviews with chart-simulated recall (CSR) to explore clinician decision-making regarding HIV testing, a method which can uncover more detailed information than is elicited from typical survey or qualitative methods. CSR decreases the need to rely exclusively on memory when reviewing clinical decisions made during a patient visit. The study design was guided by implementation science frameworks and methodology. The Systems Model of Clinical Preventive Care[7] and constructs from the Theory of Planned Behavior[8] such as attitudes, subjective norms, and perceived behavioral control guided the development of the semi-structured interview questions. Open-ended questions allowed probing for detailed information.

CSR has been shown to add additional information about clinician, patient, and systems determinants of healthcare decisions when compared to chart audit alone.[9–12.] Studies have validated three to six charts per physician as being sufficient for reliable and valid assessment of that clinician's practices[13–15], hence the selection of three charts for review with each provider in this study. To our knowledge, CSR has not been applied previously to the field of HIV prevention so interview questions were piloted in a mock CSR encounter with adolescent providers to check for clarity, bias, appropriateness, and interview technique; modifications were made based on provided feedback.

Subject Recruitment and Procedures

Twelve primary care practices were chosen in a large pediatric care network located in Philadelphia and neighboring counties. HIV testing rates were calculated per practice by dividing the total number of well adolescent visits (13–21 years old) documented in the Electronic Health Record (EHR) by the total number of tests completed during a five year time period. This permitted stratification of sites into two categories: seven "lower HIV testing performing" sites (0.4% to 4%) and five "higher HIV testing performing" sites (11% – 27%). All five of the higher performing sites were urban practices in geographic regions where the rates of known HIV are higher as compared to suburban regions. One urban practice and one suburban practice in a relatively higher prevalence area were in the lower performing group. Following IRB review and approval, all nurse practitioners and physicians at these sites were invited to participate via email. Trainees were excluded. The invitations to providers stated only that they would be asked questions about adolescent

screening practices, without more specific information, and that they would receive a $20 gift card for their time. Repeat emails were sent with the goal of recruiting 15 providers from “higher-performing” and 15 providers from “lower-performing” sites. After a provider agreed to participate, an in-person or Face Time interview was scheduled.

On the day of the interview, providers were informed of the specific purpose of the interview and consent was obtained. Providers were asked to provide personal demographic information including age, gender, race/ethnicity, degree, and years in practice. Based on their own recall, providers were then asked to retrieve electronic charts for up to five of their most recent well adolescent visits. With each chart, providers were asked how well they remembered the encounter on a scale of 1–10. One chart was excluded due to provider lack of recall (0). The research assistant did not have direct access to the medical records or any patient-identifying information. For each chart reviewed, providers were asked to report patient demographic information (gender, race, insurance status) and answer a series of questions about each encounter. These questions included whether sexual activity was assessed and whether an HIV test was done. This was followed by open-ended questions exploring the decision-making process and factors that guided the outcome (Appendix 1). In keeping with a semi-structured qualitative interview format, the interviewer probed further and asked follow-up questions to clarify or gain insight into providers’ answers. Interviews lasted from 30 minutes to one hour, occurred at the clinician’s work location and were audio-recorded, de-identified and transcribed.

Data Analysis

Three members of the research team independently read and coded the transcripts and then met to discuss and reconcile individually identified codes descriptive of the data. Once codes were agreed upon, like codes were grouped to uncover categories. Ninety-five percent agreement on code identification was reached by team members before proceeding with category and theme identification. During this step, exemplars were identified from transcripts. Coded results were then entered into NVIVO (QSR International) software to manage the data and facilitate inductive qualitative content analysis[16]. Code and category frequencies were counted and compared by salient demographic quantitative data such as site and provider characteristics. Finally, themes were identified based on categories and codes through discussion and consensus. Demographic data were summarized using standard descriptive statistics.

Results

Introductory emails were sent to 134 providers. Thirty-four pediatric primary care providers responded and 31 were interviewed. Providers were (n=31) were physicians (58%) and nurse practitioners (42%), predominantly female (94%), white (90%), and had a mean of 16.9 years (S.D. 10.8) in practice. The providers from higher-performing sites and lower-performing sites comprised 52% and 48% of the sample respectively.

Of the 113 charts reviewed, only 11.5% of the adolescents had HIV testing ordered; 20% at higher performing sites and 2% at lower performing sites (p=.0021) (Table 1). Table 2 and

Table 3 shows barriers and facilitators cited by providers which are categorized as provider- or systems-level issues. Table 4 includes illustrative quotes for each theme discussed below.

Perceived Barriers to Routine HIV Testing

Provider-Level Barriers

Lack of Knowledge of Guidelines.: Most (76%) of providers were not familiar with the routine HIV screening guidelines from the AAP or CDC. The majority of providers were aware that HIV screening guidelines existed, but when asked about their knowledge of the content of guidelines, only one provider accurately summarized the CDC guidelines. Another eight providers (26% of total providers) stated familiarity with the guidelines from either the AAP or CDC, but they inaccurately represented them as promoting risk-based, rather than routine screening.

Perception of Low HIV Risk.: Providers' perception of patients' HIV risk as low was a common recurring theme. Risk perception was grounded in four main assumptions: a) when asked, patients are generally telling the truth regarding a negative sexual history, b) with longstanding patients, the patients are more likely to tell the truth and/or providers can more accurately assess patients' honesty, c) providers can accurately assess some patients' maturity levels and therefore know if they're sexually active without asking, and d) that HIV incidence and/or the incidence of unprotected sex is low in the providers' patient populations.

In this study, risk determination was not consistently based on sexual history. When asked, providers summarized the assumption that a negative sexual history is accurate, for example, by saying "…She was being very honest about everything. So she had said she's never been sexually active, I trusted her. I didn't feel that there was any risk to screen (ID#16)." Regarding long-standing relationships, one provider said, "I have a relationship with her and I know her pretty well…. I did not test her (ID#5)."

Assessment of risk and maturity was addressed in statements like, "If I have a seventeen-year-old girl who goes to an all-Catholic school and is involved in a million activities and is under the watchful eye of her mother at all times, will I bring it up? No. (ID#17)" and, "…If there's a thirteen-year-old who's not like very…advanced, then that kind of makes me think one thing,…. It's a gestalt, like overall (ID#14)."

Finally, the perception that the providers' patient populations had a low incidence of HIV and therefore testing was not warranted was encountered frequently. Providers in low-performing areas were in more suburban sites with perceived lower risk and providers commenting "…it seems to be to me…a low-prevalence area…. I mean, we don't have any patient in the practice who has HIV…if it's more prevalent it would change my thinking (ID#21)," or stating, "If somebody gave me zip code data and told me this was a major epidemic in my area, um, then, yes, absolutely we should screen everybody. (ID#27)"

Harm to Patient-Provider Relationship.: Building on themes above, particularly with regard to trusting patients' sexual histories, many providers worried that testing in the absence of sexual risk might damage their relationships with their patients. For example, "…

Unless I really am convinced that they're at high risk…I don't push it because I don't want them to lose the trust in me (ID#16)," or, "…If you have a relationship with a teen…and then you say, well, we're gonna screen you anyway, I think that…might send up a…a pause on them, thinking well, why don't you trust me (ID#17)."

Discomfort with Potential of Delivering Positive Results.: Many providers disclosed their reluctance to test for HIV because they had never had a positive result. While this ties into providers' perception of low risk for HIV in their patient population, providers also expressed discomfort with delivering positive results. Their lack of familiarity with testing translated into confusion about how to deliver results and where to refer patients. One provider stated, "…If it was positive, I don't know what I would do (ID#6)." Additional time required for positive results without support and on-site counseling resources resulted in some provider's deciding not to test. "…then if you do get a positive, then you have to order the medication, counsel them, so, um, sometimes it's…it's excellent in theory to look for these things and screen for these things…or screen for these things, but I mean we have… we're in clinic from 8:00 to 5:00, and every portion of that time is with fifteen-minute time slot (ID#8)"

Systems-Level Barriers

Confidentiality.: Many providers cited the potential for breach in confidentiality, both via the electronic medical record and via the insurance companies, as a major barrier to HIV testing. While many providers knew how to write confidential notes in the electronic medical record, they accurately stated that if the after-visit summary were printed or requested by a parent after an HIV test had been ordered at that visit, the HIV test would print out on the summary.

Additionally, insurance is billed for HIV testing, and providers worried that parents could find out about patients' sexual activity or HIV screening via Explanation of Benefits (EOB) which are more likely to be sent home with private insurance. One provider stated, "I can hide a note…but I haven't figured out a way to hide the billing (ID#10)," and another said, "So you worry about them finding out…that their kids are having sex through the billing (ID#18)."

Laboratory Facilities.: Lack of on-site HIV testing resources were often mentioned by providers. No sites in this study had capability for rapid point-of-care HIV testing. Many did not have on-site laboratories and going off-site often requires being accompanied by an adult. Additionally, some on-site laboratories were closed during evening appointments, varied in terms of which insurance plans they accepted, or had long wait times.

Providers at practices with off-site laboratories mentioned the difficulties their patients faced getting to a lab, as they might need transportation to a commercial lab facility, which could in turn force a conversation with their parents about testing. One provider stated, "The parents …brings the child to the lab…it's not like I just give them a slip and they do it. So I have to talk about…why (ID#21)," while another commented, "First of all, their parents have to take them to the drawing center (ID#6)." Thus, providers expressed concerns about practical issues, time burden and confidentiality when laboratory-based testing is used.

Time Constraints and Lower Prioritization Compared to Other Health Concerns.: Providers stated that they didn't have enough time to take a thorough sexual history because adolescent visits were complex and scheduled for fifteen minutes, and that other issues take priority. One provider stated, "It [HIV testing] can get lost, too, with everything else you're thinking about (ID#4)." Another provider asserted, "…I feel like the mental health of our teens and some of the obesity, not that it's not [sic] more important than HIV, but outweighs in my mind because I see that so much more (ID#18)."

Perceived Facilitators to Routine HIV Testing

Provider-Level Facilitators

Knowledge of Guidelines.: Providers who were familiar with the guidelines tested more frequently. Some providers were aware that guidelines recommended standardized HIV testing; others aimed to test more often or at least once. Providers working at the two practices with Title X-funded family planning services were more likely to be aware of the guidelines and to regularly test for sexually transmitted infections (STIs) and HIV.

Describing HIV Testing to Parents and Patients as a Routine Screening Practice.: Some of the higher performers managed to address barriers regarding confidentiality by stating that they discuss HIV screening as a routine part of practice, even if the test is actually ordered based on patient's risk. One provider stated, "They get the bill from the insurance, and there's going to be questions about that. So, I always address that as, 'these are the routine screening tests (ID#28).'" Another provider took a similar approach, saying, "…I usually come back to my discussion about… 'you know, I forgot to tell you, but all the teenagers that we see we do basic screening labs on and here are the ones that we screen… And more parents are like…okay (ID#14)."

System-Level Facilitators—All higher-performing sites had laboratory capabilities on-site. Providers still identified many difficulties, however, with patients getting to the lab. One provider referenced additional time as a facilitator to comprehensive adolescent visits, stating, "For under twelve [years old] we get fifteen minutes…for adolescents we get half an hour (ID#26)." Another provider discussed the site's Title X funding as being conductive to testing, commenting, "I can open a completely separate chart in Family Planning for a kid during their well visit and do all of their testing (ID#5)." Title X-funded family planning services allow for providers to open a separate encounter on the same day as a well adolescent visit, which may address concerns about confidentiality including no explanation of benefits being sent to the home for privately insured patients.

Discussion

While HIV testing rates were relatively low overall in the pediatric primary care practices in this study, using the novel CSR method, we gained insight into differential perceived barriers and facilitators to routine adolescent HIV testing at higher and lower performing sites. Our findings highlighted specific barriers at lower performing sites including knowledge of testing guidelines, assessment of risk, concerns about damaging patient/caregiver relationships and competing priorities, while both high and low performing cites reported

concerns about confidentiality. Additionally, higher performing sites listed many more facilitators when compared with lower performing sites such as on-site laboratory and Title X family planning services.

In this study most pediatric primary care providers at the lower performing sites reported risk-based HIV testing and determined risk by relying on patients to accurately disclose their sexual activity. However, data show that many individuals at highest risk for HIV, including young gay and bisexual men, fear rejection and because of stigma do not always discuss their sexual orientation and behaviors with their provider[17]. Further, multiple studies have shown discrepancies between adolescents' reported sexual behaviors and STI infections[18–19], providing evidence that it is difficult to assess risk and has been the rationale for recommendations for routine screening regardless of reported risk. Providers at higher performing sites had incorporated this concept and developed ways of counseling that normalized HIV testing as a practice for all youth regardless of risk.

Confidentiality was a consistent concern at both higher and lower performing sites. Providers reported being less likely to offer HIV testing to patients with private insurance and because they were unable to ensure confidentiality with explanation of benefits possibly being sent to the home. Providers expressed doubts in ability to maintain confidentiality when parents did not leave the room and did not know how to navigate confidentiality if patients needed their parents to drive them to an off-site lab for HIV testing. These findings are consistent with previous studies showing that providers are reluctant to test for HIV if they have to discuss it with parents, fearing unintentional disclosure of sexual risk and violation of confidentiality.[4,6] However, several providers in higher performing sites reported overcoming this barrier by making HIV testing a part of routine care, like lipids and other recommended pediatric routine screenings.

In addition to finding ways to overcome confidentiality concerns, providers at higher performing sites also reported access to additional resources such as Title X funding and on-site laboratory facilities as key facilitators to testing. A Title X family planning grant made a difference to providers and their willingness to screen because this supports funding confidential services. If patients were able to wait, an on-site laboratory facilitated HIV testing with fewer concerns from providers about confidentiality and need to discuss with parents. These findings are consistent with a recent study showing that a systems level intervention utilizing health educators and on-site HIV rapid testing dramatically increased HIV testing rates among adolescents from 29.6% to 82.7% percent[20].

Some limitations of this study include small sample size, as well as selection and social desirability biases, though CSR techniques modified these risks and this qualitative method aims to generate rather than test hypotheses. The population of providers was predominantly female and white, and included sites only within one healthcare network. Furthermore, two of the clinics had additional Title X funding, which is not readily available to pediatric primary care sites.

Despite limitations, this was one of the first studies to use novel CSR technique to specifically uncover different barriers and facilitators to routine HIV screening of

adolescents in lower and higher-performing real-life pediatric primary care practices. Our findings support multi-level interventions that combine several strategies to enhance facilitators and address barriers at individual provider behavior and system levels. Potential system-level policy implications include increasing resources through funding for point-of-care HIV testing and additional time for adolescent visits. On the provider level, efforts to increase education and training regarding sexual health assessments, and to improve provider ability to discuss with patients and families HIV testing as a routine practice are warranted. Influencing provider bias, beliefs and attitudes is difficult but may be addressed in part through practice level interventions like addition of Title X funding to assure confidentiality and EHR tools to prompt and streamline ordering. Finally, such interventions need to be tested in the pediatric primary care broadly to ensure optimal HIV screening and sexual health care for adolescents in their medical homes.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Funding Source:

This research was supported by the Advanced Practice Nurse Research Fellowship Award at the Children's Hospital of Philadelphia and by Dr. Nadia Dowshen's K23 award from the NIMH (K23 MH102128) (PI: Dowshen). This project was supported in part by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under T71MC30798 Leadership Education in Adolescent Health (LEAH). This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

Financial Disclosure: The authors have no financial relationships relevant to this article to disclose.

Abbreviations:

AYAs	adolescents and young adults
CDC	Centers For Disease Control and Prevention
EHR	electronic health record
HIV	human immunodeficiency virus

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Implications & Contribution:

Early identification of HIV and linkage to care results in decreased transmission and better outcomes. Despite recommendations for routine screening, rates of HIV testing of adolescents have not improved. Using chart-stimulated recall, this study identified barriers and facilitators to HIV testing to inform a multi-level intervention to increase testing.

Table 1

Characteristics of Patients Seen for Visits Reviewed in Chart Stimulated Recall (CSR)

	Charts reviewed at 5 higher-performing clinics (n=59)	Charts reviewed at 7 lower-performing clinics (n=54)	P value
Mean age ± SD	16.0 ± 1.76	15.32 ± 1.81	*p=.059
Gender			**p=0.25
Male	26 (44.1%)	17 (31.5%)	
Female	33 (55.9%)	36 (66.7%)	
Race			**p<0.0001
Asian	1 (1.7%)	4 (7.4%)	
White	10 (16.9%)	38 (70.4%)	
Black	45 (76.3%)	10 (18.5%)	
Other	3 (5.1%)	2 (3.7%)	
Insurance			**p<0.0001
Public	39 (66.1%)	9 (18.5%)	
Private	20 (33.9%)	44 (81.5%)	
Tested for HIV			
Yes	12 (20.3%)	1 (1.85%)	**p=.0021
No	47 (80.7%)	53 (98.15%)	

* p value – t test

** p value – chi square test

Table 2

Reported Provider- and System-Level Barriers to HIV Testing at Well Adolescent Visits in Primary Care Pediatric Practice

Provider-Level Barriers
Lack of Knowledge of Guidelines
"I don't know if that's something that is recommended" (ID#10)
"I don't think I would be able to tell you." (ID#4)
Perceived Low HIV Risk
Telling the truth
"I felt we had trust between us and that her answer I was comfortable with in the terms of honesty." (ID#17)
"… She was being very honest about everything. So she had said she's never been sexually active, I trusted her. I didn't feel that there was any risk to screen (ID#16)."
Long-Standing Relationships impacts assessment
"I've known her mother and father long before she was born. Um, I know her, I know her cohort that she hangs around with."(ID#27)
"Yeah, I mean all these people I've known since they were very, very little kids, so they weren't new to me, a new patient.…if I felt like I really didn't know them and I didn't believe what they were saying, then I would change my outcome, but it hasn't happened recently." (ID#3)
Providers can assess sexual behavior by maturity level
"…If there's a thirteen-year-old who's not like very…advanced, then that kind of makes
me think one thing, and then something else in another.…It's a gestalt, like overall
(ID#14)."
Low incidence of risk
"I think it's just risk perception, you know? I think we have a very well informed adolescent population and community amongst all the public, private, religious schools in the area and, um, it is rare… very, very rare that any of the providers in my practice ever hear that people are having any type of unprotected sex. (ID#27)
Harm to Patient-Provider Relationship
"Sometimes maybe the parents would get offended that you're even bringing it up is because they'd be like, well, why do you think my kid has… or is at risk for HIV? Or, um… we're not drug users. We… you know, we live in a very upper-middle-class community. Why would you think that?" (ID#8)
Discomfort with Delivering Positive Results
"… it's because of extra work.. if you have this test, then what are you gonna do with the results? Then you have totalk to the kid, then you have to send them here, So…it would be a lot more work." (ID#19)
System-Level Barriers
Confidentiality
"It's easy to order the testing for the Medicaid patients because their parent isn't getting an itemized bill. But it's more the kids with the private insurance that I think that creates a little bit of a barrier for screening everybody" (ID#12)
"So you worry about them finding out…that their kids are having sex through the billing." (ID#18)
On-Site Lab Barriers:
"Our lab is sometimes a really long wait. Kids don't want to get blood drawn and they don't want to have to wait twenty minutes in the lab with their parent asking them why they're being tested for something (ID#12)."
"And I have to send them to the lab—and sneak them there." (ID#1)
"Our lab closes by about 7:30, 7:45. So by the time I did her well visit and tried to send her to the lab, they wouldn't allow screening. "(ID #13)
"There are plenty of people who forget to go to the lab. And I would say maybe that's ten to twenty percent, they forget to go to the lab." (ID#20)
Off-Site Laboratory Barriers
"You know, a lot of our patients don't have cars. They don't have access." (ID#16)
"Because it's another step which… some parents lose the papers, or they just forget to do it, or it's too hard to schedule." (ID#8)

Provider-Level Barriers
Competing Priorities/Limited Time
“I think I spent most of the time talking about the fact that he was depressed and getting his parent to agree to getting him into counseling, and getting him to agree to be in counseling.” (ID#3)
“I’m allotted fifteen minutes to see that teenager. (ID#14)

Table 3

Reported Provider- and System-Level Facilitators to HIV Testing at Well Adolescent Visits in Primary Care Pediatric Practice

Provider-Level Facilitators
Knowledge of Guidelines
"I believe it's yearly, and then more frequently if warranted." (ID#13)
"So my general screening is six to twelve months, which usually means twelve months, for serum HIV and RPR, and then often… more often Aptima.." (ID#20)
"The guidelines are sixteen to eighteen for HIV screening, regardless of history of sexual activity. I think you're supposed to screen all sexually active teenagers starting whenever they're sexually active. I believe the guidelines are every six months. I think annual screening… this is where I get confused. Annual screening, regardless, I think is every year. It may be every other year, but I think it might be every year." (ID#22)
Systems-Level Facilitators
Title X Family Planning Services
"So… but anyways, under that we can get HIV testing done confidentially and free." (ID#6)
"I can open a completely separate chart in Family Planning for a kid during their well visit and do all of their testing—". (ID#12)
"…and that's when I do the entire sexual history, depression screening… so that's when we talk about that stuff. Um… and if I feel like it's gonna be an issue… you know, sometimes I can do it confidentially, and so we'll do two separate encounters and then the teen and I will talk about just screening confidentially or… I mean parents, pretty much, they're okay with the screening. They almost like want the kids to be screened, so I don't really have a lot of barriers with that." (ID#13)
On-Site Laboratory
"Mom was in the waiting room, so it actually probably would 've been pretty easy for him to have gone over to the lab by himself and got the blood work done." (ID#12)
"I think our advantage is we have the lab on site. That really… I think that really facilitates it. I get frustrated when our lab person calls out and I can't… and I want them to come back, so I think that really facilitates it." (ID#23)
"Sometimes I'll walk them around to the lab. Like if it's somebody who I'm really concerned about, I'll walk them around to the lab." (ID#4)
Support for Routine Testing
"I'm sure we're missing kids because they're tell—… they're not disclosing, and, um… and then, you know, if we were to make it more routine and get those kids the HIV and syphilis testing, I think that would help with that barrier, too." (ID#12)
"I think if it became kind of more… part of a usual, yearly thing, then maybe it would just kind of become part of a physical. Like I think the barriers, like I said, are sometimes I think parents freak out about it a little bit. But with the teens, I mean it's just something that should become part of regular practice," (ID#13)
"If it was like, we recommend that every sexually active seventeen-year-old has an HIV test. If we just tell them like, everybody's getting it done. You don't have a choice. You know, like we're doing it on everyone who comes in here. I think it makes it sound more… acceptable. Like, oh, okay, I'm not the only one, you know? You're not thinking I'm doing something wrong. I'm just doing this because… so I think it would be huge.… You know, and it kind of takes the taboo out of doing it, so you don't necessarily… the kids aren't feeling like they did some—… you know, because they did this… because they're sexually active, they have to get screened, but my friend who's not isnot."(ID#16)
"If it was… as it's recommended now for all kids, regardless of their risk factors… you know, if we had that language among us as a practice that said, this is what we do regardless, then that would… that would take away that barrier." (ID#18)
"I think normalizing it just like we normalize lipid testing, is a good thing. I think that's really important, it takes the stigma away." (ID #29)

Table 4

Summary of Reported Barriers and Facilitators across Higher and Lower HIV Testing Performing Sites

Higher Performing Sites	Lower Performing Sites
Barriers	**Barriers**
Confidentiality (private insurance)	Less knowledge of guidelines (base testing on risk)
Lab barriers (wait time, and no HIV point of care testing available)	Confidentiality (private insurance)
	Risk Assessment (Trust patient's history, long-standing relationship impacts assessments, providers can assess sexual behavior by maturity level, low-incidence of risk)
	Patient provider relationship (Worry about offending patient and parent)
	Have competing priorities
Facilitators	**Facilitators**
Knowledge of guidelines	Would like to know more about HIV incidence rates in practice area
Family planning grant	Getting other blood work done
On-Site Laboratory	