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Understanding Quality of Care and Satisfaction with Sexual and Reproductive Health Care among Young Men

Nanlesta Pilgrim, PhD, MPH[1,2], **Jacky M. Jennings, PhD, MPH**[3], **Renata Sanders, MD, ScM**[3], **Kathleen R. Page, MD**[3], **Penny S. Loosier, PhD, MPH**[4], **Patricia J. Dittus, PhD**[4], and **Arik V. Marcell, MD, MPH**[2,3]

[1]Johns Hopkins Bloomberg School of Public Health, Baltimore, MD

[2]Population Council, Washington, DC

[3]Johns Hopkins School of Medicine, Baltimore, MD

[4]Centers for Disease Control and Prevention, Atlanta, GA

Abstract

Objective—Sexual and reproductive health care (SRHC) guidelines recommend the delivery of quality preventive SRHC to males beginning in adolescence. A quality of care (QOC) framework was used to examine factors associated with young male's perceptions of QOC and satisfaction with care, which can influence their engagement and use of SRHC.

Methods—Cross sectional surveys were conducted from August 2014 to September 2016 with 385 male patients aged 15–24, recruited from primary care and STD clinics. Surveys measured QOC received, satisfaction with care, and domains of a QOC framework. Poisson regression analyses examined associations between domains of quality and perceived QOC as well as satisfaction with care.

Results—Over half of males reported QOC as excellent (59%) and were very satisfied with the services (56.7%). Excellent QOC and high satisfaction with services was associated with timely care, higher Clinician-Client Centeredness, and, and being a bi-sexual male. Excellent QOC was also associated with greater comfort in the clinic, being tested for HIV/STDs, attending primary care settings, and receipt of higher number of SRHC services.

Conclusion—Utilizing a QOC framework as part of providing SRHC to young males can be important in improving their perceptions of QOC and satisfaction with services.

Keywords

patient satisfaction; quality of care; adolescents; patient-centered care

Corresponding Author: Nanlesta A. Pilgrim, PhD, MPH, Associate, Population Council, 4301 Connecticut Avenue NW, Suite 280, Washington, DC 20008 USA, 202-237-9409 (t); 202-237-8410 (f), npilgrim@popcouncil.org.

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INTRODUCTION

Receipt of sexual and reproductive health care (SRHC) by young sexually experienced men aged 15–24 continues to lag substantially behind that of young women despite high rates of sexually transmitted diseases (STDs), human immunodeficiency virus (HIV) and experiences of unintended pregnancy among young men.[1–9] Existing SRHC guidelines recommend the delivery of quality preventive SRHC to males begin in adolescence and be delivered by all provider types, including primary care and specialty care providers (e.g., STD services).[10,11] Regardless of the visit's purpose, SRHC guidelines recommend provision of clinical preventive services (e.g., testing for STDs/HIV, sexual health screening) to young men. At the same time, how young men process and act upon the information, recommendations, and services received from providers can be influenced by their overall clinical visit experience.[12–19] Here, young men's perceptions of the quality of care (QOC) and satisfaction with care received can influence their continued engagement and use of SRHC.

Low QOC (e.g., lack of privacy and confidentiality; poor provider-patient interaction) has been linked to negative sexual and reproductive health outcomes in adult populations, including uptake and adherence to contraception and retention in care.[12,20–22] Moreover, satisfied clients are more likely to comply with treatment advice received from their providers, return to that setting for care, and share information about clinical visits with others.[18,23,24] Despite these findings and recommendations to monitor young people's receipt of QOC, studies with young men focus on SRHC receipt rather than measure their QOC and satisfaction with care.[25–28]

The use of established QOC frameworks can elucidate factors that influence the quality of SRHC received and patient satisfaction with such services, leading to innovative strategies that reduce the rates of negative sexual and reproductive health outcomes among young men.[12,29–31] Established frameworks outline key domains of care that influence patients' experiences during their clinical visit and have been shown to influence SRHC engagement. These domains include: (1) accessibility, (2) respectful client and staff interactions, (3) efficient and effectively organized care, (4) comfortable and clean structure and facilities, (5) patient-centered care (6) appropriate package of SRHC (e.g., assessment, counseling and material services),[10,11] (7) effective and sufficient communication and information, and (8) technically competent care.[12,29–32]

Moreover, there is need for improvement of quality measures among adolescents and young adults, as noted by the American Academy of Pediatrics (AAP). The AAP advocates for using adolescents and young adults themselves as sources of measurement data about their clinical visit because their reports of their care experiences are more valid and reliable than chart review and other data sources.[21,33,34] Yet, there continues to be a lack of attention to their opinions and experiences.

This study's goal is to examine and identify factors associated with young male clients' self-report of service quality and satisfaction at the time of their clinical visit. To do this, we use

established QOC frameworks to distill key aspects of QOC and satisfaction with services received by young men during their visit to primary and specialty STD care settings.[12,29–31]

METHODS

Sample

Cross sectional surveys were conducted from August 2014 to September 2016 with male patients aged 15–24 recruited from three primary care and two public health STD clinics in an urban mid-Atlantic city with high STD/HIV rates. Data was collected over four surveillance data collection rounds as part of a larger study, which trained non-clinical youth-serving professionals in community-based settings to engage young men on SRHC. Each round lasted approximately two weeks. Eligibility criteria for the clinic survey was identifying as a male between aged 15–24 years old and being able to speak, read, and understand English or Spanish. Of 786 individuals screened, 307 (39.0%) were ineligible. Among eligible participants, 52 refused (10.9%) and 427 enrolled (89.1% participation rate). This study consists of 385 male participants who reported being sexually active.

Procedures

Study protocols were approved by the University's Institutional Review Board (IRB) and affiliated institutional IRBs. Adults and minors whose visits were SRHC-related gave consent to participate in research. Minor assent and parent consent were given if visits were non-SRHC-related. After the healthcare visit, male participants completed a survey using an 10–15 minutes audio-assisted computer survey (ACASI) in English or Spanish.. All participants received a $5 gift certificate for their time.

Measures

The survey measured socio-demographic characteristics, SRHC received, perceived QOC received and satisfaction with care, and seven of the eight domains of the QOC framework.[12,20,31] Technical competence which assesses the degree to which the care provided complies with accepted clinical standards cannot be assessed through patient report and therefore, was not measured in this study.

Outcomes

QOC was assessed by a single item ("How would you rate quality of services you received today"), with response options of excellent, good, fair, poor, and very poor. Overall perceived visit QOC was categorized as excellent versus all others because only 3% of the sample endorsed the latter options.

Satisfaction with care was assessed by a single item ("Overall, how satisfied are you with the services you received at the clinic today?"), with responses ranging from very dissatisfied to very satisfied. Overall satisfaction was categorized as very satisfied versus all others because only 5% of the sample endorsed the former options.

Covariates

The *accessibility* domain measures whether care is geographically accessible, affordable, and convenient. Two items measured this domain (e.g., "Do you have health insurance"), with response options of no and yes.

The *respectful client and staff interactions* domain, which assesses providers and staff respect of clients' privacy, was assessed by two items (e.g., "Did a doctor tell you what you talked about with them was confidential?"), with response options of no and yes.

The *efficiency and effective organization of care* domain was measured on two dimensions: the timeliness of care and the check-in process at the clinic. Two items assessed timeliness of care (e.g., "It took me too long to be seen today after I arrived"), with response options ranging from strongly disagree (1) to strongly agree (4), with higher scores indicating greater receipt of timely care. Three items, with a Cronbach's alpha of 0.72, assessed the check-in process (e.g., "Was it clear what you needed to do to check-in?"), with responses coded as no and yes. Higher scores indicate better check-in process.

The *structure and facility* domain, which assesses comfortableness, safety, cleanliness and privacy of facilities, was measured using the Clinic Discomfort Scale.[20] With an alpha of 0.87, the scale has four items measuring clients' negative waiting room experience and treatment by staff (e.g., "the waiting rooms were too crowded,"). Response options ranged from strongly disagree (1) to strongly agree (4) and were reverse coded; higher scores indicate greater comfort in the clinic.

The *patient-centered care domain* assesses whether care is tailored to the needs and preferences of individual clients and whether care is equitable and non-discriminatory care; that is, quality services are provided irrespective of age, gender, or sexual orientation [12] The adapted Clinician-Client Centeredness Scale, with an alpha of 0.87, comprised of six items that assessed client's favorable interpersonal relationship with clinician (e.g., "The healthcare provider listened to me carefully").[20] Item response choices ranged from strongly disagree (1) to strongly agree (4). Two items measured equitable and non-discriminatory care (e.g., "The health care provider had a respectful attitude towards my sexual orientation") with similar response choices.

Appropriate package of SRHC domain assesses whether the health facility provides a package of information, counseling, diagnostic, treatment, and care services that fulfill the needs of all adolescents and young adults.[12] Based on the MMWR's 2014 *Providing Quality Family Planning Services* (*QFP*) guidelines, which outlines the clinical preventive SRHC males should receive[10,11], we assessed whether male clients received the appropriate package of services using 12 items with response options of no or yes [9 history items: sexual practices, partner number and gender, protection, past HIV and STI test, pregnancy history, sexual identity, and plans for children; 2 counseling items: reducing STD/HIV risk, and preventing pregnancy; and 1 material provided: condoms)]. A summative score was created ranging from 0–12 and categorized by receipt of ≤10 services versus >10. Two additional items measured this domain: screening for STDs and HIV. Response options were no and yes.

The *communication and information* domain, which assesses whether information provided to clients is understandable and sufficient, was measured by two items that were combined ("Provider I saw taught me about protecting myself against…" "pregnancy" and "STDs/HIV"). Response options ranged from strongly disagree (1) to strongly agree (4), with higher scores indicating better communication of information.

Socio-demographic factors included age, race/ethnicity, sexual orientation, established patient status, and clinic setting type.

Data analyses

Since data was collected over four surveillance data collection rounds,, before pooling the data across rounds, we conducted sensitivity analyses to assess whether the main outcomes varied by round. Results showed that they did not vary by round. Using the pooled data, descriptive statistics (chi-square test or *t* test) were used to describe the outcomes and covariates. Bivariate and multivariable Poisson analyses examined associations among perceived QOC, satisfaction with care, and domains of quality and participants' socio-demographics. Poisson analyses were applied to calculate a relative risk (RR) because odds ratios overestimate RR when the outcome event is common (incidence of ≥10%).[35] Additional descriptive statistics investigated the role of clinic setting on quality and satisfaction of care because it is a modifiable background characteristic that was associated with both outcomes. We accounted for survey design, patients selected from within the same clinic, using Taylor series linearization via survey estimation commands in Stata/SE 13 (StataCorp, College Station, TX).

RESULTS

Sample Description

The majority of the sample was aged 20–24 (66.2%), non-Hispanic Black (90.6%) and heterosexual (78.9%) (Table 1). Male clients' visits were split between STD clinics (51%) and primary care settings (49%). For 34.5% of respondents, this was their first visit to the clinic. Over half of the respondents rated the QOC received at the clinic as excellent (59%) and reported being very satisfied with the services received (56.7%).

Regarding accessibility, the majority reported having health insurance (77%) and a minority reported needing to pay anything for the visit (7%). Most male clients reported respectful client and staff interactions (87%). Regarding efficiency and effective organization of care, male clients reported, on average, they were satisfied with the waiting time and the majority reported being satisfied with the check-in process (93%). Male clients, on average, agreed they were satisfied with how they were treated by clinic staff other than the provider (clinic structure and facility), and strongly agreed with being satisfied with how the provider communicated with them and that the provider respected their sexual orientation (patient-centered care).

Quality of SRHC receipt at the visit was reported by 24% of male clients and less than half (48%) reported being tested for both HIV and STDs. Male clients, on average, agreed their provider communicated with them about SRHC.

Perceived QOC

In multivariable analyses (Table 2), males with higher scores on the Clinician-Client Centeredness scale (Adjusted Incidence Rate Ratio (AdjIRR)=2.69, 95%CI=1.81–4.00), who reported greater comfort in the clinic (AdjIRR=1.26, 95%CI= 1.01–1.55), and who reported receiving timely care (AdjIRR=1.23, 95%CI=1.08–1.40) were more likely to rate the QOC received as excellent. Males who reported being tested for HIV and STDs (AdjIRR=1.14; 95%CI=1.01–1.23) and receiving higher number of SRHC services from their provider (AdjIRR=1.12; 95%CI=1.03–1.25) were more likely to rate the QOC received as excellent. Bisexual males were more likely to rate the QOC as excellent in comparison to heterosexual males (AdjIRR=1.56; 95%CI=1.12–2.18). Males who received services at a primary care setting were also more likely to rate the QOC as excellent relative to those who received services at STD clinics (AdjIRR=1.30; 95%CI=1.08–1.57).

Satisfaction with Services

In multivariable analyses, males with higher scores on the Clinician-Client Centeredness scale (AdjIRR=3.46; 95%CI=2.16–5.54) and who reported receiving timely care (AdjIRR=1.41; 95%CI=1.18–1.70) were more likely to report being very satisfied with services (Table 3). Bisexual males were more likely to be very satisfied with services in comparison to heterosexual males (AdjIRR=1.89; 95%CI=1.29–2.76).

Clinic Setting on QOC and Satisfaction with Services Domains

Compared to males who attended primary care settings, a significantly lower proportion of males who attended STD clinics rated the QOC as excellent (69.3% vs. 48.9%), and were very satisfied with services (66.7 vs. 47.1%) (Table 4). Males who attended STD clinics were less likely to pay for their visit than males who attended primary care settings. However, males who attended STD clinics reported less timely care, comfort in the clinic and clinician-client centeredness but were more likely to have been tested for both HIV and STDs.

LIMITATIONS

Young men may not have disclosed the full experience of their visit if they felt uncomfortable revealing certain information, especially in close proximity to health staff. It is possible that health staff might have changed the manner in which they treated clients because they were informed about the study. We acknowledge that the measures used do not capture all aspects of each stated domain. However, this is one of the few studies that has comprehensively examined QOC and satisfaction among young males. Finally, our results may not be generalizable beyond the groups included in our sample.

DISCUSSION

This study found that young men do distinguish between QOC and satisfaction with care. Although the interpersonal dynamics between provider and patient were associated with both outcomes, the entire clinical experience played a stronger role in young males' perception of receipt of excellent QOC. Study findings highlight the need to improve all

aspects of young men's clinical experience for this population to evaluate their QOC as being excellent.

The entire clinical experience, from the physical environment to engagement with providers, influenced young males' perceptions of QOC. These findings corroborate with other studies that found that structural factors, such as setting type, contribute to differentials in SRHC exposure and utilization.[16,20,31,33] Strategies are needed to train health staff, from administrators to providers, to provide male-centered care; improve the efficiency of services; and change the clinical environment to reflect both males' and females' interest and needs.[20,29,36–38] Additional work is needed that evaluates whether such strategies result not only in young males' increase and continued engagement in SRHC, but also their perceptions of QOC.[39]

Patient-centered care was the only QOC domain that was associated with excellent QOC and satisfaction with services, indicating its importance in SRHC delivery. Patient-centered care is associated with better health outcomes, higher adherence to treatment recommendations and retention in care, a critical point when young males are already reluctant to access health services.[21,23,40–42] A 2016 study from an adolescent population in England reported a strong association between lack of good provider experience and poor health measures (e.g., poor sleep); however this study did not stratify findings by gender or focused on SRHC delivery.[22] Thus, it is important that clinicians are trained in the provision of patient-centered care, where care is tailored to the needs and preferences of young males.

The finding that young men who are attracted to both females and males are more likely to perceive excellent QOC and higher satisfaction of care than those attracted to only females is an interesting one. Prior work suggests that feeling respected in clinical settings is positively associated with young sexual minority males' engagement, retention and health care use.[43] In this study, it is possible that this was experienced by young men attracted to both females and males, resulting in a better rating of care experience. Future work should examine this more directly since this was not the main goal of the present study.

The finding that young men report lower QOC and satisfaction with services in STD settings relative to primary care settings is noteworthy, especially given that a larger percentage of users of STD clinics in the United States are men, younger than 30, and non-White.[44,45] Funding cuts threaten STD clinics nationally but they are critical to the SRHC of young men.[45,46] As such, they are prime to deliver high quality SRHC with appropriate quality improvement strategies. Finally, the perceived QOC and satisfaction with services for both setting types was less than 70%, indicating a need for improvement.

CONCLUSIONS

This study found that young men's receipt of patient-centered care and timely care influenced both perceived QOC and satisfaction with care. Additionally, receipt of SRHC and STD/HIV testing influenced perceived QOC, indicating the importance of creating clinical environments that are responsive to young men's sexual and reproductive health needs. In the context where young sexually experienced males receive few SRHC but have

high rates of unintended pregnancy, STDs and HIV, we need a greater focus on improving the clinician-client relationship as it relates to improving the quality of SRHC delivered to this population. Future research is needed to assess young men's clinical experiences and its impact on their sexual and reproductive health outcomes. Utilizing a QOC framework as part of providing SRHC to young males can be important in improving their perceptions of QOC and satisfaction with services.

IMPLICATIONS

A number of implications for practice can be drawn from the study findings. First, to improve young men's service quality and satisfaction of care, there is need to develop and implement training on patient-centered care that is adaptable for different clinical settings and types of staff. Next, clinical settings should develop (if not in existence) and implement metrics of quality and satisfaction of care, such as the ones used here in the QOC framework. These metrics should be regularly monitored and evaluated with male youth, examined against health outcomes, and where needed, improvement strategies developed and implemented. In addition, clinical settings serving young men should follow recommended SRHC guidelines as only 25% of young males in our study received 10 or more of the recommended SRHC and only 50% received both HIV and STD tests. These represent missed opportunities to engage young men in preventive SRHC and possibly treatment services, and were important covariates in young men's perceived QOC. Finally, future research on QOC and satisfaction with services is needed in other clinical settings (e.g., school-based health) and among racial and ethnic not captured in the current study to provide a more comprehensive profile of healthcare quality among young men.

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References

1. Center for Disease Control and Prevention. [Accessed February 8, 2017] STDs in Adolescents and Young Adults - 2014 STD Surveillance. www.cdc.gov/std/stats14/adol.htm
2. Center for Disease Control and Prevention. [Accessed February 6, 2017] https://www.cdc.gov/hiv/group/age/youth/
3. Child Trends. Facts at a Glance: A Fact Sheet Reporting National, State, and City Trends in Teen Childbearing. Maryland: ChildTrends; 2009.
4. Lau JS, Adams SH, Boscardin WJ, Irwin CE. Young adults' health care utilization and expenditures prior to the Affordable Care Act. Journal of Adolescent Health. 2014; 54(6):663–671. [PubMed: 24702839]
5. Lafferty WE, Downey L, Holan CM, et al. Provision of sexual health services to adolescent enrollees in Medicaid managed care. American Journal of Public Health. 2002; 92(11):1779–1783. [PubMed: 12406808]
6. Lafferty WE, Downey L, Shields AW, Holan CM, Lind A. Adolescent enrollees in Medicaid managed care: The provision of well care and sexual health assessment. Journal of Adolescent Health. 2001; 28(6):497–508. [PubMed: 11377994]

7. Burstein GR, Lowry R, Klein JD, Santelli JS. Missed opportunities for sexually transmitted diseases, human immunodeficiency virus, and pregnancy prevention services during adolescent health supervision visits. Pediatrics. 2003; 111(5 Pt 1):996–1001. [PubMed: 12728079]
8. Zink TM, Levin L, Rosenthal SL. Adolescent risk behavior screening: the difference between patients who come in frequently and infrequently. Clinical Pediatrics. 2003; 42(2):173–180. [PubMed: 12659392]
9. Alexander SC, Fortenberry JD, Pollak KI, et al. Sexuality talk during adolescent health maintenance visits. JAMA Pediatrics. 2014; 168(2):163–169. [PubMed: 24378686]
10. Gavin L, Moskosky S, Carter M, et al. Guidance for providing quality family planning services: Recommendations of CDC and the U.S. Office of Population Affairs. Morbidity and Mortality Weekly Report. 2014; 63(4):1–54. [PubMed: 24402465]
11. Marcell AV. the Male Training Center for Family Planning and Reproductive Health. Preventive male sexual and reproductive health care: Recommendations for clinical practice. Philadelphia, PA and Baltimore, MD: Access Matters (formerly the Family Planning Council) and The Johns Hopkins University; 2014.
12. Nair M, Baltag V, Bose K, Boschi-Pinto C, Lambrechts T, Mathai M. Improving the quality of health care services for adolescents, globally: A standards-driven approach. Journal of Adolescent Health. 2015; 57(3):288–298. [PubMed: 26299556]
13. Kalmuss D, Tatum C. Patterns of men's use of sexual and reproductive health services. Perspectives on Sexual and Reproductive Health. 2007; 39(2):74–81. [PubMed: 17565620]
14. Kalmuss D, Austrian K. Real men do… real men don't: Young Latino and African American men's discourses regarding sexual health care utilization. American Journal of Men's Health. 2010; 4(3):218–230.
15. Lindberg C, Lewis-Spruill C, Crownover R. Barriers to sexual and reproductive health care: Urban male adolescents speak out. Issues in Comprehensive Pediatric Nursing. 2006; 29(2):73–88. [PubMed: 16772237]
16. Marcell AV, Klein JD, Fischer I, Allan MJ, Kokotailo PK. Male adolescent use of health care services: Where are the boys? Journal of Adolescent Health. 2002; 30(1):35–43. [PubMed: 11755799]
17. Marcell AV, Ford CA, Pleck JH, Sonenstein FL. Masculine beliefs, parental communication, and male adolescents' health care use. Pediatrics. 2007; 119(4):e966–e975. [PubMed: 17403834]
18. Marcell AV, Morgan AR, Sanders R, et al. The socioecology of sexual and reproductive health care use among young urban minority males. Journal of Adolescent Health. 2017; 60(4):402–410. [PubMed: 28065520]
19. Leatherman ST, McCarthy D. Quality of health care for children and adolescents: a chartbook. Commonwealth Fund; New York, NY: 2004.
20. Pilgrim NA, Cardona KM, Pinder E, Sonenstein FL. Clients' perceptions of service quality and satisfaction at their initial Title X family planning visit. Health Communication. 2014; 29(5):505–515. [PubMed: 24111690]
21. Adelman W, Braverman PK, Alderman EM, et al. Achieving quality health services for adolescents. Pediatrics. 2016; 138(2):e20161347. [PubMed: 27432849]
22. Yassaee AA, Hargreaves DS, Chester K, Lamb S, Hagell A, Brooks FM. Experience of primary care services among early adolescents in England and association with health outcomes. Journal of Adolescent Health. 2016; 60(4):388–394. [PubMed: 27914972]
23. Dutta-Bergman MJ. The relation between health-orientation, provider-patient communication, and satisfaction: An individual-difference approach. Health Communication. 2005; 18(3):291–303. [PubMed: 16187933]
24. Haskard KB, DiMatteo MR, Heritage J. Affective and instrumental communication in primary care interactions: Predicting the satisfaction of nursing staff and patients. Health Communication. 2009; 24(1):21–32. [PubMed: 19204855]
25. Porter LE, Ku L. Use of reproductive health services among young men, 1995. Journal of Adolescent Health. 2000; 27(3):186–194. [PubMed: 10960217]
26. Kalmuss D, Tatum C. Patterns of men's use of sexual and reproductive health services. Perspectives on Sexual and Reproductive Health. 2007; 39(2):74–81. [PubMed: 17565620]

27. Marcell AV, Bell DL, Lindberg LD, Takruri A. Prevalence of sexually transmitted infection/human immunodeficiency virus counseling services received by teen males, 1995–2002. Journal of Adolescent Health. 2010; 46(6):553–559. [PubMed: 20472212]
28. Marcell AV, Gibbs SE, Pilgrim NA, et al. Sexual and reproductive health care receipt among young males aged 15–24. Journal of Adolescent Health. 2017; pii: S1054–139X(17)30426–3. Epub ahead of print. doi: 10.1016/j.jadohealth.2017.08.016
29. Bruce J. Fundamental elements of the quality of care: A simple framework. Studies in Family Planning. 1990:61–91. [PubMed: 2191476]
30. Sofaer S, Firminger K. Patient perceptions of the quality of health services. Annual Review of Public Health. 2005; 26:513–559.
31. Becker D, Koenig MA, Mi Kim Y, Cardona K, Sonenstein FL. The quality of family planning services in the United States: Findings from a literature review. Perspectives on Sexual and Reproductive Health. 2007; 39(4):206–215. [PubMed: 18093037]
32. IOM (Institute of Medicine). Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, D.C: National Academy Press; 2001.
33. Toomey SL, Elliott MN, Schwebel DC, et al. Relationship between adolescent report of patient-centered care and of quality of primary care. Academic Pediatrics. 2016; 16(8):770–776. [PubMed: 26802684]
34. Churchill RD. Young people: Understanding the links between satisfaction with services and their health outcomes in primary care. Journal of Adolescent Health. 2017; 60(4):358–359. [PubMed: 28340869]
35. Barros AJ, Hirakata VN. Alternatives for logistic regression in cross-sectional studies: an empirical comparison of models that directly estimate the prevalence ratio. BMC Medical Research Methodology. 2003; 3(1):21. [PubMed: 14567763]
36. Ndong I, Becker RM, Haws JM, Wegner MN. Men's reproductive health: Defining, designing and delivering services. International Family Planning Perspectives. 1999:S53–S55.
37. Sonenstein FL. Involving males in preventing teen pregnancy: A guide for program planners. Washington, DC: Urban Institute; 1997.
38. Jain A, Bruce J, Mensch B. Setting standards of quality in family planning programs. Studies in Family Planning. 1992:392–395. [PubMed: 1293863]
39. Fine D, Warner L, Salomon S, Johnson DM. Interventions to increase male attendance and testing for sexually transmitted infections at publicly-funded family planning clinics. Journal of Adolescent Health. 2017; 61(1):32–39. [PubMed: 28528207]
40. Bartu A. CIient satisfaction: Why bother? Journal of Substance Misuse. 1996; 1(1):20–26.
41. Duggan A. Understanding interpersonal communication processes across health contexts: Advances in the last decade and challenges for the next decade. Journal of Health Communication. 2006; 11(1):93–108.
42. Finney Rutten LJ, Augustson E, Wanke K. Factors associated with patients' perceptions of health care providers' communication behavior. Journal of Health Communication. 2006; 11(S1):135–146. [PubMed: 16641079]
43. Fields E, Morgan A, Sanders RA. The intersection of sociocultural factors and health-related behavior in LGBT youth: Experiences among young black gay males as an example. Pediatric Clinics of North America. 2016; 63:1091, e106. [PubMed: 27865335]
44. Brackbill RM, Sternberg MR, Fishbein M. Where do people go for treatment of sexually transmitted diseases? Family Planning Perspectives. 1999; 31(1):10–15. [PubMed: 10029927]
45. Hoover KW, Parsell BW, Leichliter JS, et al. Continuing need for sexually transmitted disease clinics after the Affordable Care Act. American Journal of Public Health. 2015; 105(Suppl 5):S690–695. [PubMed: 26447908]
46. Leichliter JS, Heyer K, Peterman TA, et al. US public sexually transmitted disease clinical services in an era of declining public health funding: 2013–14. Sexually Transmitted Diseases. 2017; 44(8): 505–509. [PubMed: 28703733]

Biographies

Nanlesta Pilgrim, PhD, MPH

Nanlesta Pilgrim is an Associate in the Population Council's HIV and AIDS program in Washington, DC and an Associate in the Department of Epidemiology at the Johns Hopkins Bloomberg School of Public Health in Baltimore, MD. Her research focuses on populations who are highly vulnerable to HIV and AIDS—especially adolescent and young adults, and key populations—and improving access to and the quality of health care services, especially for adolescents and young adults.

Jacky M. Jennings, PhD, MPH

Jacky M. Jennings is an Associate Professor of pediatrics at the Johns Hopkins University School of Medicine, Baltimore, MD. Her conducts research on how structural factors of neighborhoods affect adolescents' and young adults' risk for STIs including HIV and implement structural-level interventions to prevent and control STI and HIV transmission among urban, disadvantaged youth.

Renata Sanders, MD, ScM

Renata Arrington-Sanders is an Assistant Professor of pediatrics at the Johns Hopkins University School of Medicine, Baltimore, MD. Her work focuses on exploring the impact of first same-sex sexual experiences in adolescent African American males, prevention of HIV in adolescents, with a particular focus on HIV testing, pre-exposure prophylaxis (PrEP), and expansion of clinical services for sexual and gender minority youth of color.

Kathleen R. Page, MD

Kathleen Page, MD, is an Associate Professor in the Division of Infectious Diseases at Johns Hopkins University School of Medicine, Baltimore, MD. Her work focuses on improving access and quality of care to the emerging Latino community in Baltimore. She established the Latino HIV Outreach Program at the Baltimore City Health Department which collaborates with various local community based organizations to improve timely HIV diagnosis and access to care for Latinos.

Penny Loosier, PhD, MPH

Penny Loosier is a Social Scientist at the Division of STD Prevention, Centers for Disease Control and Prevention (CDC), Atlanta, GA. Her work focuses on designing and evaluating interventions to prevent STDs among adolescents and young adults.

Patricia J. Dittus, PhD

Patricia J. Dittus is a Behavioral Scientist at the Behavioral Interventions and Research Branch, Division of STD Prevention, Centers for Disease Control and Prevention (CDC), Atlanta, GA. She is responsible for designing and evaluating interventions to prevent STD and pregnancy among adolescents, reducing adolescent risk behaviors, conducting research

on parental influences on adolescent risk behaviors and develop and evaluating parent-based interventions.

Arik V. Marcell, MD, MPH

Arik V. Marcell is an Associate Professor of pediatrics at the Johns Hopkins University School of Medicine, Baltimore, MD. A major focus of Dr. Marcell's research is on improving adolescent sexual and reproductive health and access to care, especially for male adolescents and young adults. His work has also informed national guidance on improving health care providers' delivery of sexual and reproductive health care to male adolescents.

Table 1

Male clients' perceptions of excellent quality and high satisfaction of care, quality of care domains and socio-demographics

Measures	Total % or Mean (SD)
Outcomes	
Perceived excellent quality of care	59.0
Perceived high satisfaction of care	56.7
Quality of care domains	
Accessibility	
Health insurance	78.6
Paid anything for visit	6.4
Respectful client and staff interactions	
Confidential communication[b]	0.87 (0.23)
Efficient and effective care	
Timely care[a]	2.93 (0.87)
Check-in process[b]	0.93 (0.21)
Structure and facility	
Clinic discomfort scale (by staff and not provider)[a]	3.37 (0.63)
Patient-centered care	
Clinician-client centeredness (provider communication)[a]	3.67 (0.42)
Equity and non-discriminatory care (provider respected my sexual orientation)[a]	3.55 (0.61)
SRH care receipt	
Recommended SRH care receipt[c]	
<10 items	75.6
≥10 items	24.4
Screening test for HIV & STD	
≤1 test	52.1
Both tests	47.9
Communication/information	
Provider taught me about SRH[a]	3.05 (0.79)
Socio-demographics	
Age	
15–19	33.8
20–24	66.2
Race/ethnicity	
Non-Hispanic Black	90.6
Non-Hispanic White	6.8
Hispanic	2.6
Sexual attraction	
Females only	78.9

Measures	Total % or Mean (SD)
Females and males	3.9
Males only	13.8
Don’t know/prefer not to say	3.4
Established patient	65.5
Setting	
STD clinic	50.9
Primary care clinic	49.1

STD=sexually transmitted disease; SRH=sexual and reproductive health; HIV=human immunodeficiency virus

[a] Ranges from 1 (strongly disagree) to 4 (strongly agree)

[b] Ranges from 0 (no) to 1 (yes)

[c] Score ranged from 0 to 12 SRH items

Table 2

Unadjusted and adjusted models examining factors associated with perceived excellent quality of care

	Perceived quality of care	
	RR (95% CI)[a]	**aRR (95% CI)[b]**
Quality of care domains		
Accessibility		
Health insurance	1.17 (0.94–1.45)	0.95 (0.78–1.15)
Paid anything for visit	1.09 (0.80–1.49)	1.19 (0.83–1.71)
Respectful client and staff interactions		
Confidential communication[d]	1.27 (0.90–1.81)	0.86 (0.63–1.18)
Efficient and effective care		
Timely care[c]	**1.53 (1.36–1.73)*****	**1.23 (1.08–1.40)****
Check-in process[d]	1.71 (0.93–3.16)	0.73 (0.41–1.30)
Structure and facility		
Clinic discomfort scale (by staff and not provider)[c]	**1.84 (1.48–2.29)*****	**1.26 (1.01–1.55)***
Patient-centered care		
Clinician-client centeredness (provider communication)[c]	**3.67 (2.52–5.35)*****	**2.69 (1.81–4.00)*****
Equity and non-discriminatory care (provider respected my sexual orientation)[c]	**1.56 (1.26–1.93)*****	0.93 (0.79–1.09)
SRH care receipt		
Recommended SRH care receipt[e]	**1.20 (1.01–1.42)***	0.91 (0.77–1.08)
Screening test for HIV and STD	**1.16 (1.05–1.30)****	**1.12 (1.01–1.23)***
Communication/information		
Provider taught me about SRH[c]	**1.28 (1.14–1.45)*****	**1.14 (1.03–1.25)***
Socio-demographics		
Age		
15–19	Ref	Ref
20–24	0.92 (0.78–1.09)	1.01 (0.86–1.17)
Race/ethnicity		
Non-Hispanic Black	Ref	Ref

	Perceived quality of care	
	RR (95% CI)[a]	**aRR (95% CI)[b]**
Non-Hispanic White	1.18 (0.90–1.55)	1.21 (0.95–1.54)
Hispanic	0.86 (0.45–1.63)	0.89 (0.43–1.84)
Sexual attraction		
Females only	Ref	Ref
Females and males	1.16 (0.80–1.68)	**1.56 (1.12–2.18)** **
Males only	1.22 (0.99–1.49)	1.04 (0.86–1.25)
Don't know/prefer not to say	0.67 (0.33–1.35)	0.83 (0.50–1.36)
Established patient	**1.21 (1.00–1.46)** *	0.94 (0.77–1.15)
Setting		
STD clinic	Ref	Ref
Primary care clinic	**1.42 (1.19–1.68)** ***	**1.30 (1.08–1.57)** **

STD=sexually transmitted disease; SRH=sexual and reproductive health; HIV=human immunodeficiency virus

[a] Relative risk (RR) & 95% confidence intervals (CI) from bivariate Poisson regression models examining association between each factor with outcome

[b] Adjusted RR (aRR) & 95% CI from multivariate Poisson regression model examining association between factors with outcome

[c] Ranges from 1 (strongly disagree) to 4 (strongly agree)

[d] Ranges from 0 (no) to 1 (yes)

[e] Score ranged from 0 to 12 SRH items

* $p < 0.05$,

** $p < 0.01$,

*** $p < 0.001$

Table 3

Unadjusted and adjusted models examining factors associated with perceived high satisfaction of care

	Perceived satisfaction of care[≠]	
	RR (95% CI)[a]	aRR (95% CI)[b]
Quality of care domains		
Accessibility		
Health insurance	1.17 (0.90–1.52)	0.99 (0.79–1.25)
Paid anything for visit	0.82 (0.49–1.38)	0.89 (0.49–1.64)
Respectful client and staff interactions		
Confidential communication[d]	**1.77 (1.10–2.85)** *	1.18 (0.76–1.83)
Efficient and effective care		
Timely care[c]	**1.71 (1.47–1.99)** ***	**1.41 (1.18–1.70)** ***
Check-in process[d]	1.87 (0.86–4.08)	0.64 (0.30–1.35)
Structure and facility		
Clinic discomfort scale (by staff and not provider)[c]	**1.82 (1.42–2.33)** ***	1.04 (0.81–1.35)
Patient-centered care		
Clinician-client centeredness (provider communication)[c]	**4.19 (2.59–6.78)** ***	**3.46 (2.16–5.54)** ***
Equity and non-discriminatory care (provider respected my sexual orientation)[c]	**1.60 (1.23–2.07)** ***	0.87 (0.70–1.07)
SRH care receipt		
Recommended SRH care receipt[e]	1.11 (0.90–1.36)	0.95 (0.78–1.15)
Screening test for HIV and STD	1.11 (0.98–1.25)	1.10 (0.98–1.23)
Communication/information		
Provider taught me about SRH[c]	**1.17 (1.02–1.34)** *	0.98 (0.88–1.10)
Socio-demographics		
Age		
15–19	Ref	Ref
20–24	**0.82 (0.67–0.99)** *	0.91 (0.76–1.09)
Race/ethnicity		
Non-Hispanic Black	Ref	Ref
Non-Hispanic White	1.01 (0.68–1.51)	1.15 (0.82–1.61)
Hispanic	0.44 (0.08–2.40)	0.49 (0.09–2.72)
Sexual attraction		
Females only	Ref	Ref
Females and males	1.19 (0.78–1.80)	**1.89 (1.29–2.76)** **
Males only	0.98 (0.72–1.33)	0.88 (0.68–1.14)
Don’t know/prefer not to say	1.07 (0.64–1.80)	1.08 (0.82–1.42)
Established patient	**1.33 (1.05–1.67)** *	1.01 (0.79–1.28)
Setting		
STD clinic	Ref	Ref

	Perceived satisfaction of care[≠]	
	RR (95% CI)[a]	**aRR (95% CI)[b]**
Primary care clinic	**1.41 (1.16–1.73)** ***	1.21 (0.97–1.50)

STD=sexually transmitted disease; SRH=sexual and reproductive health; HIV=human immunodeficiency virus

[≠]Satisfaction with care was only asked in rounds 2–4, resulting in analytic sample size of 307.

[a]Relative risk (RR) & 95% confidence intervals (CI) from bivariate Poisson regression models examining association between each factor with outcome

[b]Adjusted RR (aRR) & 95% CI from multivariate Poisson regression model examining association between factors with outcome

[c]Ranges from 1 (strongly disagree) to 4 (strongly agree)

[d]Ranges from 0 (no) to 1 (yes)

[e]Score ranged from 0 to 12 SRH items

* $p < 0.05$,

** $p < 0.01$,

*** $p < 0.001$

Table 4

Differences in excellent quality and high satisfaction of care and quality of care domains by service location where male youth sought services

Measures	Primary Care	STD Clinic	P-value
Outcomes			
Perceived excellent quality of care	69.3	48.9	<0.001
Perceived high satisfaction of care	66.7	47.1	<0.001
Quality of care domains			
Accessibility			
Health insurance	86.7	66.8	<0.001
Paid anything for visit	10.7	2.5	0.001
Respectful client and staff interactions			
Confidential communication[b]	0.87 (0.28)	0.88 (0.27)	0.724
Efficient and effective care			
Timely care[a]	3.07 (0.86)	2.80 (0.86)	0.002
Check-in process[b]	0.94 (0.20)	0.91 (0.21)	0.273
Structure and facility			
Clinic discomfort scale (by staff and not provider)[a]	3.51 (0.59)	3.23 (0.65)	<0.001
Patient-centered care			
Clinician-client centeredness (provider communication)[a]	3.71 (0.40)	3.63 (0.44)	0.030
Equity and non-discriminatory care (provider respected my sexual orientation)[a]	3.58 (0.59)	3.53 (0.62)	0.374
SRH care receipt			
Recommended SRH care receipt[c]			0.716
<10 items	74.1	72.4	
≥10 items	25.9	27.6	
Screening test for HIV & STD			<0.001
≤1 test	58.5	37.8	
Both tests	41.4	62.2	
Communication/information			
Provider taught me about SRH[a]	2.98 (0.89)	3.13 (0.68)	0.058

STD=sexually transmitted disease; SRH=sexual and reproductive health; HIV=human immunodeficiency virus

[a]Ranges from 1 (strongly disagree) to 4 (strongly agree)

[b]Ranges from 0 (no) to 1 (yes)

[c]Score ranged from 0 to 12 SRH items