

**Network Epidemiology of Syphilis Transmission (NEST)**

**Attachment 3b**

**Data elements summary and source**

**Privacy Act Statement:**

This information is collected under the authority of the Public Health Service Act, Section 301, "Research and Investigation," (42 U.S.C. 241); and Sections 304, 306 and 308(d) which discuss authority to maintain data and provide assurances of confidentiality for health research and related activities (42 U.S.C. 242 b, k, and m(d)). This information is also being collected in conjunction with the provisions of the Government Paperwork Elimination Act and the Paperwork Reduction Act (PRA). This information will only be used by the Centers for Disease Control and Prevention (CDC) staff to inform development of methodologies for collection of complex sexual network data among men at high risk for syphilis in the United States.

Public reporting burden of this collection of information is estimated to average 1.5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC/ATSDR Reports Clearance Officer; 1600 Clifton Road NE, MS D-74, Atlanta, Georgia 30333; Attn: OMB-PRA (0920-18MY).

<b>Question Number</b>	<b>Section</b>	<b>Question</b>	<b>Source for Question/Rationale for Inclusion in NEST</b>
RR_1	Recruiter Relationship	Is the participant a seed?	Gateway question to determine whether the participant is a seed (recruiter) or a recruitee. If participant is a recruitee then questions RR_1a-RR_2b would apply.
RR_1a	Recruiter Relationship	What is the serial number on the coupon given to you?	Recruiter Relationship questions were developed as part of the RDS methodology that will be employed in NEST. This question is used in RDS analysis to track links between the person who recruits people into NEST (the recruiter) and those they have recruited (the recruitees).
RR_2	Recruiter relationship	Which of the following describes how you know the person who gave you this coupon? You can choose more than one answer.	Recruiter Relationship questions were developed as part of the RDS methodology that will be employed in NEST. This question is used in RDS analysis to describe the relationship between the person who recruits people into NEST (the recruiter) and those they have recruited (the recruitees).
RR_2a	Recruiter relationship	Where did you first meet this person who gave you this coupon?	Recruiter Relationship questions were developed as part of the RDS methodology that will be employed in NEST. This question is used in RDS analysis to track

			links between the person who recruits people into NEST (the recruiter) and those they have recruited (the recruitees).
RR_2b	Recruiter relationship	When did you first meet this person who gave you this coupon?	Recruiter Relationship questions were developed as part of the RDS methodology that will be employed in NEST. This question is used in RDS analysis to track links between the person who recruits people into NEST (the recruiter) and those they have recruited (the recruitees).
ES_1	Eligibility Screener	How old are you?	This question is included in NEST to determine the age of the respondent and to identify those who are old enough ( $\geq 18$ years) and eligible to participate in NEST. Those under the age of consent will be considered ineligible and the screening procedures will end.
ES_2	Eligibility Screener	During [current year], did you already participate in at least part of this study that we are conducting? It could have been here or at one of our other locations.	Question developed for NEST to ascertain previous participation, which makes respondent ineligible to participate in NEST again.
ES_3	Eligibility Screener	What county do you currently live in or what is the zip code of the neighborhood you currently live in?	Conforms to OMB classifications of Metropolitan Statistical Areas (MSA) and OMB standards for collecting zip code information. This variable allows for verification of respondent's place of residence within the MSA. Respondents who do not live in a target MSA will be considered ineligible.
ES_4	Eligibility Screener	What sex were you assigned at birth, on your original birth certificate?	Conforms to OMB standards for collecting information on birth sex. For NEST, sex at birth determines eligibility in that only persons born male are eligible.

ES_5	Eligibility Screener	How do you describe your gender identity?	Question developed for NEST. Persons who do not identify as male will be considered ineligible.
ES_6	Eligibility Screener	Have you had anal or oral sex with a man in the past 6 months?	Question developed for NEST. For NEST, anal or oral sex with another male in the past 6 months is an eligibility criteria. Our target population are men who have sex with men and who are at high risk for syphilis.
CN_1	Eligibility Screener	We are interested in knowing why people do not want to do this study. Would you mind telling me which of the following best describes the reason you do not want to do this study? Check all that apply.	Question developed for NEST. NEST would like to collect information on reasons why eligible participants decline to participate in the study.
NS_1	Network size	Thinking about your life today, how many people do you know who are men who have sex with men in [project area]? These men may or may not identify as gay, bisexual, or same gender loving (SGL). (By “know”, I mean you know their name OR you see them around even if you don’t know their name.)(If participant is not sure, ask them to provide their best guess or estimate).	Network size questions were developed for NEST. This question is used in RDS analysis to determine the size of the network of the respondent. Adapted from NHBS (OMB No. 0920-0770, expiration date 5/31/2021) injecting drug user (IDU) cycle.
NS_1a	Network size	“You said you don’t know any men in [project area] who has sex with other men. Is this correct? (By ‘know,’ I mean you know their name OR you see them around even if you don’t know their name.”)	Network size questions were developed for NEST. This question is used in RDS analysis to determine the size of the network of the respondent. Adapted from National HIV Behavioral Surveillance (NHBS) study (OMB No. 0920-0770, expiration date 5/31/2020) injecting drug user (IDU) cycle.
DM_1	Demographics	What is the highest level of education you completed?	Adapted from NHBS (OMB No. 0920-0770, expiration date 5/31/2020). Level of education is a marker for socioeconomic status (SES).
DM_2	Demographics	What is the highest level of education your mother or primary maternal caretaker	This question is included in NEST as a proxy for the respondent’s health and human capital, which are

		completed?	intervening factors mediating individual STI risk. Children of more highly educated mothers tend to have better outcomes including better health, cognition, education, and employment outcomes.
DM_3	Demographics	Describe your current employment status. This includes formal and informal employment. Check all that apply.	Conforms to broad categories for employment status used by the Bureau of Labor Statistics: Employed full-time, Employed part-time, Unemployed, Not in Labor Force. The format of this question provides more information about respondents “not currently in the labor force”: full-time student, part-time student, self-employed, retired, unable to work for health reasons, stay-at-home parent.
DM_3a	Demographics	Please specify your current employment status	See question DM_3. Combined with employment categories, this question can be used to determine employment status of individuals who are “not currently in the labor force”.
DM_4-4a	Demographics	Which of the following best represents how you think of yourself? Check only one option. Please specify how you identify sexually.	Adopted from the NHBS questionnaire (OMB No. 0920-0770, expiration date 5/31/2020). Self-reported sexual orientation.
DM_5	Demographics	What is your race? Check all that apply.	Conforms to OMB standards for collecting information on race.
DM_6	Demographics	Are you Hispanic or Latino?	Conforms to OMB standards for collecting information on Hispanic ancestry.
DM_7	Demographics	What is your current marital status? Check only one option.	Adapted from the most recent version of the National Survey for Family Growth (NSFG) (OMB No. 0920-0315. Exp. Date 6/30/2021). Question provides descriptive information about NEST participants.
DM_8	Demographics	What is your current relationship status? Check only one option.	Assesses type of relationship respondent has with his sex partner(s). Establishes the likelihood of

			respondent engaging in non-monogamous relationships such as concurrent sexual partnerships. These relationship types are important factors affecting the risk of acquisition and transmission of syphilis.
DM_9	Demographics	Do you live with (one or more of) your partner(s)?	Question developed for NEST in consultation with subject matter experts at CDC. This question determines whether the respondent is cohabiting with one or more of their partners. Historically marital status has proved to be a dominant predictor of multiple partnerships, however with changes in marital patterns, cohabitation is an important contextual variable which is also likely to affect the likelihood of engaging in multiple partnerships. Individuals who are married but not cohabiting is likely to have a different risk of engaging in multiple partnerships compared to an individual who is married and cohabiting.
DM_10	Demographics	In the past 6 months, have you been homeless? By homeless, I mean you were living on the street, in a shelter, in a single room occupancy (SRO) hotel, with friends, in a car, or you haven't had a regular place to stay for at least one night in the past 6 months?	The definition of homelessness in this question is adapted based on the definition of homelessness used by federal programs (see the McKinney-Vento Act). This question serves as a marker for Socioeconomic Status (SES).
DM_11	Demographics	In the past 6 months, how often were you worried whether food would run out before you had money to buy more?	This question serves as a marker for socioeconomic status (SES). This question was adapted from the USDA U.S. Adult Food Security Survey Module (OMB No. 0536-0043, expiration date 11/30/2018).
DM_12	Demographics	In the past 12 months, have you been in prison or jail for more than 24 hours?	Incarceration or criminal justice involvement can be disruptive to partnerships, healthcare access, utilization, and treatment. Incarceration makes it very difficult to effectively diagnose and treat STIs. This

			question is included to determine the prevalence of criminal justice involvement among MSM enrolled in NEST.
SX_1	Sexual Behavior	Have you ever had anal sex with a male?	Gateway question to determine whether respondents will be asked a series of questions about anal sex with male sex partners.
SX_2	Sexual Behavior	Do you consider yourself to be a top/versatile top/versatile bottom/versatile/bottom?	Assesses sexual role versatility. The risk of syphilis acquisition varies by the type of sex engaged in i.e., insertive anal sex compared to receptive anal sex.
SX_3	Sexual Behavior	Have you ever had receptive anal sex or bottomed with a male?	Gateway question to determine whether respondents will be asked a series of questions about receptive anal sex with males.
SX_3a	Sexual Behavior	How many times have you bottomed with a male in the last 3 months?	Question to determine rate of receptive anal sex with male partners.
SX_3b	Sexual behavior	How many different males have you bottomed in the last 3 months?	Question to determine receptive anal sex partner-formation-rates.
SX_4	Sexual Behavior	Have you ever had insertive anal sex or topped with a male?	Gateway question to determine whether respondents will be asked a series of questions about insertive anal sex with males.
SX_4a	Sexual Behavior	How many times have you topped with a male in the last 3 months?	Question to determine rate of insertive anal sex with male partners.
SX_4b	Sexual Behavior	How many different males have you topped in the last 3 months?	Question to determine insertive anal sex partner-formation-rates.
SX_5	Sexual Behavior	Have you ever given oral sex to a male?	Gateway question to determine whether respondents

		“Giving oral sex” means putting your mouth or tongue on someone’s penis (giving a blowjob).	will be asked a series of questions about insertive oral sex with males.
SX_5a	Sexual Behavior	How many times have you given a blowjob to a male in the past 3 months?	Question to determine rate of insertive oral sex with male partners.
SX_5b	Sexual Behavior	How many different males have you given a blowjob in the past 3 months?	Question to determine insertive oral sex partner-formation-rates.
SX_6	Sexual Behavior	Have you ever received oral sex from a male? Receiving “oral sex” means he put his mouth or tongue on your penis (getting a blowjob).	Gateway question to determine whether respondents will be asked a series of questions about receptive oral sex with males.
SX_6a	Sexual Behavior	How many times have you received a blowjob from a male in the past 3 months?	Question to determine rate of receptive oral sex with male partners.
SX_6b	Sexual Behavior	From how many different males have you received a blowjob in the past 3 months?	Question to determine receptive oral sex partner-formation-rates.
SX_7	Sexual Behavior	Have you ever rimmed a male? “Rimmed” means you put your mouth or tongue on someone’s anus.	Gateway question to determine whether respondents will be asked a series of questions about insertive oral-anal sex.
SX_7a	Sexual Behavior	How many times have you rimmed a male in the past 3 months?	Question to determine rate of insertive oral-anal sex with male partners.
SX_7b	Sexual Behavior	How many different males have you rimmed in the past 3 months?	Question to determine insertive oral-anal sex partner formation rates with male partners.
SX_8	Sexual Behavior	Have you ever been rimmed by a male?	Gateway question to determine whether respondents will be asked a series of questions about receptive oral-anal sex.
SX_8a	Sexual Behavior	How many times have you been rimmed by a male in the past 3 months?	Question to determine rate of receptive oral-anal sex with male partners.



SX_8b	Sexual Behavior	Have many different males have you been rimmed by in the past 3 months?	Question to determine receptive oral-anal sex partner formation rate with male partners.
SX_9	Sexual Behavior	Have you ever had vaginal sex with a female. "Vaginal sex" means the penis goes into the vagina.	Gateway question to determine whether respondents will be asked a series of questions about vaginal sex.
SX_9a	Sexual Behavior	How many times have you had vaginal sex in the past 3 months?	Question to determine rate of vaginal sex.
SX_9b	Sexual Behavior	With how many different females have you had vaginal sex with in the past 3 months?	Question to determine vaginal sex partner formation rate.
SX_10	Sexual Behavior	Have you ever had anal sex with a female?	Gateway question to determine whether respondents will be asked a series of questions about anal sex with female partners.
SX_10a	Sexual Behavior	How many times have you had anal sex with a female in the past 3 months?	Question to determine the rate of anal sex with female partners.
SX_10b	Sexual Behavior	With how many different females have you had anal sex with in the past 3 months?	Question to determine vaginal sex partner formation rate.
SX_11	Sexual Behavior	Have you ever given oral sex to a female? "Giving oral sex" means putting your mouth or tongue on someone's vagina (going down on her).	Gateway question to determine whether respondents will be asked a series of questions about insertive oral-genital sex with female partners.
SX_11a	Sexual Behavior	How many times have you gone down on females in the past 3 months?	Question to determine the rate of insertive oral-genital sex with female partners.
SX_11b	Sexual Behavior	How many different females have you gone down on in the past 3 months?	Question to determine insertive oral-genital sex partner formation rate with female partners.

SX_12	Sexual Behavior	Have you ever received oral sex from a female? "Receiving oral sex" means she put her mouth or tongue on your penis (she gave you a blowjob).	Gateway question to determine whether respondents will be asked a series of questions about receptive oral-genital sex with female partners.
SX_12a	Sexual Behavior	How many times have you had gotten a blowjob from a female in the past 3 months?	Question to determine the rate of receptive oral-genital sex with female partners.
SX_12b	Sexual Behavior	How many different females have given you a blowjob in the past 3 months?	Question to determine insertive oral-genital sex partner formation rate with female partners.
SX_13	Sexual Behavior	Have you ever rimmed a female? "Rimmed" means putting your mouth or tongue on someone's anus.	Gateway question to determine whether respondents will be asked a series of questions about insertive oral-anal sex with female partners.
SX_13a	Sexual Behavior	How many times have you rimmed a female in the past 3 months?	Question to determine the rate of insertive oral-anal sex with female partners.
SX_13b	Sexual Behavior	How many different females have you rimmed in the past 3 months?	Question to determine insertive oral-anal sex partner formation rate with female partners.
SX_14	Sexual Behavior	Have you ever been rimmed by a female?	Gateway question to determine whether respondents will be asked a series of questions about receptive oral-anal sex with female partners.
SX_14a	Sexual Behavior	How many times have you been rimmed by a female in the past 3 months?	Question to determine the rate of receptive oral-anal sex with female partners.

SX_14b	Sexual Behavior	How many different females have you been rimmed by in the past 3 months?	Question to determine receptive oral-anal sex partner formation rate with female partners.
SX_15-15a	Sexual Behavior	How often do you use drugs or alcohol before or during sex? Have you used any of the following before or during sex in the past 3 months? Check all that apply.	Substance use before or during sex can affect decisions about sexual behaviors and has been associated with engagement in higher-risk sexual behaviors.
SX_16	Sexual Behavior	In the past 3 months, have you had sex in exchange for money, drugs, or shelter, or something else?	Adapted from NHBS (OMB No. 0920-0770, expiration date 5/31/2020). Provides information about whether the participant paid for sex with an exchange sex partner. This is important for understanding power dynamics for negotiating safer sex.
SX_17	Sexual Behavior	How many times in the past 3 months did you have sex at a bathhouse, sex party, or other location where multiple people were also having sex?	Question included to determine the prevalence of attendance at a venue where group sex is taking place. Among MSM, attendance at venues where group sex is occurring has been associated with reporting a higher number of male sex partners and a higher likelihood of reporting drug use when compared to MSM not attending these venues.
SX_18	Sexual Behavior	How many times in the past 3 months did you engage in group sex? Group sex is 3 or more people having anal, oral, or vaginal sex with each other at the same time in the same place.	See question SX_17. Question included to determine the prevalence of engagement in group sex.
HA_1-HA_1b	Healthcare access and utilization	Do you currently have health insurance or health care coverage? What kind of health insurance do you currently have? Check all that apply. Please specify other health insurance or coverage.	Adapted from NSFG (OMB No. 0920-0314, expiration date 6/30/2021). Health insurance coverage will be a key variable in measuring access to medical care among NEST respondents.
HA_2	Healthcare access and utilization	About how long has it been since you last saw a doctor, nurse, or other health care provider	Adapted NSFG (OMB No. 0920-0314, expiration date 6/30/2021). Health insurance coverage will be a key

		about your own health? Would you say it was: (within the last year/more than 1 year ago but less than 2 years ago/2 to 5 years ago/more than 5 years ago)	variable in measuring access to medical care among NEST respondents.
HA_3	Healthcare access and utilization	During the past 12 months, was there any time you needed medical care but didn't get it because you couldn't afford it?	Adapted from NSFG (OMB No. 0920-0314, expiration date 6/30/2021). Health insurance coverage will be a key variable in measuring access to medical care among NEST respondents.
HA_4	Healthcare access and utilization	Where have you gone most often for STD-related healthcare in the past 12 months?	This question is included to determine where MSM are going most often to access STD-related healthcare and to compare the utilization of STD clinics with other healthcare venues such as private providers or urgent care facilities.
HA_4-HA_4c	Healthcare access and utilization: HIV testing and diagnoses	Have you ever been tested for HIV? Have you had an HIV test in the past 12 months? What was your last HIV test result? Have you gone to see a doctor about your HIV diagnosis within the last 12 months?	Adapted from NHBS (OMB No. 0920-0770, expiration date 5/31/2020). Provides important information for determining the extent to which the Advancing HIV Prevention (AHP) recommendation to offer HIV testing by primary health care providers is being met.
HA_5-HA_5c	Healthcare access and utilization	Have you ever been tested for syphilis? Have you ever been diagnosed with syphilis (in other words, have you ever had a positive syphilis test)? Have you had a syphilis test in the past 12 months? Were you diagnosed with syphilis in the past 12 months?	Questions included in consultation with experts at CDC. Information about prior syphilis testing and prior syphilis diagnoses will be used to determine participant's medical history concerning syphilis and will be used in conjunction with syphilis serological results to diagnose a prevalent or incident case of syphilis.
HA_6	Healthcare access and utilization	In the past 12 months, how many times total did you get tested for STDs such as syphilis or HIV?	This question is included to determine STI testing behavior and STI healthcare utilization.
HA_7-7a	Healthcare access and utilization	To what kind of place have you gone most often for STD-related healthcare in the past 12 months? Please describe where you have gone most often in the past year for STD or sexual	This question is included to determine STI healthcare access and utilization.

		healthcare.	
HA_8	Healthcare access and utilization	How much time do you spend traveling (in one direction) to obtain sexual health care (including STD testing, and/or treatment)?	This question is included to determine STI healthcare access and utilization.
HA_9	Healthcare access and utilization	Have you ever heard of people who do not have HIV taking PrEP, the antiretroviral medicine taken every day for months or years to reduce the risk of getting HIV?	Questions HA_9–10 ask about PrEP knowledge and utilization. These questions were adapted from Adapted from NHBS (OMB No. 0920-0770, expiration date 5/31/2020). The knowledge and use of PrEP among MSM at high risk for syphilis is relevant because PrEP use has been associated with increased condomless anal sex and an increased number of sex partners — risk behaviors that are relevant for the transmission and acquisition of syphilis.
HA_9a	Healthcare access and utilization	In the past 12 months, have you had a discussion with a health care provider about taking PrEP?	See question HA_9.
HA_9b	Healthcare access and utilization	In the past 12 months, when you discussed taking PrEP with a health care provider, did you receive PrEP or a prescription for the PrEP?	See question HA_9. HA_9b will be used to determine how often a conversation with health care provider about PrEP leads to receipt of a prescription of PrEP among this population.
HA_9c	Healthcare access and utilization	In the past 12 months, have you taken PrEP to reduce your risk of getting HIV?	See question HA_9. HA_9c will be used to determine how often receipt of a PrEP prescription leads to an individual taking PrEP.
HA_9d	Healthcare access and utilization	In the past 30 days, have you taken PrEP every day, almost every day, or less often?	See question HA_9. HA_9d will be used to determine the prevalence of recent PrEP use (in the past 30 days).

HA_10	Healthcare access and utilization	How many people do you know who are currently taking PrEP?	See question HA_9.
HA_11	Healthcare access and utilization	In the past 12 months, have you taken PEP to reduce the risk of getting HIV?	HIV post exposure prophylaxis (PEP) use is an indicator of HIV risk and may indicate a potential candidate for PrEP referral. HA_11 will be used to determine the prevalence of PEP use in this population of MSM at high risk of syphilis.
PARTNER_ID	Sexual Network	Unique partner identifier for sexual partners in the last 3 months.	Assigning a unique numeric identifier to each sex partner will allow linkage of data records associated with each sex partner across visits.
PARTNER_DATE_LAST_SEX	Sexual Network	Date of last sex with sexual partners in the last 3 months.	Used in conjunction with SN_NEW_1 to determine the duration of relationship with sex partners in the last 3 months. Also used to identify the three most recent sex partners in the last 3 months.
SN_1	Sexual Network	I see you have not told me about this sex partner before. Is that correct?	SN_1 is included to confirm that the sex partner mention is a new sex partner. This is a gateway question to determine whether the new sex partner should be routed to the new partner series of questions. New partners are asked for demographic information when they are first named.
SN_2	Sexual Network	Since this sex partner is not a new partner, when did you last tell me about this partner?	If the partner is not a new partner then SN_2 is asked. SN_2 is included to determine at which visit the sex partner was last named. This information will be used to determine the gap length duration between sexual encounters with this sexual partner. This will be used in network analysis to estimate partner turnover or churn.

SN_3	Sexual Network	So you last told me about this partner at the visit before this one?	See question SN_2. SN_3 is a question to confirm that the partner named at the current visit was retained from a prior visit (i.e., 3 months ago). This partner will be identified as a retained sex partner.
SN_4	Sexual Network	At the last visit you told me about this partner. Have you had sex with this partner in the last three months?	If the sex partner named is not a new partner and not a retained partner (retained from prior visit) SN_4 is asked to confirm that they've not had sex with this partner in the next 3 months.
SN_5	Sexual Network	Do you still hang out or meet up with this partner, as a friend?	This question is included to determine whether the former sex partner is still in the social network of the participant. This question will be used to determine the overlap between the participant's sexual and social network.
SN_NEW_1	Sexual Network: New sex partners	When did you first have sex with this new partner?	This question will be used in conjunction with PARTNER_DATE_LAST_SEX to determine the duration of the sexual partnership.
SN_NEW_2	Sexual Network: New sex partners	What sex was your partner assigned at birth?	This question will be used to describe the composition of the sexual network of participants i.e., the number of male and the number of female sex partner in the last 3 months.
SN_NEW_3	Sexual Network: New sex partners	How would you describe your partner's gender identity?	This question will be used to describe the composition of the sexual network of participants i.e., the number of transgender sex partners in the last 3 months.
SN_NEW_4	Sexual Network: New sex partners	How old is your partner?	This question is included to determine the magnitude of age difference between respondents with differentially aged sex partners. Important for identifying large age gaps as a source of power differentials for negotiating safe sex.

SN_NEW_5	Sexual Network: New sex partners	How would you describe your partner's race?	In NEST, this question documents the race of the sex partners. This information will be used to describe the composition of the sexual network of participants.
SN_NEW_6	Sexual Network: New sex partners	Is your partner Hispanic or Latino?	In NEST, this question documents the ethnicity of the sex partners. This information will be used to describe the composition of the sexual network of participants.
SN_NEW_7	Sexual Network: New sex partners	Is this partner a main or casual partner? By "main partner" I mean a person you have an intimate or romantic relationship with. You might call this person your boyfriend/girlfriend, husband/wife, significant other, or life partner. A "casual partner" is anyone else you have sex with.	This information will be used to describe the nature of the sexual partnership. Sexual behaviors will be compared between casual and main partnerships.
SN_NEW_8-8a	Sexual Network: New sex partners	Where did you first meet this new partner? Please specify where you first met this new partner?	This information will be used to describe the sexual network of the participant by including venue-based descriptors for each sexual partnership. This information will also be used to develop a local roster of venues where sex partners are met to inform targeted prevention activities.
SN_MRP_1	Sexual Network: Most recent sex partners	In the last 3 months, which of the following did do you do with [partner name]?	Gateway question to determine the types of sexual behavior occurring with recent sex partners and determine the appropriate follow-up questions regarding timing, frequency, and condom use.
SN_MRP_1a	Sexual Network: Most recent sex partners	How many times in the last 3 months did you bottom with [partner name]?	Provides detailed information about syphilis risk behaviors during a specific recall period with a most recent sex partner.
SN_MRP_1b	Sexual Network: Most recent sex partners	When was the last time you bottomed with [partner name]?	Question included to determine the how recently a specific type of sexual behavior and syphilis risk behavior occurred in the past 3 months.



SN_MRP_1c	Sexual Network: Most recent sex partners	The last time you bottomed with [partner name] was a condom used?	To determine whether most recent sexual encounter was condomless. Event-level question preferred here as it tends to be more reliable than recall over longer periods of time.
SN_MRP_1d	Sexual Network: Most recent sex partners	How many times in the last 3 months have you topped with [partner name]?	Provides detailed information about syphilis risk behaviors during a specific recall period with a most recent sex partner.
SN_MRP_1e	Sexual Network: Most recent sex partners	When was the last time you topped with [partner name]?	Question included to determine the how recently a specific type of sexual behavior and syphilis risk behavior occurred in the past 3 months.
SN_MRP_1f	Sexual Network: Most recent sex partners	The last time you topped with [partner name] was a condom used?	To determine whether most recent sexual encounter was condomless. Event-level question preferred here as it tends to be more reliable than recall over longer periods of time.
SN_MRP_1g	Sexual Network: Most recent sex partners	How many times in the last 3 months have you given [partner name] a blowjob?	Provides detailed information about syphilis risk behaviors during a specific recall period with a most recent sex partner.
SN_MRP_1h	Sexual Network: Most recent sex partners	When was the last time you gave [partner name] a blowjob?	Question included to determine the how recently a specific type of sexual behavior and syphilis risk behavior occurred in the past 3 months.
SN_MRP_1i	Sexual Network: Most recent sex partners	The last time you gave [partner name] a blowjob was a condom used?	To determine whether most recent sexual encounter was condomless. Event-level question preferred here as it tends to be more reliable than recall over longer periods of time.
SN_MRP_1j	Sexual Network: Most recent sex partners	How many times in the last 3 months has [partner name] given you a blowjob?	Provides detailed information about syphilis risk behaviors during a specific recall period with a most recent sex partner.

SN_MRP_1k	Sexual Network: Most recent sex partners	When was the last time [partner name] gave you a blowjob?	Question included to determine the how recently a specific type of sexual behavior and syphilis risk behavior occurred in the past 3 months.
SN_MRP_1l	Sexual Network: Most recent sex partners	The last time [partner name] gave you a blowjob was a condom used?	To determine whether most recent sexual encounter was condomless. Event-level question preferred here as it tends to be more reliable than recall over longer periods of time.
SN_MRP_1m	Sexual Network: Most recent sex partners	How many times in the last 3 months have you rimmed [partner name]?	Provides detailed information about syphilis risk behaviors during a specific recall period with a most recent sex partner.
SN_MRP_1n	Sexual Network: Most recent sex partners	When was the last time you rimmed [partner name]?	Question included to determine the how recently a specific type of sexual behavior and syphilis risk behavior occurred in the past 3 months.
SN_MRP_1o	Sexual Network: Most recent sex partners	The last time you rimmed [partner name] was a condom used?	To determine whether most recent sexual encounter was condomless. Event-level question preferred here as it tends to be more reliable than recall over longer periods of time.
SN_MRP_1p	Sexual Network: Most recent sex partners	How many times in the last 3 months has [partner name] rimmed you?	Provides detailed information about syphilis risk behaviors during a specific recall period with a most recent sex partner.
SN_MRP_1q	Sexual Network: Most recent sex partners	When was the last time you [partner name] rimmed you?	Question included to determine the how recently a specific type of sexual behavior and syphilis risk behavior occurred in the past 3 months.
SN_MRP_1r	Sexual Network: Most recent sex partners	The last time [partner name] rimmed you was a condom used?	To determine whether most recent sexual encounter was condomless. Event-level question preferred here as it tends to be more reliable than recall over longer periods of time.

SN_MRP_1s	Sexual Network: Most recent sex partners	How many times in the last 3 months have you had vaginal sex with [partner name]?	Provides detailed information about syphilis risk behaviors during a specific recall period with a most recent sex partner.
SN_MRP_1t	Sexual Network: Most recent sex partners	When was the last time you had vaginal sex with [partner name]?	Question included to determine the how recently a specific type of sexual behavior and syphilis risk behavior occurred in the past 3 months.
SN_MRP_1u	Sexual Network: Most recent sex partners	The last time you had vaginal sex with [partner name] was a condom used?	To determine whether most recent sexual encounter was condomless. Event-level question preferred here as it tends to be more reliable than recall over longer periods of time.
SN_MRP_2	Sexual Network: Most recent sex partners	What was [partner name]'s HIV status?	Establishes HIV serostatus of most recent partner.
SN_MRP_2a	Sexual Network: Most recent sex partners	Was [partner name] taking antiretroviral medication for HIV in the past 3 months?	Included to determine whether sex partner who participants reports as being HIV positive might have been virally suppressed.
SN_MRP_2b	Sexual Network: Most recent sex partners	Was [partner name] taking PrEP in the past 3 months?	Included to determine the prevalence of PrEP use among this sexual network. PrEP use may affect attitudes and behaviors that affect STI risk.
SN_MRP_3	Sexual Network: Most recent sex partners	When you had sex the last time, did you exchange things like money, drugs, or shelter with [partner name] for sex?	Indicates whether any exchange for sex took place. This is important for understanding power dynamics for negotiating safer sex.
SN_MRP_4	Sexual Network: Most recent sex partners	As far as you know, over the past 3 months was [partner name] also having sex with other people?	Adapted from NHBS (OMB No. 0920-0770, expiration date 5/31/2020). Measures concurrent sex partners, which is associated with increased transmission of syphilis.

SN_MRP_4a	Sexual Network: Most recent sex partners	Do you know (any of) the person(s) that [partner name] was also having sex with?	Included to determine overlap between social and sexual networks.
SN_MRP_5	Sexual Network: Most recent sex partners	In the past 3 months, during the time you were having sex with [partner name], did you also have sex with other people?	Adapted from NHBS (OMB No. 0920-0770, expiration date 5/31/2020). Measures concurrent sex partners, which is associated with increased transmission of syphilis.
SN_MRP_6	Sexual Network: Most recent sex partners	Is [partner name] currently a main or casual partner? By “main partner” I mean a person you have an intimate or romantic relationship with. You might call this person your boyfriend/girlfriend, husband/wife, significant other, or life partner. A “casual partner” is anyone else you have sex with.	See SN_NEW_7. This question is asked again in the series of questions specific to the most recent partner as the relationship type may have changed since the partner was first named.
SN_FP_1-1a	Sexual Network: Former sex partners	Where do you hang out with this former partner? Please specify where you hang out with this former sex partner.	This question was included to supplement sex partner information with additional venue-based information and will be used to determine if there is overall between the participant’s sexual and social network.
SM_1	Sex partner meeting places	In the past 3 months, which physical places did you meet sex partners (including individuals you might have initially met online)?	Question included to obtain a roster of physical places where participants meet their sex partners. This information will be used to assess the feasibility of STI control activities that target social venues where sex partners are met.
SM_2	Sex partner meeting places	In the past 3 months, which online places did you meet sex partners? These places may include social networking websites (such as Facebook), websites directed towards gay men (such as Manhunt), dating websites, or the use of mobile social applications (such as Grindr).	Question included to obtain a roster of virtual spaces where participants meet their sex partners. This information will be used to assess the feasibility of STI control activities that target social media applications or websites.

SM_3	Sex partner meeting places	In the past 3 months, how often have you used a mobile app to meet or pick-up a sex partner while at a physical venue?	See question SM_2.
ST_1	STI Symptoms and Testing	In the past 3 months, since your last study visit have you been diagnosed with syphilis?	This question is included to determine whether the participant was diagnosed with syphilis between study visits. Incident syphilis is a primary outcome measure of the NEST study.
ST_2	STI Symptoms and Testing	In the past 3 months, since your last study visit were you diagnosed with gonorrhea?	This question is included to determine whether the participant was diagnosed with gonorrhea between study visits. This information will be used as a marker for STI risk.
ST_2a	STI Symptoms and Testing	In what part(s) of your body was the gonococcal infection? [CHECK ALL THAT APPLY]	See question ST_2
ST_3	STI Symptoms and Testing	In the past 3 months, since your last study visit were you diagnosed with chlamydia?	This question is included to determine whether the participant was diagnosed with chlamydia between study visits. This information will be used as a marker for STI risk.
ST_3a	STI Symptoms and Testing	In what part(s) of your body was the chlamydial infection? [CHECK ALL THAT APPLY]	See question ST_3.
ST_4	STI Symptoms and Testing	In the last 3 months have you noticed a new rash on your body?	This question along with questions ST_4a-6 will be used to collect information on the presence of any signs or symptoms that may suggest that the participant is infected with the primary or secondary stage of syphilis.

ST_4a	STI Symptoms and Testing	Where on your body have you noticed a new rash? [CHECK ALL THAT APPLY]	See question ST_4.
ST_4b	STI Symptoms and Testing	Please specify where on your body you have noticed a new rash.	See question ST_4.
ST_5	STI Symptoms and Testing	In the last 3 months, have you noticed any lumps or bumps in your neck, armpits or groin area?	See question ST_4.
ST_6	STI Symptoms and Testing	In the last 3 months, have you noticed any ulcers (open wounds) on your penis or anus (butt), or in your mouth or on your tongue?	See question ST_4.
ST_7	STI Symptoms and Testing	In the last 3 months, have you noticed any difficulty seeing such as blurry vision, decreased vision or dark spots?	This question along with questions ST_8–11 will be used to screen for any sequelae or complications associated with syphilis including ocular, otic, or neurologic syphilis.
ST_8	STI Symptoms and Testing	In the last 3 months, have you noticed new hair loss or feel that your hair is falling out?	See question ST_7.
ST_9	STI Symptoms and Testing	In the last 3 months, have you noticed decreased hearing, ringing in your ears or times when you feel like the room is spinning around you (vertigo)?	See question ST_7.
ST_10	STI Symptoms and Testing	In the last 3 months have you noticed any new problems with your memory or had problems remembering things?	See question ST_7.

ST_11	STI Symptoms and Testing	In the last 3 months have you noticed any weakness or numbness (loss of feeling) in your arms or legs or have you had problems walking?	See question ST_7.
SU_1	Substance use	Have you ever in your life shot up or injected drugs that were NOT prescribed for you?	Adapted from NSFG (OMB No. 0920-0314, expiration date 06/30/2021). This question is a gateway question for SU_1a.
SU_1a	Substance use	In the past 3 months, on average, how often did you inject?	This question is included to get the average frequency of injection drug use in the past 3 months.
SU1b-1c.	Substance use	Which of the following drugs did you inject in the past 3 months? [CHECK ALL THAT APPLY]. Please specify which drug you injected most often.	This question is included to get an inventory of drugs injected in the past 3 months.
SU_2	Substance use	In the past 3 months, have you used any non-injection drugs (drugs you did not inject) other than those prescribed for you?	Adapted from NSFG (OMB No. 0920-0314, expiration date 06/30/2021). This question is a gateway question for SU_2a. Recreational drug use, including non-injection drug use has been associated with STI risk.
SU_2a-2b.	Substance use	In the past 3 months, which drugs did you use? [CHECK ALL THAT APPLY]. Please specify which other drugs you've used in the past 3 months.	This question is included to get an inventory of the types of drugs used that were not injected in the past 3 months.
SU_3	Substance use	How often do you have a drink containing alcohol? A drink is equivalent to a 12 ounce can of beer or 5 ounces of wine or 1.5 ounces of hard alcohol such as gin, rum, tequila or vodka.	Adapted from the MMP questionnaire (OMB No. 0920-0740, expiration date 06/30/2010) to measure current alcohol and heavy alcohol use.

SU_3a	Substance use	How many standard drinks containing alcohol do you have on a typical day?	Adapted from the MMP questionnaire (OMB No. 0920-0740, expiration date 06/30/2010) to measure heavy alcohol use.
PA_1	PrEP attitudes	Have you ever considered PrEP as a way of reducing your chances of getting HIV?	These questions were included after consultation with experts at CDC. The HIV prevention landscape has changed significantly in recent years with the expansion and increased emphasis on biomedical prevention in the form of HIV pre-exposure prophylaxis. These questions are included in the NEST survey to ensure that we are collecting the most relevant HIV-associated behavioral data.
PA_2	PrEP attitudes	How willing are you to take PrEP every day to lower your chances of getting HIV?	See PA_1. This question is included to determine the likelihood of the participant starting PrEP in the future.
PA_3	PrEP attitudes	Please choose how much you agree or disagree with the following statement related to PrEP: "Having to take a pill every day is difficult"	The series of questions PA_3-PA_15 is included to determine attitudes and barriers to PrEP use, as well as how PrEP use may be influencing the perceptions of MSM around safe sex and health screening. The influence of PrEP use on willingness to engage in condomless sex is an important consideration for syphilis and STI transmission.
PA_4	PrEP attitudes	Please choose how much you agree or disagree with the following statement related to PrEP: "People will judge me for taking PrEP"	See PA_3.
PA_5	PrEP attitudes	Please choose how much you agree or disagree with the following statement related to PrEP: "I am concerned about the side effects of PrEP"	See PA_3.



PA_6	PrEP attitudes	Please choose how much you agree or disagree with the following statement related to PrEP: "I am cautious when dealing with healthcare organizations"	See PA_3.
PA_7	PrEP attitudes	Please choose how much you agree or disagree with the following statement related to PrEP: "I cannot afford the financial costs of PrEP"	See PA_3.
PA_8	PrEP attitudes	Please choose how much you agree or disagree with the following statement related to PrEP: "PrEP is for people who have riskier sex lives than I do"	See PA_3.
PA_9	PrEP attitudes	Please choose how much you agree or disagree with the following statement related to PrEP: "PrEP is not available for people like me"	See PA_3.
PA_10	PrEP attitudes	Please choose how much you agree or disagree with the following statement related to PrEP: "Taking PrEP would make me more comfortable having sex without a condom"	See PA_3.
PA_11	PrEP attitudes	Please choose how much you agree or disagree with the following statement related to PrEP: "Taking PrEP would make me feel less anxious about sex"	See PA_3.
PA_12	PrEP attitudes	Please choose how much you agree or disagree with the following statement related to PrEP: "My friends think I should take PrEP"	See PA_3.
PA_13	PrEP attitudes	Please choose how much you agree or disagree with the following statement related to PrEP: "If someone saw me taking medication, they would think I have HIV"	See PA_3.

PA_14	PrEP attitudes	Please choose how much you agree or disagree with the following statement related to PrEP: "I have a medical provider I can talk with about PrEP"	See PA_3.
PA_15	PrEP attitudes	Please choose how much you agree or disagree with the following statement related to PrEP: "I know where I can go for a PrEP prescription if I want one"	See PA_3.
PA_16	PrEP attitudes	Have you ever started PrEP and later decided to stop being on PrEP?	This question is included to determine lifetime use of PrEP among MSM enrolled in NEST.
PA_16a-16b	PrEP attitudes	What were the reasons you decided to stop being on PrEP [CHECK ALL THAT APPLY]. Please specify the reasons you decided to stop being on PrEP.	This question is included to get more detail on why participants may have started and then stopped using PrEP.

**Privacy Act Statement:**

This information is collected under the authority of the Public Health Service Act, Section 301, "Research and Investigation," (42 U.S.C. 241); and Sections 304, 306 and 308(d) which discuss authority to maintain data and provide assurances of confidentiality for health research and related activities (42 U.S.C. 242 b, k, and m(d)). This information is also being collected in conjunction with the provisions of the Government Paperwork Elimination Act and the Paperwork Reduction Act (PRA). This information will only be used by the Centers for Disease Control and Prevention (CDC) staff to inform development of methodologies for collection of complex sexual network data among men at high risk for syphilis in the United States.

Public reporting burden of this collection of information is estimated to average 2 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC/ATSDR Reports Clearance Officer; 1600 Clifton Road NE, MS D-74, Atlanta, Georgia 30333; Attn: OMB-PRA (0920-18MY).

**Smartphone survey**

EMA_1	Smartphone survey	Did you have anal sex in the last 24 hours?	This question is included to determine the likelihood of a participant engaging in anal sex in the last 24 hours and will be used to get a more granular measure of anal sex frequency. Asking about sexual behaviors in the last 24 hours allows us to capture data closer to real time increasing data validity.
EMA_1a	Smartphone survey	How many men did you have anal sex with in the last 24 hours?	This question is collected in NEST to obtain a more granular rate of male anal sex partner formation.
EMA_1b	Smartphone survey	How many women did you have anal sex with in the last 24 hours?	This question is collected in NEST to obtain a more granular rate of female anal sex partner formation.

EMA_1c	Smartphone survey	The last time you had anal sex in the last 24 hours, were you the top or the bottom?	This question obtains information on sexual role closer to the time that the sexual encounter occurred increasing data validity.
EMA_1d	Smartphone survey	The last time you had anal sex in the last 24 hours, was a condom used?	This question obtains information on preventative sexual behaviors closer to the time that the sexual encounter occurred increasing data validity.
EMA_1e	Smartphone survey	The last time you had anal sex in the last 24 hours, was lubricant used (for example saliva, semen, commercial lube, or another product)?	This question obtains information on preventative sexual behaviors closer to the time that the sexual encounter occurred increasing data validity.
EMA_1f	Smartphone survey	Which lubricant? (mark all that apply)	See EMA_1e.
EMA_1g	Smartphone survey	The last time you had anal sex in the last 24 hours, where were you?	This question obtains venue-based information associated with a recent sexual encounter closer to the time that the sexual encounter occurred increasing data validity.
EMA_1h	Smartphone survey	Thinking about the last person you had anal sex with in the last 24 hours: where did you first meet that person?	This question obtains venue-based information associated with a recent sexual encounter closer to the time that the sexual encounter occurred increasing data validity.
EMA_1i	Smartphone survey	Thinking about the last person you had anal sex with in the last 24 hours: how long have you known that person?	This question obtains information about partnership duration with a recent sex partner closer to the time that the sexual encounter occurred increasing data validity.
EMA_2	Smartphone survey	Did you have oral sex in the last 24 hours?	This question is included to determine the likelihood of a participant engaging in oral sex in the last 24 hours and will be used to get a more granular measure of anal sex frequency. Asking about sexual behaviors in the last 24 hours allows us to capture

			data closer to real time increasing data validity.
EMA_2a	Smartphone survey	How many men did you have oral sex with (either giving or getting a blowjob) in the last 24 hours?	This question is collected in NEST to obtain a more granular rate of male oral sex partner formation.
EMA_2b	Smartphone survey	How many women did you have oral sex with (either giving or getting a blowjob) in the last 24 hours?	This question is collected in NEST to obtain a more granular rate of female oral sex partner formation.
EMA_2c	Smartphone survey	The last time you had oral sex in the last 24 hours, did you get a blowjob or did you give a blowjob/go down on someone?	This question obtains information on sexual role closer to the time that the sexual encounter occurred increasing data validity.
EMA_2d	Smartphone survey	The last time you had oral sex in the last 24 hours, where were you?	See question EMA_1g.
EMA_2e	Smartphone survey	Thinking about the last person you had oral sex with in the last 24 hours: where did you first meet that person?	See question EMA_1g.
EMA_3	Smartphone survey	In the past 24 hours, did you take PrEP (a daily pill that prevents people from getting HIV infection)?	This question obtains information on preventative sexual behaviors closer to the time that the sexual encounter occurred increasing data validity.

**STI Testing Results – to be abstracted from study laboratory results**

SR_1-1a	STI study test results	Which testing algorithm was used to test for syphilis? Please specify which testing algorithm was used to test for syphilis.	The testing algorithm used is important when anticipating the number and types of syphilis tests used and when interpreting syphilis tests results.
SR_1b	STI study test results	Which syphilis tests were conducted?	This is a gateway question to determine which syphilis test results to record.
SR_2-2a	STI study test results	What was the highest recorded RPR or VDRL titer result? Please specify the RPR or VDRL titer result?	The highest RPR/VDRL result is important to determine whether participant has an incident or past diagnosis of syphilis.
SR_2b	STI study test results	When was the RPR or VDRL test conducted?	This question is included to determine time between subsequent RPR/VDRL titers in order to track RPR/VDRL changes over time.
SR_3-3a	STI study test results	What was the patient's serologic TP-PA result? When was the TP-PA test conducted?	Treponemal test result is needed in conjunction with the RPR/VDRL result to appropriately diagnose and stage the participant.
SR_4-4a	STI study test results	What was the patient's serologic EIA result? When was the EIA test conducted?	Treponemal test result is needed in conjunction with the RPR/VDRL result to appropriately diagnose and stage the participant.
SR_5-5a	STI study test results	What was the patient's serologic FTA-ABS result? When was the FTA-ABS test conducted?	Treponemal test result is needed in conjunction with the RPR/VDRL result to appropriately diagnose and stage the participant.
SR_6-6a	STI study test results	What was the patient's serologic CIA result? When was the CIA test conducted?	Treponemal test result is needed in conjunction with the RPR/VDRL result to appropriately diagnose and stage the participant.

SR_7-7a	STI study test results	What was the patient's serologic MHA-TP result? When was the MHA-TP test conducted?	Treponemal test result is needed in conjunction with the RPR/VDRL result to appropriately diagnose and stage the participant.
SR_8-8a	STI study test results	Which treponemal antibody test was used to screen for syphilis? Please specify which treponemal antibody test was used to screen for syphilis.	If a non-traditional syphilis testing algorithm was used, it would be important to know which treponemal test was used as screening test in order to appropriately interpret serological results.
SR_9-9a	STI study test results	Which treponemal antibody test was used as a confirmatory test? Please specify which treponemal antibody test was used to confirm syphilis.	If a non-traditional syphilis testing algorithm was used, it would be important to know which treponemal test was used as confirmatory test in order to appropriately interpret serological results.
SR_10	STI study test results	What stage of syphilis was the patient diagnosed with?	This question is used to determine the stage of syphilis that the participant was diagnosed with.
SR_11	STI study test results	What was the rectal chlamydial test result?	To determine the prevalence of a rectal chlamydial infection.
SR_12	STI study test results	What was the oropharyngeal chlamydial test result?	To determine the prevalence of an oropharyngeal chlamydial infection.
SR_13	STI study test results	What was the urine chlamydial test result?	To determine the prevalence of a urethral chlamydial infection.
SR_14	STI study test results	What was the rectal gonococcal test result?	To determine the prevalence of a rectal gonococcal infection.

SR_15	STI study test results	What was the oropharyngeal gonococcal test result?	To determine the prevalence of an oropharyngeal gonococcal infection.
SR_16	STI study test results	What was the urine gonococcal test result?	To determine the prevalence of a urethral gonococcal infection.
SR_17-17a	STI study test results	What was the HIV test result? When was the HIV test conducted?	To determine the prevalence of HIV.
SR_17b-17c	STI study test results	Why was the participant not tested for HIV at this study visit? Please specify why the participant was not tested for HIV at this study visit.	If participant was not tested for HIV this question is included to determine the reason(s) why.