

**Guidelines for Completing Visit 55 Section 4  
(MACS Questionnaire)**

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## **Guidelines for Completing Visit 55 Section 4 (MACS Questionnaire)**

### **General Instructions:**

The purpose of the S4 questionnaire is to collect medical history and behavior practices of the participant since his last follow-up visit.

1) The first section focuses primarily on medical conditions and prescribed medications. The diagnosed medical conditions that qualify as possible reportable outcomes shall be confirmed through a medical record review.\* This section must be administered by an interviewer, preferably in-person and if not possible, by telephone.

2) The second section asks about substance use (including smoking, alcohol and recreational drugs) and sexual behaviors. This section has been substituted by the MACS Web-based Interactive Interview (MWII). Administer the S4 behavioral section if the participant does not complete the MWII.

\*See Outcome Reporting protocol: [Outcome Reporting Protocol](#)

**The visit number version of the completed S4 should be the same as the other data collection forms/MWII. For example, if a participant completes a V54 S4 at the end of V54 and comes back within the next 2 weeks after the start of V55, he should still be administered all V54 forms and the local PC version of the V54 MWII. If the participant comes back more than 2 weeks later, administer all the current visit number forms and MWII.**

Unless prohibited by special circumstances, all data (including lab samples) should be collected within two weeks of the study visit, which is defined as the first date of data collection. See Item 3 for editing time frames of data collection forms.

1. Use number 2 pencil and completely fill in the bubbles. If you need to erase, make sure mark is erased completely.
2. Ask the questions as they are written on the form. Read the response options where applicable, but NEVER read the DON'T KNOW or REFUSE options. Although these responses are legitimate and acceptable, the interviewer should not encourage these responses. If the participant doesn't know, probe to assist him with his recall or provide a more detailed explanation of the question to improve his understanding. If a participant refuses, the interviewer may remind him that all information that he provides is held strictly confidential. Otherwise, move on to the next question.

Additional information is specified in the guidelines next to the corresponding question number. If further clarification is needed, please report this to CAMACS, and they will help to clarify any misinterpretations or confusing language.

3. It is important to make every attempt possible to check the participant's responses for completeness and logical inconsistency within two weeks following the study visit. If the participant cannot be contacted within this time period to fill in the

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missing information or clarify his responses, then no further changes should be made to the questionnaire. Exceptions to this rule would pertain to obtaining medical releases and contact information for doctors and hospitals.

4. For dates that appear on the form, if the participant cannot remember the exact month (and day), probe for the season. (Use "15" for the day if specific day cannot be recorded).

Summer	=	July	=	06
Fall	=	October	=	10
Winter	=	January	=	01
Spring	=	April	=	04
Don't know month	=	June (midpt)	=	06

### PROVIDING THE PARTICIPANT A MONTHLY CALENDAR MAY BE HELPFUL.

If the participant still cannot remember a year for a particular event, such as a diagnosis of a medical problem, then probe for other significant events that may have occurred around the event, such as birthdays, anniversaries, trips, graduations...

5. In response to questions inquiring about occurrences "since last visit," note that the earliest year indicated on the form is "00", which stands for 2000 or earlier. If the occurrence was prior to 2000, fill in the "00" bubble.
6. For open-ended questions, keep lists of responses, **ideally in an electronic format**. Interviewers should write responses, exactly in the words of the respondent.
7. Be specific in specify boxes, such as names and addresses.
8. Obtain the date of the participant's previous visit. This month should be used in the questions, with the following exception:

For participants who return for a visit after a long lapse in attending visits, use: "[Since your last visit]" rather than "[Since your last visit in (MONTH)]" or "[Since your visit in (MONTH, YEAR)]".

9. Follow the skip patterns as they appear on the form.
10. Record the time the interview began and ended.

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### **Question 1:** All non-AIDS cancers, AIDS defining cancers, and Castleman's Disease

We are interested in all cancers, plus Castleman's Disease. Specify and code the site/type of cancer according to the Cancer Site List (Appendix 1). Three cancers, Kaposi Sarcoma, Non-Hodgkins Lymphoma and Primary brain Lymphoma (9140, 9590, 9710) qualify as AIDS defining diagnoses. Request a Medical Release to obtain medical records for all cancers except for the following:

Basal Cell Carcinoma (code=8090 is distinguished from other reportable skin cancers (melanoma and squamous cell). If the participant was certain that his skin cancer was basal cell carcinoma, do not request medical records or submit a outcome reporting form to CAMACS.

\*See Outcome Reporting protocol: [Outcome Reporting Protocol](#)

### **Question 2:** Medical Conditions Indicative of AIDS

These conditions refer to AIDS-related illnesses other than the three AIDS cancers Kaposi's Sarcoma and Primary lymphoma and Non-Hodgkins Lymphoma (9140, 9590, 9710) reported in Question 1. (See Appendix 7A for AIDS diagnoses and codes and Appendix 7B for a new expanded version with lay language summaries of these diagnoses.)

If the participant does not remember if he reported an earlier diagnosis, record it. If an HIV positive participant does not directly report an AIDS diagnosis but describes symptoms that describe an AIDS condition in response to any medical history question, record the description fully in his words. Ask for diagnosing physician and for a medical release or refer to a clinician for follow up.

Specify the type of AIDS illness in the specify box. Refer to Appendix 7A for the AIDS diagnosis codes and bubble in code. Record the month and year of the diagnosis. If the participant cannot remember the year, prompt for an estimate (see General Instructions). If he still does not remember the year, leave it blank. Obtain a signed medical release to request medical records and report medical diagnosis to CAMACS on an **OUTCOME REPORTING FORM**.

### **Question 3:** Pneumonia

Record all pneumonia diagnoses and the month and year of the diagnosis in this question not previously reported in Question 2. Obtain a signed medical release for all reported pneumonia diagnoses. The medical records review will inform you if it is an AIDS-defining illness. If so, fill out an Outcome Reporting Form and submit to CAMACS.

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There is a clinician's notes box available to record methods of diagnosis, or any other pertinent information regarding the pneumonia diagnoses. The use of this box is optional. No data will be entered into the database from this box.

### **Question 4:** Testing for TB

The next few questions are about Tuberculosis or TB for short. To see if a person has tuberculosis a doctor or nurse will give a skin test-sometimes called a PPD test. If the skin test was positive, it shows the person has been exposed or infected with tuberculosis and more tests are needed to see if he/she has become sick from TB (see Q5).

If the participant does not know if the PPD was positive, do not leave it blank. Ask if further testing was performed (see Q5). If no, then mark "No". Default is "No".

### **Question 5:** Active TB

Active TB means a person has become sick from exposure to TB. The infection is spreading through the body and, if the lungs are infected, the disease can be spread to others. Active TB is also referred to as "tuberculosis disease" or "infectious tuberculosis". Usually, if a person has infectious tuberculosis, people who lived or worked with the person will be tested for tuberculosis too.

Active TB is diagnosed by finding the TB-causing bacteria in a sputum sample (fluid from the lungs) or in samples from other parts of the body. Doctors sometimes use a chest X-ray to help diagnose active TB.

Ask if the participant has had an active TB infection. Active TB infection is characterized by weakness, weight loss, no appetite, chills and night sweats. Active TB in the lungs includes symptoms such as bad cough, pain in the chest and coughing up blood.

If active TB is reported, obtain a signed medical release form for a medical records request. Report confirmed active TB to CAMACS on an **OUTCOME REPORTING FORM**.

### **Question 6:** Hospitalizations

If a participant reports that he was hospitalized for a reportable outcome, request medical records for review as part of the Outcome Reporting protocol (See Appendix 6: List of Reportable Outcomes.) If the medical records confirm a diagnosis of a reportable outcome, fill out an Outcome Reporting form and send to CAMACS.

The purpose of this question is to collect information on overnight hospital stays for any reason or hospital outpatient procedures for a potential medical outcome that requires a

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signed medical release. Outpatient visits to the emergency room or hospital-based clinics for other reasons should be recorded in Q20 only. The only exception would be if the participant went to the ER and was subsequently admitted to the hospital for an overnight stay or for an outpatient procedure as described below:

The reason for collecting outpatient procedures is to ascertain whether the participant had any outpatient procedures performed for a cardiovascular problem or other potential reportable outcomes that require a medical release. Obtain a medical release for any outpatient procedures related to the same conditions that you would generally request a medical release. (See Appendix 6: List of Reportable Outcomes.) For instance, if someone had a coronary revascularization procedures performed on an outpatient basis, such as angioplasty ( "Balloon angioplasty" or "Coronary Stent"), then obtain a signed medical release for medical records. If someone had an outpatient procedure for a broken bone, do not obtain a signed medical release form.

It is IMPORTANT to note that potential reportable medical outcomes captured in the hospitalization section could also be captured in the other questions about health problems. For instance, if a person was admitted to the hospital to have a liver biopsy performed on an outpatient basis, this biopsy would also be reported in Q9. If the result of the biopsy was malignant, the malignancy would be reported in Q2. A signed release for medical records could be requested based on the responses to any one of these questions.

**6.A** - Record the number of times the participant was admitted to the hospital on an outpatient and inpatient basis. Make sure to fill out medical release for records and note complete name and address of hospital.

**6.B** - Start with the most recent hospitalization; i.e. the one closest to the current date, and then the one before that, etc. Fill out a continuation sheet for when there are more than two reported hospitalizations.

If the participant cannot recall the dates of the hospitalizations, see General Instructions, Items 4 and 5 on pages 2-3 of the guidelines.

Example: Participant is interviewed on 05/01/11. He was seen at the emergency room on 03/18/11 and was hospitalized on 1/10/11 and 4/15/11. The emergency room visit would be recorded in Q20 only (not in hospitalizations).

Question 6.B(1)a would be:

04	=	A for April
10	=	10 <sup>th</sup> day
05	=	5th day (10 + 5 = 15 <sup>th</sup> day)
11	=	2011

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Question 6.B(2)a would be:

01	=	J for January
10	=	10th day
11	=	2011

### Question 6.B.b

Ask the participant how many nights he spent in the hospital. If the participant had an outpatient procedure, fill in zero.

Question 6.C Collect the name and address of the participant's diagnosing physician. Record the conditions and problems resulting in the hospitalizations. If AIDS-related or cancer, go back to **Q1 and Q2** to make sure that these conditions or problems were reported in one of these questions. If not, re-ask questions related to the conditions or problems for which the participant was hospitalized and code where appropriate. If participant had reported being diagnosed with an AIDS condition (**Q2**) or cancer (**Q1**), but did not report a hospitalization, ask participant if he had to be hospitalized for the condition and record the hospitalization here.

### Rules for obtaining and recording diagnoses and procedures:

We are now collecting the ICD-9-CM codes for each hospital stay. Please use the boxes located underneath Q6 to record the correct code and reason for hospitalization. Code the primary diagnosis and primary procedure (if any). Please refer to the ICD-9-CM manual for lists of codes (Do NOT use the ICD-10). Any edition of the ICD-9-CM may be used. Please do not use any other 3<sup>rd</sup> party website to code the diagnoses.

This link allows you to download a Rich Text File (RTF) of each edition of the ICD-9-CM:

<http://www.cdc.gov/nchs/icd.htm>

If applicable, fill in the "V", "E" and "P" bubbles above the ICD-9-CM code boxes. The "V" and "E" bubbles are used for reasons other than a diagnosis or procedure. There is a section in the ICD-9-CM manual immediately following the list of disease codes, which gives an explanation for each type and the corresponding codes.

"V" codes are used for times when a patient seeks medical care, but not necessarily for a disease or injury. This will be rare for most inpatient hospital stays, but an example would be when someone is an organ donor or when someone receives a vaccine.

"E" codes are used for external causes of injury, such as a car accident, gun shot wound or poisoning.

"P" codes are used for procedures, and the codes for such procedures can be

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found in the last section of the ICD-9-CM manual.

It is important to remember to fill in one of these bubbles where applicable, as the V/E/P codes overlap with the standard ICD-9\_CM codes for disease.

Enter the ICD-9-CM codes, **including leading zeros**, up to the tenth decimal point. For example:

- If someone is hospitalized for acute MI, the code would be 410.9. Fill in 4109.
- If someone was hospitalized for meningitis, the code would be 036.0. Fill in 0360.
- In the rare instance that a participant is hospitalized with no diagnosis and no procedure, enter "0000" in the ICD-9 code box.

If a hospital stay results in a diagnosis AND a procedure, code both using the two boxes allotted for each hospitalization. For example, if a participant was hospitalized for a heart attack (MI) and also had a catheterization of his artery, please record both in the two boxes provided.

Diagnosis: Heart Attack (MI)	Code: (410.9) 4109
Procedure: Catheterization	Code: (038.9) 0389 + "P" bubble

If a participant reported only an operation or procedure, ask for a medical diagnosis. For example, if his gall bladder was removed, ask him why he had his gall bladder removed.

If a participant reported a catheterization or cardiac stress test and did not report a medical problem or diagnosis, ask him for the results to give you some indication if there is a possible reportable outcome. For example...

If a participant reports a cardiac stress test, and the test results showed NO heart problems that qualify as an outcome listed in Appendix 6 then DO NOT ask for a medical release.

If a participant reports a cardiac stress test and the test results showed Angina then ASK for a medical release because Angina is classified as a reportable outcome in Appendix 6.

If the participant is not sure about the results of the cardiac stress test, then ask for a medical release.



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### **Question 7A:**

This question pertains to any mental health care obtained in an inpatient or outpatient care setting.

A mental health professional may be a psychiatrist, psychologist, social worker or other health care provider in a mental health setting. If “Yes”, record month and year of most recent diagnosis. NOTE - that a medical records release for mental health problems.

### **Question 8:**

Mark “Yes” and ask if the participant had a neurological examination for problem of the nervous system (brain, spinal cord, nerves in hand and feet).

If yes: ask the participant if there was a diagnosis and report the diagnosis in Q10.CC.i, other neurological problems. Get a medical release and follow up with a request for medical outcomes.

### **Question 9:** Anal pap smear

**9.A.(1-3)** - The purpose of these 3 questions is to ascertain whether or not a participant has undergone an anal pap smear since their last visit outside the MACS. THIS DOES NOT include any Pap smears conducted as part of the MACS visit.

Please provide the definition of an anal pap smear when asking Q9.A.1:

“A doctor or medical practitioner took a swab of the anal canal to test for cancer cells.”

Collect the month and year of the pap smear. Obtain a signed release for medical records review if the pap smear is abnormal, unable to evaluate, or if the participant does not know the results and fill out an OUTCOME REPORTING FORM. You may use the space in Q9C to write down the contact information of the medical provider(s) for requesting medical records.

**9.B** - The purpose of this question is to ascertain whether the participant has had anal screening involving a scope or tube-shaped device, which allows the doctor to check by observation for abnormalities in the rectum/anus only.

This method of anal screening does not include the rectal exam performed as part of the MACS visit nor a PAP smear that involves a scraping of tissue with a Q-tip. It also does not include a colonoscopy or a flexible sigmoidoscopy. These two procedures are used to look at the gastrointestinal tracts. Whereas the anal scope specifically looks at the rectum/anus only.

A “YES” response indicates that the participant was only examined for anal abnormalities. This does not require a signed medical release for medical records

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review. If the participant said he had a biopsy with this procedure then record the biopsy in Q9.C1.

**9.C(1-3)** - If participant was reportedly diagnosed with cancer ("Yes" to Q1) or had an abnormal Pap smear results and responds that he did not have a biopsy, double check that he did not have a biopsy by referring back to the cancer and/or anal pap smear questions and ask how he was diagnosed with the cancer.

Record all sites that were biopsied and the diagnoses of each respective biopsy. Please note that we are capturing anal biopsies in this question. Make sure to include the date of each biopsy. Code these responses after the interview. (See Appendices 2 (Tissue Biopsy Sites) and 3 (Diagnosis of Tissue). Please note that a diagnosis of 'dysplasia' has been added to code 5 (benign) in the Diagnosis of Tissue Appendix. Remember to get a medical release for medical records.

### **NOTE:**

If multiple sites of an organ are biopsied by a doctor on the same date of service, it will count as one biopsy. For instance, if a participant was biopsied in multiple places of the skin by Dr. Jones at Memorial Hospital on June 30, 2007, count it as one biopsy.

However, if the biopsies included more than one organ, such as the skin and lungs, then count it as two biopsies even though they were all performed by Dr. Jones at Memorial Hospital on June 30, 2007. Biopsies of more than one organ may be looking for different diseases and it would be potentially useful to have this information for the collection of medical outcomes.

### **Question 10:**

This question asks "were you diagnosed with other NEW medical conditions, ailments or disorders since your last visit".

Note that "other" implies any medical diagnosis other than what was reported in Q1-Q9. If the participant reports a diagnosis that should have been reported in response to one of these previous questions, go back to the pertinent question and report it there.

If a participant is not sure whether he reported a diagnosis at an earlier visit, fill in "YES" anyway. It is better to repeat the recording of a diagnosis in multiple visits than to miss one.

For the purpose of collecting medical records in this Question10, there is one box on page 7, one box on page 8, and two boxes on page 10 to record the name and address of the physician who diagnosed certain condition(s) for the following questions:

Obtain a signed medical record release if the participant responds

"Yes" to questions Q10.L-R, Q10.CC.c, or CC.i

"Yes" to CC.e (liver disease) or CC.f (osteoporosis, avascular necrosis or osteonecrosis)

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Follow up on these diagnoses with a medical record abstraction and fill out an OUTCOME REPORTING FORM.

**10.H** - If participant did not have arthritis:

- Mark “No”;
- Leave rheumatoid, osteoarthritis or degenerative and other type blank.

If the participant reports arthritis:

- Mark "Yes" and ask participant if he has rheumatoid, osteoarthritis or degenerative, and other type of arthritis;  
Mark "Yes" for the type(s) that he had and "No" for the ones he did not have.
- If the participant specifies another type of arthritis ("*Other*"), record in the participant's own words in the specify box.
- If the participant doesn't know what type of arthritis he has then mark “Yes” next to “*Don't Know*” and mark the other types as “No”.

**Note - 10.BB.2 through BB.5 - lifetime fractures after age of 30 were removed. Fracture questions since last visit were reinstated.**

**10.T** This set of questions asks about broken bones and fractures since the participant's last visit.

- Record “NO” or “YES”.
- Do not obtain a medical release if the participant reports fractured bones.

**10.T.2** What was fractured.

- Up to 3 broken bones may be recorded. See Appendix 9 for list of ICD-9 codes. **If more than 3 bones are fractured, contact CAMACS which will then consult with Dr. Todd Brown on which fractured bones should be documented. Dr. Brown will prioritize according to degree of traumatic impact.**

**10.T.3** Mechanisms for fracture

- “Without trauma” signifies that the fracture occurred due to very weak bones, such as elderly people or people with other special conditions who may break a bone just by sneezing or coughing or bending over and/or lifting an object.
- Falling down from a standing height position, such as standing and losing one's balance, or walking along a side walk and tripping on a crack in the pavement.

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- Falling from one level to another level, such as falling from a ladder, or chair or down a set of steps.
- Breaking a bone because of an external force, such a car accident, skiing into a tree.

10.CC (a-) – This set of questions tries to identify medical problems OTHER THAN THOSE that were reported in the previous questions. It asks about diagnoses according to specific body areas.

Some participants do not seek medical care from visit to visit either because they are very healthy and need no care or they have no insurance and refrain from going to the doctor. However the onset of acute or serious illness is not predicated on having insurance or a regular source of medical care. Therefore, the question also pertains to new conditions diagnosed in urgent care facilities and hospital emergency rooms.

If participant answers “No” to any of the body areas **a-l**:

- Leave rest of question blank and skip to next body area.

If participant answers “Yes” to any of the questions **a-l**:

- Ask if there was a diagnosis. • Check if the reported diagnosis was asked about in a previous question. If so and the response was “No” then re-ask previous question.
- If the participant reported the diagnosis in a previous question fill in “No” and go to the next question.
- If the participant reports a new diagnosis, fill in “Yes” and record the response in the specify box.
- If the participant reports a new medical problem, but has no specific diagnosis, fill in “Yes” and leave the specify box blank.
- If more than one diagnosis per area, record additional diagnoses in question “**Q10.CC.I**” under “Other Area”.
- Use the boxes located under **Q10.CC.I** on page 9 to record the physician’s name and address for any reportable medical outcomes. You may also go to the comments section on page 22 to record physician’s contact information.

NOTE: Enter the ICD-9-CM codes up to the tenth decimal point in the boxes provided for each diagnosis.

- Code diagnoses using ICD-9 codes after the interview. Please refer to the ICD-9-CM manual for lists of codes (Do NOT use the ICD-10). Any edition of the ICD-9-CM may be used. Please do not use any other 3<sup>rd</sup> party website to code the diagnoses.

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This link allows you to download a Rich Text File (RTF) of each edition of the ICD-9-CM:

<http://www.cdc.gov/nchs/icd.htm>

Request a medical release for medical records where indicated. Note revisions to Q10.CC.e which now include liver disease (a reportable outcome that requires a medical release).

### Question 11: Herpes

Ask participant if he has each specific herpes items 1-4.

- Mark “Yes” or “No” for each herpes item.
- If “Yes” is reported for at least one herpes item, ask participant items *B* and *C*.

NOTE: If the first attack occurred since the last visit (Q11.B = “YES”) still ask Q11.C (did the sores worsen...) even though worsening is considered unlikely.

### Question 12: STDS

Ask participant items *A.1*, *B*, *F*, *G.1*, *H.1*. Note that the questions about new infections versus a continuation or relapse of a previous infection for *A1*, *G1*, and *H1*. A new infection means that the participant was diagnosed since his last visit with the disease or medical condition for the first time in his lifetime. Relapse means that the participant had experienced symptoms or problems of a pre-existing or chronic condition since his last visit.

- Mark “Yes” or “No” for each item.
- If participant reports having gonorrhea in *B*, complete items *C-E*.
- If participant reports a type of gonorrhea other than what is specified in *C*, *D*, and *E*, such as joint gonorrhea, then leave items *C*, *D*, and *E* blank and move directly to *F*.

### Question 13: Symptoms

**13.A** - Ask participant about each symptom or problem. Note that the introduction asks for illnesses or side effects due to medications.

- Mark “Yes” or “No” for each item
- For each “Yes” in *A*, complete *B*, *C*, *D* and *E*.

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Note: *Box, D*, “Did you experience this symptom due to taking any medication?”

- If the condition is new (E= “Yes”, i.e. first occurrence was since the participant's last visit), complete *F*.

**13.B** - Ask participant each question.

- Mark “Yes” or “No” for each item.
- Ask him to indicate the severity on a scale of 0 (none) to 10 (severe) for each side. Example: if the participant experienced a level of pain around 7 in his left foot/leg, but no pain in his right foot/leg, then code “0” for the right and “7” for the left.
- Ask if these symptoms were due to taking any medications.

**13.C (1-5)** - This set of questions is used to assess the occurrence of anal bleeding.

NOTE: If the participant reports pain with the anal bleeding, refer this case to the clinic coordinator.

NOTE: It is up to the Medical Directors of each site to develop an Investigative protocol for these cases.

If the participant asks why the questions are needed, please respond by giving him the Rationale for Anal Bleeding Question handout (Appendix 8): “The information that we gather about symptoms will help researchers learn how symptoms are related to the risk of developing certain illnesses or diseases. Understanding this relationship will help doctors and nurses do a better job in directing and diagnosing illnesses.”

**NOTE: Q14 Flu questions will not be administered at V55.**

**Question 15: AIDS Medications**

**HIV Medications Section:**

- If the participant is HIV negative, you will only ask *Q15* and *Q15A* and then skip to *Q16*.
- *Q15A(1) and (2)* apply to all participants who are HIV positive regardless of their medication status.
- *Q15B* and *Q15C* apply to participants who are on HIV related medications.

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**Q15** - Have you taken any medications any HIV-related medications or treatments?

This questions refers only to medications used to fight AIDS, HIV, opportunistic infections, and/or to stimulate the immune system. Medications that appear on the drug list 1 and 2 but were used for reasons other than to suppress the HIV virus or opportunistic infections should be recorded in Q16. If a person reports Epivir (3TC, lamivudine) or Emtriva (FTC, Emtricitabine) for Hepatitis, report in Q16.16. If he reports taking this drug for both HIV and Hepatitis, report this drug in both sections (Q15.A./B. and Q16.16).

Ask participant if he is taking any drugs for HIV, AIDS or opportunistic infections.

- If “No”, go to Q15.A.
- If “Yes”, go to Q15.A(1).

**15.A** - This question obtains information on why the participant is NOT taking HIV-related medication. Note: this question is incongruous for seronegative participants. Therefore, when you read the question, “Why did you decide not to take HIV related medications?”, follow up immediately with the statement, “Is that because you are not HIV infected?”.

- If “Yes” to not taking medication because he is not infected with HIV, skip to Q16. Do not read the rest of the possible responses.
- Otherwise, proceed to ask about each reason. To avoid putting HIV positive participants who are not taking HIV medications in a defensive position, you may want to preface this question with “Since you are not taking any HIV medications, I am going to read through a list of reasons for you to select.”
  - Mark every reason the participant responds “Yes” to by filling in the corresponding bubble.
  - If the reason is not listed, fill in ‘Other’ reason bubble and write reason in the specify box.
  - Go to Q15A(1) after this question.

### **Question 15.A(1-2): Blood Test for Drug Resistance**

We are asking about blood tests for HIV drug resistance strains since the participant’s last visit. This type of testing can help explain antiretroviral treatment failures and help guide treatment decisions. All seropositive participants regardless of HIV medication status are asked this question.

Q15.A.1 For Seropositives not taking HIV meds since last visit (Q14= “No”): If the participant answers “No” to Q15.A(1), indicating he has not had a drug resistance test, then skip to Q16. If the participant answers “Yes” to Q15.A(1), continue with Q15.A(2) and then skip to Q16.



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Q15.A.1 For Seropositives taking HIV meds since last visit (Q14= "Yes") : If the participant answers "No" to Q15.A(1), indicating he has not had a drug resistance test, then skip to Q15.B.(1). If the participant answers "Yes" to Q15.A(1), continue with Q15.A(2) and then move on to Q15.B(1).

Q15.A(2) For Seropositives taking HIV meds (Q14= "Yes") and had drug resistance testing (Q15.A(1)= "Yes"): Ask if participant's treatment changed as a result of the testing. If his treatment has changed, but his doctor did not indicate the reason(s) for a change in therapy, then mark "Don't Know".

### **Questions 15.B(1) - 15.B(3)**

This section pertains to the use of antiretroviral medications that are on DRUG LIST 1. Always administer a separate DRUG FORM 1 questionnaire for every reported medication on DRUG LIST 1.

Some centers may opt to send a medication form to the participants prior to their visit (See Appendix 5). In this case, ask the participant to show you his medication form and confirm which ones are on DRUG LIST 1. It is still advisable to show the participant the medication photo cards to make sure that you have accurately captured all the antiretroviral medications that the participant is taking.

**15.B(1)** – Show the participant the current DRUG LIST 1 and the medication photo cards. If the participant brought his medication form, you should review it and confirm that the list is complete. If there is some doubt about its completeness, then show him DRUG LIST 1 and the photo cards. If the participant has problems with his vision, read the list of medications.

- Mark "Yes" or "No" if he is taking medications on this list.
- If "Yes", skip to Q15.B(3).
- If "No", continue to Q15.B(2) to ask why he is not taking them.

**15.B(2)** - This question asks the participant which antiretroviral drugs on DRUG LIST 1 he is taking. The listing on the questionnaire is not complete. However, it contains currently used medications to the best of our knowledge. Refer to the complete DRUG LIST 1 for proper coding for drugs that are not on the questionnaire. This list is updated every six months.

- Mark each drug the participant indicated he was taking by filling in the corresponding bubble.
- If participant says he is taking other antiretroviral drug(s) on DRUG LIST 1\*, specify the name(s) and fill in the drug code(s) in the "Other" box.
- If the participant reports he is in a blinded trial (DGF1 Q1.B="Yes") specify the



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name of the drugs that are part of the blinded trial and record the code for the blinded trial in the "Other" box. See the list of blinded trials on drug list 1. If the blinded trial is not listed, bring it to the attention of the Clinic Coordinator. If it is a new blinded trial, contact CAMACS for a new code.

- For EACH drug reported, complete a DRUG FORM 1. This includes drugs taken for non-research use and unblinded research trials. If the research trial is blinded, fill out one Drug Form 1 per trial. See DRUG FORM 1 section for more details.

EXAMPLES for Participant "X":

- X is taking Combivir (AZT, 3TC), Indinavir, and Norvir as his regular treatment or part of an unblinded research trial. Bubble Combivir, Indinavir, and Norvir and complete a separate DRUG FORM 1 for each drug.
- X is in a Combivir/Trizivir blinded trial and taking Sustiva. He knows that he is taking Sustiva but he does not know whether he is taking Combivir or Trizivir (i.e., he is blinded to the treatment). Complete two separate DRUG FORM 1's for Sustiva (220) and the Combivir/Trizivir Blinded Trial (250).

\* FOR ANY OTHER ANTIRETROVIRAL MEDICATION REPORTED BY THE PARTICIPANT, BUT THAT IS NOT ON DRUG LIST 1:

- Check DRUG LIST 2 to see if it is on this list.
  - If it is on Drug List 2, record medication in **Q15.C only**.
  - If it is not on either Drug List 1 or Drug List 2, mark "*Other Antiretroviral*" in **Q15.B(3)**, record drug name in box and complete a DRUG FORM 1. Bring this to the attention of clinic coordinator/director to verify if this is a true antiretroviral medication.
  - If it is a true antiretroviral medication and the drug is not on the coding list, the center's director will contact the coordinator at CAMACS to have a code assigned and add it to the appropriate Drug List.
  - If it turns out that it is not an antiretroviral medication, eliminate the DRUG FORM 1 filled out for this medication, determine what type of drug it is, and code it in its appropriate place (**Q15.C** or **Q16**).

**15.B(3)** - This question assesses whether the participant took a break for at least 2 consecutive days from his antiretroviral medications, and if so, for how long. It also captures how many times he missed and if any of the breaks were prescribed by a physician. If the participant had multiple lapses in therapy use, ask him to report the length of the most recent one.

**15.C** - This question asks about non-antiretroviral drugs on DRUG LIST 2, i.e., medications for the treatment or prevention of illnesses caused by HIV or related to HIV or AIDS.

- Give the participant DRUG LIST 2. If the participant has problems with his vision,

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read the list of medications.

- Record each drug the participant responds to with a "Yes" by filling in the corresponding bubble next to the drug name.

For a reported HIV-related illness medication that is not on DRUG LIST 2:

Find out if the participant is taking this medication for a true HIV-related illness by contacting your clinic coordinator.

If it is an HIV-related illness, the drug may need to be added to DRUG LIST 2. Contact the coordination team at CAMACS who will investigate this drug and determine if it should be added to DRUG LIST 2.

If it is NOT an HIV-related illness, record the medication in Q16.17

**Question 16:** Other Medications (since last visit).

A 600 series of categorical codes for Hormones and Steroids were created for the reporting of medications in the other drug section 16.15. These drugs were removed from the 500 series.

- Continue administering Q16.1-3: report steroids injected or taken orally, thyroid hormones and other hormones / anabolic steroids (except testosterone) in Q16.1-3 respectively.

(Report testosterone which has a specific code = 606 in the other drug section Q16.15.)

- Report the following in Q16.15: progesterones (602), estrogens (603), steroids inhaled or taken topically (604), testosterone (606), and Serostim (607).

This question should be used to record medications taken for reasons other than for HIV and AIDS. Drug names are also categorized separately for cholesterol / lipid problems, for hypertension, for diabetes, and for hepatitis.

REFER TO THE DRUG LISTS IF THE PARTICIPANT NEEDS ASSISTANCE WITH IDENTIFYING HIS MEDICATIONS.

- Record the name and use of the drug in column B.
- If unsure about the spelling, ask the participant.
- Maintain a log of written responses.
- Record whether or not the participant has taken each drug in the past 5 days, or for aspirin, in the last week in column C.

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Report medications in DRUG LIST 2 that are used for other medical problems. **If the medication is not in the Drug Form 1 list then refer to the general 500 series list. For example, if the participant reports bactrim, use code 112. If the participant reports amoxicillin, then use the 500 series code for antibiotics, 529.**

There are also some HIV antiretroviral drugs that are used to treat Hepatitis. They have separate codes for the treatment of Hepatitis, such as Tenofovir (code=708) or Epivir (code=705), and should be recorded in the Hepatitis section when prescribed to treat hepatitis. If Epivir is being used to suppress HIV and Hepatitis, record in both Q15 and Q16.

The medication section is useful for tracking the presence of chronic conditions over time. For each reported medication, check for the presence of a corresponding medical condition. If it was not diagnosed since the last visit, ascertain if it was reported at an earlier visit.

For example, if someone reported taking hypertension medication at V55, but was diagnosed with hypertension at V40, he would not report that he was diagnosed with hypertension since his last visit. However, we would know that he still had a hypertension condition because he reported a hypertension medication at V55.

Be aware of combination medications that are designed to treat multiple conditions (e.g., Caduet, 4105, used for treating cholesterol and hypertension). Report the drug in the respective box of each reported condition.

### Medication examples

Examples	Type of Medication that was reported by the participant	If a participant reported taking a medication for the following sets of medical condition(s):	Interviewer records the medication in the following respective question(s).
Participant 1	Caduet (Code = 4105)	Cholesterol Hypertension	Q16.11 Cholesterol Q16.12 Hypertension
Participant 2	Cholesterol (800 code series)	Cholesterol Heart Failure	Q16.11 Cholesterol
Participant 3	Hypertension (4000 code series)	Migraines	Q16.15 Other
Participant 4	Herpes/Hepatitis (code=707)	Hepatitis Herpes	Q16.14 Hepatitis Q16.8 Herpes

## **Guidelines for Completing Visit 55 Section 4 (MACS Questionnaire)**

**16.8** - Acyclovir (CODE-"527") should be recorded here. Treatment can either be taken everyday to suppress and prevent outbreaks; or treatment can be taken at the first sign of an outbreak or active lesion.

- If the participant responds "Yes"; Ask the participant if he is taking it everyday or only when he had active lesions or had an outbreak; Mark "Yes" or "No" for each.
- If the participant claims that he is taking Acyclovir as part of his HIV therapy to combat Herpes, Acyclovir should still be recorded in this section only.

**16.9** - Record "Yes" only if the participant was taking a drug to treat a diagnosed erectile dysfunction only. If there was no diagnosis for erectile dysfunction and the prescribed medications as indicated were taken to enhance sexual performance, then record "No". Medications taken to enhance sexual performance without a diagnosis are captured by Q49 in the behavioral section.

**16.10** - Record whether or not the participant has taken aspirin three days or more on a weekly basis.

**16.11** - Record any prescribed lipid-lowering medications to lower cholesterol, triglycerides, lipids, or fat. Cholesterol and lipid-lowering meds are part of the 800 series and can be found in the codebook and Drug Lists.

Note: Keep in mind that the 1000 digit place (top row of the code box) is reserved for combination hypertension drugs that are also taken for high cholesterol. Hypertension meds have a 4 digit code and the 1000 digit place was added to the cholesterol code box to accommodate the insertion of the 4 digit hypertension codes. This 1000 digit place can be left blank or filled in as a zero for the regular 800 series codes.

**16.12** - Record specific hypertension medications to treat hypertension in this section. The hypertension meds are part of the 4000 series and can be found in the codebook and Drug Lists.

**16.13** - Record any diabetic medications for lowering or regulating blood sugar. The diabetic meds are part of the 900 series and can be found in the codebook and Drug Lists.

**16.14** - Record any hepatitis medications to treat hepatitis. The hepatitis medications are part of the 700 series. A list of the hepatitis meds can be found in the codebook and Drug Lists.

**16.15** - Record other medications NOT reported in (Q16.1-Q16.14).

## Guidelines for Completing Visit 55 Section 4 (MACS Questionnaire)

**Report the following in Q16.15: progesterones (602), estrogens (603), steroids inhaled or taken topically (604), testosterone (606), and Serostim (607).**

There may be some drugs on DRUG LIST 2 that may be used for reasons other than HIV. Code these DRUG LIST 2 meds in this section as long as they are not being taken for any HIV related condition. Record prescribed medications first and with space permitting, add vitamins and herbal preps last.\* If a participant is taking a hypertension or lipid-lowering medication for an indication OTHER than treating hypertension or high cholesterol, please record the drug and it's use here.

\* If a participant is taking more than one herbal preparation or more than one type of vitamin, record it only once. Do not record the individual herbal preparations and vitamins because all are classified under one code and cannot be distinguished in the database. This same rule applies to all other meds that are classified under one categorical code.

**NOTE:** Pay attention to the participant's reasons for using the drug. If the specific reason fits a previously defined category and you have assessed that the reason given is plausible then move the recording of the drug to that category. If the participant reports an herbal preparation to reduce cholesterol then go back and record it in Q16.13. If you are not certain about the indications for the drug, check with your supervisor or a clinician before placing the reported drug in another category.

**NOTE:** If the participant reports Acyclovir in this section for the first time, go back and re-ask Q16.8. Probe if the participant says he is not taking it for Herpes by telling him that Acyclovir is an antiviral drug that specifically attacks the Herpes virus. If the participant insists that he is not taking it for Herpes then code it in Q16.15.

**NOTE:** Keep in mind that the 1000 digit place (top row of the code box) is reserved for hypertension drugs that are being taken for a reason not specified in the previous questions. This 1000 digit place can be left blank or filled in as a zero for the regular 3 digit drug codes.

### **Question 17:** Health Insurance (Part A) and Medication Coverage (Part B)

**17.A** - ADAP stands for AIDS Drug Assistance Program, a drug coverage program for those HIV patients who do not have adequate medical coverage. Ryan White was added to this question in v52 which covers regular medical care in addition to medications.

- Ask about ADAP or Ryan White, Mark "Yes" or "No" and proceed to Q17.B.

If participant answers "No" to Q17.B indicating that he did not have any medical coverage since his last visit, skip to Q17.C.

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If the participant answers "Yes" to Q17.B, read items *Q17.B.1-7 and Q17.C*.

- Mark "Yes" or "No" for each item.

### **17.B(1-7)** - List of health insurance plans.

HMO is a health maintenance organization, such as Kaiser Permanente, Harvard Health, and Prudential HMO.

If privately insured through their employment and not by an HMO, it is group private insurance.

Item 4, Medicaid, Medi-cal, Medical Assistance

Some examples of medical assistance includes:

ORSA : Outpatient Reduced-Cost Simplified Application Plan – covers outpatient medical care and medicines; for LA County residents that are not fully eligible for Medi-Cal

ATP: Ability-to-Pay Plan – also covers for medical care, hospitalizations, and medicines; for those also not fully eligible for Medi-Cal

GR: General Relief – Program that provides basic expenses such as food stamps, financial assistance, and medical services via Medi-Cal. So this may be considered Medi-Cal, but they report that they see it as GR.

Positive Healthcare - A Medi-Cal managed care plan designed for people living with AIDS in Los Angeles County (and Florida, I believe); I believe this is provided through the AIDS Healthcare Foundation.

If response to **Q17.B** = "*Other*" (item 7) type of medical coverage, specify name and whether private insurance in specify box. An example of other medical care assistance is Ryan White.

**17.C** - This question captures those participants that have any form of medication insurance coverage, even if they do not have other medical coverage. It pertains to the participant's current status of insurance coverage for medications.

If the participant answers "No" to all items in Q17.B and "No" to Q17.C, skip to Q19.

If the participant answers "Yes" to having at least one health insurance plan in *B* or *C*, continue with Q18.

### **Question 18: Currently Insured**

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This question is asked only if participant answered "Yes" to Q17B. or C.

**Question 19:** Dental Insurance Coverage

**Question 20:** Use of Outpatient Medical Care Since Last Visit

Outpatient medical care does not include overnight hospital stays. Outpatient clinics within hospitals should be recorded here unless it is for a procedure related to a potential medical outcome, such as cardiovascular disease (see Q6 for further clarification).

**HMO:** May include the participant's primary care doctor within an HMO or a specialist doctor such as an allergist as long as the doctor is part of an HMO, such as closed HMOs where the participant goes to his HMO for all his outpatient care.

**Doctor's office or specialty clinic:** Includes the participant's primary care doctor if he is not part of an HMO (this will include doctors who are part of Preferred Provider Organizations). It also includes specialty doctors such as allergists, neurologists who may work in a private solo or group practice. This group practice may be freestanding such as a clinic or part of a hospital.

Whenever a participant says he has been to the lab, probe if the lab work had been conducted as part of another doctor's or clinic visit. If so, record it as a doctor's visit. However, if the lab procedure was performed on a separate visit or location (even on the same day) then mark it as "Other". If uncertain, record it as "Other".

**Any other clinic:** These include public health clinics, primary care clinics for gay and lesbian communities, the VA, or student health services. If a participant says "VA", the interviewer should probe as to whether this was a visit to the participant's own doctor there or if it was a clinic appointment; in either case code it as a doctor's office or specialty clinic. In absence of this information, code it as any other clinic (CLOV).

**Emergency Room:** These are ERs attached to a hospital.

**Other outpatient care:** Facilities that provide lab work or special non-mental health therapy. Miscellaneous services are appropriate for the other category, including chemotherapy, pentamidine, and physical therapy.



## Guidelines for Completing Visit 55 Section 4 (MACS Questionnaire)

Examples of service types:

allergist	Doctor's office/Specialty clinic
podiatrist	Doctor's office/Specialty clinic
dermatologist	Doctor's office/Specialty clinic
eye doctor	Doctor's office/Specialty clinic
ENT surgeon	Doctor's office/Specialty clinic
optometrist	Doctor's office/Specialty clinic
X-ray	other outpatient care
blood tests	other outpatient care
physical therapy	other outpatient care
resp therapy	other outpatient care
speech therapy	other outpatient care
CT scan	other outpatient care
VA	any clinic
student health clinic	any clinic

### Question 21: Use of Providers Since Last Visit

**Q21** This question asks about dental services.

**Q21.a Follow up the dental service question with a frequency of teeth brushing. If the participant wears dentures, ask him the number of times he washes them per day. For example, if he washes his dentures twice a day, mark “2 times per day”.**

**(This question was moved from the MWII to the form at V55.)**

### Question 22: Did Not Seek Medical Care When Needed Since Last Visit

**22.A** - If the participant responds “No,” there was not a time he did not seek care or obtain prescriptions he thought he needed, skip to Q23A. If the participant responds “Yes,” there was a time he did not seek care or obtain prescriptions when he thought was needed, go to Q22.B.

**22.B(1)** - Record in participant's own words reason for not seeking medical or dental care or not obtaining prescription medications if other than financial. Maintain log of written responses.

**Question 23.A.** This question offers the chance for the interviewer to capture any information that the participant may have forgotten to report. Information that is not reportable in the body of the questionnaire may be added here.



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### Question 24: Administration of Behavior Section

Mark "S4 interview" if behavioral section of S4 questionnaire is administered. If the behavioral section is administered by computer, mark "MWII (ACASI)". If the participant refuses the behavioral section, mark "Participant refused behavior section."

**Note - If the participant does not complete the MWII, administer the entire S4 and paper version of the abbreviated QOL, S2/S3, and MAS.**

### Question 25: S4 Telephone Interview

Mark "Yes" if S4 interview is being conducted over the telephone. Otherwise mark "No". **The centers have the option of conducting telephone interviews via the MWII.**

### Question 26: S4 Home Visit

Mark "Yes" if the S4 interview is being conducted in the participant's home. Other interviews conducted off-site such as in physician's office or hospital are considered "Home visit" and accordingly, should be marked "Yes".

### Question 27:

Mark "Yes" if interview being conducted is an abbreviated interview. Abbreviated interview questions are marked with a bolded asterisk (\*) next to the question number. **(See Page 54)**

### Time Ended:

Record the time the S4 form interview ended. If the participant completes the entire S4 paper version, then go back to page 22 to record the time after completion.

### Interviewer Number:

Sign your name and fill in your interviewer number

**Clinic identifier:** Fill in the clinic at which the study visit session was conducted.

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The Behavior section begins at this point. It is preferable that the participant completes the behavioral question on the MWII unless he requests a personal interview.

**Question 29: Anti-HIV Medications Prep or PEP Questions**

These questions are to be administered to HIV negative participants. Prep stands for pre-exposure prophylaxis or medications taken on a regular basis or prior to engaging in sexual activity to prevent HIV infection. PEP stands for post-exposure prophylaxis or medication following sexual activity.

If a participant ask for more information about these medications, advise him to see his doctor.

**29 Ascertain if the participant has taken PREP or PEP. Response options are:**

**NO**  
**YES**  
**Don't remember**  
**HIV infected.**

Proceed to Q29.a only if participant responds "YES". Otherwise, skip to Q30.

**29.a. Ask the participant to choose from the list of the PREP or PEP medications he is taking. Only the plausible medications are listed. If the participant claims he is taking PREP or PEP medication(s) that are not listed, choose other prescribed or other over-the-counter.**

The participant may report up to 3 medications. Record one medication at a time then proceed to Q29.b - Q29.e for each respective medication.

**Q29.b. Note - this question refers to the last 6 months. Ask the participant if he had taken the medication around having sex, before or after.**

If yes, proceed to Q29.c  
if no, proceed to Q29.d.

**29.c. Ask the participant when he takes the medication around sex and read each response option. This is a multiple response option.**

**29.d. Again this question refers to the past 6 months. Ask the participant to select the how often he has taken this drug that most typically characterizes the frequency in the past 6 months.**

**29.e. Ask the participant to select his primary source.**

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### Questions 30: Annual Income

Ask participant to select the range of income listed that matches his individual annual income before taxes.

### Question 31: Major Financial Difficulty

This question assesses whether participant is **CURRENTLY** having difficulty meeting basic expenses.

If yes, ask if it is greater, less or the same as the time he came in for his last visit.

### Question 32: Employment Changes due to HIV Disease

If the participant responded "Yes" he has changed employment because of HIV, ask each possible reason and record "No" or "Yes" response. If all items 1-3 are "No", bubble in "Yes" for 4 ("Other") and record participant's reason in specify box.

### Question 33: Cigarette Smoking

**Note - 2 questions about secondary smoke exposure has been added to the questionnaire.**

**33.A** - If participant never smoked cigarettes, mark "No" and **go to Q33D**.

**33.B & C** - If participant currently smokes cigarettes ("Yes" to Q33.B), ask Q33.C. If participant does not currently smoke or only smokes occasionally, skip to **Q33.D**.

**33.D and E.** Preface these two questions by reading the introduction: **Thinking about other cigarette smokers.**

**D.** Ask the participant to estimate the number of years living in household as a child (<18 years old) where other smoker(s) lived. Ask him to accumulate the years across households.

**E.** Ask the participant about living in households as an adult (18 years and older) with other smokers. Again, ask him to accumulate the years across households.

### Question 34: Alcoholic Beverages

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If participant did not drink any alcoholic beverages in the past 6 months, skip to Q34.D.  
If participant drank alcoholic beverages in the past 6 months, ask participant Q34.B-D.  
**Sexual activities - Note - numerous questions have been removed from this section.**

### Definition of Sexual Activity

If anyone asks why we include “deep kissing” in this definition, please reply with the following answer:

“When the MACS started, this definition was adopted for sexual activity as we really didn't know how HIV was transmitted (or even that it was HIV!) and wanted to cover all potential routes. But nowadays, it probably stays in there only because of a desire to not change definitions in midstream of something as basic as sex.”

### Question 35 through 41: Sexual Activities

If a participant asks why he is being asked about deep kissing (Q38.6 and/or Q41.9), please reply with the following answer:

“While there is no linkage between deep kissing and transmission of HIV, some researchers would like to know about deep kissing because it is possible that some non-HIV viruses are transmitted during deep kissing.”

### Question 35: Any **sexual activity** since his last visit.

If participant had no sexual activity since his last visit then skip to Q42 (*Recreational Drugs*).

### Question 36: Any **sexual activity** with women

If the participant had no sexual activity with a woman since his last visit, skip to Q39 (*Sexual activity with men*).

### Question 37: **Female Sexual Partners**

For A and B, if the participant's response is 1000 partners or more, code "999".

If the participant reports only one female partner ( $A + B = 1$ ) then go to Q37.C.1.  
If the participant reports more than one female partner ( $A + B \geq 2$ ) then go to Q37.C.2.

**37.C.1 & 37.C.2** - Ascertain if one of the partners reported in A or B is a main partner. If the participant considers a partner to be his main partner (C.1="Yes" or C.2="Yes") then go to Q37.D and Q37.E. Else, go to Q38.

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**37.D & 37.E** - Asks if the participant practiced unsafe sex with his main partner and for information on the main partner's HIV status.

**Question 38: Female Sexual Partners**

Column A pertains to only one sexual partner (sum of Q37.A and Q37.B = 1).

Column B pertains to two or more sexual partners (sum of Q37.A and Q37.B > 1)

**Administer questions and record responses in the column according to the number of reported sexual partners.**

**38.1** - Oral sex with female partner:

Fill in "NO" or "YES" if one sexual intercourse partner was reported (Q37.A= 1).

**Fill** in number of partners if two or more sexual intercourse partners (Q37.A>1).

**38.2** - Vaginal sex with female partner:

Fill in "NO" or "YES" if one sexual intercourse partner was reported (Q37.A=1).

**Fill** in number of partners if two or more sexual intercourse partners (Q37.A>1).

If "NO" or zero, go to Q38.4.

**38.3** - Condom use every time during vaginal sex with female partner:

Fill in "NO" or "YES" if one sexual intercourse partner was reported (Q37. =1).

**Fill** in number of partners if two or more sexual intercourse partners (Q37.A>1).

**38.4** - Anal sex with female partner:

Fill in "NO" or "YES" if one sexual intercourse partner was reported (Q37.A=1).

**Fill** in number of partners if two or more sexual intercourse partners (Q37.A>1).

If "NO" or zero, go to Q38.6.

**38.5** - Condom use every time during anal sex with female partner:

Fill in "NO" or "YES" if one sexual intercourse partner was reported (Q37.A=1).

**Fill** in number of partners if two or more sexual intercourse partners (Q37.A>1).

**38.6** - Deep kissing (pertains to all female sexual partners with or without intercourse):

Fill in "NO" or "YES" if one sexual partner was reported (Q37.A + Q37.B = 1).

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**Fill** in number of partners if two or more sexual partners ( $Q37.A + Q37.B > 1$ ).

### **Question 39:** Any sexual activity with men

If the participant had no sexual activity with a man since his last visit, but had sexual activity with a woman skip to *Q41.10*.

### **Question 40: Male Sexual Partners**

For *A* and *B*, if the participant's response is 1000 partners or more, code "999".

If the participant reports one male partner ( $A + B = 1$ ) then go to *Q40.C.1*.

If the participant reports more 2 or male partner ( $A + B \geq 2$ ) then go to *Q40.C.2*.

*40.C.1* & *40.C.2* - Ascertains if one of the partners reported in *A* or *B* is a main partner. If the participant considers a partner to be his main partner (*C.1*="Yes" or *C.2*="Yes") then go to *Q40.D* and *Q40.E*. Else, go to *Q41*.

*40.D* & *40.E* - Asks if the participant practiced unsafe sex with his main partner and for information on the main partner's HIV status.

### **Question 41: Male Sexual Partners**

Column *A* pertains to only one sexual partner (sum of *Q40.A* and *Q40.B* = 1).

Column *B* pertains to two or more sexual partners (sum of *Q40.A* and *Q40.B* > 1).

**Administer questions and record responses in the column according to the number of reported sexual partners.**

#### **41.1** - Insertive oral sex with male partner:

Fill in "NO" or "YES" if one sexual intercourse partner was reported ( $Q40.A = 1$ ).

**Fill** in number of partners if two or more sexual intercourse partners ( $Q40.A > 1$ ).

#### **41.2** - Insertive anal sex with male partner:

Fill in "NO" or "YES" if one sexual intercourse partner was reported ( $Q40.A = 1$ ).

**Fill** in number of partners if two or more sexual intercourse partners ( $Q40.A > 1$ ).

If "NO" or zero, go to *Q41.5*.

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**If 2 or more sexual intercourse partners (Q40.A>1), ask Q41.3b & Q41.3b.1- 4.**

**If one sexual intercourse partner (Q40.A. = 1), ask Q41.4a and Q41.4a.1-2.**

**41.3b** - If multiple partners: condom used every time during insertive sexual intercourse

Fill in number of partners with condom use every time.

If any partners with whom condom not used every time ( $Q41.3b < Q41.2b$ ), go to Q43.b.1. Else skip to Q41.3b.4

**41.3b.1 - 41.3b.3**

HIV status of any partners with whom the participant did not use a condom during anal insertive sex partners

Report "NO" or "YES" if any HIV positive partners.

Report "NO" or "YES" if any HIV negative partners.

Report "NO" or "YES" if any HIV unknown status partners.

**41.3b.4** - Ejaculation during anal insertive sex with no condom use or when condom failed

Fill in number of partners.

**41.4a** - If one sexual intercourse partner: Condom used every time with anal insertive sex.

Fill in "NO" or "YES".

If "NO", go to Q41.a.1. Else skip to Q41.a.2.

**41.4a.1**

- HIV status of the partner with whom the participant had unprotected anal insertive sex partners (Q41.4a = "NO").

Fill in "NEG", "POS", or "Unknown".

**41.4a.2**

- Ejaculation during anal insertive sex with no condom use or when condom failed

Fill in "NO" or "YES".

**41.5** - Receptive oral sex with male partner:

Fill in "NO" or "YES" if one sexual intercourse partner was reported (Q40.A=1).

Fill in number of partners if two or more sexual intercourse partners (Q40.A>1).

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**41.6** - Receptive anal sex with male partner:

Fill in "NO" or "YES" if one sexual intercourse partner was reported (Q40.A=1).  
Fill in number of partners if two or more sexual intercourse partners (Q40.A>1).

If none, go to Q41.9.

**If multiple sexual intercourse partners (Q40.A > 1), ask Q41.7b and Q41.7b.1-4.**

**If one sexual intercourse partner (Q40.A = 1), ask Q41.8a and Q41.8a.1-2.**

**41.7b** - If multiple partners: condom used every time during receptive sexual intercourse

Fill in number of partners with condom use every time.

If any partners with whom condom was not used every time (Q41.7b < Q41.6b), go to Q47.b.1. Else skip to Q41.7b.4

**41.7b.1 - 41.7b.3**

HIV status of any partners with whom the participant had unprotected anal receptive sex partners

Report "NO" or "YES" if any HIV positive partners.

Report "NO" or "YES" if any HIV negative partners.

Report "NO" or "YES" if any HIV unknown status partners.

**41.7b.4** - Ejaculation during anal receptive sex with no condom use or when condom failed

Fill in number of partners.

**41.8a** - If one sexual intercourse partner: Condom used every time with anal receptive sex.

Fill in "NO" or "YES".

If "YES", go to Q41.8.a.1. Else go to Q41.8.a.2.

**41.8a.1**

- HIV status of the partner with whom the participant had unprotected anal receptive

Fill in "NEG", "POS", or "Unknown".



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**41.8a.2**

- Ejaculation during anal receptive sex with no condom use or when condom failed

Fill in "NO" or "YES".

**41.9** - Deep kissing (pertains to all male sexual partners with or without intercourse):

Fill in "NO" or "YES" if one sexual partner was reported (Q40.A + Q40.B = 1).

**Fill** in number of partners if two or more sexual partners (Q40.A + Q40.B > 1).

**41.10** - Met any new partners with whom you had sexual intercourse since your last visit. If the participant has not met any new partners in past 6 months, fill in "NO" and skip to Q42. ELSE, fill in "Yes" and ask Q41.11.

**41.11** - Bubble in the setting at which the participant met his last new partner.

**41.12** - Any drugs and/or alcohol used during intercourse with last new partner.

**Select all that were used during any of the sexual intercourse encounters with last new partner.**

**41.13** – How often used condoms with last new partner.

**Question 42:** Recreational Drugs

If a participant reports "Yes" to "Other forms of cocaine", "Speed, Meth or Ice", "Heroin" or "Speedball (heroin and cocaine together)" then ask participant "How did you use/take drug since last visit." Mark all answers that apply.

For other kinds of drugs, ask the participant for specific names. If given a slang name, ask if known by other name. Record both the slang name and other name in same specify box. These will be coded using codes in **Appendix 4**. For "other kinds of street/club drugs", if A is "Yes", ask B for each additional drug.

Sexual performance enhancing drugs may be prescribed or over the counter. It is okay to report "Yes" for any prescribed or over the counter drugs as long as the participant was taking them to enhance sexual performance that was not associated with a diagnosis of erectile dysfunction. A list of common drugs is in the S4 questionnaire and in **Appendix 4**.

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**Questions 43-49:** IV Drug Use –

**Note questions about shooting gallery activities and number of times injected per month were removed were deleted from this section.**

If the participant does not report any injection drug use in Q42, then skip to Q45 and ask only about any drug treatment programs since his last visit.

If the participant reported that he injected drugs (intravenous, intradermal or intramuscular) in Q42.c since his last visit then administer Q43-Q45.

**43.A.** – Currently injecting drugs.

**Question 44.A:** Needle Exchange Programs

If answer is “Yes” to A, ask B (how often).

**Question 45:** Drug Treatment

This question asks if the participant has been in any sort of drug treatment program since his last visit.

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**Appendix 1: Cancer Site Codes**

1400	Oral/Pharynx (not otherwise specified) (NOS)
1409	Lip
1410	Tongue
1420	Salivary Gland
1460	Tonsil
1470	Nasopharyngeal
1500	Digestive System (not otherwise specified)
1510	Stomach
1520	Small Intestine
1530	Colon
1540	Rectum
1543	Anus/Anorectal
1550	Liver
1570	Pancreas
1600	Respiratory System and Intrathoracic Organs (not otherwise specified, see below) (including nasal cavity, sinuses, middle and inner ear, larynx, pleura, thymus, heart and mediastinum)
1620	Lung/Bronchus
1650	Other Respiratory
1700	Bones/Joints
1710	Soft Tissue
1730	Skin (NOS, to Kaposi's sarcoma, melanoma or basal cell)
8090	Basal Cell Carcinoma
9140	Kaposi's Sarcoma
8720	Melanoma
1850	Prostate
1870	Male Genitals (not otherwise specified)
1860	Testes
1874	Penis
1880	Bladder

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1890	Kidney
1900	Eye/Orbit
1910	Brain
1920	Other Nervous System
1930	Thyroid
1940	Other Endocrine Glands
9590	Non-Hodgkin's Lymphoma
9710	Brain Lymphoma
9750	Burkitt's Lymphoma
9650	Hodgkin's Disease
9730	Multiple Myeloma
9800	Leukemia (not otherwise specified)
9821	Acute Lymphocytic Leukemia
9823	Chronic Lymphocytic Leukemia
9861	Acute Myelocytic Leukemia
9863	Chronic Myelocytic Leukemia
9890	Monocytic Leukemia
1950	Cancer (not otherwise specified)
7856	Castleman's Disease

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**Appendix 2: Tissue Biopsy Site**

- 01 Adrenals
- 02 Blood
- 03 Bone marrow
- 04 Brain
- 05 Cerebrospinal fluid
- 06 Gastro-intestinal tract
- 07 Kidney
- 08 Liver
- 09 Lung
- 10 Lymph nodes
- 11 Myocardium
- 12 Nerve, peripheral
- 13 Oral cavity
- 14 Prostate
- 15 Skeletal muscles
- 16 Skin
- 17 Spinal Cord
- 18 Spleen
- 19 Anus
- 20 Rectum
- 21 Urinary tract
- 22 Thyroid
- 98 Other
- 99 Biopsy, unknown site

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**Appendix 3: Diagnosis of Tissue**

- 0 Don't know
- 1 Tuberculosis
- 2 Cancer ( including all tumor cancers, and lymphoma)
- 3 Toxoplasmosis
- 4 (Benign) reactive hyperplasia
- 5 Benign / Dysplasia
- 6 Non-diagnostic/non-specific/inconclusive/indeterminate/normal/  
negative/nothing found
- 7 Vasculitis
- 8 Granuloma
- 9 Other

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### Appendix 4:

#### Other Kinds of Street/Club Drug Codes (Q42)

- 2 "Downers" including barbiturates as yellow jackets or reds, tranquilizers like Valium, Librium, Xanax or other sedatives or hypnotics like Quaaludes
- 3 Methadone or other opiates/narcotics like Demerol
- 4 PCP, angel dust, psychedelics, hallucinogens, LSD, DMT, mescaline, Ketamine or Special K
- 6 Ethyl Chloride as inhalant
- 7 GHB
- 9 Other

#### Sexual Performance Enhancing Drugs

Viagra

Herbal Viagra

Levitra

Cialis

Testosterone patch, injection or topical creams

Yohimbine

Ephedrine or Guarana containing products

Tri-Mix

Penile suppositories

Any other compound, herbal preparation or prescription drug used primarily to enhance sexual performance in the absence of diagnosed primary erectile dysfunction

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**Appendix 5:**

MACS  
Prescribed Medications

Please list all the prescribed medications that you have taken since your last visit on \_\_\_\_ \_\_\_\_. Bring this form to your next study visit. If you have not taken any prescribed medications, please disregard this form. Thank you.

Drug name	If you started taking this drug since your last visit, write the month and year when you started.	If you stopped taking drug since last visit, in what month and year did you stop?



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### Appendix 6: List of Reportable Outcomes

- Any AIDS diagnosis
- Any malignancy (excluding basal cell carcinoma)
- Any neurological outcome
- Any pneumonia
- Lung infections, excluding bronchitis
- Tuberculosis
- Bacterimias
- Septicemias
- Anal dysplasia
- Any cardiovascular outcome
- Angina
- Heart Attack (MI)
- Congestive Heart Failure
- Stroke (CVA)
- Seizure
- Osteoporosis
- Avascular necrosis, Osteonecrosis
- Kidney disease / Renal Failure
- Liver Disease
  - Cirrhosis
  - Fibrosis
  - Inflammation
  - Other liver disease, excluding positive hepatitis (serology only)
- Castleman's Disease
- Death

Other self-reported conditions or diagnoses that do not qualify as an "outcome" and do not require submission of an outcome report include:

- AIDS-related symptoms (Thrush, diarrhea, weight loss)
- Hepatitis
- Sinusitis
- Bronchitis
- Skin infections
- Hernias
- Cardiovascular symptoms (high blood pressure, high cholesterol, high blood sugar/diabetes)
- Elevated liver function tests/enzymes
- Lipodystrophy

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### **APPENDIX 7A: AIDS Diagnosis Codes** (Report in Q2. For Kaposi Sarcoma, Primary Brain Lymphoma and Non-Hodgkin's Lymphoma, see Appendix 1 and report in Q1.)

- 0001 Kaposi's sarcoma
- 0002 Pneumocystis carinii pneumonia
- 0003 Toxoplasmosis (at a site other than or in addition to liver, spleen, muscle or lymph nodes)
- 0004 Cryptosporidiosis with diarrhea persisting > 1 month
- 0005 Isosporiasis with diarrhea persisting > 1 month
- 0006 Histoplasmosis, disseminated, at a site other than or in addition to lungs or cervical or hilar lymph nodes
- 0007 Cytomegalovirus infection histopathologically documented (of an organ other than liver, spleen, or lymph nodes) or diagnosis by serology culture alone. If CMV retinitis or CMV polyradiculitis, code 0008 or 0027 respectively.
- 0008 CMV Retinitis, eye unknown
- 0028 CMV Retinitis, left eye
- 0029 CMV Retinitis, right eye
- 0027 CMV polyradiculitis. Usually developing in a patient with advanced immune deficiency who has evidence of CMV infection elsewhere, e.g., CMV retinitis, colitis, with the subacute onset of lower extremity weakness, sacral/back pain, sphincter disturbance. Cerebrospinal fluid analyses usually show a marked inflammatory response with elevated WBC, total protein, and in 50%, positive CMV culture. Autopsy confirmation may be present with demonstration of CMV in the lumbosacral nerve roots.
- 0009 Primary Lymphoma of brain
- 0010 Diffuse, undifferentiated B-cell non-Hodgkin's lymphoma, including:
  - a. small noncleaved Lymphoma of (either Burkitt or non-Burkitt type)
  - b. immunoblastic sarcoma (equivalent to any of the following, although not necessarily all in combination: immunoblastic Lymphoma, large-cell Lymphoma, diffuse histiocytic Lymphoma, diffuse undifferentiated Lymphoma, or high-grade Lymphoma)
- 0011 Diffuse, undifferentiated B-cell non-Hodgkin's lymphoma metastatic to brain
- 0012 Progressive multifocal leukoencephalopathy (Papovavirus infection, brain)

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- 0013 HIV encephalopathy (dementia) determined to be probable after review by the Neuropsychology Working Group
- 0014 Candida esophagitis; tracheal, bronchial or pulmonary candidiasis
- 0015 Atypical (non-tuberculous) mycobacterial infection, (disseminated at a site other than or in addition to lungs, skin or cervical hilar lymph nodes), not specified
- 0016 Atypical (non-tuberculous) mycobacterial infection, (disseminated at a site other than or in addition to lungs, skin, or cervical hilar lymph nodes) specified as *M. avium-intracellulare*
- 0017 Other atypical (non-tuberculous) mycobacterial infection, (disseminated at a site other than or in addition to lungs, skin or cervical hilar lymph nodes), specify.
- 0018 Disseminated M.T.B.
- 0019 Cryptococcal infection extrapulmonary - not otherwise specified
- 0020 Cryptococcal infection extrapulmonary - meningitis
- 0021 Cryptococcal infection extrapulmonary - other internal organ
- 0022 Cryptococcal infection extrapulmonary - blood
- 0023 Chronic mucocutaneous herpes simplex infection persisting > 1 month; or herpes simplex bronchitis, pneumonitis, or esophagitis
- 0024 Coccidioidomycosis disseminated (at a site other than or in addition to lungs or cervical or hilar lymph nodes)
- 0025 Salmonella (non-typhoid) septicemia, recurrent
- 0026 Wasting Syndrome: findings of profound involuntary weight loss > 10% of baseline body weight plus either chronic diarrhea (at least two loose stools per day for > 30 days) or chronic weakness and documented fever (for > 30 days, intermittent or constant) in the absence of a concurrent illness or condition other than HIV infection that could explain the findings (e.g., cancer, tuberculosis, cryptosporidiosis, or other specific enteritis.)
- 0050 Pulmonary Tuberculosis or mycobacterial TB in the lung.
- 0051 Recurrent pneumonia (more than one episode in a 1-year period), acute (new x-ray evidence not present earlier) pneumonia diagnosed by both: a) culture (or other organism-specific diagnostic method) obtained from a clinically reliable specimen of a pathogen that typically causes pneumonia (other than *Pneumocystis carinii* or *Mycobacterium tuberculosis*), and b) radiologic

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evidence of pneumonia; cases that do not have laboratory confirmation of a causative organism for one of the episodes of pneumonia will be considered to be presumptively diagnosed. Recurrent pneumonia diagnostic date is the date that the 2nd episode is diagnosed.

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### Appendix 7B. AIDS Diagnosis Descriptions

If an HIV positive participant does not directly report an AIDS dx, but describes any set symptoms that describe an AIDS condition in response to any medical history question, record the description fully in his words. Ask for diagnosing physician and for a medical release or refer to a clinician for follow up.

#### APPENDIX 7: AIDS Diagnosis Codes

##### **0001 Kaposi's sarcoma ("KS")**

KS is a cancer that causes patches of abnormal tissue to grow on the skin, in the lining of the mouth, nose, and throat or in other organs. The patches are usually red or purple and can be confused with bruises. They are composed of cancer cells and blood cells. They usually cause no symptoms, but occasionally may be painful.

##### **0002 Pneumocystis pneumonia ("PCP")**

PCP is a pneumonia that occurs among persons infected with HIV. People with CD4 counts below 200 are at risk for PCP. It causes fever, shortness of breath, and cough.

##### **0003 Toxoplasmosis (at a site other than or in addition to liver, spleen, muscle or lymph nodes)**

Toxoplasmosis is a disease caused by the parasite *Toxoplasma gondii*. HIV-infected people with CD4 counts below 100 are at risk for toxoplasmosis, which infects the brain resulting in seizures, behavior changes, weakness in the arms or legs, difficulty speaking, or visual changes.

##### **0004 Cryptosporidiosis with diarrhea persisting > 1 month**

Cryptosporidiosis is a diarrheal disease caused by a parasite that lives in soil, food, water or on surfaces that have been contaminated with waste. Infection occurs when contaminated material has been swallowed. The most common symptoms are watery diarrhea and crampy abdominal pain. Over time it can lead to severe weight loss and wasting, especially in people with low CD4 counts.

##### **0005 Isosporiasis with diarrhea persisting > 1 month**

Isosporiasis is an uncommon diarrheal illness caused by the parasite *Isospora belli*. It causes severe diarrhea, crampy abdominal pain, and difficulty digesting food. Over time, it can lead to severe weight loss and wasting.

##### **0006 Histoplasmosis, disseminated, at a site other than or in addition to lungs or cervical or hilar lymph nodes**

Histoplasmosis is caused by *Histoplasma capsulatum*, a fungus that exists in the environment and can occur in people with healthy or suppressed immune systems. While it most commonly causes pneumonia, in people with suppressed immune systems, it can also cause more serious problems such as meningitis, kidney or liver failure, and brain damage.

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### **0007 Cytomegalovirus infection**

Histopathologically documented (of an organ other than liver, spleen, or lymph nodes) or diagnosis by serology culture alone. If CMV retinitis or CMV polyradiculitis, code as indicated below, 0008 or 0027, respectively. ("CMV"). Cytomegalovirus (CMV) is a member of the herpes virus family.

### **0008 CMV Retinitis, eye unknown**

### **0028 CMV Retinitis, left eye**

### **0029 CMV Retinitis, right eye**

In people with HIV infection, CMV most commonly causes damage to the retina (the back of the eye). This can lead to blurred vision, "floaters," the appearance of blind spots or moving spots, and ultimately blindness.

### **0027 CMV polyradiculitis.**

Usually developing in a patient with advanced immune deficiency who has evidence of CMV infection elsewhere, e.g., CMV retinitis, colitis, with the subacute onset of lower extremity weakness, sacral/back pain, sphincter disturbance. Cerebrospinal fluid analyses usually show a marked inflammatory response with elevated WBC, total protein, and in 50%, positive CMV culture. Autopsy confirmation may be present with demonstration of CMV in the lumbosacral nerve roots.

CMV can affect the nerves, causing cause pain, tingling, or weakness in the limbs, particularly the legs and feet. It can also lead to loss of urinary or bowel control.

CMV can also cause ulcers in the esophagus (resulting in chest pain or difficulty swallowing) and ulcers in the bowel, causing abdominal pain, fever, diarrhea, or bloody stool.

### **0009 Primary Lymphoma of brain**

### **0010 Diffuse, undifferentiated B-cell non-Hodgkin's lymphoma. includes the following histologic types:**

- a. small noncleaved Lymphoma of (either Burkitt or non-Burkitt type)
- b. immunoblastic sarcoma (equivalent to any of the following, although not necessarily all in combination: immunoblastic Lymphoma, large-cell Lymphoma, diffuse histiocytic Lymphoma, diffuse undifferentiated Lymphoma, or high-grade Lymphoma)

### **0011 Diffuse, undifferentiated B-cell non-Hodgkin's lymphoma metastatic to brain**

Lymphoma is a cancer of the lymphatic system, the network of lymph glands, organs (including the spleen, thymus, and tonsils), and vessels that help make up part of the immune system. Lymphoma can spread to the bone marrow or can involve the brain. HIV-infected people are at higher risk for developing lymphoma than non-HIV-infected people. Likewise, the tumor can progress (get worse) faster and be more difficult to treat in HIV-infected people. Lymphoma of the brain almost always occurs in people with very low CD4 counts (below 50), whereas other lymphomas can occur in people with higher CD4 counts.

### **0012 Progressive multifocal leukoencephalopathy (Papovavirus infection, brain) ("PML")**

Progressive multifocal leukoencephalopathy (PML) is a viral infection of the brain that can occur in HIV-infected people, especially those with very low CD4 counts. PML can cause seizures, visual changes,

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difficulty speaking, weakness and difficulty moving arms and legs. The best treatment for PML is antiretroviral therapy.

### **0013 HIV encephalopathy (dementia) determined to be probable after review by Neuropsychology working group**

HIV-associated dementia is a worsening and slowing of mental function caused by HIV infection of the brain. It is more likely to occur in people whose immune systems are very weakened, especially when CD4 cell counts are below 200. Signs of early dementia include memory loss, changes in behavior, confusion, depression, and personality changes.

### **0014 Candida esophagitis; tracheal, bronchial or pulmonary candidiasis**

The common fungus *Candida albicans*, can cause a variety of conditions in people with immunosuppression caused by HIV infection. Thrush (oral candidiasis) causes white patches in the mouth. In severe cases, it can cause painful swallowing, mouth pain, or a change in the taste of food. HIV-infected women may develop more frequent or severe vaginal yeast infections (vaginitis). Candidiasis of the esophagus (the tube leading from the mouth to the stomach) causes difficult or painful swallowing, usually in people with CD4 counts below 100.

### **0015 Atypical (non-tuberculous) mycobacterial infection** (disseminated at a site other than or in addition to lungs, skin or cervical hilar lymph nodes), not specified)

### **0016 Atypical (non-tuberculous) mycobacterial infection** (disseminated at a site other than or in addition to lungs, skin, or cervical hilar lymph nodes) specified as *M. avium-intracellulare*)

### **0017 Other atypical (non-tuberculous) mycobacterial infection** (disseminated at a site other than or in addition to lungs, skin or cervical hilar lymph nodes), please specify.

Mycobacteria are types of infections that are in the TB (tuberculosis) family, but unlike TB are not usually contagious. These "atypical mycobacteria", can cause a wide variety of problems such as abscesses (pockets of pus), infections in joints, bone, the lung, lymph nodes, bowel, skin, soft tissues, and bloodstream infections.

For HIV-infected persons, the most important and common atypical mycobacterium is *Mycobacterium avium-intracellulare* (MAI, also known as *Mycobacterium avium* complex, or MAC), which frequently affects HIV-infected persons with CD4 counts below 50 and can cause fever, diarrhea, weight loss, and wasting. Much rarer mycobacterial infections include:

- a. *Mycobacterium marinum*, which can cause skin and lymph node infections
- b. *Mycobacterium ulcerans*, which can cause skin infections
- c. *Mycobacterium kansasii*, which can cause lung disease

### **0018 Disseminated M.T.B. (*Mycobacterial tuberculosis*)**

TB (tuberculosis) is more common and severe in HIV-infected people. In most people, TB causes lung infection, but in people with low CD4 counts, it can infect other organs such as the lymph nodes, bowel, lining of the heart or lungs, brain, or the lining of the central nervous system (causing meningitis), and the bloodstream.

### **0019 Cryptococcal infection extrapulmonary - not otherwise specified**

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### **0050 Pulmonary Tuberculosis or mycobacterial TB in the lung.**

Pulmonary tuberculosis (TB) is caused by the bacteria *Mycobacterium tuberculosis*. TB is passed from person to person by coughing. TB most often causes pneumonia that requires treatment with several antibiotics for at least six months. TB can be life-threatening if not treated correctly

### **0020 Cryptococcal infection extrapulmonary - meningitis**

### **0021 Cryptococcal infection extrapulmonary - other internal organ**

### **0022 Cryptococcal infection extrapulmonary – blood**

Cryptococcal meningitis is a serious infection of the brain and the lining of the spinal cord that can occur in HIV-infected people, particularly those with CD4 counts below 100. It is caused by *Cryptococcus neoformans*, a fungus that is common in the environment and can be found in soil and bird droppings.. Meningitis is the most common form of cryptococcal infection, causing fever, headache, and nausea. Less common forms of infection will occur in the lungs kidneys, skin, urinary tract, and lymph nodes.

### **0023 Chronic mucocutaneous herpes simplex infection persisting > 1 month; or herpes simplex bronchitis, pneumonitis, or esophagitis**

In patients with HIV infection, herpes infections can be more severe, persistent, and difficult to treat. In addition to the painful oral or genital sores that anyone with herpes can experience, persons with HIV can develop infection of the esophagitis (the tube leading from the mouth to the stomach) giving rise to difficult or painful swallowing, colitis (bowel infection), painful ulcers (sores) around the anus, and, more rarely, encephalitis (brain infection), meningitis, or pneumonia.

### **0024 Coccidioidomycosis disseminated (at a site other than or in addition to lungs or cervical or hilar lymph nodes)**

Coccidioidomycosis (cok-SID-EEYOY-do-my-ko-sis) is a fungal infection also known as valley fever. It can occur in people with healthy or suppressed immune systems. In people with suppressed immune systems such as persons with HIV infection, it can cause pneumonia and can also spread to other organs, including the bones, joints, lymph nodes, kidneys, or skin. It can also cause infection of the brain or lining of the spinal cord (meningitis), which can be life-threatening if not diagnosed and treated promptly.

### **0025 Salmonella (non-typhoid) septicemia, recurrent**

*Salmonella* is a bacterium often found in food such as undercooked poultry, eggs, and unpasteurized milk. It is also present in water, soil, kitchen surfaces, animal feces, and raw meat and on certain animals, such as reptiles. It can be acquired through ingestion (swallowing) infected material, causing diarrhea and fever. *Salmonella* can also cause bloodstream infections and infection of the bile ducts and gallbladder, especially in HIV-infected people. 0026

Wasting Syndrome: findings of profound involuntary weight loss > 10% of baseline body weight plus either chronic diarrhea (at least two loose stools per day for  $\geq 30$  days) or chronic weakness and documented fever (for  $\geq 30$  days, intermittent or constant) in the absence of a concurrent illness or condition other than HIV infection that could explain the findings (e.g., cancer, tuberculosis, cryptosporidiosis, or other specific enteritis.)

### **0026 Wasting Syndrome**

AIDS wasting is the involuntary loss of more than 10% of body weight accompanied by prolonged diarrhea, weakness and fever. Both fat and muscle mass can be lost in people with the wasting



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syndrome. Wasting syndrome can be caused by HIV itself, as well as other infections that HIV-infected persons with weak immune systems are susceptible to.

### **0051 Recurrent pneumonia (more than one episode in a 1-year period)**

Pneumonia is an infection of the lung that may have many different causes, including bacteria, viruses, or fungi. When pneumonia is recurrent (occurs more than once during a 1-year period) it is an AIDS defining condition, regardless of the cause.

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### **Appendix 8: Rationale for Rectal Bleeding Question**

Rectal bleeding can be a sign of any of several abnormal processes including hemorrhoids, trauma, acute infection, or cancer. It has become apparent that MSM are at greater risk for the development of rectal cancers that occur as a result of chronic infection with human papillomavirus (HPV), the virus that causes anal and genital warts. This cancer is becoming more common in HIV-infected MSM. Many MSM have chronic (over many years) rectal infection with HPV, regardless of whether or not they ever developed anal warts. Likewise, colon and rectal cancer in general increases as adults age. Whatever its cause, rectal bleeding is an important occurrence that should not be ignored.

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**Appendix 9A: Fracture Site Codes**

- 800.0 skull or face
- 805.0 spine
- 807.0 rib or sternum
- 808.0 pelvis
- 810.0 clavicle (collar bone)
- 811.0 scapula (shoulder, but not arm)
- 812.0 humerus (upper arm)
- 813.0 radius or ulna (lower arm)
- 814.0 carpal bones (wrist)
- 815.0 metacarpal bone (hand but not fingers)
- 816.0 phalange of hand (fingers)
- 820.0 neck of femur (hip)
- 821.0 femur (not neck of femur) (thigh, but not hip)
- 822.0 patella (knee cap)
- 823.0 tibia or fibula (bones of lower leg or calf)
- 824.0 ankle
- 825.0 tarsal or metatarsal bone (foot, but not ankle or toes)
- 826.0 phalange of foot (toes)

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### Appendix 9B: Neurology Diagnosis Codes

Below are the most commonly reported diagnoses in the MACS. Refer to the **ICD-9-CM** manual if you cannot accurately code the reported neurological problem with one of the following **ICD-9-CM** codes.

- 314.0 HYPERKINETIC SYNDROME OF CHILDHOOD
- 321.0 MENINGITIS DUE TO OTHER ORGANISMS
- 323.0 ENCEPHALITIS
- 325.0 PHLEBITIS AND THROMBOPHLEBITIS OF INTRACRANIAL VENOUS SINUSES
- 331.0 OTHER CEREBRAL DEGENERATIONS
- 332.0 PARKINSON'S DISEASE
- 333.0 OTHER EXTRAPYRAMIDAL DISEASE AND ABNORMAL MOVEMENT
- 336.0 OTHER DISEASES OF SPINAL CORD
- 337.0 DISORDERS OF THE AUTONOMIC NERVOUS SYSTEM
- 344.0 OTHER PARALYTIC SYNDROMES
- 345.0 EPILEPSY
- 346.0 MIGRAINE
- 347.0 CATAPLEXY AND NARCOLEPSY
- 348.0 OTHER CONDITIONS OF BRAIN
- 349.0 OTHER AND UNSPECIFIED DISORDERS OF THE NERVOUS SYSTEM
- 350.0 TRIGEMINAL NERVE DISORDERS
- 351.0 FACIAL NERVE DISORDERS
- 352.0 DISORDERS OF OTHER CRANIAL NERVES
- 353.0 NERVE ROOT AND PLEXUS DISORDERS
- 354.0 MONONEURITIS OF UPPER LIMB AND MONONEURITIS MULTIPLEX
- 355.0 MONONEURITIS OF LOWER LIMB AND UNSPECIFIED SITE
- 356.0 HEREDITARY AND IDIOPATHIC PERIPHERAL NEUROPATHY
- 357.0 INFLAMMATORY AND TOXIC NEUROPATHY
- 358.0 MYONEURAL DISORDERS
- 359.0 MUSCULAR DYSTROPHIES AND OTHER MYOPATHIES

## Guidelines for Completing Visit 55 Section 4 (MACS Questionnaire)

### Drug Form 1 General Instructions:

1. A **DRUG FORM 1** should be completed for each antiretroviral drug reported by participant in **SECTION 4**, Q15.B(3) unless a drug combination is being taken as part of a blinded clinical trial (see part 2 below). If the prescribed dosage of an antiretroviral drug has changed during the time since the last visit, then complete two forms. The two forms will have different dosages: both will be since the last visit, but one form will be for the first dosage and the other form will be for the current dosage.

For example, during the time since the last visit, a participant took 6 Norvir 2x a day and then switched to 1 pill 1x a day. In this case, a **DRUG FORM 1** would be completed for Norvir with the old dosage of 6 pills 2x a day and a second **DRUG FORM 1** would be completed for Nervier with the current dosage of 1 pill 1x a day.

**Coding Example:** (See **SECTION 4** guidelines, Q15, and the sample forms on **pages 50-51** for specific examples.)

2. Combinations of drugs being tested in blinded research studies should be reported as one drug. This is the only time when you report two or more drugs on one drug form. A blinded study is one in which the participant does not know which drugs, or combination of drugs, he is taking.
  - Fill out one **DRUG FORM 1** for combinations of this kind.
  - Fill out form through Q1a – Q1d only.
3. If a participant took a medication as part of a research study but then continues that medication after the trial ends during the same 6 month visit period, complete two drug forms. (See sample drug forms at the end of the **DRUG FORM 1** Guidelines.) In this example, the participant's last visit was May 1, 2010 and his most visit was November 1, 2010. He began Trizivir as part of a clinical unblinded research trial on January 1, 2010 and ended the trial on July 1, 2010. After the research trial ended, he continued taking Trizivir NOT as part of a research study. The amount of time he took the drug for research use since his last visit was 2 months (May-June) and 4 months for non-research use (July-October).
  - One form will correspond to the portion of the visit when the participant was enrolled in the research trial, May-June.
  - The second drug form will correspond to the portion of the visit continuing the medication usage but not part of the trial, July-Oct.

## Guidelines for Completing Visit 55 Section 4 (MACS Questionnaire)

4. Not all DGF1 medications are listed on the form. If a reported medication is not on the form, refer to the current drug list for the correct code. Mark "*Other*" and use the specify box for reported antiretroviral medications not listed on DRUG FORM 1. Notify CAMACS of any frequently used medications that do not have unique codes. (See Q15.B of the S4 guidelines for more detailed instructions on reporting antiretroviral drugs.)
5. All questions refer to the period since the participant's last visit.
6. Note that all known protease inhibitors have now been given unique codes.

### Question 1:

This question asks the participant if he is taking the drug as part of a research study.

- If "*No*", skip *B – E* and go to Q2.
- If "*Yes*", ask *B - E*.

**Q1.D** - If the participant answers "*Yes*" to this question, there are two options:

- If the participant is BLINDED to the treatment, he should STOP at this point (i.e., if Q1.B is "*Yes*").
  - Do not answer Q.2-Q.12 if the participant is taking this drug as part of a blinded research study and therefore does not know whether he is taking a placebo or the actual drug.
- If the participant is UNBLINDED to the treatment, SKIP TO Q4 and continue with the rest of the questionnaire.
- If the participant answers "*No*" then go to Q1.E.

**Q1.E** - This question should only be answered if the participant took the medication as part of a research study since last visit but is not currently taking the medication as part of the research study.

### Question 2:

This question applies to those participants who took the drug as part of an unblinded research study but are no longer taking it as part of the research study (Q1.D = "*No*"). It asks participants if they are currently taking the drug for non-research use.

## **Guidelines for Completing Visit 55 Section 4 (MACS Questionnaire)**

- If “Yes”, the participant is currently taking the drug as non-research, go to Q4 and complete the rest of DRUG FORM 1 for research use and then fill out a separate DRUG FORM 1 for non-research use.
- If “No”, the participant is not taking the drug as non-research, go to Q3 and continue filling out the form for research use.

### **Question 3:**

This question applies to participants who are not currently taking the drug for non-research use and stopped since their last visit. If this is the case then ask what month and year the participant last took the drug.

### **Question 4:**

There are a few drugs that are administered by injection. Ask participant if he is taking the drug by mouth (either pill or liquid) or by injection.

- If by mouth, ask Q5 and Q6 and go to Q8.
- If by injection, skip Q5 and Q6 and go to Q7.

### **Question 5:**

Ask the participant how many times he takes this drug and record accordingly and ask if the number of times reported is per day, week or month. Fill in the provided time frame.

### **Question 6:**

This is the number of pills or liquid doses prescribed by the physician.

### **Question 7:**

Ask the participant how many times he injects this drug and record accordingly and ask if the number of times reported is per day, week or month. Fill in the provided time frame.

### **Question 8:**

This question refers to whether or not the participant started the medication since his last visit.

- If the drug form is being filled out for a drug taken as part of a research study then this question pertains to whether the participant began taking the drug as part of a research study since his last visit.

## **Guidelines for Completing Visit 55 Section 4 (MACS Questionnaire)**

- If the drug form is being filled out for a drug taken NOT as part of a research study then this question pertains to whether the participant began taking the drug for non-research use since his last visit.

### **Question 9:**

This question should only be answered if the participant started the medication since his last visit (Q8 = "Yes"). If the participant cannot remember the exact month, probe for the season as instructed in item 4 of the General Instructions (page 3).

### **Question 10:**

Mark only one response.

- "One to two months" means one month and longer up to less than 3 months.
- "Three to four months" means three months or longer up to less than 5 months.

### **Question 11:**

Stopping medications means intentionally to discontinue taking the drug or intentionally stop taking the drug for 2 days or longer. What we are trying to capture is if the participant has stopped his medication at any time and the reasons for stopping.

Discontinuation or temporarily stopping the medication must be for a reason other than alternating drug regimens as may be prescribed by a physician. If a participant reports that he discontinued or temporarily stopped his medication, then ask him why he stopped and indicate reason(s) in Q12.

### **Question 12:**

Each reason for stopping should be read to the participant. Multiple reasons may be chosen. If participant responds with reasons not listed on the form, mark "*Other*" and record in participant's words the reason(s) in the specify box.

### **Question 13:**

This question is designed to assess adherence to a prescribed medication schedule.



# Guidelines for Completing Visit 55 Section 4 (MACS Questionnaire)

## SAMPLE: 1<sup>st</sup> Drug Form 1 for Trizivir taken for research study

### 53 FORM 1—ANTIRETROVIRAL DRUGS

**COMPLETE THE FOLLOWING FOR EACH DRUG LISTED IN QUESTION 15.B(3).**

<input type="radio"/> abacavir (Ziagen) (218) <input type="radio"/> atazanavir (Reyataz) (243) <input type="radio"/> Atripla (efavirenz + emtricitabine + tenofovir) (262) <input type="radio"/> Combivir (zidovudine & lamivudine) (227) <input type="radio"/> d4T (Zerit, Stavudine) (159) <input type="radio"/> darunavir (Prezista) (256) <input type="radio"/> didanosine (Videx) (147) <input type="radio"/> efavirenz (Sustiva) (220) <input type="radio"/> emtricitabine (Emtriva, FTC) (239) <input type="radio"/> Epzicom (abacavir + lamivudine) (254) <input type="radio"/> Etravirine (Intencele, TMC-125) (255) <input type="radio"/> fosamprenavir (Lexiva) (249) <input type="radio"/> Indinavir (Crivivan) (212)	<input type="radio"/> lamivudine (EpiVir, 3TC) (204) <input type="radio"/> lopinavir/ritonavir (Kaletra, LPV) (217) <input type="radio"/> nelfinavir (Viracept) (216) <input type="radio"/> nevirapine (Viramune) (191) <input type="radio"/> Raltegravir (Isentress) (264) <input type="radio"/> ritonavir (Norvir) (211) <input type="radio"/> saquinavir (Invirase, Fortovase) (210) <input type="radio"/> tenofovir (Viread) (234) <input checked="" type="radio"/> Trizivir (abacavir + lamivudine + zidovudine) (240) <input type="radio"/> Truvada (emtricitabine + tenofovir) (253) <input type="radio"/> zidovudine (Retrovir, AZT) (092)	ID Number <table border="1" style="width: 100%; text-align: center;"> <tr><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>1</td><td>1</td><td>1</td><td>1</td></tr> <tr><td>2</td><td>2</td><td>2</td><td>2</td></tr> <tr><td>3</td><td>3</td><td>3</td><td>3</td></tr> <tr><td>4</td><td>4</td><td>4</td><td>4</td></tr> <tr><td>5</td><td>5</td><td>5</td><td>5</td></tr> <tr><td>6</td><td>6</td><td>6</td><td>6</td></tr> <tr><td>7</td><td>7</td><td>7</td><td>7</td></tr> <tr><td>8</td><td>8</td><td>8</td><td>8</td></tr> <tr><td>9</td><td>9</td><td>9</td><td>9</td></tr> </table>	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9	9	9	Visit No. <table border="1" style="width: 100%; text-align: center;"> <tr><td>5</td><td>3</td><td>0</td></tr> <tr><td>6</td><td>4</td><td>1</td></tr> <tr><td>7</td><td>5</td><td>2</td></tr> <tr><td>8</td><td>6</td><td>3</td></tr> <tr><td>9</td><td>7</td><td>4</td></tr> <tr><td>0</td><td>8</td><td>5</td></tr> <tr><td>1</td><td>9</td><td>6</td></tr> <tr><td>2</td><td>0</td><td>7</td></tr> <tr><td>3</td><td>1</td><td>8</td></tr> <tr><td>4</td><td>2</td><td>9</td></tr> </table>	5	3	0	6	4	1	7	5	2	8	6	3	9	7	4	0	8	5	1	9	6	2	0	7	3	1	8	4	2	9	DATE <table border="1" style="width: 100%; text-align: center;"> <tr><td>Jan</td><td>DAY</td><td>YEAR</td></tr> <tr><td><input type="radio"/></td><td>01</td><td>10</td></tr> <tr><td><input type="radio"/></td><td>02</td><td>10</td></tr> <tr><td><input type="radio"/></td><td>03</td><td>10</td></tr> <tr><td><input type="radio"/></td><td>04</td><td>10</td></tr> <tr><td><input type="radio"/></td><td>05</td><td>10</td></tr> <tr><td><input type="radio"/></td><td>06</td><td>10</td></tr> <tr><td><input type="radio"/></td><td>07</td><td>10</td></tr> <tr><td><input type="radio"/></td><td>08</td><td>10</td></tr> <tr><td><input type="radio"/></td><td>09</td><td>10</td></tr> <tr><td><input type="radio"/></td><td>10</td><td>10</td></tr> <tr><td><input type="radio"/></td><td>11</td><td>10</td></tr> <tr><td><input type="radio"/></td><td>12</td><td>10</td></tr> </table>	Jan	DAY	YEAR	<input type="radio"/>	01	10	<input type="radio"/>	02	10	<input type="radio"/>	03	10	<input type="radio"/>	04	10	<input type="radio"/>	05	10	<input type="radio"/>	06	10	<input type="radio"/>	07	10	<input type="radio"/>	08	10	<input type="radio"/>	09	10	<input type="radio"/>	10	10	<input type="radio"/>	11	10	<input type="radio"/>	12	10
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**8. Did you start taking this drug since your last visit?**  
 NO [GO TO Q10]     YES

**9. [Since your last visit] In what month and year did you start taking this drug?**

J	F	M	A	M	J	J	A	S	O	N	D
01	02	03	04	05	06	07	08	09	10	11	12

**10. Since your last visit in (MONTH), how long have you used (DRUG)?**

One week or less  
 More than 1 week but less than 1 month  
 1–2 months (includes 2 months and longer, but less than 3 months)  
 3–4 months (includes 4 months and longer, but less than 5 months)  
 5–6 months  
 More than 6 months

**11. Did you stop taking this drug, for 2 days or longer, at any time since your last visit? [DOES NOT INCLUDE ALTERNATING DRUG USE]**  
 NO [GO TO Q13]     YES

Last visit: Nov 1, 2009  
 Research Use:  
 Began July 1, 2009  
 Ended Jan 1, 2010

**12. Why did you stop taking this drug? (MARK ALL THAT APPLY)**

- Low white blood cells (low neutrophils)
- Anemia (low red blood cells/low hemoglobin)
- Blood in urine
- Bleeding
- Dizziness/Headaches
- Nausea/Vomiting
- Abdominal pain (pancreatitis/abdominal bloating/cramps)
- Diarrhea
- Muscle pain or weakness (myopathy/myositis/muscle cramps/spasms)
- Burning/tingling in extremities (neuropathy/neuritis/numbness)
- Kidney stones
- Kidney failure
- Rash
- High blood sugar/Diabetes
- High cholesterol/High triglycerides
- Painful urination
- High blood pressure
- Abnormal changes in body fat
- Vivid nightmares or dreams
- Liver toxicity (abnormal liver function test)
- Insomnia or problems sleeping
- Fatigue
- Increased viral load
- Decreased viral load
- Hospitalized
- Personal decision
- Prescription changes by physician
- Too expensive
- Too much bother, inconvenient (ran out/vacation/unable to fill prescription)
- Changed to another drug in order to decrease the number of pills or dosing frequency
- Study ended
- Other, specify:

1) \_\_\_\_\_  
 2) \_\_\_\_\_  
 3) \_\_\_\_\_

**13. On average, how often did you take your medication as prescribed?**

- 100% of the time
- 95–99% of the time
- 75–94% of the time
- <75% of the time

SCANTOR Mark Palfax® EM-203768-27594321

Please continue on the other side. →

# Guidelines for Completing Visit 55 Section 4 (MACS Questionnaire)

## SAMPLE: 2<sup>nd</sup> Drug Form 1 for Trizivir taken for non- research study

### 53 FORM 1—ANTIRETROVIRAL DRUGS

**COMPLETE THE FOLLOWING FOR EACH DRUG LISTED IN QUESTION 15.B(3).**

<ul style="list-style-type: none"> <li><input type="radio"/> abacavir (Ziagen) (218)</li> <li><input type="radio"/> atazanavir (Reyataz) (243)</li> <li><input type="radio"/> Atripla (efavirenz + emtricitabine + tenofovir) (262)</li> <li><input type="radio"/> Combivir (zidovudine &amp; lamivudine) (227)</li> <li><input type="radio"/> d4T (Zerit, Stavudine) (159)</li> <li><input type="radio"/> darunavir (Prezista) (256)</li> <li><input type="radio"/> didanosine (Videx) (147)</li> <li><input type="radio"/> efavirenz (Sustiva) (220)</li> <li><input type="radio"/> emtricitabine (Emtriva, FTC) (239)</li> <li><input type="radio"/> Epzicom (abacavir + lamivudine) (254)</li> <li><input type="radio"/> Etravirine (Intence, TMC-125) (255)</li> <li><input type="radio"/> fosamprenavir (Lexiva) (249)</li> <li><input type="radio"/> Indinavir (Crixivan) (212)</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> lamivudine (EpiVir, 3TC) (204)</li> <li><input type="radio"/> lopinavir/ritonavir (Kaletra, LPV) (217)</li> <li><input type="radio"/> nelfinavir (Viracept) (216)</li> <li><input type="radio"/> nevirapine (Viramune) (191)</li> <li><input type="radio"/> Raltegravir (Isentress) (264)</li> <li><input type="radio"/> ritonavir (Norvir) (211)</li> <li><input type="radio"/> saquinavir (Invirase, Fortovase) (210)</li> <li><input type="radio"/> tenofovir (Viread) (234)</li> <li><input checked="" type="radio"/> Trizivir (abacavir + lamivudine + zidovudine) (240)</li> <li><input type="radio"/> Truvada (emtricitabine + tenofovir) (253)</li> <li><input type="radio"/> zidovudine (Retrovir, AZT) (092)</li> <li><input type="radio"/> Other →</li> </ul>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th>ID Number</th> <th>Visit No.</th> <th>DATE</th> </tr> <tr> <td>0 0 0 0</td> <td>5 3 0</td> <td>Jan 01 10</td> </tr> <tr> <td>1 1 1 1</td> <td>1 1</td> <td>Feb 09</td> </tr> <tr> <td>2 2 2 2</td> <td>2 2</td> <td>Mar 10</td> </tr> <tr> <td>3 3 3 3</td> <td>3 3</td> <td>Apr 11</td> </tr> <tr> <td>4 4 4 4</td> <td>4 4</td> <td>May 12</td> </tr> <tr> <td>5 5 5 5</td> <td>5 5</td> <td>June 13</td> </tr> <tr> <td>6 6 6 6</td> <td>6 6</td> <td>July 14</td> </tr> <tr> <td>7 7 7 7</td> <td>7 7</td> <td>Aug 15</td> </tr> <tr> <td>8 8 8 8</td> <td>8 8</td> <td>Sept 16</td> </tr> <tr> <td>9 9 9 9</td> <td>9 9</td> <td>Oct 17</td> </tr> <tr> <td></td> <td></td> <td>Nov 18</td> </tr> <tr> <td></td> <td></td> <td>Dec 18</td> </tr> </table>	ID Number	Visit No.	DATE	0 0 0 0	5 3 0	Jan 01 10	1 1 1 1	1 1	Feb 09	2 2 2 2	2 2	Mar 10	3 3 3 3	3 3	Apr 11	4 4 4 4	4 4	May 12	5 5 5 5	5 5	June 13	6 6 6 6	6 6	July 14	7 7 7 7	7 7	Aug 15	8 8 8 8	8 8	Sept 16	9 9 9 9	9 9	Oct 17			Nov 18			Dec 18
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**Name of Drug:**

Drug Code
0 100 200 300 400 500 600 700 800 900
0 10 20 30 40 50 60 70 80 90
0 1 2 3 4 5 6 7 8 9

  

**You said you were taking (DRUG) since your last visit:**

1.A. Did you take this drug as part of a research study?  
 NO [GO TO Q2]     YES

B. Was this study one in which you may have taken a placebo (not the actual drug) or in which you were blinded to the treatment?  
 NO     YES

C. Was this part of the AIDS Clinical Trial Group (ACTG) study?  
 NO     DON'T KNOW     YES

D. Are you currently taking this drug as part of the research study?  
 NO [GO TO E.]     YES STOP, IF BLINDED, GO TO Q4, IF UNBLINDED.

E. [Since your last visit] In what month and year did you most recently take this drug as part of the research study?  
 Jan 10  F M A M J J A S O N D  
 01 02 03 04 05 06 07 08 09 10 11 12

IF BLINDED, STOP, GO TO NEXT DRUG. IF UNBLINDED, GO TO Q2.

2. Are you currently taking this drug [not as part of a research study]?  
 NO [GO TO Q3]     YES [GO TO Q4]

IF YES, BUT DRUG WAS PREVIOUSLY TAKEN AS PART OF A STUDY, YOU MUST COMPLETE THIS FORM FOR RESEARCH USE AND COMPLETE ANOTHER FORM FOR NON-RESEARCH DRUG USE

  

3. [Since your last visit] In what month and year did you most recently take this drug?  
 J F M A M J J A S O N D  
 01 02 03 04 05 06 07 08 09 10 11 12

4. Do you take this drug by mouth or receive it by injection?  
 by mouth (pill or liquid)  
 injection  
IF BY INJECTION, SKIP TO Q7.

5. According to your doctor, how many times per day, week, or month should you take (DRUG)? [IF NOT CURRENTLY TAKING DRUG, USE MOST RECENT TIME]  
 NUMBER OF TIMES PER  Day or  Week or  Month  
 0 10 20 30  
 0 1 2 3 4 5 6 7 8 9

6. According to your doctor, how many pills or doses should you take each time?  
 1 2 3 4 5 6 7 8 9 10  
IF BY MOUTH, SKIP TO Q8.

7. How many times per day, week, or month do you inject this drug?  
 NUMBER OF TIMES PER  Day or  Week or  Month  
 0 10 20 30  
 0 1 2 3 4 5 6 7 8 9

Please continue on the other side. →

Did you start taking this drug since your last visit?  
 NO [GO TO Q10]     YES

[Since your last visit] In what month and year did you start taking this drug?  
 Jan 10  F M A M J J A S O N D  
 01 02 03 04 05 06 07 08 09 10 11 12

Since your last visit in (MONTH), how long have you used (DRUG)?  
 One week or less  
 More than 1 week but less than 1 month  
 1–2 months (includes 2 months and longer, but less than 3 months)  
 3–4 months (includes 4 months and longer, but less than 5 months)  
 5–6 months  
 More than 6 months

Did you stop taking this drug, for 2 days or longer, at any time since your last visit? [DOES NOT INCLUDE ALTERNATING DRUG USE]  
 NO [GO TO Q13]     YES

Last visit: Nov 1, 2009  
 Non-Research Use:  
 Began Jan 1, 2010

12. Why did you stop taking this drug? (MARK ALL THAT APPLY)

- Low white blood cells (low neutrophils)
- Anemia (low red blood cells/low hemoglobin)
- Blood in urine
- Bleeding
- Dizziness/Headaches
- Nausea/Vomiting
- Abdominal pain (pancreatitis/abdominal bloating/cramps)
- Diarrhea
- Muscle pain or weakness (myopathy/myositis/muscle cramps/spasms)
- Burning/tingling in extremities (neuropathy/neuritis/numbness)
- Kidney stones
- Kidney failure
- Flash
- High blood sugar/Diabetes
- High cholesterol/High triglycerides
- Painful urination
- High blood pressure
- Abnormal changes in body fat
- Vivid nightmares or dreams
- Liver toxicity (abnormal liver function test)
- Insomnia or problems sleeping
- Fatigue
- Increased viral load
- Decreased viral load
- Hospitalized
- Personal decision
- Prescription changes by physician
- Too expensive
- Too much bother, inconvenient (ran out/vacation/unable to fill prescription)
- Changed to another drug in order to decrease the number of pills or dosing frequency
- Study ended
- Other, specify: \_\_\_\_\_

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

13. On average, how often did you take your medication as prescribed?  
 100% of the time  
 95–99% of the time  
 75–94% of the time  
 <75% of the time

## **Guidelines for Completing Visit 55 Section 4 (MACS Questionnaire)**

### **Antiretroviral Adherence General Instructions:**

Complete one ANTIRETROVIRAL MEDICATION ADHERENCE FORM for seropositive participants with at least one complete DRUG FORM 1 and who are currently taking the specified antiretroviral medication(s). Drugs taken as part of a clinical trial should be included as long as the participant is not blinded to the treatment.

The form should be administered by the interviewer immediately following completion of all **DRUG FORM 1(s)**.

### **Question 1:**

This question is divided into 9 sections with an identical series of questions. Administer each section for each drug reported in DRUG FORM 1. Most items in this question refer to medication usage in the last 4 days. List the days of the week that fell in last 4 days to help the participant with recall. There is room for 9 possible drugs. Answer all questions for one drug at a time.

### **Number of times the participant took his medication daily over the past 4 days.**

**This questions measures adherence to the number of times per day the participant has been prescribed his medication as he reported in Q5 of Drug Form 1.**

**If the participant reports he took 2 Truvada pills, 3 times two days ago, fill in "3" for the respective day.**

**If he reported taking 1 Truvada pill, 2 times yesterday, fill in 2 for the respective day.**

**When referring to 2 days ago, 3 days ago and 4 days ago, name the respective day of the week. For example, if the interview is on Friday, tell the participant you are talking about Monday through Thursday. When you state two days ago, mention Wednesday; 3 days ago, mention Tuesday, and 4 days ago, mention Monday.**

### **Pattern typical of recent drug use.**

**The next item asks if this pattern of use described in the previous 4-day period is typical of the participant's recent use of that drug in general. For example, the participant reported taking his medication as prescribed in the last 4 days, but this was not a typical because in the last month he was taking it fewer times than prescribed.**

**Name the actual drug at the end of the question. The time frame of "recent" is**



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**intentionally meant to be subjective. It is up to the participant's interpretation. Do not try to define "recent" for the participant. If needed, simply repeat the question.**

**Fewer pills taken per dose than what was prescribed.**

**This question measures the participant's adherence to the number of pills he has been prescribed to take each time as he reported in Q6 of Drug Form 1.**

**This question is important for measuring adherence among those participants who are taking the prescribed daily dosage, but fewer pills per time.**

**Here are examples of adherence to 1) the number of times per day and 2) number of pills per time.**

**The participant is prescribed to take 2 Truvada pills three times daily - breakfast, lunch and dinner.**

**If the participant took 1 pill at breakfast and lunch and 2 pills at dinner two days ago:**

**Number of times per day medication was taken 2 days ago = 3  
Fewer pills per dose than prescribed = "YES" .**

**If the participant took 2 pills at breakfast and skipped taking them all together at lunch and dinner three days ago.**

**Number of times taken three days ago = 1  
Fewer pills per dose than prescribed may be recorded either as "YES" or "NO" depending upon the participant's interpretation. We already know the participant is taking fewer pills per time because he missed two of his prescribed daily dosages.**

At the end of this question, if the participant is currently only taking one drug, SKIP TO Q2; otherwise continue with the second drug and go through the exact same sequence of questioning. Do likewise for the completion of the third drug.

If the participant is currently taking more than 3 antiretroviral medications, continue on page 2; otherwise SKIP TO Q2. If the participant is currently taking more than 6 medications, continue on page 3; otherwise SKIP TO Q2.

**Question 2:**

This question refers to the last 6 months. Ask the participant when was the last time he skipped ANY of his medications in the last 6 months. Although the question doesn't include the "last 6 months", ask the participant to think back over the past 6 months.

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Refer back to the beginning month as a benchmark. For example, if the interview is in October, add “the last 6 months since April”.

The last response option is interpreted as more than 3 months ago in the last 6 months or in this example June, May or April was the last time he skipped his medications. If he has never skipped any medications, go to Q4.

### **Question 3:**

This question asks a series of reasons for missing medications and how often each reason applies. For example, a participant may have RARELY missed his medication because he was away from home, but missed his medication OFTEN because he felt sick or ill.

Like Q2, this question refers to the last 6 months. Although the question doesn't include the “last 6 months”, please ask the participant to think back over the past 6 months.

Refer back to the month as a benchmark. For example, if the interview is in October, add “the last 6 months since April”.

Read each reason to the participant and complete his responses before proceeding to the next reason. At the end, ask the participant if there are any other reasons for missing his medications that he was not already asked. Write these responses in the specify box.

### **Question 4:**

All participants completing the form should answer this question related to adherence to their medication schedules. The time frame for this question is the last 4 days.

### **Question 5:**

This question has three parts related to special instructions for taking medications. If the participant was never given such instructions, SKIP TO Q6; otherwise continue with the next 2 items. In item 3, an example of conflicting instructions would be that the participant is taking 2 medications at the same time. For one he is instructed to “take on an empty stomach” and for the other he is told to “take it with food”.

### **Question 6:**

This question refers to the way the participant remembers to take his medication. Read each item and mark the participant's response. If he has a way of remembering that was not listed, mark “Yes” for other and record it in the specify box.

## **Guidelines for Completing Visit 55 Section 4 (MACS Questionnaire)**

### **Abbreviated S4 Interviews**

#### ***Purpose:***

The purpose of an abbreviated S4 interview is to collect medical outcome information from participants who are too sick to participate in a full S4 interview or healthy participants who are resolutely opposed to participating in a full study visit. Obtain a Medical Release for reported diagnoses that qualify as a reportable medical outcome.

Overall, an abbreviated interview should be the option of last resort. It is advisable to withhold the availability of this option from study participants in general and reserve it only for exceptional cases and extenuating circumstances where the site is at risk of losing a participant from the study. For instance, in response to a participant's refusal to go through a full S4 interview (both medical and behavioral sections), ask the participant if it would help to break the interview session in half by conducting the medical and behavioral sections at two separate times. If that option still doesn't appeal to him, offer to administer the full medical S4 before offering the abbreviated version.

#### ***Administration***

1) The abbreviated interview consists of selected questions from the S4 form (they have a bolded asterisk (\*) next to the question number), which should be administered in the following order of priority. Administer the following questions and their embedded skip pattern questions in the following order:

Q1-5a	AIDS diagnoses and cancers
Q6	Hospitalizations
Q9A. and C	Pap smears and biopsies to collect cancers
Q10.I-R, Q10.CC.c/e/f/i	All other potential medical outcome diagnoses
Q15.B and C	HIV medications

If the interviewer is able to continue after collecting the above information, then go to Q10.A, other new medical conditions and proceed with administering the remainder of the questionnaire in question number order as much as permitted by the participant. Please note that Q7, mental health treatment, and Q8 neurological evaluations.

#### ***Local Data management options:***

- 1). Each site may choose either method of data submission to CAMACS
  1. Combine the abbreviated S4 data with the other full S4 data.
  2. Create a separate abbreviated S4 data file.

#### ***Editing of Abbreviated S4 forms***

Please mark "Yes" to Q27 in the S4 to indicate that the interview was abbreviated. The skipped sections of the S4 will not be combined with the other edits queries sent to the centers.