Formative Research and Tool Development: Survey of HIV Medical Care Providers to Guide the Medical Monitoring Project

Generic Information Collection request under 0920-0840

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Supporting Statement
Part B

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B.1 Respondent Universe and Sampling Method

The targeted national population of inference for the Medical Monitoring Project (MMP) Provider Survey is health care providers practicing HIV medicine in the United States during 2012, including physicians, physician assistants and nurse practitioners.

Providers whose patients have been sampled to participate in the MMP patient survey will be recruited to complete the provider survey. MMP employs a three-stage sampling design. In the second stage of MMP sampling, a representative sample of all facilities providing HIV medical care in a project area is selected with probability proportional to size. At each sampled facility, all providers who meet the following conditions will be surveyed: (1) have provided care to HIV-infected patients age ≥ 18 years old during the 2012 MMP Population Definition Period (January 1 through April 30, 2012); (2) have completed their residency and, if applicable, fellowship training programs (i.e., not an intern, resident, or fellow); (3) are a physician or physician assistant or nurse practitioner; (4) order CD4 or HIV viral load testing and/or prescribe antiretroviral medications in the context of managing a patient's HIV disease (providers who obtain CD4 lymphocyte counts and HIV viral loads only for referral purposes or provide antiretroviral refill prescriptions–but do not play a more active role in managing their patients' HIV infection–are not eligible for participation). Approximately 3,000 providers (based on 600 facilities, with an average of 5 providers each), will receive surveys.

Because the MMP Provider Survey is mainly descriptive, power calculations – which are used in sample size determinations for testing specific hypotheses – were not performed. Instead, the level of precision that may be expected from the available sample was determined. All providers within each sampled facility will be surveyed. Correlation of observations within facilities causes variance estimates to be larger than they would be for a simple random sample of the same size. This variance inflation is called design effect. A design effect of 2 is used in the calculations because that level of design effect is commonly encountered in national cluster surveys. However, the actual design effect will not be known until the data are collected and analyzed. The following table indicates the expected level of precision – i.e., the estimated 95% confidence interval (CI) half-width – for a survey of either facilities or providers with a range of design effect from 1 (no design effect) to a design effect of 3. The number of surveys sent is estimated to be 3,000 but this number will not be known with certainty until provider information is collected by staff of health departments with which CDC has cooperative agreements. Because of this uncertainty, CI half widths are shown for sample sizes ranging from 1,500 to 5,000.

Table 1. 95% Confidence Interval half-widths for total population estimates for various sample sizes and design effects
CI half-widths

	CI Half-width		
n	**Design Effect = 1**	**Design Effect = 2**	**Design Effect = 3**
1500	**2.53%**	**3.58%**	**4.38%**
2000	**2.19%**	**3.10%**	**3.80%**
2500	**1.96%**	**2.77%**	**3.39%**
3000	**1.79%**	**2.53%**	**3.10%**
4000	**1.55%**	**2.19%**	**2.68%**
5000	**1.39%**	**1.96%**	**2.40%**

Sampling Frame

All eligible providers at MMP sampled facilities will be recruited to participate in the MMP Provider Survey. MMP sampled facilities are selected, with probability proportional to size, from the MMP Facility Sampling Frame (FSF). The FSF is a

comprehensive list of all facilities providing HIV medical care within MMP project areas' jurisdictions. HIV medical care is defined as the treatment and management of HIV disease, and includes monitoring CD4 and HIV viral load tests and/or the prescription of antiretroviral medications. To be eligible for inclusion in the MMP FSF, the facility must deliver HIV medical care. Multiple physical facilities that share a common medical record system are treated as one facility on the MMP FSF. Thus, facilities providing HIV care could include outpatient facilities such as hospital-affiliated clinics, free-standing clinics or private physician offices.

Facilities that are known not to provide HIV-related medical care, such as HIV counseling and testing sites, are excluded from the FSF. Other facilities that are excluded from each project area's FSF are facilities that provide exclusively inpatient care, including hospices; emergency departments; facilities located outside the funded project area; facilities that have closed; federal, state and local correctional and work-release facilities; tribal facilities; and health facilities located on military installations. Facilities that provided HIV care only to patients under the age of 18 are also excluded from the FSF.

Expected Response Rate

The response rate for an earlier MMP Provider Survey, in 2009 (OMB No.0920-0740, was 43%. The response rate for the proposed survey is expected to be higher than in 2009, because the 2013 survey will include a telephone reminder for non-respondents two months after the initial contact, a method which was not used in 2009. Other physician surveys using the same recruitment and follow-up methods including mail and telephone reminders and a $20 prospective cash incentive have achieved response rates of at least 60%.(Weissman, Betancourt et al. 2005; DesRoches, Rao et al. 2010)

B.2. Procedures for the Collection of Information

The proposed formative research will help guide decisions about changes being considered for the Medical Monitoring Project (MMP), provide information about barriers to receiving medical care that can be used to inform the development of updated data collection instruments targeting HIV-infected persons not in care or inconsistently engaged in care for the OMB-approved data

collection – MMP (0920-0740, expires 5/31/2015) and provide information about providers' adoption of national prevention guidelines to inform development of MMP data collection instruments.

For the MMP Provider Survey, sampled providers will be able to access the MMP Provider survey at their convenience either via a Web-based application **(Attachment 2)** or paper survey **(Attachment 3)**. Time required to complete the survey is expected to be approximately 20-30 minutes.

Both web and paper surveys will be self-administered and will have explicit completion instructions. If the provider has technical difficulties in accessing the web-based survey, the provider can contact the CDC Contractor. Contact numbers and web addresses for the CDC Contractor staff associated with the MMP Provider Survey will be provided in the recruitment packet and on the survey website. At the end of the MMP Provider Survey, the provider will have the option to print the survey questions and their responses.

The National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP), CDC, has determined that MMP is not research and that it is a routine disease surveillance activity, with data being used for disease control program or policy purposes **(see attached MMP Non-research Determination)**. Because NCHHSTP has determined that MMP is not research, it is not subject to human subjects regulations, including federal institutional review board (IRB) review and approval. All federal, state, and local MMP staff must adhere to the ethical principles and standards by respecting and protecting the privacy, confidentiality, and autonomy of participants to the maximum extent possible.

The CDC Clinical Outcomes Team, which manages MMP, has requested a non-research determination for the MMP Provider Survey as well. This application is currently under review.

Health departments participating in MMP and the MMP Provider Survey will follow state and/or local procedures to determine whether the Provider Survey is subject to state and/or local human subject regulations. The need for state/local IRB review, and the IRB approval and renewal dates, if applicable, must be kept on file in each project area and provided to CDC.

The CDC Contractor will be responsible for designing and hosting the web-based survey. The Contractor will test the draft version

of the MMP Provider Survey in both web and paper formats prior to finalizing the survey and survey distribution.

Facilities selected to participate in the 2012 MMP cycle will be contacted by the local MMP staff in order to obtain the names and contact information of the providers working at those facilities. Project area staff will assign a unique MMP Provider Survey identification number to each provider. The project areas will transfer the lists of providers to the CDC Contractor through a secure data transfer system. The CDC Contractor will use the provider names and contact information to create and mail individualized recruitment packets to the survey recipients.

The CDC Contractor will prepare all materials to be included in the recruitment packet mailed to eligible providers. All materials will be mailed to providers in a stamped plain, white, letter-sized envelope.

The recruitment packets will include a CDC recruitment letter **(Attachment 4)** that will explain the purpose of the survey, instructions on how to complete the survey (including instructions on how to access the web-based survey via the provider's unique identification number), and information regarding the gift card. An additional recruitment letter from the local MMP grantee agency may also be included.

Participating providers will access the survey through a secure website, and data will be automatically saved, so that a respondent may stop the survey at any time and return later to next survey question. For providers who choose to complete the paper survey, a stamped envelope addressed to the CDC Contractor will be included in the recruitment packet. The CDC Contractor will enter responses on paper into the web-based application.

The provider will enter his/her unique provider identification number to complete the survey. These unique provider identification numbers will be used to identify which providers have completed the survey and which providers need to be followed-up.

The Dillman method will be used to follow-up on non-responders (Dillman 1978; Dillman 1983). Dillman suggests three follow-up contacts to assure adequate response rates. One week after the mailing of the provider recruitment packets, the CDC Contractor will mail a postcard reminder. The postcard will have standard language thanking all those who have responded and providing a

friendly reminder for those who have yet to complete the survey. Three weeks after the original mailing, providers who have not completed the survey will be sent a non-respondent letter, the original CDC recruitment letter, and a replacement paper survey. CDC will write the text of the non-respondent letter and the CDC Contractor will be responsible for preparing the follow-up packages and will send them to the non-respondents. Seven weeks after the original provider survey mailing, the Contractor will send a final mailing. The procedures will be the same as for the three-week reminder. Finally, the Contractor will place a telephone call to providers who have not responded within two months to remind them to complete the survey **(Attachment 4)**. MMP Provider Surveys will not contain specific identifiers (e.g., name, address, social security number). Paper surveys will be destroyed six months after survey activities are completed.

The web-based software, which will serve as a means of collecting data, supports the ability to encrypt response data and password-protect surveys so that unauthorized users are unable to view, export, or modify collected data.

Quality Control

The web-based data collection system incorporates logic and data validation rules to prevent respondents from not following skip logic or entering invalid dates and multiple responses to questions designed for a single response. The web-based survey platform will also be utilized for entry of data from paper survey forms. Since human operators can generate errors, two distinct operators will key each survey booklet. Data entry discrepancies will trigger an alert which can be addressed by correcting the second entry or leaving the alert in place for a supervisor to review later. A log is retained of all alerts and the resolution of each. Errors that occur on the paper survey due to the respondent not following instructions will be keyed as entered and flagged for editing or correcting by the Project Manager utilizing a data cleaning protocol. Errors that are cleaned after the data entry phase will be identified in a SAS data cleaning program that will log each error and how the data element was changed to bring it back into consistency. CDC will regularly convene conference calls with the Contractor to address any issues with the software and discuss mechanisms that are being used for administering the survey as well as all aspects of management.

B.3. Methods to Maximize Response Rates and Deal with Nonresponse

Providers will receive $20 in cash as an incentive to participate. The survey will only take 20-30 minutes to complete. However, since providers frequently receive surveys in the mail, the decision was made to include an incentive to increase participation rates.

A meta-analysis (Church, 1993) of survey methodologies found that studies using prepaid monetary incentives yielded an average increase in response rates of 19.1 percentage points, representing a 65% average increase in response. Physician surveys providing a prospective $20 cash incentive have achieved at least a 60% response rate.(Weissman, Betancourt et al. 2005; DesRoches, Rao et al. 2010)

Incentives have been used in other Department of Health and Human Services HIV medical provider surveys including the Health Resources and Services Administration HIV Clinician Workforce Survey (OMB No. 0915-0349) which offered a prospective $20 incentive and the CDC HPV Clinician Survey (OMB No. 0920-6029) which offered a prospective $50 incentive. In both of these surveys, incentives were used to help increase participation rates.

Assessing Non-Response Bias

MMP project area staff routinely gather basic information on every sampled facility from which providers will be selected for the MMP Provider Survey. These data on the characteristics of practice sites will be used to compare Provider Survey respondents and non-respondents. Statistically significant predictors of non-response will be used to develop weight adjustment classes. Non-response data will factor into calculation of analytic weights so as to increase the generalizability of the information obtained to the universe of HIV care providers.

B.4. Tests of Procedures or Methods to be Undertaken

The MMP Provider Survey is intended to answer key questions that will inform decisions about future MMP data collection methods. For example, the MMP Provider Survey will elicit providers' level of support for continued participation in MMP if the patient selection method is changed from facility-based sampling to direct sampling using local case surveillance data. If MMP is

to include HIV-infected individuals not in care or inconsistently in care, medical providers can provide information about barriers to receiving care that could be explored in the patient interview targeting this population. Information about providers' awareness and adoption of prevention guidelines will allow identification of prevention services inconsistently provided and allow prioritization of questions about these specific services on the MMP patient interview instrument. In this way, the information from the provider survey will maximize the usefulness of information from the MMP patient interviews.

CDC staff will test the skip patterns and responses using the paper versions of the data collection instruments. The CDC Contractor will program and test a web-based application using an industry standard testing methodology. The Contractor will collect a minimum of 25 mock surveys and create a pilot data set. CDC will duplicate these processes to validate that quality assurance processes are working. OMB will be informed of any changes to data collection procedures or instruments as quickly as possible.

B.5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

Consultants on Statistical Aspects

The following individuals consulted on statistical aspects only. They are not involved in collecting or analyzing the data.

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Individuals Collecting and/or Analyzing Data

CDC is not directly engaged with human subjects during data collection. However, CDC Project Staff below will train health department staff in methods of collection of provider names and contact information and monitor the progress of data collection by the CDC contractor.

CDC Project Staff
The following CDC project staff will analyze MMP Provider Survey data. All CDC project staff can be reached at the following address and phone number:

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The following contracted staff will collect and analyze MMP Provider Survey data.

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