Supporting Statement – Part B
Surveys of Physicians and Home Health Agencies to Assess Access Issues for Specific Medicare Beneficiaries as Defined in Section 3131(d) of the ACA
CMS-10429, OMB 0938-New

Collections of Information Employing Statistical Methods

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.

Survey of home health agencies (HHAs). The respondent universe for the survey of home health agencies includes all home health agencies in the U.S. that served Medicare beneficiaries in 2010. In order to arrive at an estimate of the size of this respondent universe, we used available Medicare program data (the 2009 Standard Analytic File and home health utilization data from 2010-Q2). Home health utilization was only included if the from date and end date were in 2009.

Using these files, there are 9,228 home health agencies (HHAs) with more than 10 referrals in 2009; these HHAs constitute our sampling frame. Of these, there are 2,727 HHAs where more than half of the beneficiary episodes of care for the agency are for dual eligibles; this constitutes 29.6 percent of the total number in the universe. Because of the size of this subgroup, it is not necessary to oversample. The expected yield from a random sample will be sufficient to conduct subgroup analyses and allow estimates of proportions of the target population with specific characteristics or behaviors without applying sampling weights. However, it is straightforward to make population estimates with a self-weighting sample since each observation would have the same weight. The weight would be calculated so that the sum of the weights would equal the universe of the target population found in the CMS claims from which the sample will be drawn.

Table 1.1 on the following page summarizes the survey of HHAs serving Medicare beneficiaries.

Table 1.1 Survey of Home Health Agencies serving Medicare beneficiaries

	Universe Number (percent)	Sample	Expected sample yield	Target response rate
All HHAs with more than 10 episodes in 2009	9,228 (91.6%)	925 simple random sample	600	65%
Subgroup of interest—HHAs where more than 50% of episodes of care delivered are for dually-eligible beneficiaries	2,727 (29.6%)	273 expected yield from SRS	177	

Survey of physicians. The respondent universe for the survey of physicians includes physicians meeting the following criterion: referred at least 25 Medicare beneficiaries for home health services in 2010 where the beneficiaries are members of the ACA priority populations, defined as either living in a medically underserved area or dually eligible for Medicare and Medicaid. For planning purposes, we are using 2009 data and designation as a Health Professional Shortage Area (HPSA) to proxy Medically Underserved Area (MUA) status—we find 8,007 physicians who meet this criterion, representing approximately 2.9 percent of all physicians who referred Medicare beneficiaries for home health services in 2009. Table 1.2 below summarizes the survey of Physicians serving Medicare beneficiaries from the ACA priority populations.

Table 1.2 Survey of Physicians serving Medicare beneficiaries from ACA priority populations

	Universe Number (percent)	Sample	Expected sample yield	Target response rate
All physicians who refer Medicare beneficiaries	277,385 (100%)	no data collection		
Physicians who refer 25 or more beneficiaries for home health services annually	23,602 (8.5%)	no data collection		
Physicians who refer 25 or more dually-eligible beneficiaries for home health services annually	3,189 (1.1%)	no data collection		
Physicians who refer 25 or more beneficiaries living in HPSAs (*) annually	8,007 (2.9%)	no data collection		
Target population for survey—Physicians who refer 25 or more beneficiaries who are either dually eligible OR living in HPSA (*) annually	8,007 (2.9%)	460 Simple random sample	275	60%

(*) defined as HPSA with score in top 50%

As described above, these sample specifications were produced using 2009 data, and with the data we had available at the time, to identify the ACA priority populations. The actual sample will be drawn from the 2010 data and we will have available information on the LIS status of the population. LIS status will potentially be used to more broadly define the ACA priority population. The final algorithm used to select the sample will be based on the actual distribution of referrals to that population and can be provided to OMB once it is finalized. The data provided above still represents our best approximation of the final sample.

2. Describe the procedures for the collection of information including:

- Statistical methodology for stratification and sample selection,

- Estimation procedure,

- Degree of accuracy needed for the purpose described in the justification,

- Unusual problems requiring specialized sampling procedures, and

- Any use of periodic (less frequent than annual) data collection cycles to reduce burden.

The survey's sample of physicians will be a simple random sample with no stratification; the sample of HHAs will be stratified by rural-urban status to ensure proportional representation in rural areas. Medicare data will be used to identify HHAs and physicians; specifically we will use the home health utilization data to identify Medicare beneficiaries and link (by beneficiary and date) to the Standard Analytic File to identify physicians who made home health referrals. Should more recent data from the sources listed above become available prior to fielding the surveys, the research team will update the sampling to reflect this prior to conducting field work. We anticipate additional data that will allow a more refined way to identify the populations of interest —e.g., the availability of Census tract data on medically underserved areas as well as data identifying beneficiaries who receive low-income-subsidies. Any new information introduced into the sampling process will be based on the research conducted about this population by the team pursuant to the home health study.

Although we will use a simple random sampling method for physicians, we plan to review the results of this drawing for severe underrepresentation of any group of potential interest. Checking for severe underrepresentation among the subgroups of interest, after drawing the sample, will help qualify our analysis and inform any limitations of the data.

The HHA data will be used to make univariate estimates for the entire respondent population (N=600). This sample of HHAs will yield an estimate that is approximately plus or minus 2 to 4 percentage points at the .05 level of significance. We also anticipate being able to make comparisons between two subgroups of interest, though the ability to detect differences will depend on a number of factors including the sample sizes for each

of the two subgroups and where the estimate is in the distribution. The ability to make these comparisons will also depend on actual sample yield and will not be made for more than two subgroups at a time. Table 2.1 below shows the main comparisons likely to be made for the HHAs. If we are comparing two subgroups—for example, with 200 HHAs serving ACA populations and 400 other HHAs—we will be able to report that a difference of 9 to 12 percentage points is statistically different.

Table 2.1 Possible comparison groups for survey of home health agencies

Comparison	Anticipated sample size	Detectable difference at 80% power, in percentage points	
		True proportions less than 20% or greater than 80%	True proportions approximately 50%
Location of HHA—Rural vs. Urban	125 vs. 475	10	14
Ownership—Proprietary vs. Voluntary/Non-profit/Gov't	435 vs. 165	9	13
Population served: Primarily ACA populations vs. Others	200 vs. 400	9	12
Size, no. episodes or revenue—greater than or less than median	300 vs. 300	8	12

The physician survey data will be used to make univariate estimates only. The sample of physicians will yield an estimate that is plus or minus 4 to 6 percentage points at the .05 level of significance. No subgroup comparisons are planned.

The HHA survey will be stratified by rural-urban status whereas the physician survey will not rely on stratification. Stratification is used if a random sample will not result in a sufficient number of a given type of cases. However, there are no specific subgroups of critical interest that are not sufficiently represented in the physician population. It should be remembered as well that any stratification to increase the yield of one type of case will decrease the yield of another type of case. Moreover, a stratified sample will be less efficient, resulting in design effects that decrease effective sample size and require the calculation and use of sampling weights for analysis.

3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield 'reliable' data that can be generalized to the universe studied.

The response rate is affected by a number of factors including the salience and complexity of the instrument, method and amount of payment, skill and training of interviewers and procedures for converting non-respondents. The resources allocated should be sufficient to obtain a response rate ranging from the low 50s to about 60 percent, which is our target.

Physicians will receive a prepaid incentive of $50.00; a number of studies have shown that prepaid incentives increase response rates for physicians. (Because of the potential problems in providing an incentive payment to an employee, we will not offer incentives to HHAs.) The literature on monetary incentives for physician surveys is substantial, and clearly indicates that incentives increase response rates and that higher incentives result in higher response rates. Table 3.1 below provides references to several studies that examined the impact of different incentives on response rates, and includes a column that inflation adjusts these incentives. Both the NCI and the Malin et. al studies tested incentives with questionnaires that required 15 minutes or less to complete. The CDC study included a longer survey, since the study is from 1981; while we can infer the importance of relative incentive payments it is difficult to draw any conclusion from the absolute size of the incentive.

Table 3.1 Impact of Payment Incentives on Response Rates

Title/Sponsor	Incentive	Incentive ($2012)	Response Rate	Citation
Center for Studying Health System Change	$75 $50	$80.09 $53.39	65% 60%	Center for Studying Health System Change. 2009. "HCS 2008 Health Tracking Physician Survey Methodology Report". Technical Publication No. 77. Retrieved from: http://www.hschange.org/CONTENT/1085/
National Cancer Institute (NCI), National Institutes of Health (NIH)	$50 $20	$53.21 $21.28	68% 52%	Keating, N.L., Zaslavasky, A.M., Goldstein, J., West, D.W., Ayanian, J.Z. 2008. "Randomized trial of $20 versus $50 incentives to increase physician survey response rates". *Medical Care.* 46(8) 878-881.
RAND	$50 $0	$66.52 $0	66% 13%	Malin, J.L., Rideout, J., Ganz, P.A. 2000. "Tracking managed care: the importance of a cash incentive for medical director response to a survey". *American Journal of Managed Care.* 6(11)1209-1214.
The Center for Disease Control (CDC) and opinion Research Corporation (ORC)	$50 $25	$126.02 $63.01	77% 69%	Gunn, W.J., Rhodes, I.N. 1981. "Physician response rates to a telephone survey: effects of monetary incentive level." *Public Opinion Quarterly.* 45:109-115.
RAND	$25 $20	$33.26 $26.61	66% 59%	Collins, R.L., Ellickson, R.D., Hays, R.D., Mccaffrey, D.F. 2000. "Effects of incentive size and timing on response rates to a follow-up wave of a longitudinal mailed survey". 2000. Evaluation review. 24(4):347-363.

<u>Additional references on prepaid incentives:</u>

Berk, M., Edwards, W. and Gay, N. "The Use of a Prepaid Incentive to Convert Nonresponders on a Survey for Physicians," *Evaluation and the Health Professions* 16, 2 (1993).

Berk, M., Mathiowetz, N., Ward, E., and White, L. "The Effect of Prepaid and Promised Incentives: Results of a Controlled Experiment," Journal *of Official Statistics* 3 (1987).

Berk, M. "Interviewing Physicians: The Effect of Improved Response Rate," American *Journal of Public Health* (November 1985).

Singer E., Van Hoewyk, J. and M.P. Maher (2000) "Experiments with Incentives on Telephone Surveys." Public Opinion Quarterly 64: 171-188.

In addition to the physician incentive, the data collection team will implement a number of procedures to maximize response rates, including telephone prompting for participants who fail to complete and return the mailed questionnaire within the designated time period. During the phone prompt, interviewers will encourage participants to return the questionnaire by mail or fax and will offer to complete the survey over the phone. Further, survey packets mailed to respondents will be sent via FedEx or USPS Priority mail in order to catch the attention of the sample person. The packet will include a clear and concise cover letter describing the purpose and the policy importance of the survey as well as instructions for completing and returning questionnaire and a pre-stamped business-reply envelope. Subsequent follow-up mailings (up to two) will be made using USPS Priority mail services. Reminder postcards will be sent to those participants who have not responded or who have misplaced or lost their packets, followed by a second packet and, if necessary, a third packet. The survey instrument itself has been kept brief and it will be formatted and printed so as to minimize respondent burden. We will also provide options for submitting the questionnaire via mail, fax, or over the telephone if requested.

A nonresponse analysis will be conducted comparing characteristics of responding HHAs and physicians to non-responders, using those characteristics available from the sampling frames. We will be able to compare HHAs (responders and non-responders) with respect to size (measured by episodes or revenue), proportion of population served (accounted for by ACA priority populations), location (region and rural vs. urban), and ownership. The data available to compare physician responders and non-responders will be: (1) specialty; (2) number of home health referrals; and (3) proportion of home health referrals that are for ACA priority populations. We anticipate that larger HHAs and proprietary HHAs may be somewhat less likely to respond. For physicians, we expect that higher income physicians (proceduralists) may be somewhat less likely to respond than primary care physicians and that those with fewer home health referrals may be somewhat less likely to respond than those who have a greater interest in home health care (evidenced by a greater number of referrals). We do not think the level of bias will be severe.

We note that nonresponse results in bias in survey estimates only to the extent that nonresponders differ from responders with respect to the analytic variables of interest. As such, the adjustment corrects for nonresponse only to the extent that responders with specific characteristics respond like the nonresponders would have responded. In other words, the nonresponse adjustment assumes that the available variables are correlated with non-response bias.

While we do not think the level of bias will be severe, based on the nonresponse analysis, we will construct a nonresponse adjustment. For the survey of HHAs, we will base the nonresponse adjustment on a small number of variables; with only 600 cases in total, using all of the available variables simultaneously would result in the weights becoming unstable and highly variable. We will select the two characteristics from those included in the nonresponse analysis that exhibit the greatest degree of nonresponse for adjustment. These variables will be used to create sub-groups containing respondents and non-respondents. Weights will then be calculated based on the proportions in each sub-group and applied to the respondents to reflect the total sample population. Comparisons on key variables will be analyzed between the unadjusted and weighting-class adjusted respondents. If clear differences are detected, we will use the adjusted (weighted) estimates.

Depending upon the variability in the weights once the weights are finalized, we will determine whether it is necessary to use SUDAAN to account for this variability in estimating standard errors.

4.   Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.

Throughout the development period, we have consulted with members of the technical expert panel (TEP) established under a recently completed project addressing the Section 3131(d) mandate. The TEP was convened to provide expertise regarding the home health industry and input into how best to identify and measure home health access issues. The TEP members represented HHAs, national home health care associations, state and federal agencies, consumer advocacy organizations, home health physicians, and home health research experts. Our TEP consultations to test the appropriateness of the survey instrument were with a number of physicians and home health experts all involved in some way in the planning or delivery of home health services. TEP members also sought input from colleagues who reviewed the questionnaire and provided feedback on question wording, response categories, and overall length.

The research team is also planning to conduct a limited pilot test aimed at ensuring that questions cover the range of potential issues and use accepted terminology. It is the team's experience that even a small number of test cases can reveal any possible problems in questionnaire wording or flow. This pilot test will be conducted with approximately 5 to 9 friendly respondents. While additional pre-testing could result in a somewhat improved instrument, this would be at the expense of other survey activities - most likely reducing the level of resources available for phone follow-up and thereby likely resulting in a lower response rate.

5.   Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

Jacob Feldman, PhD, Senior Statistician, Social & Scientific Systems was consulted on statistical aspects of the design. (phone number: 301-628-0416)