# SSA Work Disability Functional Assessment Battery (WD-FAB) Data Collection

# OMB No. 0960-NEW

**Part B. Statistical Methods**

**(used for collection of information employing statistical methods)**

**B. Collections of Information Employing Statistical Methods**

The primary objectives of this study are to assess feasibility of integrating the WD-FAB into the continuing disability review (CDR) business process, examine relationships between single administrations of the WD-FAB and the CDR process, and explore relationships between change in WD-FAB data and the CDR process. Since the crux of the CDR process is evaluation over time, it is critical that the study examines administration of the WD-FAB over time and establishes baselines for significant change in WD-FAB scores in the beneficiary population. Therefore, this study implements repeated data collections to assess change in function over time; we will conduct two single administrations of the WD-FAB survey six months apart to meet this goal.

1. **Statistical Methodology**

Study Design

This study is a descriptive, longitudinal study of a targeted sample of Social Security disability insurance (SSDI) beneficiaries, and Supplemental Security Income (SSI) recipients where we will administer the WD-FAB survey at two time points roughly 6 months apart to the same beneficiaries to assess change in function. We will target the beneficiary sample to maximize the likelihood of observing change in WD-FAB scores in the required timeframe while employing a stratification scheme that achieves an adequate distribution of beneficiaries across key characteristics. We will compare change in WD-FAB scores, as well as point-in-time scores, to measures that we collected as part of the normal CDR business process. We intend the study to provide evidence and estimates that inform the design of a subsequent large-scale study powered to address the WD-FAB’s utility in the CDR process.

Sampling Frame

Westat will sample a stratified random sample from cases with medical CDR diaries

that come due in quarter 1 of fiscal year 2022 (i.e., October 1, 2021-December 31, 2021). We will stratify the participant pool by predictive model score, diary type, and age categories. We will place beneficiaries in three strata based on a predictive model score; the category of HIGH indicates predictive model scores above 4.21%, MEDIUM with scores 2.01-4.20% and LOW category would be below 2%.

There are three medical diary designations based on the predictive model score; medical improvement not expected (MINE), medical improvement possible (MIP), and medical improvement expected (MIE).

For age, CDRs for beneficiaries age 50 or older tend to be 55-65 percent of all CDRs, and so the age strata will follow a 60-40 split for beneficiaries older than 50 and beneficiaries younger than 50, respectively. Figure 1 shows the graphical representation of each stratum.

**Figure 1. CDR Pilot Participant Pool – Stratification Values**

 To the extent possible, each participant pool cell will also balance cases where the primary source of disability is physical or mental. Other than the characteristics described here to identify each stratum, the only restriction on beneficiaries participating in the pilot study is meeting the inclusion or exclusion criteria described below in 1.c. We do not restrict the sample based on claim type (SSDI vs. SSI) or any other characteristic, including impairments such as hearing or vision loss.

We will send the identified participant pool directly for a CDR full medical review (FMR) at the beginning of the fiscal year and we will flag these CDR/FMRs as priority cases. SSA will send the relevant participant pool information to the Westat who is in charge of recruitment, consenting, and data collection.

Eligibility Criteria for the Surveys

The participant pool will include SSI recipients and SSDI beneficiaries who are due for a medical CDR diary in the first quarter of FY 2022. SSA will exclude any beneficiaries who previously had an FMR or CDR deferral. We define eligible beneficiaries as those who meet the following criteria:

1. Beneficiaries who are at least 18 years old at the time of comparison decision point;
2. English speaking and literate in English;
3. Medical diary due during the first quarter of FY 2022

(i.e., October 1, 2021-December 31, 2021). If we cannot recruit a sufficient size participant pool, we may consider including beneficiaries with earlier diary dates; and

1. Beneficiaries who are able to provide consent.

Westat will use screening questions previously used in SSA Studies to make this determination

 We will exclude:

1. Beneficiaries who previously had an FMR; and
2. Beneficiaries who had a CDR deferred (i.e., beneficiaries whose diary came due previously).

**Power Analysis**

The goal of this study is to test the effectiveness of using WD-FAB in the CDR process. From 2004-2011, the ultimate benefit cessation rates (i.e., the cessation rates after all appeals) for all CDRs among adults, were 7.5% for MIE, 5.5% for MIP, and 3.4% for MINE. If we assume a 5% cessation rate across all adults, when we are comparing WD-FAB results with the CDR process results, the study would require a sample size of less than 1,000 complete pairs to achieve a power of 80% and a two sided significance of 5% for detecting a difference of 0.02 between marginal proportions[[1]](#footnote-1). To estimate the initial size of the participant pool, we made several assumptions and worked backwards from our target number of 1,000 FMR outcomes. The median time to FMR completion is approximately 8 months. If we allow for one full year to collect FMR outcomes, we assume we will complete 65% of CDR cases in 12 months, this means we need approximately 1,600 participants to complete both Survey 1 and Survey 2. Assuming we have a loss to follow up of 33%, we need 2,400 beneficiaries from the participant pool to volunteer to participate in the study. Based on the National Beneficiary Survey, we estimate a 60% response rate (i.e., 60 percent of those contacted will agree to participate), this means we need at least 4,000 cases in the initial participant pool. Due to approximately 25% of direct release cases being temporarily screened out, the participant pool sent for direct release will need to include at least 5,334 cases. We would distribute the 5,334 cases across the low, medium, and high scores with 1,334 low, 1,334 medium, and 2,666 high scoring cases. Once we send the cases out for direct release and temporary screen-out, we will remove the cases, and will use the remaining list of beneficiaries for sample recruitment, with a target of at least 4,000 beneficiaries. If fewer than 4,000 beneficiaries remain after the temporary screen out, we will pull additional cases from the reserve sample for recruitment, if available. We expect 2,400 beneficiaries to complete Survey 1 and 1,600 beneficiaries (out of the 2,400 who completed Survey 1) to complete Survey 2.

 **Figure 2. CDR Pilot Participant Pool – Stratification Counts**

**Data Analysis**

This study focuses on the correspondence between CDR measures and WD-FAB data. We will first compute summary statistics such as mean, median, and standard deviation for the responses to original response validity items in physical function and mental health domains. We will plot the distributions of the responses using histograms and kernel-density estimates. We will also calculate the 95% confidence intervals of the mean responses to the validity items. In addition, we will use linear regression analyses using CDR FMR decisions as the outcome measure and the numerical changes in WD-FAB data and the baseline WD-FAB scores as the predictor variables. We expect the results will be exploratory due to the limited length of the study and the number of WD-FAB domains. The regression coefficient will provide preliminary results on how the WD-FAB score changes relate to the FMR decisions

1. **Procedures for Collecting the Information**

 SSA will stratify the participant pool we select for the study based on the following variables:

* Predictive Model Score: SSA statistical profiling to determine whether to initiate a CDR as a mailer or as an FMR. Beneficiaries with a high predictive score are sent directly to FMR due to a high likelihood of cessation of benefits; beneficiaries with a medium or low predictive score are sent mailers due a lower likelihood of cessation of benefits;
* Diary Type: SSA designated categories based on likelihood of medical improvement: medical improvement not expected (MINE), medical improvement (MIP), and medical improvement expected (MIE).
* Age: Beneficiaries age 50 or older account for 55-65% of all CDRs, therefore the stratification will include a 60/40 split for the two age groups, under 50 and over 50.

We will include multiple modes of contact for participant recruitment. We will mail a study invitation package to the participants. The study invitation package will include: (1) An invitation letter which explains the study, and will inform the selected participants we will call them soon; (2) a study consent form which explains the background of the study; what will occur during the study; their rights as a participant; the risks and benefits of participating in the study; and (3) instructions on how to download the study smartphone app to facilitate study participation.

Once we mail the study invitation package, we will call recipients to conduct a short screener to ensure we are speaking to the sampled recipient and to verify the recipient is eligible for the study. The eligibility recipient criteria to complete the survey is: the recipient age of 18 or over, ability to understand English, and the ability to provide informed consent.

To evaluate the participants ability to provide informed consent, interviewers will read aloud a brief description of the study and then ask participants to name one thing participation involves. Asking the participant to name one thing participation involves allows the interviewer to check for one’s cognitive ability to provide consent. If the recipient fails to name one thing participation involves, the interviewer will deem the recipient ineligible for the study due to inability to provide informed consent. If the recipient can provide informed consent, the interviewer will review the main points on the consent form over the phone with the beneficiary. The main point on the consent will includes: (1) the voluntary nature of the study; (2) the study will not directly benefit them; (3) their rights as study participants; (4) participants can withdraw at any time; and (5) contact information on who to call if they have questions about their rights as research participants.

The interviewer will then ask the recipient if they want to participate in the study and collect verbal informed consent. After we collect consent, interviewers will collect contact information from the recipient including home address, preferred telephone numbers, and email addresses. Interviewers will obtain permission for the study to send reminders via text message for respondents with cell phones. The system will send electronic reminders to participants about survey completion and to keep in touch with respondents between each wave of data collection. We will confirm the recipient’s address to mail incentives after survey completion.

We estimate it will take respondents 50 minutes to complete Survey 1 and 75 minutes to complete Survey 2; it will take respondents a total of 125 minutes to complete both surveys. The study app provides a cost-efficient way for the study to maintain contact with participants between survey waves and collect updated contact information.

At the close of the screener, recipients will have the option of completing the survey online themselves or over the telephone with an interviewer. For those recipients who opt to do the survey with an interviewer, the interviewer will give them the opportunity to do the survey immediately following the screener, or at a later date and time that is convenient for the recipient. The interviewer will schedule an appointment to call the recipient at their preferred date and time. We will ask recipients who opt to complete the survey on the web to provide a valid email address where they can receive information about how to access the web survey.

 The recipient will receive an email with the survey URL and instructions for logging on. Recipients who elect to complete Survey 1 or Survey 2 on their own via the web will also receive email reminders if they have not started the web survey within four days and another emailed reminder on day.

1. **Methods to Maximize Response Rates**

We will follow established best-practices in survey fielding methodologies to increase response rate while keeping the participant burden as low as possible. Previous studies have demonstrated the positive effect of respondent reimbursement on survey response rates.[[2]](#footnote-2) In addition, studies have shown the reminders in web-based data collection increase response rates. We offer participants reimbursement for their participation in the study, and we will also send text and e-mail reminders to encourage their participation throughout the study. We determined the graduated incentive structure of $50 for completing Survey 1 and $75 for completing Survey 2, to maximize response rates and encourage respondents to complete both surveys. In total, respondents will receive $130 in Visa debit cards for completing both surveys and downloading the study app. One of the central goals of the study is to evaluate how WD-FAB scores and beneficiary functional information might change over time, therefore, participation in both surveys is of critical importance, which is why we are instituting relatively high incentive payments for this evaluation.  An additional reason for the incentive structure is to provide an adequate incentive for respondents to complete Survey 2, which contains an additional 52 follow-up endorsement questions that are not included in Survey 1.

We will also create a study app the participant can download on their phone which helps keep them in contact with the study; allow them to schedule their survey and receive reminders about the study.

We will email all respondents for whom we have email addresses, and text respondents with valid cell phone numbers who have granted permission to receive text messages.

Text Reminders:

Respondents will receive text message reminders if:

* They opted to complete the survey over the phone at a later time, but have not scheduled their survey;
* They scheduled their survey for a later date; and
* They elected to complete the survey online.

We will also send text message reminders to Survey 1 respondents to remind them about Survey 2. Respondents will receive a text message reminder about Survey 2 each month in the six months between Survey 1 and Survey 2, and again two weeks before, one week before, and one day before their window for Survey 2 opens. These reminders will include a note to call the study help desk with any changes to their contact information.

Email Reminders:

Respondents who elect to complete Survey 1 or Survey 2 on their own via the

web-based survey will receive email reminders if they have not started the web survey within four days and another on day 5. The email will inform the respondent of the days remaining to complete the survey online. The email will include the link to the survey and their unique access code and remind them about the prepaid debit card they will receive after completing the survey. The email will also remind the respondent that their survey will expire if they do not complete it within the next three days (or a total of 7 days from when the initial email is sent).

Respondents who provide us with an email address will receive reminders via email at the same interval as the text message reminders. Respondents will receive email message reminders if:

* They opted to complete the survey over the phone at a later time, but have not scheduled their survey;
* They scheduled their survey for a later date; and
* They elected to complete the survey online.

Smartphone App Notification Reminders:

Eligible respondents will be able to download the app from the Apple App Store, or Google Play at no cost. The app will allow respondents to schedule, cancel, or reschedule appointments for Survey 1 or Survey 2, and review and update their contact information. We will also use the app to send push notification reminders about Survey 1 and Survey 2.

Respondents will receive push notification reminders through the study app if:

* They have not yet scheduled Survey 1 or Survey 2;
* They scheduled their phone Survey 1 or Survey 2 for a later date; or
* They elected to complete Survey 1 or Survey 2 online until they complete the survey.

The app will also help us maintain contact with respondents between Survey 1 and Survey 2. Respondents will receive a push notification reminder about Survey 2 every two months in the six months between Survey 1 and Survey 2, and again two weeks before, one week before, and one day before their window for Survey 2 opens. These reminders will include a note for respondents to update their contact information directly in the app if there are any changes.

Telephone Follow-up for Web Non-Responders:

Data collectors will initiate phone calls (Attachment B1: Survey 1 Web

Non-responders Follow-up Script; and Attachment B2: Survey 2 Web

Non-responders Follow-up Script) to respondents who elect to complete the survey on the web if they do not complete the web survey within 7 days of receiving the initial email with the link to the survey. Web survey non-respondents will receive a telephone follow-up on day 8. The goal of the call will be for interviewers to complete the survey with the respondent over the phone. If the respondent prefers to complete the survey online, we will send them a new email to access the survey.

1. **Tests of Procedures**

The survey instrument will include SSA CDR questions and the previously tested and validated WD-FAB instrument.[[3]](#footnote-3) In addition, in 2015 and 2016, Westat conducted a series of studies jointly with the National Institutes of Health’s (NIH’s) Rehabilitation Medicine Department, Boston University’s (BU’s) Health and Disability Research Institute, and SSA to test the effectiveness of SSA’s computerized adaptive testing (CAT) program in expediting the disability claims process and use of WD-FAB. Based on these experiences, we believe we have all the information needed for an accurate estimate of respondent burden as required by OMB. We did not undertake testing of procedures or methods for this information collection, as we are basing this survey on procedures and methods we used previously.

1. **Statistical Agency Contact for Statistical Information**

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1. Assumed correlation between paired observation is 60% [↑](#footnote-ref-1)
2. See Mercer A, Caporaso A, Cantor D, Townsend R, How Much Gets You How Much? Monetary Incentives and Response Rates in Household Surveys, Public Opinion Quarterly, Volume 79, Issue 1, Spring 2015, Pages 105–129 [↑](#footnote-ref-2)
3. For validity and reliability of WD-FAB instrument, see “Meterko, M., Marfeo, E. E., McDonough, C. M., Jette, A. M., Ni, P., Bogusz, K., Rasch, E. K., Brandt, D. E., & Chan, L. (2015). Work disability functional assessment battery: feasibility and psychometric properties. *Archives of physical medicine and rehabilitation*, *96*(6), 1028–1035. [↑](#footnote-ref-3)