

Background and Planning for Incorporating an Event History Calendar into the Re-Engineered SIPP.

Jason Fields
Mario Callegaro

Jason Fields – US Census Bureau, Housing and Household Economic Statistics Division
Jason.M.Fields@Census.GOV

Mario Callegaro – Knowledge Networks

This report is released to inform interested parties of research and to encourage discussion of work in progress. The views expressed are those of the authors and not necessarily those of the U.S. Census Bureau.

Introduction

The Census Bureau is currently re-engineering the Survey of Income and Program Participation (SIPP). The re-engineered SIPP will be an integrated data system with multiple components and methods: a survey-based data collection; an American Community Survey-based sampling frame; administrative records; and statistical modeling. Together, these components will yield a fuller, stronger, more richly detailed program of estimates of economic well-being. The re-engineered SIPP survey component will be evaluated to incorporate improvements to the current SIPP. The survey's mission is to provide a nationally representative sample for evaluating: 1) annual and sub-annual income dynamics, 2) movements into and out of government transfer programs, 3) family and social context of individuals and households, and 4) interactions among these items. These survey objectives are pursued in the context of several goals - cost reduction and improved accuracy, relevance, timeliness, and accessibility.

We present background information about the methodological choices that led to the current design. The re-engineered SIPP survey is being designed around annual data collection that collects sub-annual dynamics in income and government program use. Annual survey administration is the primary source of significant cost savings compared with prior SIPP panels. Moving from the current design, with interviewing 3 times per year, to an annual survey, raises significant concerns about recall accuracy and the ability of respondents to report the sub-annual dynamics SIPP traditionally measured. The current preferred option is to design a new survey based on more streamlined content, minimal topical module-based content, and to utilize an Event History Calendar (EHC) module to improve respondents' ability to recall the sub-annual dynamics the survey is tasked with collecting. We discuss the background for choosing an EHC module, additional design considerations, and propose methodological evaluations that may be incorporated into strategies for evaluating EHC collected data.

Background

The main objective of the SIPP has been to provide accurate and comprehensive information about the income and program participation of individuals and households in the United States. The SIPP collects detailed information

on cash and non-cash income (including participation in government transfer programs) three times a year, and detailed data on taxes, assets, and liabilities are collected annually. A major use of the SIPP has been to evaluate the use of and eligibility for government programs and to analyze the impacts of options for modifying them.

The Social Security Administration, for example, relies on SIPP data to project baby boomers' retirement incomes and the likely timing of their retirement. The Department of Health and Human Services uses SIPP data to evaluate the impact of Welfare Reform and to measure the economic effect of disabling conditions on children and adults. The Department of Agriculture uses SIPP data to understand who is eligible for, but not participating in, assistance programs like Food Stamps, and to assess alternative eligibility requirements. Other SIPP stakeholders include the Small Business Administration, the Department of Labor, the Congressional Budget Office, and the Congressional Research Service. While the SIPP has been used to research alternative measures of poverty, the official measure comes from the Current Population Survey (CPS). The American Community Survey (ACS) also provides some data on poverty for small geographic areas.

The Census Bureau's continual efforts to improve its SIPP data collection program led to the decision to reengineer the SIPP. The re-engineered SIPP has had many names over the past year and half (Program of Income, Wealth and Health Insurance Measurement, and Dynamics of Economic Well-Being System – DEWS are the most referenced), but in this paper we will just refer to the re-engineered SIPP for simplicity. The SIPP's longitudinal household design provides many advantages; it also imposes considerable burden on respondents and makes data processing and review difficult, leading to long delays before the data can be released and analyzed. Furthermore, the SIPP (like virtually all long-term survey programs) has been experiencing declining response rates. In 1996, nonresponse to the first SIPP interview was 8 percent; the 2001 rate was 13 percent; and the 2004 rate was 15 percent. The Census Bureau has wanted to reengineer the SIPP for some time. Reengineering efforts to convert SIPP to a new instrument language and new processing system were underway during 2005, however at the end of that calendar year this work paused. Changes in resources necessitated new plans for SIPP. In early 2006 meetings were held with key federal stakeholders to discuss possible directions for the future collection of data that had been part of SIPP, taking advantage of this time to consider other options to re-engineer the SIPP.

The design goals for the re-engineered SIPP are focused on offering policymakers and researchers data that address the same basic issues as SIPP, and that can be used, in part, as SIPP data have been used, that is, to provide a nationally representative sample that can be used to evaluate the annual and sub-annual dynamics of income, the movements into and out of government transfer programs, the effect on family and social context of individuals and households, and the interaction among these items. The improvements to SIPP were directed to streamline the collection and production systems, provide similar information at a reduced cost, with improved data quality, improved timeliness, and improved data accessibility. Several important decisions were made based on these directives; 1) The design of the data system would try to capitalize on existing data collection programs and simplify new collection systems to reduce cost, 2) the data processing system would be overhauled to eliminate the patches and workarounds that have accumulated over the years, 3) the structure of the data file presented to the public would be simpler, 4) and timeliness would be significantly improved through redesign of the processing system and simplification of the data collection schedule.

The current SIPP program administers three waves or interviews in each year. The interview rotation design means that data are collected in each of the 12 months of the calendar year in order to level field resource requirements. This requires a constant level of production-readiness that encumbered several components of the survey production and review processes, contributing to data products that were not timely, were error-prone, and were difficult to use.

Proposals for the re-engineered SIPP

The process of developing alternatives for the current SIPP design was open and included many ideas that were reviewed and dismissed before settling on a couple paths to develop more fully. Initially, following the decision to re-evaluate the current status and direction of SIPP, several options were brought forward based on data sharing and modeling advances. From January 2006 through April 2006, meetings were held with several key federal stakeholders, discussing several plans that could have provided economical alternatives to continuing an extensive and complex survey like SIPP. While the same domains as traditional SIPP would be present, compromises would necessarily be required in terms of the scope and strict comparability to prior SIPP data. In June of 2006 the

leading options for a composite improvement to SIPP were presented in an open meeting at The Brookings Institution (see <http://www.sipp.census.gov/sipp/dews.html>). We will briefly discuss these alternatives, but return to focus on the methodological justification for our decision to pursue development of an instrument which utilizes an event history calendar to facilitate the collection of subannual information with an annual survey.

There were several key components to the alternatives discussed. Throughout the first half of 2006 the discussion of alternatives to SIPP were guided by a primary emphasis on cost reduction. The components include use of existing survey data, that is data collected by another survey which could be used to provide information on SIPP topics; administrative records as a replacement for SIPP type survey data; modeling or synthetic data; a simplified new survey; and combinations of the above.

Using existing survey data collected as part of another data collection program was a first response to quickly replacing content that was collected by SIPP. Data for a number of SIPP topics are collected in the Annual Social and Economic (ASEC) supplement to the Current Population Survey (CPS). The CPS represents a monthly, ongoing data collection, whose monthly sample design includes a subset of household addresses that were interviewed the preceding year. Taking advantage of this year-to-year overlap in the CPS-ASEC, about 40% of respondents would be available in adjacent years. The data from the respondents in both years would have represented the foundation of the longitudinal data. Geographic coverage in the American Community Survey (ACS) far exceeds that which was possible in the SIPP. Utilizing the advances in image processing, forms handling, and infrastructure that supports the ACS could also be significant sources of cost savings and represent additional returns for the development of mail-out supplemental data collections. These advances in survey administration and processing which enable the ACS forms to be quickly processed and coded could be adapted regardless of whether the CPS or the ACS was used as the foundation. Data collected in either the CPS or the ACS could then be supplemented with a follow-on survey that could include additional topics that could have expanded the breadth of the data to include necessary domains that are not part of the CPS-ASEC or ACS data collections, as well as lengthening the period for which longitudinal data were available for these households.

Administrative records data are data collected to serve an administrative purpose. The records under consideration for use in this program come from federal or state government offices charged with administering programs or policies. Primary sources of federal administrative records data include the Social Security Administration and the Internal Revenue Service. There are many other sources of federal administrative records data, and where content in those records overlap with SIPP content, discussions were initiated to explore the possibility of agency partnerships which would facilitate obtaining access to those data. A significant portion of the program related content that users would like to see on any replacement or improvement to SIPP does not come from federal agencies, but from state agencies. In these cases distinct agreements for use and access to these records need to be negotiated with each state agency responsible for those data. An additional complication is the wide variability in data format and quality from one state to another. The states have different levels of sophistication with their data collection and management systems.

Proposals to use administrative records to replace, validate, or supplement data collected in SIPP are not new. Since the beginning of SIPP, internal SIPP personnel and external stakeholders and advisory groups (like the National Academy of Sciences) have recommended the use of administrative records for these purposes. In June 2006, at a presentation at the Brookings Institution, our stakeholders expressed concerns about a lack of usefulness of a survey enhanced with administrative records, citing comparability of measures, coverage differences, matching rates, synthetic data concerns, and confidentiality issues. Additionally, the likelihood of a data gap and the potential length of the gap between the end of the current SIPP data and a possible improved SIPP became a significant issue. The importance of minimizing this data gap with data more similar to SIPP than could be generated from the existing data and administrative records became clear. By August 2006, we had refocused to utilize administrative records as a supplement to a new survey that could deliver more of the content stakeholders needed from SIPP. Administrative records will play a key role in validation activities for the test and dress rehearsal data collections; serve as a supplement to survey data in the editing process, for modeling activities, and for evaluation activities. At this time a contract was also initiated with the National Academy of Sciences' Committee on National Statistics (CNSTAT) to sponsor a panel that could advise the Census Bureau of the best use of administrative records in the new system.

Following the input from stakeholders and the outcry at the possible loss of SIPP data, we began development of a new survey that would fundamentally redesign the collection of content collected by SIPP. After considering the existing 4 month recall period, or a six month or an annual recall period and the costs associated with each, we eventually opted to explore annual survey contacts in the household with a reference period long enough and detailed enough to capture retrospective information on sub-annual dynamics. Choosing to focus on repeated annual survey administrations provided the best source of cost reduction while continuing to include an interviewer-administered survey-based data collection component. Addressing the issues raised by the stakeholders with respect to the presence and size of the data gap were the driving force for moving through this process quickly and expediting the design and plans for a replacement data collection. There were insufficient funds and time to design and implement a standard overlap and validation development process while also minimizing the data gap and meeting stakeholders' needs.

The use of an event history calendar was not the only option discussed, nor was it even the first. Once the decision was made that major cost savings would be achieved through reductions in field costs with an annual survey, and that the content requirements still included subannual dynamics in jobs, programs, health insurance coverage, and demographics, methodologies that could facilitate this were considered. The primary concern is that in an annual administration, spells on programs and the amounts received would be difficult to recall. Using traditional SIPP type questionnaire techniques over this length of time would have certainly been deficient for many items. A literature review of survey methods related to improving respondent recall clearly points to the use of event history calendars as survey tools that facilitate better recall in nearly all cases examined.

Event History Calendars

The use of an event history calendar (EHC) to capture sub-annual transitions is a relatively new feature in automated demographic survey instruments. The Panel Study of Income Dynamics (PSID) conducted by the University of Michigan, the Health and Retirement Survey, as well as the labor surveys of Statistics Canada (SLID) and Statistics Netherlands currently use or are planning to use this methodology, which ties life events to program participation, health insurance, and job transitions. This type of methodology, described in more detail below, facilitates the use of annual instrument administration to collect sub-annual estimates rather than three interviews at four-month intervals, as is the current practice with SIPP. This was another clear advantage of the 12 month EHC, enabling the use of the same reference period across items, and further streamlining the instrument from one wave (year) of data collection to the next. Recent research also shows that EHC collected data can decrease seam effects between waves compared with traditional questionnaire interviewing, and also potentially reduce seam effects between different components of an the same instrument (Callegaro, 2007). Additional work is needed to evaluate whether additional reductions in seam biases can be realized by combining dependent interviewing with EHC methodologies.

Calendar-based data collection originated in the late 1960s (Balán, Browning, Jelin, & Litzler, 1969; Blum, Karweit, & Sørensen, 1969) and was then rediscovered by Freedman and colleagues (1988) who called it the Life History Calendar (Belli & Callegaro, in press-a). Authors have used inconsistent terminologies to refer to the same interviewing strategy. For the purpose of this discussion we will not enter into the terminological details but refer to it as Event History Calendar or EHC. The interested reader can refer to Callegaro (2007) and Belli and Callegaro (in press-a) for more details.

An EHC interview is centered on a customized calendar that shows the reference period under investigation (Axinn, Pearce, & Ghimire, 1999). The calendar contains timelines for different domains, for example work history, residence history, household composition and other domains relevant to the topic of the study. Landmark events, such as holidays and birthdays can be used to aid the respondent's memory (Belli, Shay, & Stafford, 2001) but not every researcher employs them (Axinn, Barber, & Ghimire, 1997). The interviewer guides the respondent in answering queries for each time line, starting with the first domain and continuing through all of the domains until the EHC is completed. The EHC also allows moving back and forth among the domains. The process uses previous domain information and dates to help the respondent correctly place other events in the appropriate time frame. When, for example, unemployment history is queried, the respondent can use retrieval cues from landmark events, residential history, and household composition to retrieve the spell in which any unemployment had transpired. For instance, an unemployment spell can happen just before a move to a new location, or right after a pregnancy. The calendar does not necessarily have to be shown to the respondents. In the literature there are successful applications

using both face-to-face (Axinn, Barber, & Ghimire, 1997; Parrado & Zenteno, 2001) and telephone interviews (Belli, Shay, & Stafford, 2001; Belli, Smith, Andreski, & Agrawal, 2006). In a randomized assignment study, Callegaro and colleagues (2005) found initial support that showing the calendar improves the quality of reports in comparison to a completely auditory presentation (checked against validation data). In a computerized self-administered panel, respondents were given a summary screen in the form of a calendar based on previous responses collected with a conventional questionnaire (CQ) about major events in various domains of their life. After the summarized calendar screen the respondents were asked to make any necessary corrections. Twenty one percent of respondents corrected the order of the events and seventy nine percent corrected the dates after seeing the information summarized on the calendar (Saris, 1998).

The units of analysis are decided by the researcher and have included years (Axinn, Barber, & Ghimire, 1997; Furstenberg, Brooks-Gunn, & Morgan, 1987), months (Caspi et al., 1996; Engel, Keifer, & Zahm, 2001), and thirds of a month (Belli, Shay, & Stafford, 2001; Pebley, 2004a). In some administrations, interviewers are encouraged to permit a chronological order of retrieval at the respondents' choosing such as moving forward in time, backward in time, or across contemporary events. Every event or "spell" is entered into the time lines with a starting point and an ending point as defined by the unit of analysis. In case the respondent remembers the exact dates those can be entered into the timeline or are converted directly into the unit of analysis. If those are not available, the interviewer is instructed to probe for a time location depending on the unit of analysis. In the case of thirds of a month, for example, the interviewer will ask if the event occurred at the beginning of the month, in the middle, or at the end of that month.

Each spell can happen before, after, or contemporaneously with another spell. For example, a relocation event can occur contemporaneously with a new job event. The entire process of compiling the calendar focuses, by its nature, on coherence, consistency, sequential order, and attempts to correct for missing data (Belli, 1998). By coherence, it is intended that some events are less likely to occur together, such as having three jobs at the same time. Although that might be the case, it is also possible that the respondent made a mistake in the location of the jobs in time. The calendar instrument visualizes better than a CQ instrument events in the time line suggesting possible inconsistencies. The sequential nature of the EHC is revealed by the fact that an event should happen after the preceding one and before the following one. For example if the respondents are unemployed, they will then look for a job, and when found, become employed. The time line also highlights to the interviewer missing data in a more prominent way than a CQ. This is because each event in a time line should be adjacent to another event without any time unaccounted for (something must have been happened in each time frame). In case of time unaccounted for, the interviewer can probe to investigate what happened in that time frame.

The instrument is organized by domains (rows) and by months (columns). The calendar being designed for the re-engineered SIPP will collect information for a one-year reference period and the units of analysis are months, with the exception of employment and unemployment, which are thirds of a month. It starts by asking for some landmarks events; some of them are already filled in such as national holidays (e.g. Labor Day and Thanksgiving). In addition to the temporal placement of spells during the reference year, the EHC section of the instrument will collect specific details that are pertinent to each spell. For example in the residence history section of the EHC, a full address is collected for each residence to enable geographic coding and migration research. In addition, the type of living quarters, the tenure status (own/rent), residence in subsidized housing, and voucher receipt at this address are recorded. Across domains one of the characteristics that we are paying additional attention to is the starting date for spells. In the case of residences, the residence that is reported for January of the reference year will also generate a question for the date moved in. In designing this calendar component for the re-engineered SIPP, the Census Bureau staff has been informed by the work on the PSID by Belli et al. (2001), prior work on event history calendar use in SIPP by Kominski (1990) and by the work of Freedman and colleagues (1988).

The calendar is accompanied by a questionnaire that provides a structure, suggests question wording and probes. The questions can be very detailed and standardized (Zahm et al., 2001) – as will be the case with the re-engineered SIPP – or more narrative and open ended (Blum, Karweit, & Sørensen, 1969). The common denominator of EHC studies is that the interviewers are not required to follow the question order exactly, but they are allowed to deviate from it with a series of probes and inquiring techniques that are adapted to the respondent's way of remembering. The instrument's flexibility promotes the recording of very complicated life histories, with the benefit of allowing the respondents to remember the events in the chronological order that they prefer. Although the literature about which order of retrieval (forward or backward in time) leads to the best reports is still inconclusive (Bhandari &

Wagner, 2006), some studies on the quality of order of retrieval suggest that when allowing respondents to choose their own order in comparison with suggesting an order of retrieval provides better data (Jobe et al., 1990; Loftus & Fathi, 1985). The EHC instrument does not necessarily have to be used alone. In fact, it is frequent that it is part of a longer instrument in which a CQ component is administered before and/or after the calendar (Belli, 2003; Pebley, 2004b; Witterbrood & Nieuwbeerta, 2000).

Quality of EHC Data

Since its first applications, researchers have been examining the quality of data obtained by EHC interviewing and how it addresses the common problems of recall error in survey research (Belli, 1998). Freedman and colleagues (1988) published the first paper dealing with quality of EHC data by comparing retrospective EHC reports with contemporaneous verbal reports collected from the same panel respondents five years earlier. For events such as marital status and births the agreement was above 95% with discrepancies of one month. For school attendance and employment status measured on a 3-category scale (full-time, part-time, nonattendance/unemployment) the reliability was .90 and .62 respectively (Alwin, 2007). Caspi et al. (1996) found over 90% agreement between EHC data and data reported in the same month three years earlier for living arrangements, cohabitation, schooling, employment, and job training in a longitudinal-epidemiological study. Similar rates of agreement with data collected 15 years earlier were found by Ensel and colleagues (1996) in a longitudinal study. Lin, Ensel & Lai (1997) asked 1993-95 Albany panel respondents to recall life experiences that happened in 1979-82 using Event History Calendar data collection. They then compared the EHC reports with the contemporaneous reports of the same respondents for CQ data collected nearly 15 years before. The comparisons were done for ten life event categories such as marital changes, births, residential moves, education, employment, deaths, financial/legal work, health, sexual difficulties, arguments with partner or spouse, and changes in social activities and recreation. The analysis showed nearly no overreporting but some underreporting. The underreporting errors were no higher than 33% for health events and tended to be larger for chronic or routine activities rather than intimate events and family experiences. Interestingly, 25% of respondents made no recall errors in any of the ten categories and another quarter made recall errors in only one of the ten categories. Only 8% made recall errors in five or more categories. When analyzing the precision of recall over time, the authors found nearly no backward or forward telescoping, concluding that recall errors were mostly due to forgetting or selective retention, rather than timing of their occurrence.

Kessler and Wethington (1991) compared inter-respondent reliability of data collected with the EHC with a similar study using a CQ. The respondents were married couples who were separately asked to date several negative events such as illness, death, and job and financial troubles, for the previous 12 months before the interview. The interreliability rate (r) among the couple was in the range of .64 to .68 compared to .30 for a similar CQ study. When compared to CQ methods in randomized design studies, EHCs have shown better data quality for retrospective reports in terms of precision of the placement of events in time, and in terms of reducing underreporting. In a study with PSID respondents randomly assigned to EHC or CQ conditions, and using validation data collected from the same respondents (PSID) years before, Belli, Shay, and Shafford (2001) showed that EHC reports were more precise (less underreporting, higher agreement between reports) than CQ reports on number of moves, income, weeks unemployed, and weeks missing work resulting from personal illness, the illness of another, or the combination of the two. In a study with a design similar to that of Belli and colleagues (2001) with PSID respondents, this time using a computerized instrument and telephone interviews, Belli, Smith, Andreski and Agrawal (2006) collected retrospective reports with a reference period of up to 30 years. The respondents were randomly assigned to either a standardized CATI interview or a computerized EHC (C-EHC). The reports on social and economic variables of residential, marriage, cohabitation, and work history were compared to the previous data collected from the same panel respondents. The C-EHC showed better overall data quality for cohabitation and work history; no difference was found for residence change and CQ showed better data only for marriage history. Yoshihama and colleagues (2005) found that the EHC method facilitated the recall of domestic violence victimization. In particular, the EHC technique elicited more reports of lifetime experiences of intimate partner abuse (93-96%) than CQ format (61-64%). EHC was especially precise in revealing abuse that occurred earlier in respondents' lives.

Testing and Evaluation of the re-engineered SIPP

As part of the development of the re-engineered SIPP we are incorporating two distinct field test activities. The first research project being undertaken at the Census Bureau is a reinterview and validation experiment using a sample of cases from the SIPP 2004 panel. The purpose of this evaluation is to consider the ability of the EHC to successfully assist respondents to recall program related information. The EHC will be administered with a paper instrument to respondents from the 2004 SIPP panel and will focus on the 2007 calendar year experience for these respondents. In their wave 10, 11, and 12 SIPP interviews, each of which used a 4-month recall period, those respondents will have reported about their employment, program use, income sources, demographics, and other subjects during calendar year 2007. The EHC reinterview, to be carried out in early 2008, will ask those same respondents to report about the entire 2007 calendar year in a single interview, utilizing an event history calendar data collection instrument. Responses to the 12-month EHC will be compared with the same respondents' SIPP interview reports covering the same calendar year. Missed events in one or the other interview method are likely evidence of reduced data quality. Other data quality differences may be indicated by more or less reasonable distributions of spell transitions across calendar months. Additional evaluation methods – respondent debriefings, interviewer debriefings and focus groups, interview observations, analysis of recorded interviews, etc. – will be directed toward a better understanding of the EHC interview process, such as how landmark dates are introduced and used, the preferred “direction” of reporting, the extent to which events in one domain are used to pinpoint transitions in another domain, etc.

One limitation of this design is the possibility that the SIPP respondents' EHC reports will be “primed” by their having just completed three waves of SIPP interviews covering the same time period. This study will yield data about the extent of such “priming” by including in the EHC interview sample a set of un-primed SIPP sample cases that were dropped from the 2004 SIPP sample after Wave 8 due to a budget-cutting exercise, and thus will not have previously reported about calendar year 2007.

To this point the design of this study is comparative; SIPP vs. EHC, and EHC (primed) vs. EHC (un-primed). We also plan an assessment of data quality through validation against administrative records data. This data quality assessment with administrative record data will focus on subset of key characteristics and programs. In order to make this aspect of the design feasible, we will limit the EHC reinterview test sample to cases from one or two states, where substantial groundwork has already been laid to be able to utilize administrative records for several programs (e.g., TANF, Food Stamps, Medicare, Medicaid, Social Security, SSI, and possibly unemployment information). This validation stage of the analysis will occur after the first stage comparisons due to the added time necessary to obtain and match the necessary administrative records.

By including direct comparisons across survey instruments, as well as an administrative-record-based validation component, this research will be able to add significantly to the literature on event history calendar survey methodology, especially with respect to validating the SIPP and EHC reporting of income transfer program receipt and amounts over a calendar year. Results from the study will also inform the decision of whether to use EHC methods in the re-engineered SIPP program.

Following the 2008 paper instrument evaluation, (assuming a positive outcome) a broad dress-rehearsal evaluation of the new electronic EHC instrument being designed for the re-engineered SIPP will be administered in September 2009. The results from the 2008 EHC evaluation will be used to refine training procedures and make necessary adjustments to the new computer assisted personal interview (CAPI) EHC being prepared for the dress rehearsal.

The planning and instrument development for the 2009 re-engineered SIPP dress rehearsal is well underway. The survey will be administered in September – the earliest possible administration window for the dress rehearsal. It will collect information about jobs, programs, health insurance and demographics for the 2008 calendar year. The dress rehearsal will implement the lessons learned in developing field procedures for the 2008 EHC evaluation and extend field implementation to each of the Regional Offices for this national test. The 2009 dress rehearsal instrument will be evaluated in several domains including field implementation issues and data comparability vis-à-vis SIPP 2008 and administrative records. The administration of the 2009 dress rehearsal in September is not ideal, but is the earliest in 2009 that the instrument can be ready for implementation. The production implementation of an EHC in the re-engineered SIPP would be during the early part of the calendar year to minimize the length of recall in the reporting of data for the prior calendar year. Results from both the 2008 evaluation and the 2009 dress rehearsal will be used to make final decisions regarding the design and implementation of the re-engineered SIPP for production in 2011 or 2012.

Keywords (SIPP, re-engineered SIPP, EHC, Census, Survey)

References

- Alwin, D. F. (2007). *The margin of error: A study of reliability in survey measurement*. Hoboken, NJ: Wiley.
- Axinn, W. G., Barber, J. S., & Ghimire, D. J. (1997). The neighborhood history calendar: A data collection method designed for dynamic multilevel modeling. *Sociological Methodology*, 27, 355-392.
- Axinn, W. G., Pearce, L. D., & Ghimire, D. J. (1999). Innovations in life history calendar applications. *Social Science Research*, 28, 243-264.
- Balán, J., Browning, H. L., Jelin, E., & Litzler, L. (1969). A computerized approach to the processing and analysis of life histories obtained in sample surveys. *Behavioral Science*, 14, 105-114.
- Belli, R. F. (1998). The structure of autobiographical memory and the event history calendar. Potential improvements in the quality of retrospective reports in surveys. *Memory*, 6, 383-406.
- Belli, R. F. (2003). The integration of a computer assisted interviewing event history calendar in the Panel Study of Income Dynamics. Retrieved June, 2006, from <http://psidonline.isr.umich.edu/data/Documentation/Fam/2003/EHCManuscript.pdf>
- Belli, R. F., & Callegaro, M. (in press-a). The emergence of calendar interviewing: A theoretical and empirical rationale. In R. F. Belli, F. P. Stafford & D. Alwin (Eds.), *Calendar and time diary methods: Measuring well being in life course research*. Newbury Park, CA: Sage.
- Belli, R. F., Shay, W. L., & Stafford, F. P. (2001). Event history calendars and question list surveys: A direct comparison of interviewing methods. *Public Opinion Quarterly*, 65, 45-74.
- Belli, R. F., Smith, L., Andreski, P., & Agrawal, S. (2006). Methodological comparison between CATI Event History Calendar and conventional questionnaire instrument: Quality of life course and retrospective reports. Submitted for publication.
- Bhandari, A., & Wagner, T. (2006). Self-reported utilization of health care services: Improving measurement and accuracy. *Medical Care Research and Review*, 63, 217-235.
- Blum, Z. D., Karweit, n. L., & Sørensen, A. (1969). *A method for the collection and analysis of retrospective life histories* (No. 48). Baltimore, MD: Johns Hopkins University.
- Callegaro, M. (2007). *Seam Effects Changes Due to Modifications in Question Wording and Data Collection Strategies, A Comparison of Conventional Questionnaire and Event History Calendar Seam Effects in the PSID*. Lincoln, NE: University of Nebraska
- Callegaro, M., Yu, M., Cheng, F.-W., Liao, D., & Belli, R. F. (2005). Comparison of computerized event history calendar and question-list interviewing methods: A two year hospitalization history study. In 2004 Proceedings of the American Statistical Association, 59th Annual conference of the American Association for Public Opinion Research (AAPOR) (CD-ROM) (pp. 4746-4753). Alexandria, VA: American Statistical Association.
- Caspi, A., Moffitt, T. E., Arland, T., Freedman, D., Amell, J. W., Harrington, H., et al. (1996). The life history calendar: A research and clinical assessment method for collecting retrospective event-history data. *International Journal of Methods in Psychiatric Research*, 6, 101-114.
- Engel, L. S., Keifer, M. C., & Zahm, S. H. (2001). Comparison of traditional questionnaire with an icon/calendar-based questionnaire to assess occupational history. *American Journal of Industrial Medicine*, 40, 502-511.

- Ensel, W. M., Peek, K. M., Lin, N., & Lai, G. W.-f. (1996). Stress in life course. A life history approach. *Journal of Aging and Health*, 8, 389-416.
- Freedman, D., Thornton, A., Camburn, D., Alwin, D., & Young-DeMarco, L. (1988). The life history calendar: a technique for collecting retrospective data. *Sociological Methodology*, 18, 37-68.
- Furstenberg, F. F. J., Brooks-Gunn, J., & Morgan, P. S. (1987). *Adolescent mothers in later life*. New York: Cambridge University Press.
- Jobe, J. B., White, A. A., Kelley, C. L., Mingay, D. J., Sanchez, M. J., & Loftus, E. F. (1990). Recall strategies and memories for health-care visits. *The Milbank Quarterly*, 68, 171-189.
- Kessler, R. C., & Wethington, E. (1991). The reliability of life reports in a community survey. *Psychological Medicine*, 21, 723-738.
- Kominski, R. (1990). The SIPP Event History Calendar: Aiding respondents in the dating of longitudinal events. In *Proceedings of the Section of Survey Research Methods* (pp. 553-558). Washington D.C.: American Statistical Association.
- Lin, N., Ensel, W. M., & Lai, G. W.-f. (1997). Construction and use of the life history calendar: Reliability and validity of the recall data. In I. H. Gotlib & B. Wheaton (Eds.), *Stress and adversity over the life course. Trajectories and turning points* (pp. 249-272). Cambridge: Cambridge University Press.
- Loftus, E. F., & Fathi, D. C. (1985). Retrieving multiple autobiographical memories. *Social Cognition*, 3, 280-295.
- Parrado, E. A., & Zenteno, R. M. (2001). Economic restructuring, financial crises, and women's work in Mexico. *Social Problems*, 48, 456-477.
- Pebley, A. R. (2004a). EHC user's guide. Retrieved June, 2006, from <http://www.lasurvey.rand.org/EHC%20Users%20Guide%20final.pdf>
- Pebley, A. R. (2004b). The Los Angeles family and neighborhood survey. Retrieved December, 2005, from <http://www.lasurvey.rand.org/>
- Saris, W. E. (1998). Ten years of Interviewing without Interviewers: The Telepanel. In M. P. Couper, R. P. Baker, J. Bethlehem, C. Z. F. Clark, J. Martin, W. L. Nichols II & J. M. O'Reilly (Eds.), *Computer assisted survey information collection* (pp. 409-430). New York: Wiley.
- Witterbrood, K., & Nieuwbeerta, P. (2000). Criminal victimization during one's life course: The effects of previous victimization and patterns of routine activities. *Journal of Research in Crime and Delinquency*, 37, 91-122.
- Yoshihama, M., Gillespie, B., Hammok, A. C., Belli, R. F., & Tolman, R. M. (2005). Does the life history calendar method facilitate the recall of intimate partner violence? Comparison of two methods of data collection. *Social Work Research*, 29, 151-163.
- Zahm, S. H., Colt, J. S., Engel, L. S., Keifer, M. C., Alvarado, A. J., Burau, K., et al. (2001). Development of a life events/icon calendar questionnaire to ascertain occupational histories and other characteristics of migrant farmworkers. *American Journal of Industrial Medicine*, 40, 490-501.