# Re-engineering the SIPP: Creating the SIPP-EHC

Jason Fields – US Census Bureau

Session 5: Designs that use "event history" methodology to improve recall and reduce measurement error in recall surveys.

June 1-2, 2011
Committee on National Statistics
Household Survey Producers Workshop
Conference Center, 20 F Street, NW, Washington DC



## The Save the SIPP Campaign

New York Times Editorials

Discovering What Happens Next

Save our SIPP

The Continuing Saga of SIPP



NY Representative, Carolyn Maloney stated:

"I want to thank all of the policy groups and economists who worked so hard to help reverse the Administration's original SIPP decision. Because of their dedication and hard work, the Administration came to understand how important SIPP is to creating and implementing good public policy."



## SIPP Re-engineering

#### Implement Improvements to SIPP

- reduce costs
- reduce R burden
- improve processing system
- modernize instrument
- expand/enhance use of admin records

#### Key Design Change:

- annual interview, <u>12-month reference pd.</u>, Event History Calendar (EHC) methods



## **EHC Interviewing**

#### **Human Memory**

- structured/organized
- links and associations

#### **EHC Exploits Memory Structure**

- links between the occurrence and timing of events

#### EHC Encourages Active Assistance to Rs

- flexible approach to help elicit an autobiographical "story"
- Accuracy in placement of events by respondents
- Improvements in ability for respondents to recall details and timing
- Facilitate the interviewer's ability to recognize inconsistencies and probe

SIPP-EHC: A 'hybrid' Event History Calendar.



## **Evaluations of EHC Methods**

Many EHC vs. "Q-List" Comparisons

- various methods
- in general: positive data quality results

BUT, Important Research Gaps

- data quality for need-based programs?
- comparison to 4-month reference period?



## **Evaluations of EHC Methods**

- Event history calendar instruments evaluated on numerous occasions
- Reliability High levels of agreement with previously collected questionnaire based data.
- Domains
  - Marriage, births, residential moves, school enrollment, labor force (all showed good agreement)
  - Concerns AFDC/Food Stamps (SNAP)
- Mode Phone and in-person almost same degree of consistency.
- Validation Limited record check studies designed into the first SIPP field test evaluation.
- Reduction of seam bias



## Measurement Errors

- Missed data due to:
  - Recall
  - Ineffective conversational interviewing
- Inaccurately reported data due to:
  - Timing accuracy
  - Detail accuracy
    - Proxies
    - Memory decay
- Seam Errors
  - Dependent data
  - Revising based on longitudinal edits or administrative data post-hoc



# SIPP calendar aided interview test 1989 to 1991

Person number (or name)	1988 1989							1990									
	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	JAN	FEB
Respondent person number																	
Address change?	ŀ															•	
Number of persons in household	1															j	]
Maritel status	1				[												Ì
Employer 1:			İ														
Wages/Salary	1																
Employer 2:																	-
Wages/Salary																	1
Self-employed (income)			ļ		<u> </u>												
Health insurance coverage: Private																	
Medicaid	1					ļ	ĺ										1
Medicare		1	i														-
Programs: Workers' compensation																	
Unemployment payments	-	ŀ	ŀ														
Child support	1	ł															
Food stamps	]		ļ														1
SSI	ì											ľ					1
AFDC/ADC	İ																1
General assistance	ŀ																
WIC	ŀ	•															1
																	-
Pensions/Retirement: Social Security Retirement																	
Private pension																	
State/Local govt. pension			1		1	1			,								

FORM SIPP-9030	U.S. DEPARTMENT OF COMMERCE
	The second of th
EVENT CA	ALENDAR
INCOME SO	WACE LIST
Social Security	
U.S. Government Railroad	
Federal Supplemental Secu	rity Income (SSI)
State Supplemental Securit	
(State administered SSI or State unemployment comp	
Supplemental Unemployme	
Other unemployment comp	ensation
(Trade Adjustment Act be	
Veterans compensation or	pensions
Black lung payments Workers' compensation	[
State temporary sickness o	r disability benefits
Employer or union temporar	
Payments from a sickness,	
insurance policy purchase	
Aid to Families with Depend	
General assistance or General	
Indian, Cuban, or Refugee A Foster child care payments	ssistance
Other welfare	i
WIC (Women, Infants, and	Children Nutrition Program)
Food stamps	
Child support payments	1
Alimony payments	
Pension from company or u	
Federal Civil Service or othe employee pensions	r Federal civilian
U.S. Military retirement pay	1
National Guard or Reserve F	orces retirement
State government pensions	1
Local government pensions	
Income from paid-up-life ins	urance policies or annuities
Estates and trusts	
Other payments for retireme G.I. Bill	mt, disability, or survivor
Other VA educational assist	
Income assistance from a ch	• -
Money from relatives or frie	nde
Lump sum payments	
Income from roomers or boa National Guard or Reserve p.	
Incidental or casual earnings	-,
Other cash income not inclu	•



## SIPP Re-engineering Field Test Plans

- Proof of concept test
  - 2008 paper and pencil reinterview test
- EHC CAPI test
  - 2010 Integrated Blaise and C# instrument prototype
- CAPI Revised test
  - 2011 Test improvements to the wave 1 instrument, training, and expand sample to all regional offices.
- 2012 Test wave 2 concepts and instrument, examine movers and attrition issues, and refine training procedures.



# Re-engineered SIPP -Contents

#### 2011 Re-engineered SIPP-EHC high-level instrument contents and flow

The roster, demographics are collected by the household respondent for the whole household.

The Type-2 items are answered by the household respondent for the people they live with all year, additionally the income screener is answered for a subset of those people meeting a relationship restriction, else these two sections are person level.

Event History Calendar and continues to the wrap-up section. Each available household member 15 and over are interviewed in person and data are collected for each household member (by proxy for those under age 15). Respondents are subject to the universe restrictions of each section and item.

Person level interviewing begins with the

Address Verification

Sample address characteristics and coverage

Roster creation and demographics

Roster creation for Type 2 (people who the sample members lived with during the year, but who don't live here now)

Income Screener for Programs

EHC CALEZDA

Landmark Events
Residence History

Marriage and Cohabitation

School Enrollment

Labor Force

(Jobs, Businesses, Contingent Work, Unemployment, Not In Labor Force, Commuting, Work Schedule)

> Programs (SSI,FS,TANF,GA,WIC)

Health Insurance (Private, Medicare, Medicaid, Military, Other, and Uninsured)

> Fertility - Child Care Dependent Care

Social Insurance -Annual Programs - Other GI -Lump Sum - Child Support

Assets / Balances

Health (Medical Expenditures - Utilization, Disability)

Housing - Material Wellbeing, Food Security, Basic Needs, Child Well-Being

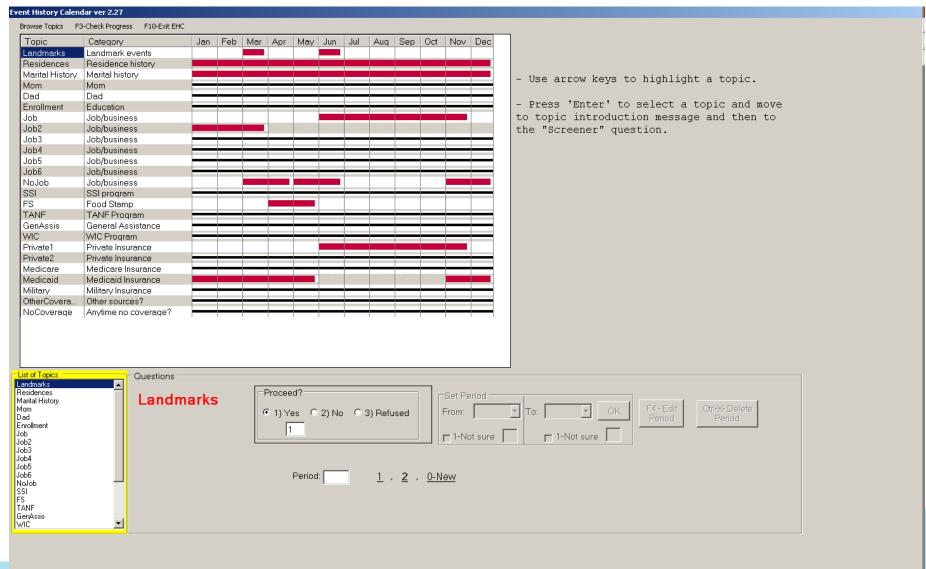
> Wrap-up and Missing Follow-up visit/call Info

Interview Closeout –
Respondent Debriefing Items –
Interviewer Debriefing Items

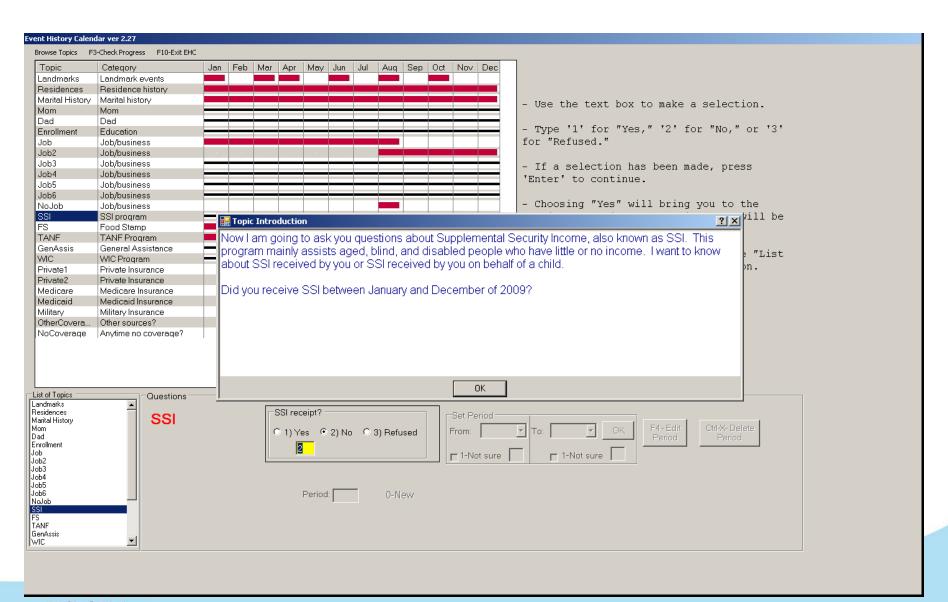
The last interviewed knowledgeable person age 15 and over responds to the final section of the interview.



## Screenshot – 2010 SIPP-EHC Instrument







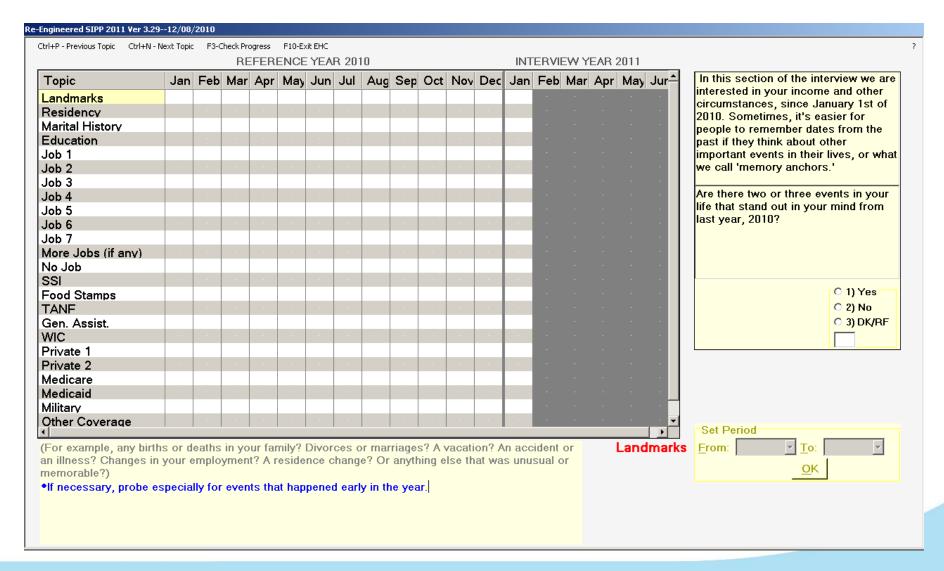


## For 2011...

- Extend the reference period to 'Now'
- Clean up the instrument navigation tasks
- Transition spell level questions to Blaise

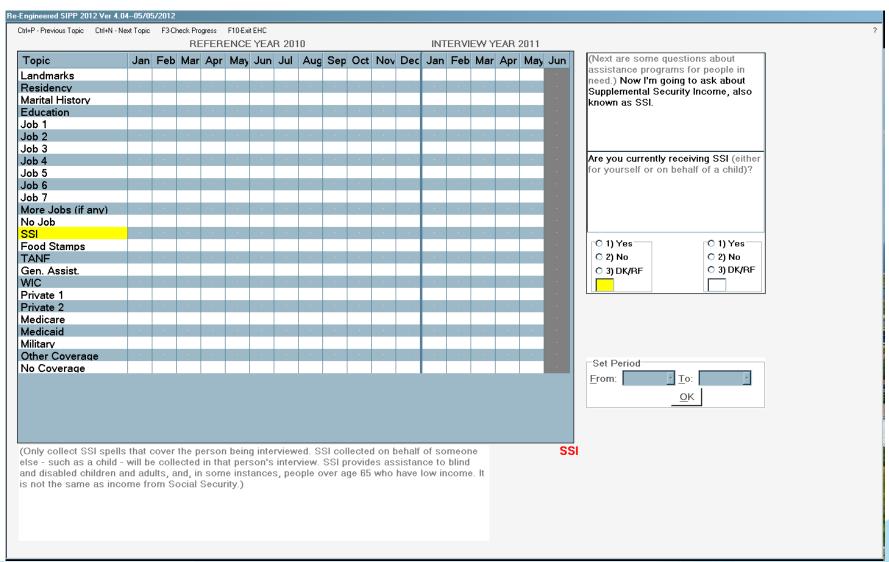


#### Screenshot – 2011 SIPP-EHC Instrument





### Screenshot – 2012 SIPP-EHC Instrument



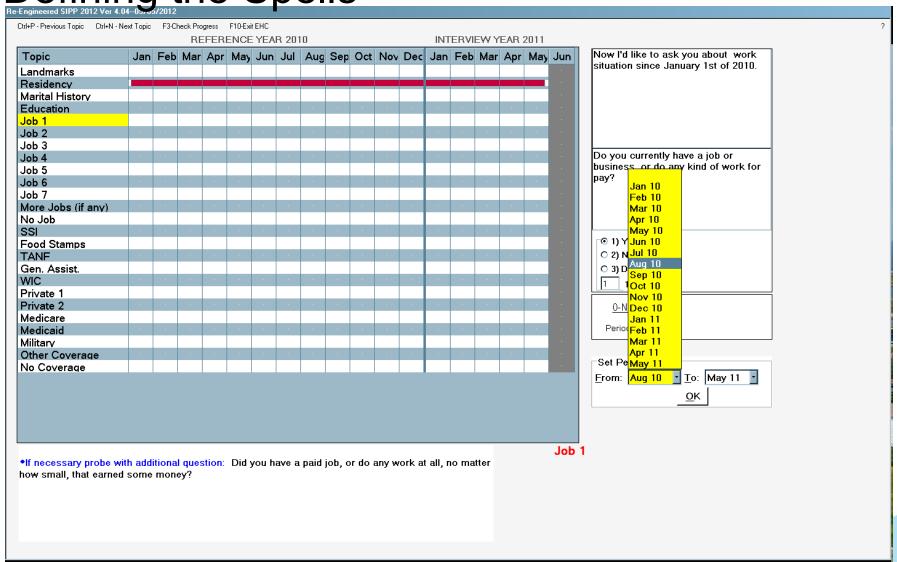


# Combined Conversational and Conventional Probing...

- Focus on spells
- Sub-monthly data for labor force section collected based on delineated weeks (calendar flash card provided to R's)
- Scripted repeated probes for "more work"
  - Based on 2010 information that navigating multiple job lines conversationally was not clear, and evidence from administrative data that jobs were under-reported.



Defining the Spells
Re-Engineered SIPP 2012 Ver 4.04-05-0372012



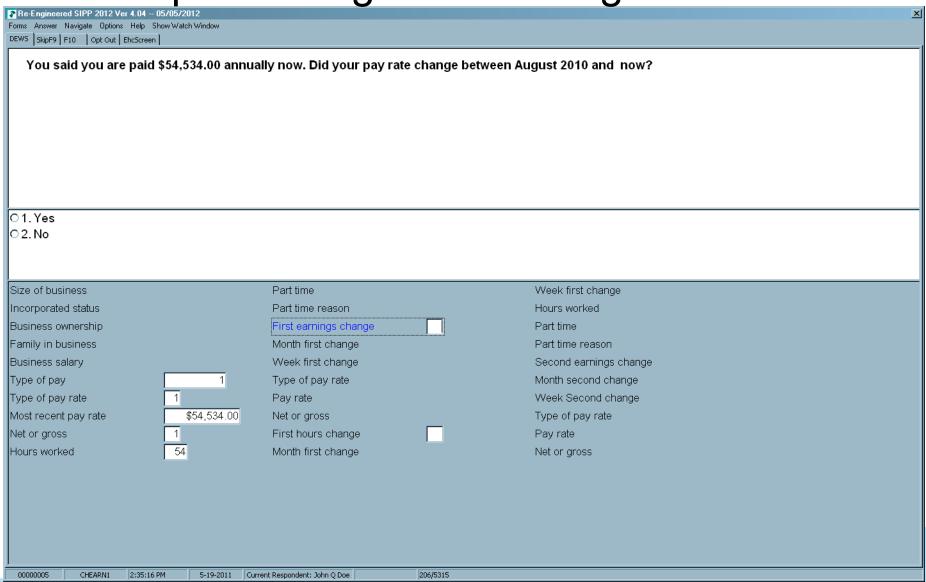


## Sub-monthly Time Definition.

Re-Engineered SIPP 2012 Ver 4.0. Forms Answer Navigate Options Help DEWS SkipF9 F10 Opt Out EhcSci	4 05/05/2012 p Show Watch Window reen	iis job?			
O 32. August 1, 2010 - A			○ 36. Augu	st 29, 2010 - August 31, 2	2010
● 33.August 8, 2010 - A					
34. August 15, 2010					
	7 (uguet 20, 20 )			Function of government	
Work arrangement Contingent work		Emp./bus. name Street number		Function of government Industry	
Start January		Street name		Type of industry	
Start year		Suite/office number		Occupation	
Start month		City		Usual activities	
Start day		State		Member of union	
Start week	33	Zip code		Union contract	_
End week		Class of job		Number of locations	
Reason job end		Class of government		Employees at all locations	
Reason business end		Class of government		Total employees	



## Within Spell Changes in Earnings / Hours





Pe-Engineered SIPP 2012 Ver 4.04 05/05/2012 Forms Answer Navigate Options Help Show Watch Window DEWS   SkipF9   F10   Opt Out   EhcScreen    You said you were paid \$45,345.06	0 annually before December 2	010. Did your pay ra	ite change between August 2010 and December 2010?	×
○1.Yes ○2.No				
Size of business	Part time		Week first change	
Incorporated status	Part time reason		Hours worked	
Business ownership	First earnings change	1	Part time	
Family in business	Month first change	12	Part time reason	
Business salary  Type of pay	Week first change	52	Second earnings change	
I ypc or pay	Type of pay rate	\$45,345.00	Month second change  Week Second change	
Type of pay rate 1  Most recent pay rate \$54,534	Pay rate  .00 Net or gross	φ45,545.00	Type of pay rate	
Net or gross 1	First hours change	2	Pay rate	
Hours worked 54	Month first change		Net or gross	



# Probing – Now Scripted For More Work





# Probing – Now Scripted For More Work

Re-Engine	eered SIPP 2012 V	er 4.04 05/05/2	012					×
	er Navigate Options		ch Window					
DEWS SkipF	9   F10   Opt Out	EhcScreen						
			k for pay	for another employer	or business since J	anuary 1st of 2010	)?	
O1. Yes	5							
○ 2. No								
Any more		2						
How man	У							
Any Othe	r Work							
<b></b>		J						
No Job S								
No more	spells							
00000005	ANYOTHERWORK	2:41:55 PM	5-19-2011	Current Respondent: John Q Doe	211/5315			

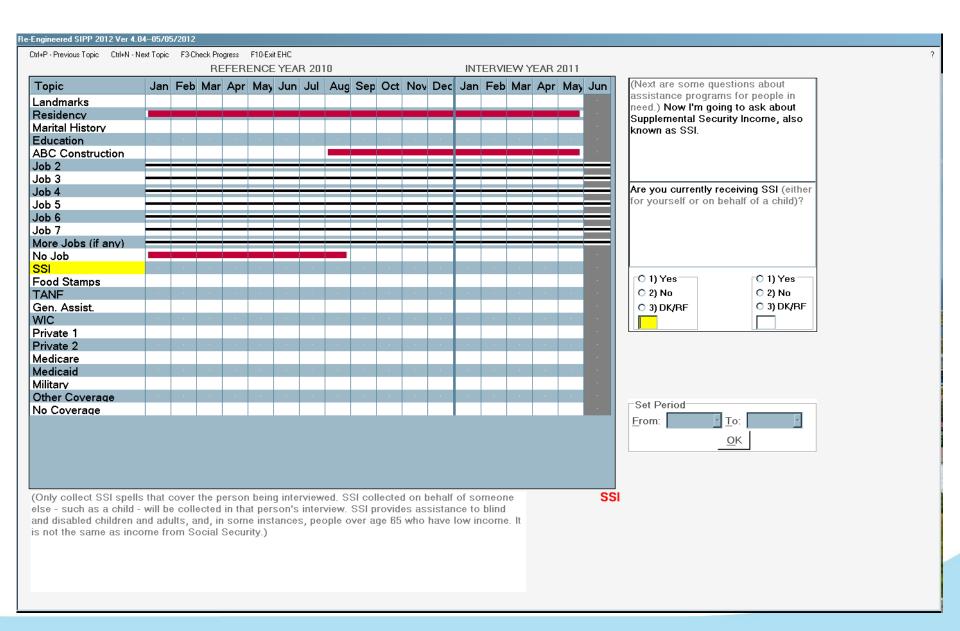


- Gaps calculations embedded into questionnaire flow.
- And one more scripted probe about work



Re-Engineered SIPP 2012 Ver 4.04 05/05/2012
Forms Answer Navigate Options Help Show Watch Window  DEWS SkipF9 F10 Opt Out   EhcScreen
I'm showing you were not working for pay during the following time since January 1st of 2010:
◆ The following time periods are calculated GAPS within reported JOB HISTORY : January 1 2010 to August 7 2010
Have we talked about all the times, since January 1st of 2010, when you worked for pay?
O 1. Yes O 2. No
Any more spells 2
How many Any Other Work 2
No Job Screener
No more spells
00000005 NOJOBSCREENER 2:42:43 PM 5-19-2011 Current Respondent: John Q Doe 211/5315

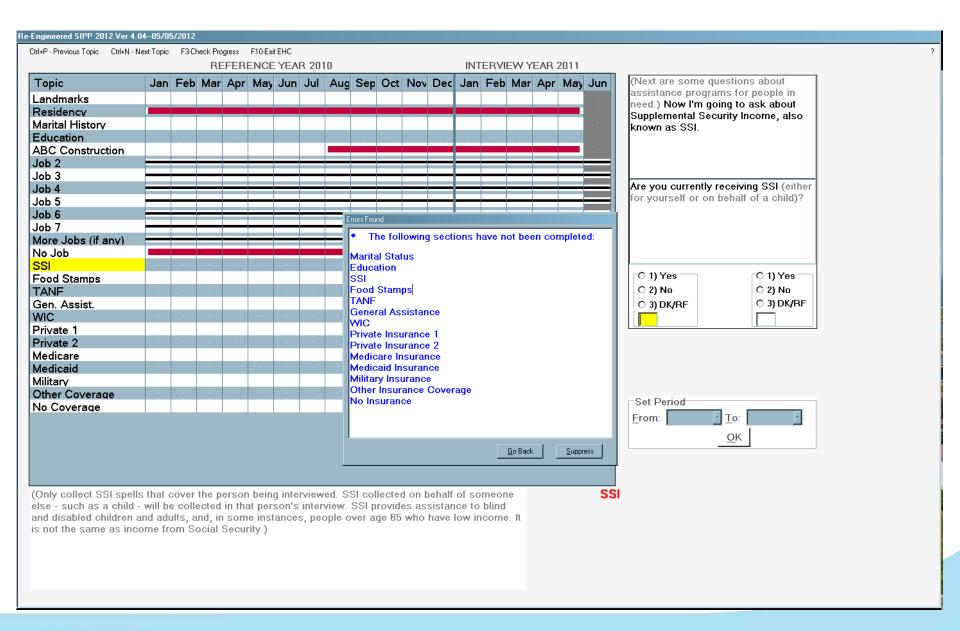






 Completeness checks for "conversational" component





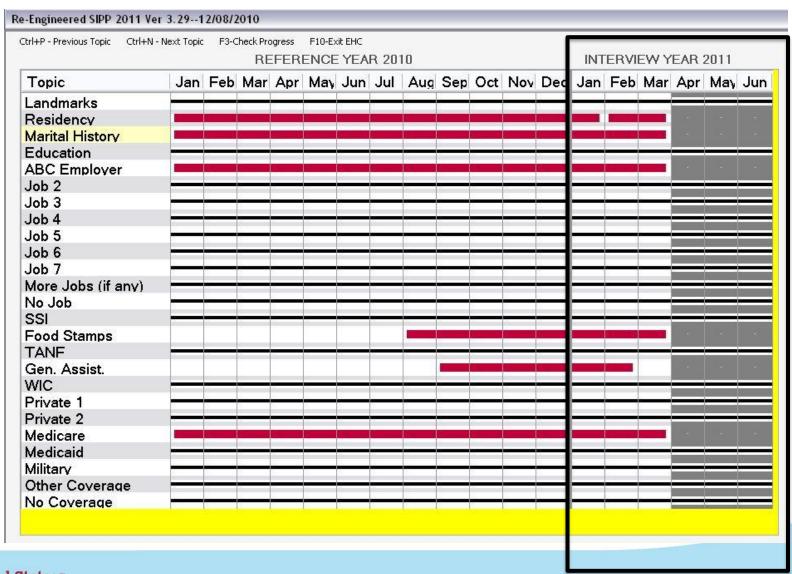


## **Dependent Data**

- Very useful in standard interviewing to reduce seam bias and respondent burden.
- Very burdensome to the instrument and to processing.
- Design, How to effectively build a calendar based interview with dependent data

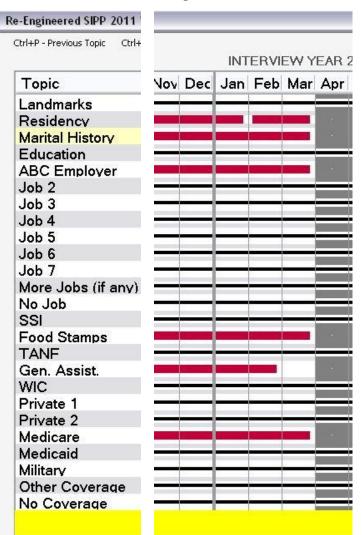


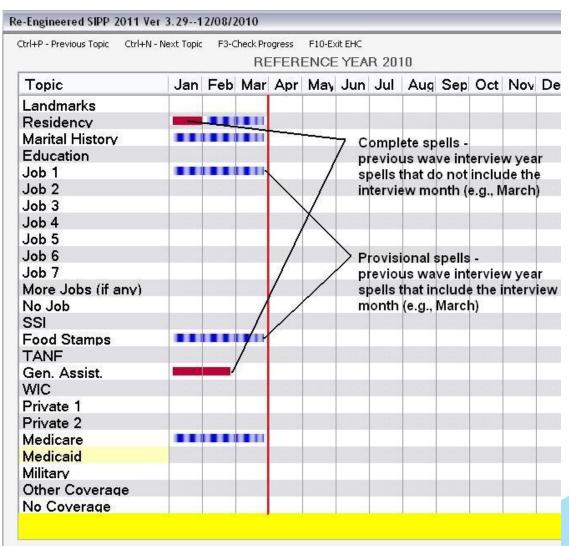
### 2011 SIPP-EHC Completed Calendar





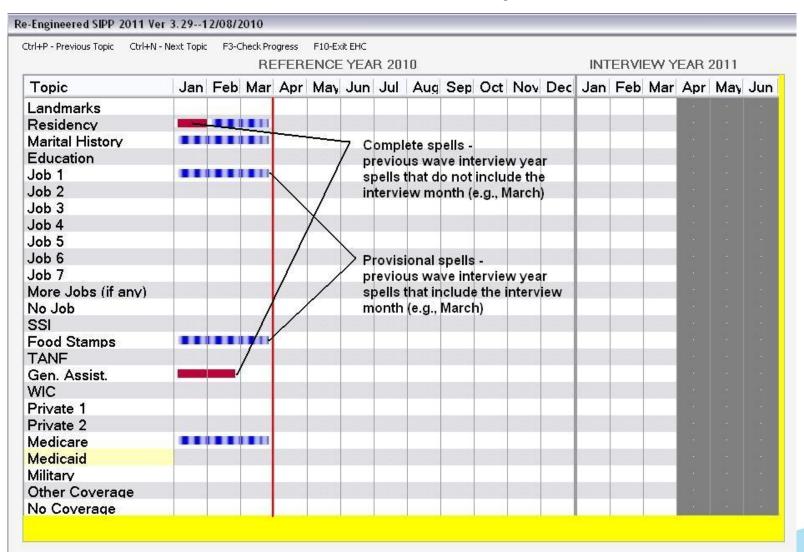
## **EHC Dependent Data**







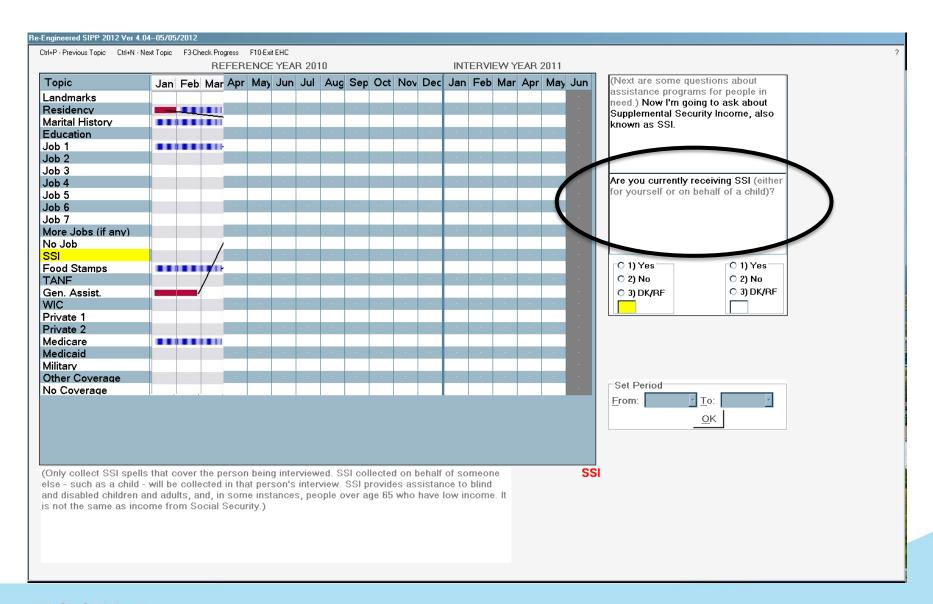
### 2012 SIPP-EHC Calendar w/ Dependent Data





 Feedback will both utilize existing question structure and alternative fills to script questions based on the presence or absence of returning data.







 Evaluation and comparison of 2010 SIPP-EHC data (in progress)



Food Stamp Participation
Probability and
Monthly Time Trend in
Participation
2010 SIPP-EHC and
2008 Panel data matched in
MSIPP

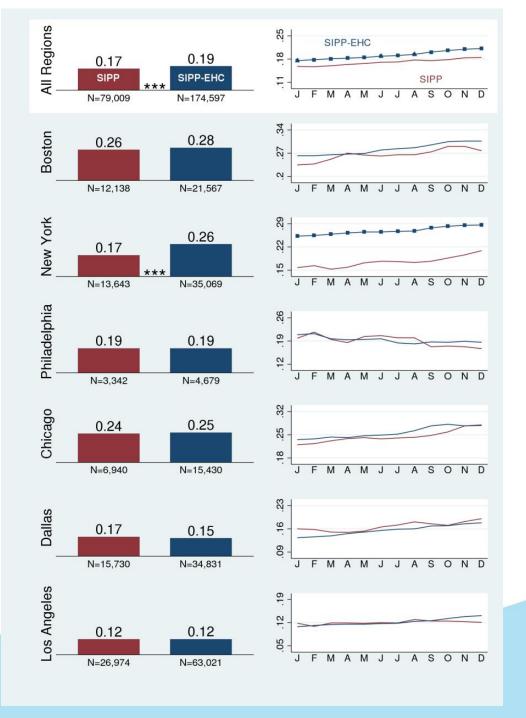




Figure 6. Probability of Employment and Program Participation in a Given Month

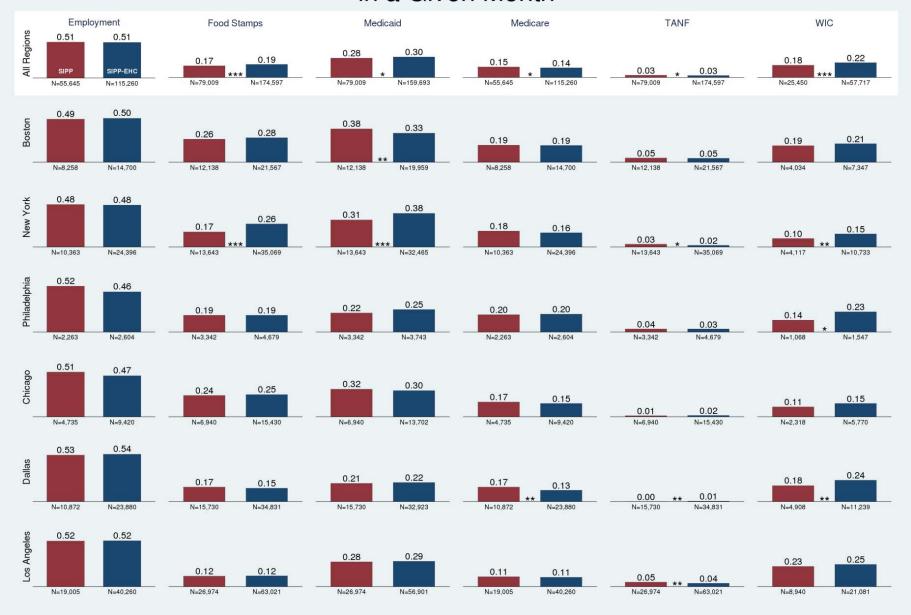
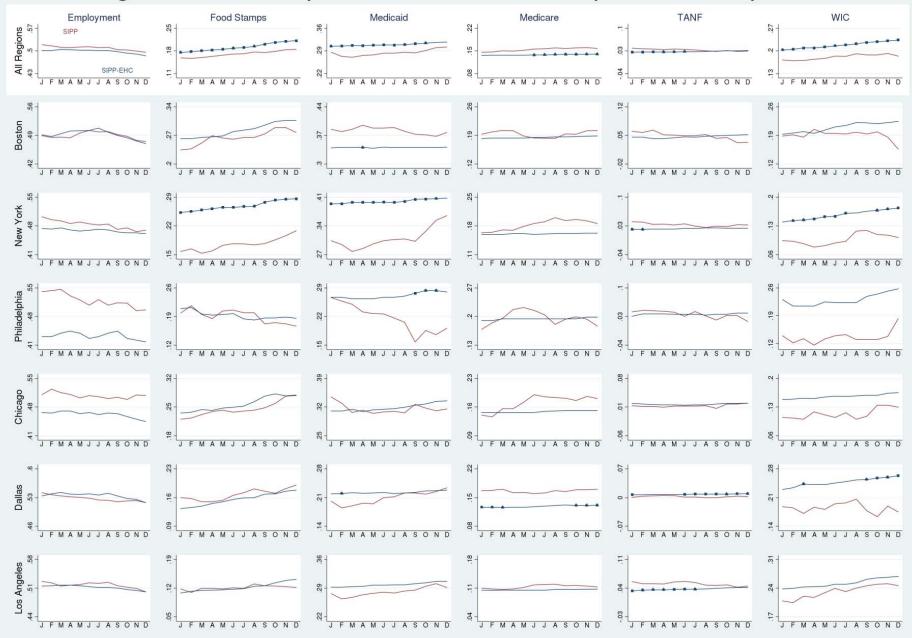


Figure 8: Month-Specific Differences in Reported Participation



## Challenges Faced

Developing new technical capacity.

- experimentation
- limitations
- evolution

Crisis planning.

- limited lead time / preparation
- changing goals and required flexibility

New procedures.

- training and acceptance
- development and refinement of procedures



#### **Current Status**

- Interviewing for 2011 SIPP-EHC in all 12 regional office areas (20 States) is complete.
- Reviewing and making changes to content and design (Dependent Interviewing for 2012 – Wave 2).
- Reviewing and revising training materials and methods
- Planning for 2013 Research Panel design and implementation
- Planning for 2014 Production Implementation of SIPP-EHC



#### Assessing Users' Needs

#### U.S. Census Bureau

Survey of Income and Program Participation







URL: http://www.census.gov/sipp/

**URL:** http://www.census.gov/sipp

