

**THE SURVEY OF INCOME AND
PROGRAM PARTICIPATION**

**Deconstruction of the Time Trend in
Health Insurance: A Look Inside SIPP
2008 Health Insurance Rates**

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Deconstruction of the Time Trend in Health Insurance:

A look inside SIPP 2008 health insurance rates.

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Abstract

The Survey of Income and Program Participation (SIPP) is a nationally representative survey that provides longitudinal surveillance on health insurance coverage at a monthly level, requiring a complex system of survey administration and data processing. This analysis presents new longitudinal health insurance estimates from the SIPP spanning May 2008 to March 2010. I present estimates of the number of months of insurance, as well as monthly estimates for coverage types, by age group. I then decompose these estimates into their constituent waves and subsample components, to reveal any irregularities embedded within the aggregate numbers.

^{*} This paper is released to inform interested parties of research and to encourage discussion. The views expressed or technical issues are those of the author and not necessarily those of the U.S. Census Bureau.

Introduction

Health insurance coverage is an important factor of population health in the United States. A significant population 'gradient' exists in coverage, with reduced medical utilization and health outcomes in cases of uninsurance (McWilliams, 2009; Smith et al, 2006). Health insurance coverage is not static, with some individuals “churning” in and out of coverage (Klein et al, 2005). Research suggests that intermittent coverage, as well as continuous uninsurance, results in reduced access to a variety of medical care. (Cummings et al, 2009; Olsen et al, 2005; Schoen & DesRoches, 2000; Sudano & Baker, 2003). Thus, longitudinal surveillance sensitive to short-term change is necessary for a functional understanding of health insurance coverage within the population.

Only a few surveys are capable of documenting these dynamics of coverage over time. The Current Population Survey (CPS) and the National Health Interview Survey (NHIS) provide health insurance data, both not at the monthly level. The Medical Expenditure Panel Survey (MEPS) collects monthly health insurance information, but with relatively small sample sizes (Winter & Moyer 1999). The Survey of Income and Program Participation (SIPP) is a nationally representative survey that is able to provide longitudinal data on health insurance coverage at a monthly level. Such detailed data collection requires a complex system of survey administration and data processing that can be challenging to manage. It is important to understand the construction of SIPP health insurance estimates in order to assess the quality of the estimates and to discern the true contours of health insurance coverage within the country.

This analysis presents new longitudinal health insurance estimates from SIPP spanning May 2008 to March 2010. I first estimate months of health insurance by coverage type for both children and working-age adults. Next, new monthly estimates of health insurance coverage by type and age group are presented. I then decompose these estimates into their constituent waves and subsample

components, in order to reveal any irregularities embedded within the aggregate numbers, as well as to illustrate the complexity and challenges involved in developing these monthly estimates.

Data & Methods

The SIPP is a continuous series of national panels, ranging from 2.5 to 4 years, of the civilian noninstitutionalized population. Sample sizes range from 14,000 to 36,700 households per panel. This analysis uses the 2008 Panel, waves 1 through 5, which reference the period May 2008 to March 2010. Within SIPP, continuous monthly information is collected in a series of interviews (waves), each containing information on the 4 months prior to a given interview (See Figure 1). The full sample is also broken up into 4 equally sized random subsamples, called rotation groups. Each rotation group is interviewed on a specific month of each wave to allow for continuous data collection.

These pieces of data, coming from separate rotations and waves, are combined to create a monthly insurance coverage estimate (See Figure 2). For the monthly time series I present, approximately two-thirds of the monthly estimates are produced using data from all 4 rotations groups and about half combine data from 2 different waves.

This analysis presents health insurance coverage spells (duration of coverage) by type and age group, as well as new SIPP longitudinal estimates² of health insurance from the 2008 Panel. The monthly estimates include levels of uninsurance, private coverage, Medicare, and Medicaid. Children are expected to have different coverage dynamics than adults, particularly because state programs are directed at children. Adults 65 years old or older have fairly static coverage, since after entering Medicare it remains in place for the person's lifetime. Thus, I do analyses separately for two groups: children aged 0 to 17 and working-aged adults aged 18-64. Medicare estimates are not computed for

² The estimates in this report (which may be shown in text, figures, and tables) are based on responses from a sample of the population and may differ from actual values because of sampling variability or other factors. As a result, apparent differences between the estimates for two or more groups may not be statistically significant. All comparative statements have undergone statistical testing and are significant at the 90-percent confidence level unless otherwise noted.

children because of the low levels of child participation at this program. Next, these SIPP monthly estimates are deconstructed to assess the variations embedded within the aggregated sample estimates. This analysis illustrates how the monthly trend lines may be influenced by variations in the separate waves and rotation groups that compose them.

In the analysis of months of coverage, health insurance is described with three categories: any health insurance, private health insurance, and public health insurance. Any health insurance refers to any comprehensive health insurance coverage - in contrast to partial coverage such as dental or vision plans. Private coverage includes coverage obtained through a job or union or individually purchased plans. Additionally, SIPP private coverage includes both military coverage (e.g. CHAMPUS) as well as veteran coverage (e.g. CHAMPVA). Public coverage includes Medicare, Medicaid, and any other government subsidized health coverage. For subsequent analyses of monthly trends in coverage types, slightly different categories are used. Private coverage is as described above. Medicare refers to any type of Medicare plan (plan type is not differentiated in the data). Medicaid here refers to Medicaid, SCHIP, and any other government subsidized health coverage. A person is uninsured if they have neither private nor public coverage. If the person has IHS and no other types of coverage then they are uninsured.

The analysis of calendar-month estimates uses all respondents who replied in a given month, along with the weight appropriate to that month. In contrast, for spell analysis I include only those respondents who participated in all 5 waves of the survey. This provides 20 months of data for each respondent. Ideally, I would use a longitudinal weight for this analysis, but as the panel is only partially completed longitudinal weights are not yet available. As a second best option, I have simply used the final month weight variable for wave 5.

Results

Months of Coverage

Health Insurance coverage for working-age adults by number of months and type is shown in Figure 3. For the 20 months of coverage asked of recipients, this figure illustrates how many were covered by private³, public, or any source of health insurance coverage. Among working-age adults, 67.5 percent had a source of coverage for the full 20 months. 9.9 percent had no months of coverage within the reference period. About three-fifths of adults had a full 20 months of private coverage, while one-fifth had no months of private coverage. Public health coverage was relatively uncommon for working-age adults; 82.8 percent of adults had no public coverage, and only 5.7 percent had public coverage for the full 20 months.

Children had a higher rate of continuous coverage than adults: 69.8 percent had health insurance coverage for all 20 months (See Figure 4). Children had private coverage less often than working-age adults: only 50.7 percent had continuous coverage and 28.2 percent had no months of private coverage. Public coverage is much more common for children than working-age adults. About half had no public coverage at all in the reference period, and 15.6 percent of them received this coverage all 20 months.

Trends in Calendar Month Estimates

For working-aged adults, the percentage of the population that was uninsured increased from 21.4 percent to 22.8 percent between the months of September 2008 and March 2010 (See Figure 5). Private coverage declined from 70.1 percent to 67.8 percent between May 2008 and March 2010. Medicaid increased during this period, from 8.3 percent to 9.3 percent. Medicare declined between May and August 2008 from 3.1 percent to 2.8 percent, and then increased between August 2008 and March 2010, from 2.8 percent to 3.3 percent.

³ Private coverage here includes all military coverage including CHAMPUS, which can also be described as a public form of health insurance.

For children, the trend in uninsurance went in two different directions within the reference period from May 2008 to March 2010 (See Figure 6). The percentage uninsured increased between May 2008 and January 2009 from 12.9 to 14.8 percent, followed by a decline from Jan 2009 to March 2010 from 14.8 to 12.0 percent. Private coverage declined during the reference period from 60.5 percent to 56.0 percent. Between January 2009 and March 2010, Medicaid increased from 29.9 percent to 35.1 percent of children. This increase is consistent with the timing of the Children's Health Insurance Program (CHIP) expansion of 2009.

Estimates by Wave

Next I deconstruct the time series by wave, to find out if the different waves of data appear consistent with one another. Each wave will span seven calendar months, with smaller sample size on the earliest and latest months. This is due to the staggered collection months, as illustrated previously in Figure 2.

For adults, the estimates of uninsurance and private coverage by calendar month do not differ by wave (See Figure 7). Medicaid estimates for both September and November 2008 have higher calendar month estimates in wave 1 than in wave 2. Recall that adult Medicare calendar month estimates increased between the months of August 2008 and March 2010. However, Medicare by wave does not indicate an increase within waves. Rather, in waves 1 and 2, Medicare estimates were actually decreasing across wave. Medicare calendar month estimates differ by wave for eight calendar months.

For children, the estimates of uninsurance by wave indicate that the overlapping calendar months between waves 1 and 2 (September-November 2008) are lower in wave 1 than in wave 2 (See Figure 8). Analysis of private coverage for children shows no differences in calendar month estimates by wave. However, for Medicaid, the estimates in overlapping calendar months between waves 1 and 2 (September-November 2008) were higher in wave 1 than in wave 2.

Estimates by Rotation Group

Next I look at the estimates deconstructed by rotation group to see whether there are differences in calendar-month estimates by rotation group within a given wave. Because of the design of the SIPP panel, there can be multiple estimates for the same calendar month, since different rotation groups are in the field at the same time. For working-age adults, calendar month estimates for uninsurance differ between rotation groups for 5 calendar months (See Figure 9.) Private Coverage and Medicare estimates differed between rotation groups for 7 calendar months each. Medicaid estimates differed for only 2 calendar months (January and May 2009).

For children, uninsurance estimates differed by rotation group for 5 calendar months (See Figure 10). For private coverage, estimates by rotation group only differed for September 2008, where rotation group 3 reported more private coverage than rotation group 2. Medicaid estimates only differed during July and August 2008, where rotation group 2 reported more Medicaid than rotation group 3.

Data Issues

The data analysis above raised two issues to investigate further: an elevation in wave 1 Medicaid for children relative to wave 2; and a within-wave decrease in Medicare estimates for adults in waves 1 and 2 that is counter to the overall increase in Medicare coverage beginning August 2008. It seems that the origin of the Medicaid wave 1 abnormality is due to sample attrition. Attrition is an issue that is managed continuously in a longitudinal survey. In SIPP, attrition is generally greatest between waves 1 and 2. Attrition tends to decline from one wave to the next (U.S. Census Bureau 2001), and a number of new respondents enter the panel along the way due to joining a household already in sample. Additionally, attrition occurs disproportionately among those who are young, male,

black, poor, program participants, and frequent movers (McArthur 1988).

In the 2008 Panel, 9.7 percent of the child sample was lost to wave 2. In wave 2, about 5 percent of the unweighted child sample is newly entered respondents (See Figure 11). In order to manage these changes there is a sophisticated process of weighting that accounts for numerous factors including sex, race, income, etc. Yet despite this assiduous weighting effort, we know only a single wave of information about the respondents that leave after wave 1, and adjusting for the true heterogeneity between subsample that leaves, remains, or enters is quite difficult.

I find that children who were in both waves 1 and 2 had a consistent pattern of coverage (See Figure 12). The children that left the sample were contributing about 3% to the Medicaid estimates, whereas the children who entered the sample were contributing about 1% to the estimates. Thus the net change in Medicaid levels due to sample change was approximately 2%. In this way, the attrition between waves 1 to 2 may have caused lower Medicaid estimates in wave 1 relative to wave 2.

However, this does raise the issue of whether estimates from the original wave 1 sample, were more accurate than estimates from subsequent waves that had lost some critical component of high Medicaid usage population. Having discovered this data quirk, analysts can now work on finding the best solution to accommodate it.

The second issue is regarding the trend in adult Medicare within waves 1 and 2. While less striking than the issue with children's Medicaid, this nonetheless deserves further evaluation as to the source of the pattern, and possible editing solutions. Having revealed this slope issue, data users can know that the downward trend in Medicare between May and August 2008 may be due to data error, rather than a true population trend. Future research involves further investigation of these small wave 1 and wave 2 anomalies in Medicare.

Conclusion

The purpose of this analysis is twofold. First, this deconstruction is descriptive, intended to share with outside researchers the contents and construction of the data that has the potential to impact estimates and trend-lines. Second, such a deconstruction of the estimates allows the analyst conducting data reviews and quality checks to inspect for unexpected problems that may have arisen in the complex process of data collection and processing. The analyses raised two issues within the data, but provided reassurance that most calendar months, rotation groups, and waves do not display unintended heterogeneity among them.

This analysis provides insight into the construction of seemingly straight-forward estimates to discover the small quirks that hide within the aggregated data. Close examination of the estimates' construction allows us to appreciate the role of data construction on the trend lines produced by this panel data. By breaking down the trend lines by their many constituent pieces, this analysis underscores both the challenges in producing this data, and the importance of keen attention to sources of variation when interpreting this longitudinal data.

Source of Data:

The population represented (the population universe) in the 2008 Survey of Income and Program Participation (SIPP) is the civilian noninstitutionalized population living in the United States. The SIPP is a longitudinal survey conducted at four-month intervals. The data in this report were collected from May 2008 to March 2010 in wave 1 to wave 5 (interview) of the 2008 SIPP. [Include more detail as needed about the longitudinal aspect of SIPP.] The institutionalized population, which is excluded from the population universe, is composed primarily of the population in correctional institutions and nursing homes (91 percent of the 4.1 million institutionalized people in Census 2000).

Accuracy of the Estimates section :

Statistics from surveys are subject to sampling and nonsampling error. All comparisons presented in this report have taken sampling error into account and are significant at the 90-percent confidence level unless otherwise noted. This means the 90-percent confidence interval for the difference between the estimates being compared does not include zero.

Nonsampling errors in surveys may be attributed to a variety of sources, such as how the survey is designed, how respondents interpret questions, how able and willing respondents are to provide correct answers, and how accurately the answers are coded and classified. The Census Bureau employs quality control procedures throughout the production process including the overall design of surveys, the wording of questions, the review of the work of interviewers and coders, and the statistical review of reports to minimize these errors. The [survey] weighting procedure uses ratio estimation whereby sample estimates are adjusted to independent estimates of the national population by age, race, sex and Hispanic origin. This weighting partially corrects for bias due to undercoverage, but biases may still be present when people who are missed by the survey differ from those interviewed in ways other than age, race, sex, and Hispanic origin. How this weighting procedure affects other variables in the survey is not precisely known. All of these considerations affect

comparisons across different surveys or data sources.

For further information on statistical standards and the computation and use of standard errors, go to http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf or contact Mahdi Sundukchi of the Census Bureau's Demographic Statistical Methods Division on the Internet at mahdi.s.sundukchi@census.gov. Additional information on the SIPP can be found at the following websites: www.census.gov/sipp/ (main SIPP website), www.census.gov/sipp/workpapr/wp230.pdf (SIPP Quality Profile), and www.census.gov/sipp/usrguide.html (SIPP User's Guide).

References

- Cummings, J., Lavarreda, S., Rice, T., & Brown, E. 2009. The effects of varying periods of uninsurance on children's access to health care. *Pediatrics*, 123,e411-e418.
- Klein, K., Glied, S., & Ferry, D. 2005. Entrances and Exits: Health Insurance Churning, 1998-2000. The Commonwealth Fund, pub # 855. <http://64.251.193.200/BriefingMaterials/entrancesandexits-287.pdf>
- McArthur, E. 1988. Measurement of Attrition Through the Completed SIPP 1984 Panel: Preliminary Results. Memorandum, U.S. Bureau of the Census, March 1988.
- McWilliams, J. 2009. Health consequences of uninsurance among adults in the United States: recent evidence and implications. *Milbank Quarterly*, 87,443-94.
- Olson, Lynn M., Tang, Suk-fong S., & Newacheck, P. W. D. 2005. Children in the United States with Discontinuous Health Insurance Coverage. *The New England Journal of Medicine*, 353,382-291.
- Schoen, C., & DesRoches, C. 2000. Uninsured and unstably insured: the importance of continuous insurance coverage. *Health Services Research*, 35,187-206.
- Smith, P., Stevenson, J., & Chu, S. 2006. Associations between childhood vaccination coverage, insurance type, and breaks in health insurance coverage. *Pediatrics*, 2006,1972-8.
- Sudano, J., & Baker, D. 2003. Intermittent lack of health insurance coverage and use of preventive services. *American Journal of Public Health*, 93,130-7.
- U.S. Census Bureau. 2001. The Survey of Income and Program Participation Users' Guide: Chapter 2 SIPP Sample Design and Interview Procedures. Washington, D.C.
- Winter, A. & Moyer, M.E. 1999. Understanding Estimates of Uninsured Children: Putting the Differences in Context. ASPE Research Note. (Washington: Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services)

Appendix

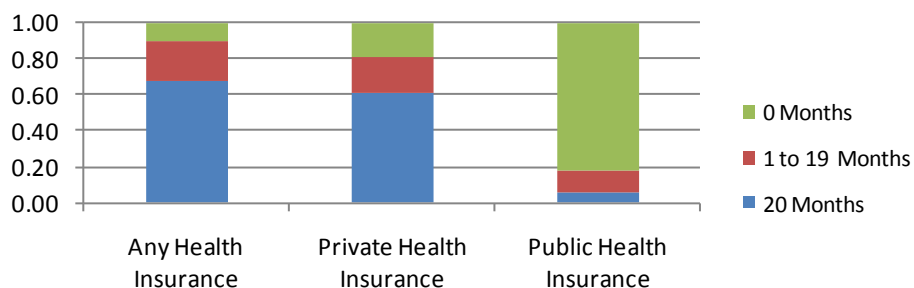
Figure 1. Interview Calendar for SIPP 2008 Panel, Waves 1-5

Wave	Interview		Reference Month			
	Year	Month	1	2	3	4
1	2008	Sept	May	June	July	Aug
1	2008	Oct	June	July	Aug	Sept
1	2008	Nov	July	Aug	Sept	Oct
1	2008	Dec	Aug	Sept	Oct	Nov
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5	2010	Apr	Dec	Jan	Feb	Mar

Figure 2. Structure of Calendar Month Estimates by Wave and Rotation Group

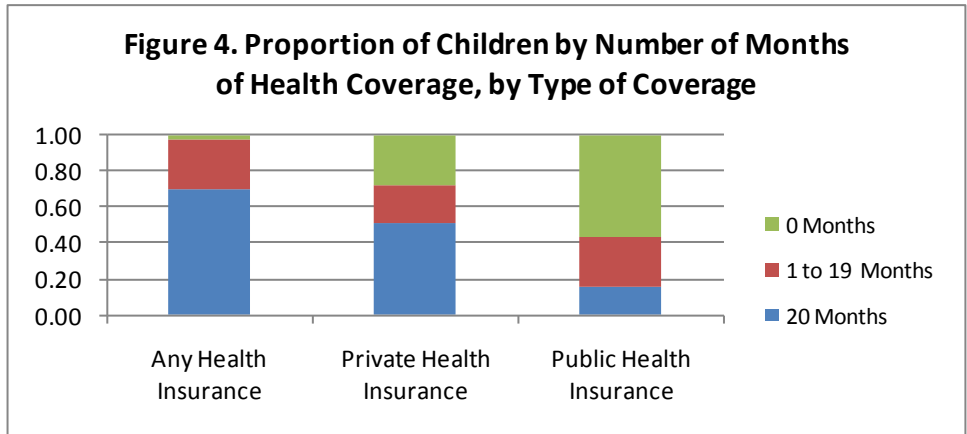
Reference Period	Year	2008						.	.	2010		
	Month	May	Jun	Jul	Aug	Sep	Oct	.	.	Jan	Feb	Mar
Rotation	1	w1	w1	w1	w1	w2	w2	.	.	w6	w6	w6
	2		w1	w1	w1	w1	w2	.	.	w5	w6	w6
	3			w1	w1	w1	w1	.	.	w5	w5	w6
	4				w1	w1	w1	.	.	w5	w5	w5

Figure 3. Proportion of Working-Age Adults by Number of Months of Health Coverage, by Type of Coverage



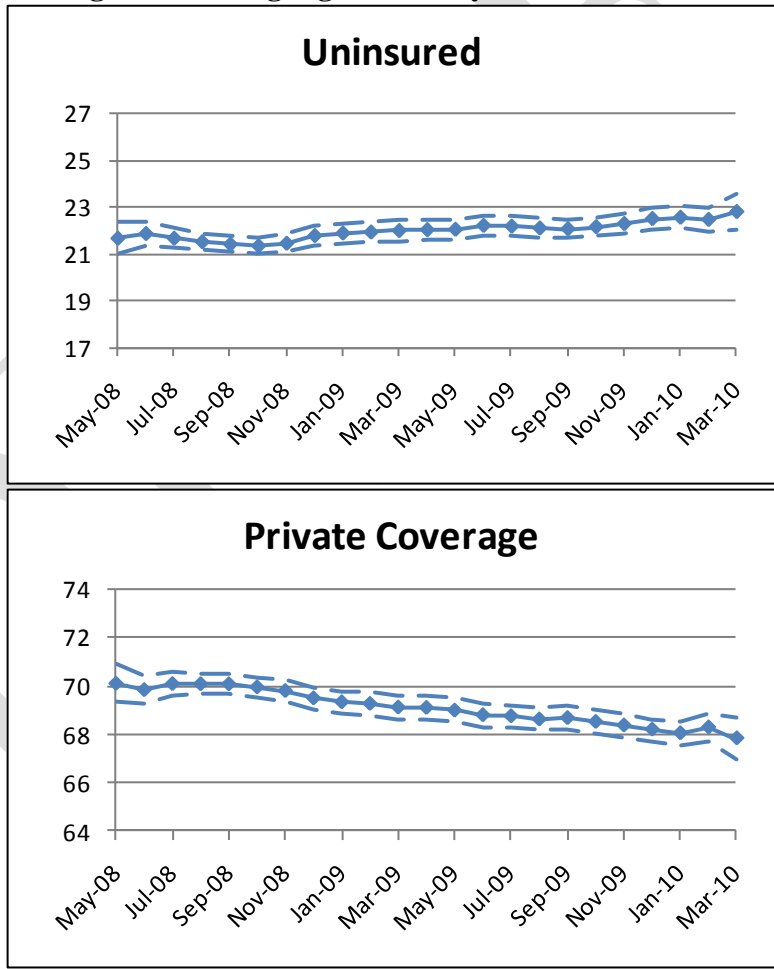
U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at:

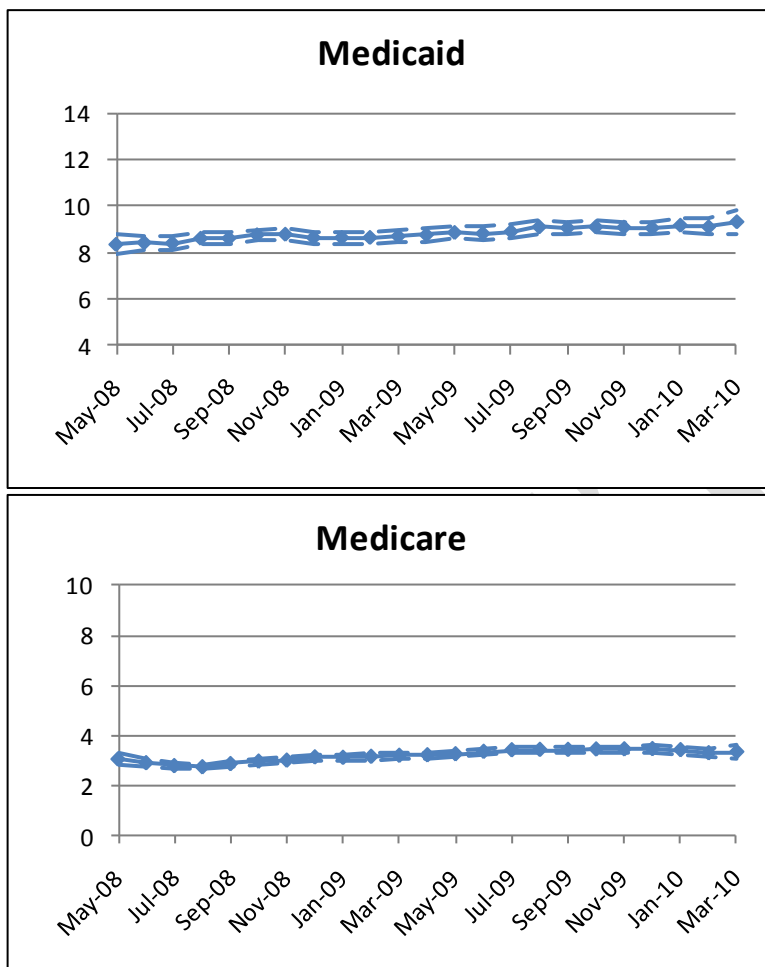
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U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at: http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

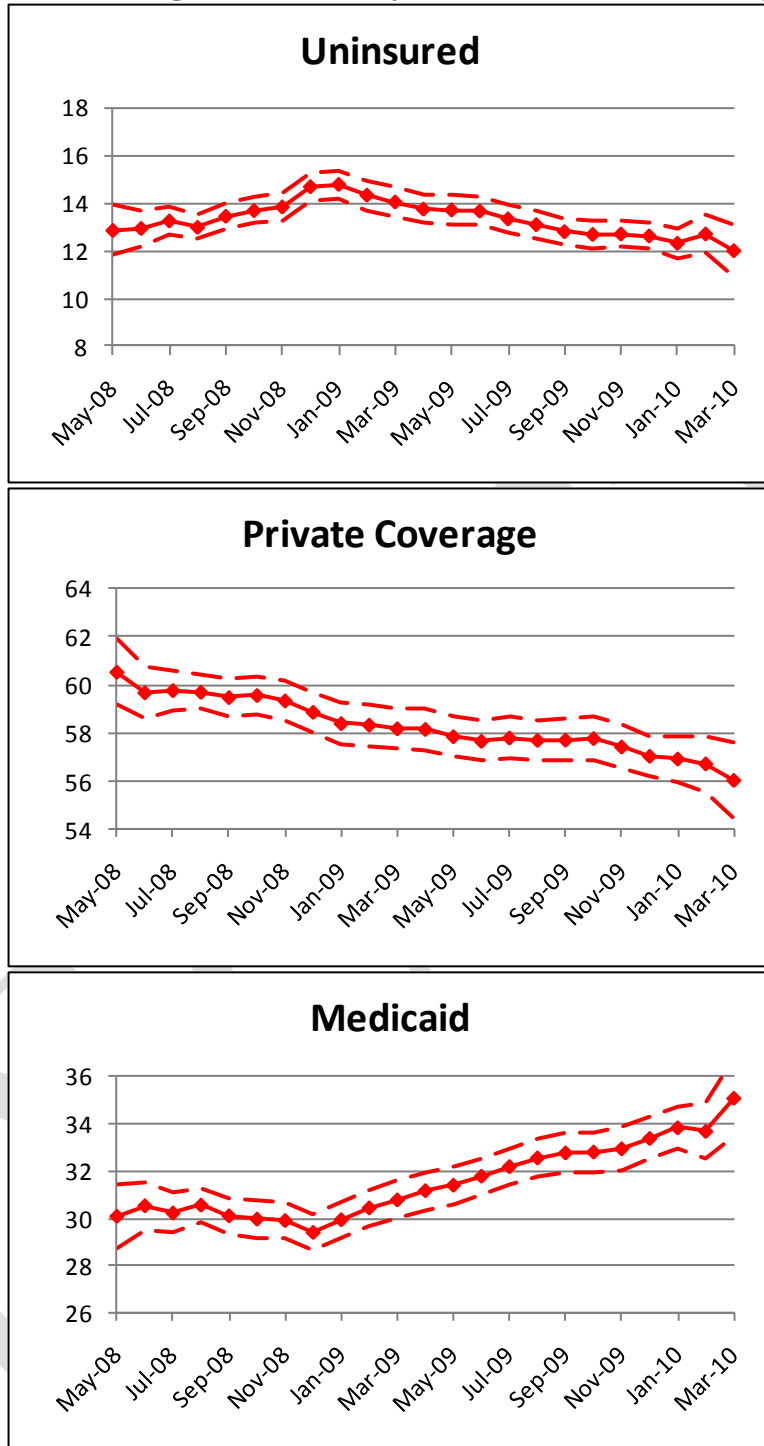
Figure 5: Percentage of Working-Age Adults by Health Insurance Coverage Type





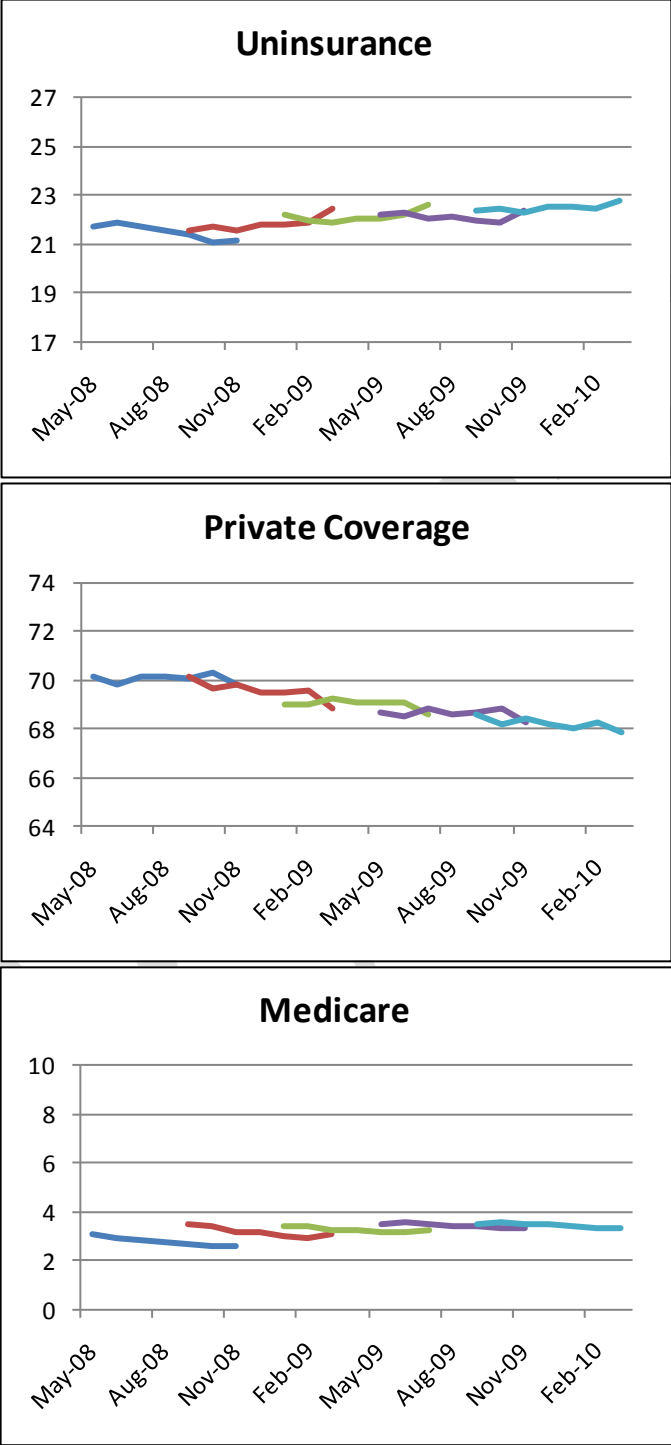
U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at: http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

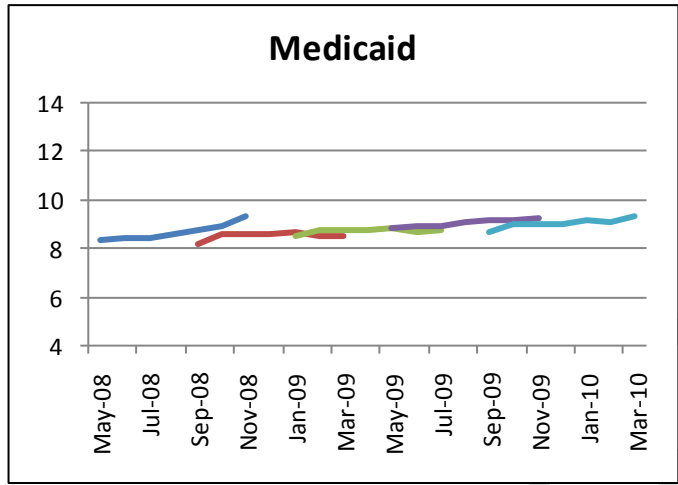
Figure 6: Percentage of Children by Health Insurance Coverage Type



U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at: http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

Figure 7: Percentage of Working-Age Adults by Health Insurance Coverage Type, by Wave

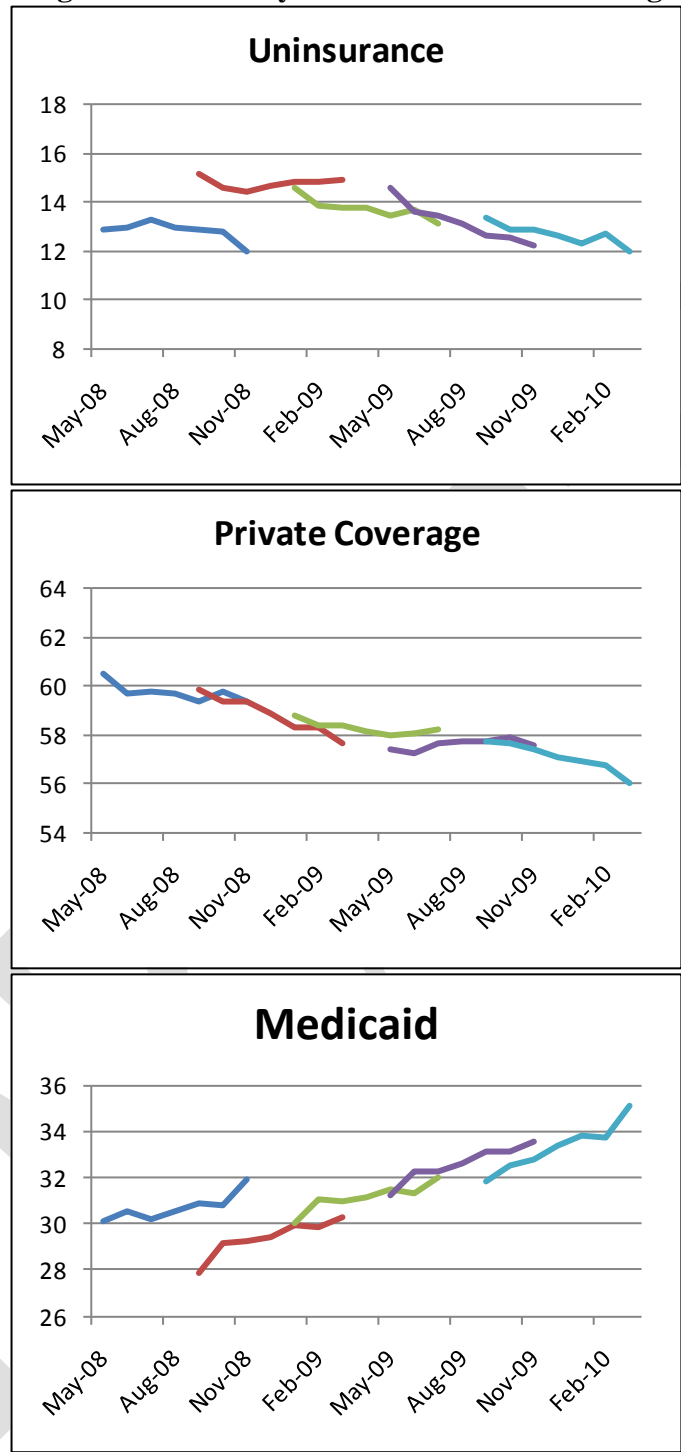




U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at: http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

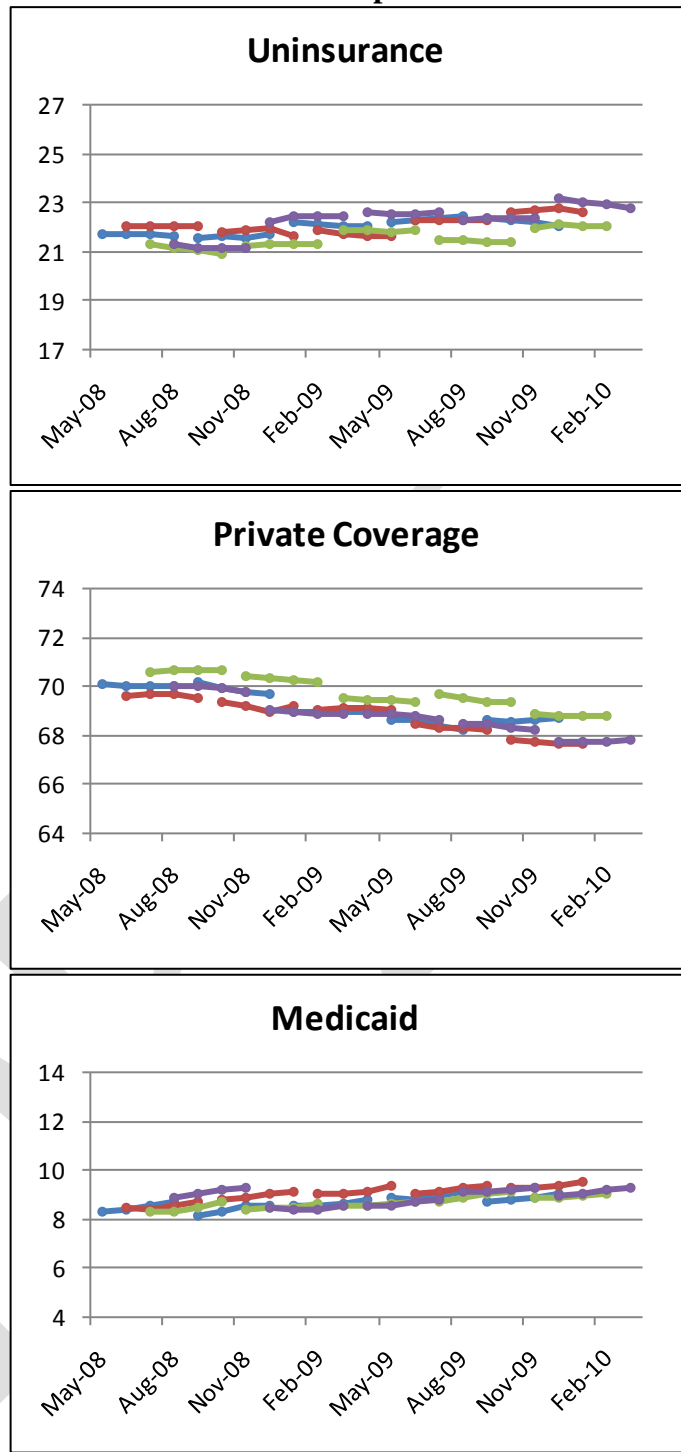
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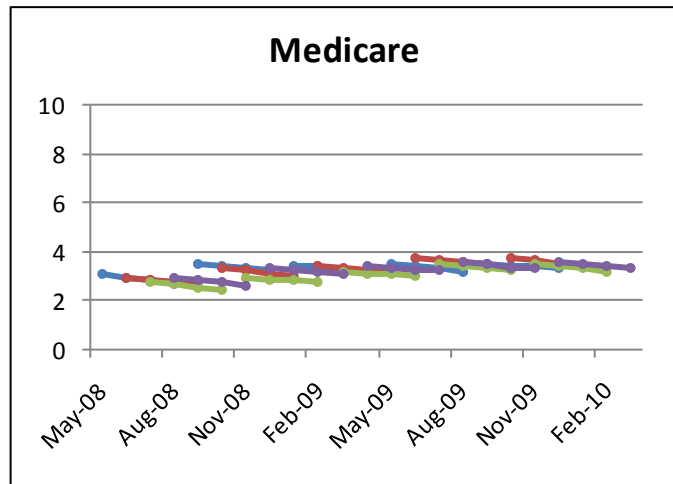
Figure 8: Percentage of Children by Health Insurance Coverage Type, by Wave



U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at: http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

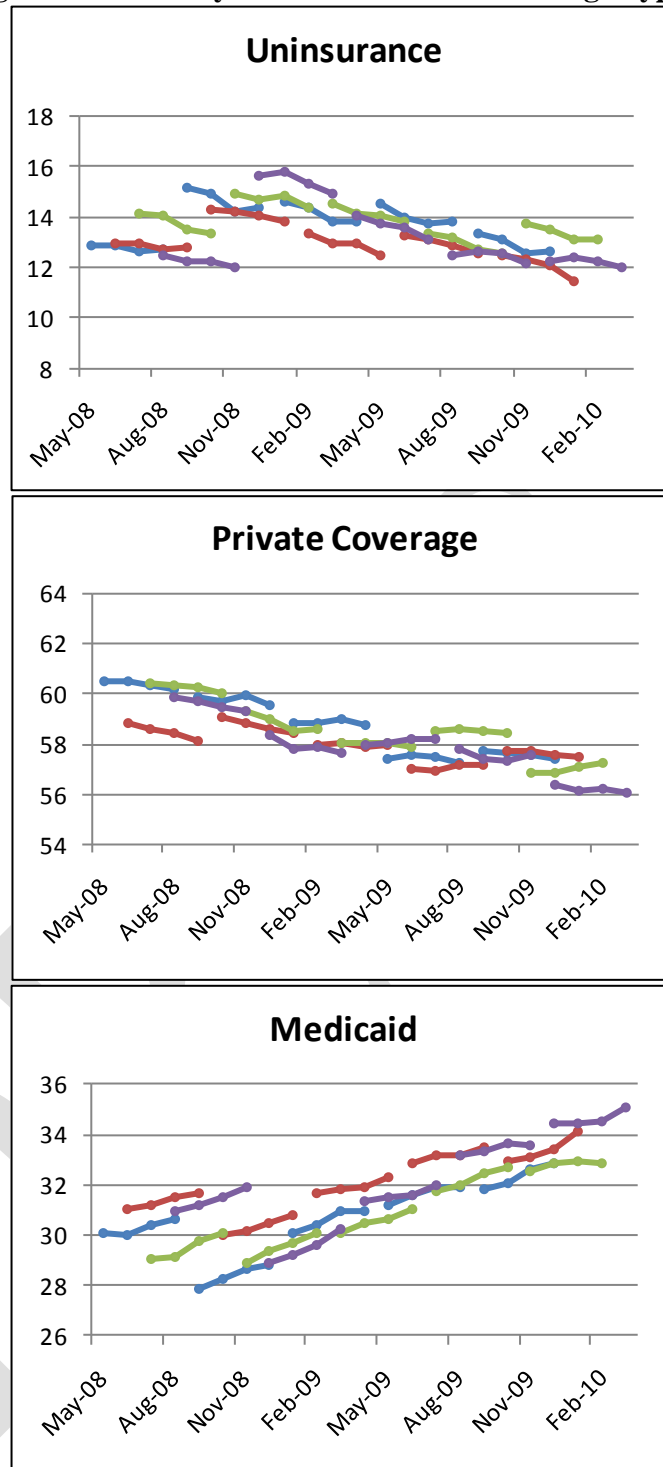
Figure 9: Percentage of Working-Age Adults by Health Insurance Coverage Type, by Rotation Group





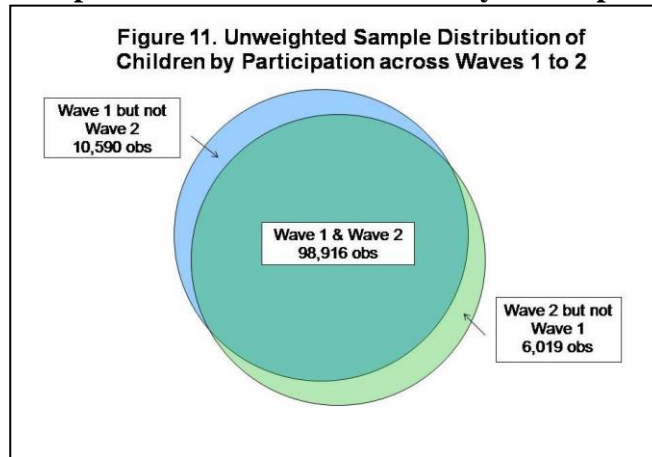
U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at: http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

Figure 10: Percentage of Children by Health Insurance Coverage Type, by Rotation Group



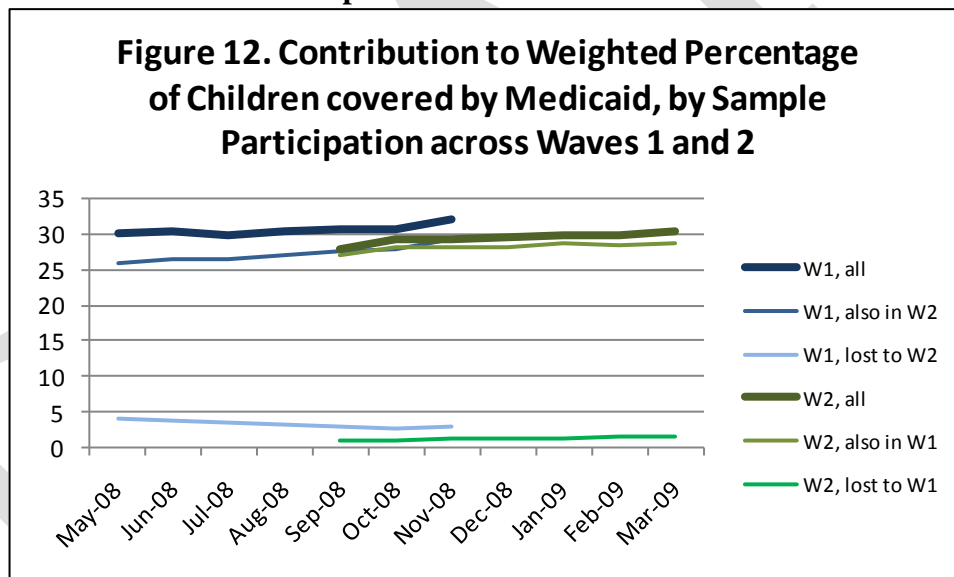
U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at: http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

Figure 11: Unweighted Sample Distribution of Children by Participation across Waves 1 and 2



U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 2. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at: http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

Figure 12: Contribution to Weighted Percentage of Children covered by Medicaid, by Sample Participation across Waves 1 and 2



U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 2. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at: http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

Table 1: Number of Months of Health Insurance Coverage by Type, Working-Age Adults
(Shown in Figure 3)

Number of Months		None	1 to 19	20
Any Health Insurance	%	9.9	22.6	67.5
	SE of %	0.2	0.3	0.3
	90 CL min	9.6	22.1	67.0
	90 CL max	10.2	23.1	68.0
Private Health Insurance	%	19.4	19.7	60.9
	SE of %	0.3	0.3	0.4
	90 CL min	18.9	19.3	60.3
	90 CL max	19.8	20.2	61.5
Public Health Insurance	%	82.8	11.5	5.7
	SE of %	0.3	0.2	0.1
	90 CL min	82.3	11.2	5.5
	90 CL max	83.2	11.9	6.0

U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at: http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

Table 2: Number of Months of Health Insurance Coverage by Type, Children
(Shown in Figure 4)

Number of Months		None	1 to 19	20
Any Health Insurance	%	2.7	27.6	69.8
	SE of %	0.2	0.5	0.6
	90 CL min	2.3	26.7	68.8
	90 CL max	3.0	28.5	70.7
Private Health Insurance	%	28.2	21.0	50.7
	SE of %	0.6	0.5	0.7
	90 CL min	27.2	20.2	49.6
	90 CL max	29.2	21.8	51.9
Public Health Insurance	%	57.1	27.3	15.6
	SE of %	0.7	0.5	0.5
	90 CL min	56.0	26.4	14.7
	90 CL max	58.2	28.2	16.4

U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at: http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

Table 3: Percentage of Working-Age Adults by Health Insurance Coverage Type
(Shown in Figure 5)

Working-Age Adults	Uninsured				Private Cov				Medicare				Medicaid			
	%	SE of %	90 CL min	90 CL max	%	SE of %	90 CL min	90 CL max	%	SE of %	90 CL min	90 CL max	%	SE of %	90 CL min	90 CL max
May-08	21.7	0.4	21.0	22.3	70.1	0.5	69.3	70.9	3.1	0.1	2.8	3.3	8.3	0.3	7.9	8.7
Jun-08	21.9	0.3	21.4	22.4	69.8	0.4	69.2	70.4	2.9	0.1	2.8	3.1	8.4	0.2	8.1	8.7
Jul-08	21.7	0.2	21.3	22.1	70.1	0.3	69.6	70.6	2.8	0.1	2.7	2.9	8.4	0.2	8.1	8.7
Aug-08	21.5	0.2	21.2	21.9	70.1	0.2	69.7	70.5	2.8	0.1	2.6	2.9	8.6	0.2	8.3	8.8
Sep-08	21.4	0.2	21.1	21.8	70.1	0.2	69.7	70.5	2.9	0.1	2.8	3.0	8.6	0.2	8.3	8.9
Oct-08	21.4	0.2	21.0	21.7	70.0	0.3	69.5	70.4	3.0	0.1	2.9	3.1	8.7	0.2	8.5	9.0
Nov-08	21.5	0.2	21.1	21.9	69.8	0.3	69.4	70.2	3.0	0.1	2.9	3.1	8.8	0.2	8.5	9.0
Dec-08	21.8	0.2	21.4	22.2	69.5	0.3	69.0	69.9	3.1	0.1	3.0	3.3	8.6	0.2	8.4	8.9
Jan-09	21.9	0.3	21.5	22.3	69.3	0.3	68.9	69.8	3.1	0.1	3.0	3.2	8.6	0.2	8.4	8.9
Feb-09	21.9	0.3	21.5	22.4	69.3	0.3	68.8	69.7	3.2	0.1	3.0	3.3	8.6	0.1	8.4	8.9
Mar-09	22.0	0.3	21.6	22.4	69.1	0.3	68.6	69.6	3.2	0.1	3.1	3.3	8.7	0.2	8.4	8.9
Apr-09	22.0	0.3	21.6	22.5	69.1	0.3	68.6	69.6	3.2	0.1	3.1	3.3	8.7	0.2	8.5	9.0
May-09	22.0	0.3	21.6	22.5	69.0	0.3	68.5	69.5	3.3	0.1	3.1	3.4	8.8	0.2	8.6	9.1
Jun-09	22.2	0.3	21.8	22.6	68.8	0.3	68.3	69.3	3.4	0.1	3.2	3.5	8.8	0.2	8.5	9.1
Jul-09	22.2	0.3	21.8	22.6	68.7	0.3	68.3	69.2	3.4	0.1	3.3	3.5	8.9	0.2	8.6	9.2
Aug-09	22.1	0.2	21.7	22.5	68.6	0.3	68.2	69.1	3.4	0.1	3.3	3.5	9.1	0.2	8.8	9.4
Sep-09	22.1	0.2	21.7	22.5	68.7	0.3	68.2	69.2	3.4	0.1	3.3	3.6	9.0	0.2	8.8	9.3
Oct-09	22.2	0.2	21.8	22.6	68.5	0.3	68.0	69.0	3.4	0.1	3.3	3.6	9.1	0.2	8.8	9.3
Nov-09	22.3	0.3	21.9	22.7	68.4	0.3	67.9	68.8	3.4	0.1	3.3	3.6	9.1	0.2	8.8	9.3
Dec-09	22.5	0.3	22.1	22.9	68.2	0.3	67.7	68.6	3.5	0.1	3.3	3.6	9.0	0.2	8.8	9.3
Jan-10	22.6	0.3	22.1	23.0	68.0	0.3	67.6	68.5	3.4	0.1	3.3	3.6	9.2	0.2	8.9	9.5
Feb-10	22.5	0.3	22.0	22.9	68.3	0.4	67.7	68.9	3.3	0.1	3.1	3.5	9.1	0.2	8.7	9.4
Mar-10	22.8	0.5	22.0	23.6	67.8	0.5	67.0	68.7	3.3	0.2	3.0	3.6	9.3	0.3	8.8	9.8

U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave

5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at:

http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

Table 4: Percentage of Children by Health Insurance Coverage Type
(Shown in Figure 6)

Children	Uninsured				Private Cov				Medicaid			
	%	SE of %	90 CL min	90 CL max	%	SE of %	90 CL min	90 CL max	%	SE of %	90 CL min	90 CL max
May-08	12.9	0.6	11.8	13.9	60.5	0.8	59.2	61.9	30.1	0.8	28.8	31.4
Jun-08	12.9	0.5	12.2	13.7	59.7	0.7	58.6	60.8	30.5	0.6	29.5	31.5
Jul-08	13.3	0.4	12.7	13.8	59.8	0.5	59.0	60.6	30.2	0.5	29.4	31.1
Aug-08	13.0	0.3	12.5	13.5	59.7	0.4	59.0	60.4	30.6	0.4	29.8	31.3
Sep-08	13.4	0.3	12.9	14.0	59.5	0.5	58.7	60.2	30.1	0.5	29.3	30.9
Oct-08	13.7	0.3	13.1	14.2	59.6	0.5	58.8	60.4	30.0	0.5	29.2	30.8
Nov-08	13.8	0.3	13.3	14.4	59.3	0.5	58.5	60.2	29.9	0.5	29.1	30.7
Dec-08	14.7	0.4	14.1	15.3	58.9	0.5	58.0	59.7	29.4	0.5	28.6	30.2
Jan-09	14.8	0.4	14.2	15.4	58.4	0.5	57.5	59.3	29.9	0.5	29.2	30.7
Feb-09	14.3	0.4	13.7	15.0	58.3	0.5	57.5	59.2	30.4	0.5	29.7	31.2
Mar-09	14.0	0.4	13.4	14.7	58.2	0.5	57.3	59.0	30.8	0.5	30.0	31.6
Apr-09	13.7	0.4	13.1	14.4	58.2	0.5	57.3	59.0	31.2	0.5	30.4	32.0
May-09	13.7	0.4	13.1	14.3	57.9	0.5	57.0	58.7	31.4	0.5	30.6	32.2
Jun-09	13.7	0.3	13.1	14.2	57.7	0.5	56.8	58.5	31.8	0.5	31.0	32.5
Jul-09	13.3	0.4	12.7	13.9	57.8	0.5	57.0	58.6	32.2	0.5	31.4	33.0
Aug-09	13.1	0.4	12.5	13.7	57.7	0.5	56.8	58.6	32.6	0.5	31.8	33.4
Sep-09	12.8	0.3	12.2	13.4	57.7	0.5	56.8	58.6	32.8	0.5	31.9	33.6
Oct-09	12.7	0.4	12.1	13.3	57.8	0.5	56.9	58.7	32.8	0.5	32.0	33.6
Nov-09	12.7	0.3	12.1	13.3	57.4	0.5	56.5	58.3	33.0	0.5	32.1	33.8
Dec-09	12.6	0.3	12.1	13.2	57.0	0.5	56.2	57.9	33.4	0.5	32.5	34.3
Jan-10	12.3	0.4	11.7	13.0	56.9	0.6	56.0	57.9	33.8	0.5	32.9	34.7
Feb-10	12.7	0.5	11.9	13.5	56.7	0.7	55.6	57.9	33.7	0.7	32.5	34.9
Mar-10	12.0	0.7	10.9	13.1	56.0	1.0	54.4	57.6	35.1	1.0	33.4	36.8

U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave

5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at:

http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

Table 5: Percentage of Working-Age Adults by Health Insurance Coverage Type, by Wave
(Shown in Figure 7)

Uninsurance: Working-Age Adults					
Calendar Month	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5
May-08	21.7				
Jun-08	21.9				
Jul-08	21.7				
Aug-08	21.5				
Sep-08	21.4	21.5			
Oct-08	21.0	21.7			
Nov-08	21.2	21.6			
Dec-08		21.8			
Jan-09		21.8	22.2		
Feb-09		21.9	22.0		
Mar-09		22.4	21.9		
Apr-09			22.0		
May-09			22.0	22.2	
Jun-09			22.2	22.3	
Jul-09			22.6	22.0	
Aug-09				22.1	
Sep-09				22.0	22.3
Oct-09				21.9	22.4
Nov-09				22.4	22.3
Dec-09					22.5
Jan-10					22.6
Feb-10					22.5
Mar-10					22.8

Private Coverage: Working-Age Adults					
Calendar Month	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5
May-08	70.1				
Jun-08	69.8				
Jul-08	70.1				
Aug-08	70.1				
Sep-08	70.1	70.1			
Oct-08	70.3	69.6			
Nov-08	69.8	69.8			
Dec-08		69.5			
Jan-09		69.5	69.0		
Feb-09		69.5	69.0		
Mar-09		68.8	69.2		
Apr-09			69.1		
May-09			69.1	68.7	
Jun-09			69.1	68.5	
Jul-09			68.6	68.8	
Aug-09				68.6	
Sep-09				68.7	68.6
Oct-09				68.8	68.2
Nov-09				68.2	68.4
Dec-09					68.2
Jan-10					68.0
Feb-10					68.3
Mar-10					67.8

Medicare: Working-Age Adults					
Calendar Month	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5
May-08	3.1				
Jun-08	2.9				
Jul-08	2.8				
Aug-08	2.8				
Sep-08	2.7	3.5			
Oct-08	2.6	3.4			
Nov-08	2.6	3.1			
Dec-08		3.1			
Jan-09		3.0	3.4		
Feb-09		2.9	3.4		
Mar-09		3.1	3.2		
Apr-09			3.2		
May-09			3.2	3.5	
Jun-09			3.1	3.6	
Jul-09			3.2	3.5	
Aug-09				3.4	
Sep-09				3.4	3.5
Oct-09				3.3	3.6
Nov-09				3.3	3.5
Dec-09					3.5
Jan-10					3.4
Feb-10					3.3
Mar-10					3.3

Medicaid: Working-Age Adults					
Calendar Month	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5
May-08	8.3				
Jun-08	8.4				
Jul-08	8.4				
Aug-08	8.6				
Sep-08	8.7	8.2			
Oct-08	8.9	8.6			
Nov-08	9.3	8.6			
Dec-08		8.6			
Jan-09		8.7	8.5		
Feb-09		8.5	8.8		
Mar-09		8.5	8.7		
Apr-09			8.7		
May-09			8.8	8.8	
Jun-09			8.7	8.9	
Jul-09			8.8	8.9	
Aug-09				9.1	
Sep-09				9.2	8.7
Oct-09				9.2	9.0
Nov-09				9.3	9.0
Dec-09					9.0
Jan-10					9.2
Feb-10					9.1
Mar-10					9.3

U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at: http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

Table 6: Percentage of Children by Health Insurance Coverage Type, by Wave
(Shown in Figure 8)

Uninsurance: Children					
Calendar Month	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5
May-08	12.9				
Jun-08	12.9				
Jul-08	13.3				
Aug-08	13.0				
Sep-08	12.9	15.2			
Oct-08	12.8	14.6			
Nov-08	12.0	14.5			
Dec-08		14.7			
Jan-09		14.8	14.6		
Feb-09		14.8	13.8		
Mar-09		14.9	13.8		
Apr-09			13.8		
May-09			13.4	14.6	
Jun-09			13.7	13.6	
Jul-09			13.1	13.4	
Aug-09				13.1	
Sep-09				12.6	13.3
Oct-09				12.6	12.8
Nov-09				12.2	12.9
Dec-09					12.6
Jan-10					12.3
Feb-10					12.7
Mar-10					12.0

Private Coverage: Children					
Calendar Month	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5
May-08	60.5				
Jun-08	59.7				
Jul-08	59.8				
Aug-08	59.7				
Sep-08	59.4	59.8			
Oct-08	59.8	59.4			
Nov-08	59.3	59.4			
Dec-08		58.9			
Jan-09		58.3	58.8		
Feb-09		58.3	58.4		
Mar-09		57.6	58.4		
Apr-09			58.2		
May-09			58.0	57.4	
Jun-09			58.1	57.3	
Jul-09			58.2	57.7	
Aug-09				57.7	
Sep-09				57.7	57.7
Oct-09				57.9	57.7
Nov-09				57.5	57.4
Dec-09					57.0
Jan-10					56.9
Feb-10					56.7
Mar-10					56.0

Medicaid: Children					
Calendar Month	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5
May-08	30.1				
Jun-08	30.5				
Jul-08	30.2				
Aug-08	30.6				
Sep-08	30.9	27.9			
Oct-08	30.8	29.1			
Nov-08	31.9	29.2			
Dec-08		29.4			
Jan-09		29.9	30.1		
Feb-09		29.9	31.0		
Mar-09		30.3	31.0		
Apr-09			31.2		
May-09			31.5	31.2	
Jun-09			31.3	32.3	
Jul-09			32.0	32.3	
Aug-09				32.6	
Sep-09				33.1	31.8
Oct-09				33.2	32.5
Nov-09				33.6	32.7
Dec-09					33.4
Jan-10					33.8
Feb-10					33.7
Mar-10					35.1

U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at: http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

Table 7: Percentage of Working-Age Adults by Health Insurance Coverage Type, by Rotation Group

(Shown in Figure 9)

Uninsurance: Working-Age Adults					
Calendar Month	Wave	Rotation Group			
		1	2	3	4
May-08	Wave 1	21.7			
Jun-08		21.7	22.1		
Jul-08		21.7	22.1	21.3	
Aug-08		21.6	22.0	21.2	21.3
Sep-08	Wave 2	21.5	22.0	21.0	21.1
Oct-08		21.6	21.8	20.9	21.1
Nov-08		21.6	21.9	21.3	21.2
Dec-08		21.7	22.0	21.3	22.2
Jan-09	Wave 3	22.2	21.7	21.3	22.4
Feb-09		22.1	21.8	21.3	22.5
Mar-09		22.0	21.7	21.8	22.4
Apr-09		22.0	21.6	21.9	22.6
May-09	Wave 4	22.2	21.6	21.8	22.6
Jun-09		22.3	22.3	21.8	22.5
Jul-09		22.3	22.3	21.5	22.6
Aug-09		22.5	22.2	21.4	22.3
Sep-09	Wave 5	22.3	22.3	21.4	22.3
Oct-09		22.3	22.6	21.4	22.4
Nov-09		22.2	22.7	21.9	22.4
Dec-09		22.0	22.7	22.1	23.1
Jan-10			22.6	22.0	23.1
Feb-10				22.0	22.9
Mar-10					22.8

Private Coverage: Working-Age Adults					
Calendar Month	Wave	Rotation Group			
		1	2	3	4
May-08	Wave 1	70.1			
Jun-08		70.0	69.6		
Jul-08		70.0	69.7	70.6	
Aug-08		70.0	69.7	70.7	70.0
Sep-08	Wave 2	70.2	69.5	70.7	70.0
Oct-08		70.0	69.3	70.6	69.9
Nov-08		69.8	69.2	70.5	69.8
Dec-08		69.7	69.0	70.3	69.1
Jan-09	Wave 3	69.0	69.2	70.3	68.9
Feb-09		69.0	69.0	70.2	68.9
Mar-09		69.0	69.1	69.5	68.8
Apr-09		68.9	69.1	69.5	68.9
May-09	Wave 4	68.7	69.0	69.4	68.9
Jun-09		68.6	68.5	69.3	68.8
Jul-09		68.4	68.3	69.7	68.6
Aug-09		68.2	68.3	69.5	68.5
Sep-09	Wave 5	68.6	68.2	69.4	68.4
Oct-09		68.6	67.8	69.4	68.3
Nov-09		68.6	67.7	68.9	68.2
Dec-09		68.7	67.6	68.8	67.7
Jan-10			67.6	68.8	67.7
Feb-10				68.8	67.8
Mar-10					67.8

Medicare: Working-Age Adults					
Calendar Month	Wave	Rotation Group			
		1	2	3	4
May-08	Wave 1	3.1			
Jun-08		2.9	2.9		
Jul-08		2.8	2.8	2.8	
Aug-08		2.7	2.8	2.7	2.9
Sep-08	Wave 2	3.5	2.7	2.5	2.8
Oct-08		3.4	3.3	2.4	2.7
Nov-08		3.3	3.2	2.9	2.6
Dec-08		3.3	3.1	2.8	3.4
Jan-09	Wave 3	3.4	3.0	2.8	3.3
Feb-09		3.4	3.4	2.7	3.2
Mar-09		3.3	3.3	3.2	3.1
Apr-09		3.2	3.2	3.1	3.4
May-09	Wave 4	3.5	3.1	3.1	3.3
Jun-09		3.4	3.7	3.0	3.3
Jul-09		3.3	3.7	3.5	3.2
Aug-09		3.2	3.6	3.4	3.6
Sep-09	Wave 5	3.5	3.5	3.3	3.5
Oct-09		3.4	3.8	3.2	3.4
Nov-09		3.4	3.7	3.5	3.3
Dec-09		3.4	3.5	3.4	3.6
Jan-10			3.4	3.3	3.5
Feb-10				3.2	3.4
Mar-10					3.3

Medicaid: Working-Age Adults					
Calendar Month	Wave	Rotation Group			
		1	2	3	4
May-08	Wave 1	8.3			
Jun-08		8.4	8.4		
Jul-08		8.5	8.4	8.3	
Aug-08		8.7	8.5	8.3	8.9
Sep-08	Wave 2	8.2	8.7	8.5	9.1
Oct-08		8.3	8.8	8.7	9.2
Nov-08		8.5	8.9	8.4	9.3
Dec-08		8.5	9.1	8.5	8.4
Jan-09	Wave 3	8.5	9.1	8.5	8.4
Feb-09		8.5	9.0	8.6	8.4
Mar-09		8.7	9.1	8.5	8.5
Apr-09		8.8	9.2	8.5	8.5
May-09	Wave 4	8.8	9.3	8.7	8.6
Jun-09		8.8	9.1	8.7	8.7
Jul-09		9.0	9.2	8.7	8.8
Aug-09		9.1	9.3	8.9	9.1
Sep-09	Wave 5	8.7	9.4	9.0	9.1
Oct-09		8.8	9.3	9.1	9.2
Nov-09		8.9	9.3	8.9	9.3
Dec-09		9.0	9.4	8.9	8.9
Jan-10			9.5	9.0	9.0
Feb-10				9.0	9.2
Mar-10					9.3

U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at: http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf

Table 8: Percentage of Children by Health Insurance Coverage Type, by Rotation Group
(Shown in Figure 10)

Uninsurance: Children					
Calendar Month	Wave	Rotation Group			
		1	2	3	4
May-08	Wave 1	12.85			
Jun-08		12.89	12.99		
Jul-08		12.66	12.98	14.12	
Aug-08		12.70	12.73	14.06	12.45
Sep-08	Wave 2	15.17	12.81	13.52	12.28
Oct-08		14.91	14.26	13.34	12.23
Nov-08		14.23	14.20	14.92	11.99
Dec-08		14.40	14.02	14.72	15.60
Jan-09	Wave 3	14.60	13.86	14.88	15.79
Feb-09		14.35	13.31	14.36	15.31
Mar-09		13.79	12.97	14.53	14.90
Apr-09		13.84	12.97	14.13	14.05
May-09	Wave 4	14.56	12.49	14.04	13.76
Jun-09		13.99	13.27	13.83	13.56
Jul-09		13.77	13.08	13.37	13.13
Aug-09		13.83	12.87	13.19	12.49
Sep-09	Wave 5	13.32	12.54	12.73	12.63
Oct-09		13.14	12.51	12.57	12.52
Nov-09		12.59	12.32	13.72	12.19
Dec-09		12.64	12.08	13.49	12.28
Jan-10			11.44	13.12	12.40
Feb-10				13.14	12.28
Mar-10					12.01

Private Coverage: Children					
Calendar Month	Wave	Rotation Group			
		1	2	3	4
May-08	Wave 1	60.53			
Jun-08		60.53	58.83		
Jul-08		60.34	58.58	60.39	
Aug-08		60.20	58.43	60.30	59.88
Sep-08	Wave 2	59.84	58.12	60.23	59.73
Oct-08		59.72	59.05	60.02	59.48
Nov-08		59.92	58.85	59.28	59.32
Dec-08		59.54	58.58	59.01	58.33
Jan-09	Wave 3	58.81	58.46	58.49	57.83
Feb-09		58.83	57.99	58.62	57.91
Mar-09		59.02	58.01	58.08	57.64
Apr-09		58.75	57.89	58.05	57.93
May-09	Wave 4	57.39	57.99	58.03	58.02
Jun-09		57.54	57.00	57.89	58.22
Jul-09		57.50	56.96	58.55	58.20
Aug-09		57.27	57.20	58.56	57.77
Sep-09	Wave 5	57.71	57.18	58.52	57.45
Oct-09		57.65	57.70	58.45	57.30
Nov-09		57.59	57.71	56.86	57.54
Dec-09		57.38	57.60	56.83	56.36
Jan-10			57.52	57.11	56.15
Feb-10				57.22	56.23
Mar-10					56.04

Medicaid: Children					
Calendar Month	Wave	Rotation Group			
		1	2	3	4
May-08	Wave 1	30.09			
Jun-08		30.04	31.03		
Jul-08		30.42	31.21	29.06	
Aug-08		30.67	31.48	29.14	30.95
Sep-08	Wave 2	27.86	31.66	29.73	31.20
Oct-08		28.24	30.00	30.12	31.52
Nov-08		28.69	30.16	28.87	31.93
Dec-08		28.85	30.51	29.35	28.91
Jan-09	Wave 3	30.05	30.83	29.69	29.19
Feb-09		30.40	31.63	30.11	29.64
Mar-09		30.92	31.86	30.11	30.25
Apr-09		30.98	31.91	30.46	31.35
May-09	Wave 4	31.23	32.29	30.62	31.49
Jun-09		31.61	32.89	31.05	31.60
Jul-09		31.89	33.16	31.75	31.99
Aug-09		31.91	33.19	31.97	33.20
Sep-09	Wave 5	31.85	33.46	32.45	33.36
Oct-09		32.04	32.92	32.69	33.62
Nov-09		32.65	33.06	32.53	33.58
Dec-09		32.87	33.44	32.82	34.44
Jan-10			34.13	32.96	34.44
Feb-10				32.85	34.54
Mar-10					35.10

U.S. Census Bureau, Survey of Income and Program Participation (SIPP), 2008 Panel Wave 1 to Wave 5. The most recent Source and Accuracy Statement for SIPP 2008 Panel can be found at: http://www.census.gov/sipp/sourceac/S&A08_W1toW3%28S&A-12%29.pdf