

User Guide to Health Insurance in the Health and Retirement Study, 2006 – 2014

Prepared by Helen Levy

May 2017

Abstract: This documentation report describes health insurance data in the HRS. We summarize the relevant variables and describe how they have changed over time in responses to major new insurance programs including Medicare Part D and the Affordable Care Act. We benchmark HRS estimates of health insurance coverage to estimates from two national surveys: the NHIS and the ACS. We look at the prevalence of private insurance (employer-sponsored and non-group), public insurance (Medicare and Medicaid/other), and uninsurance for individuals ages 55 through 64, and a subset of those outcomes for individuals ages 65 and older. Overall, the results suggest that the HRS data on health insurance benchmark very well to data from other large-scale national surveys.

Suggested citation: Levy, H. (2017). User Guide to Health Insurance in the Health and Retirement Study, 2006-2014. Retrieved from Ann Arbor, Michigan:
<https://hrs.isr.umich.edu/publications/biblio/9064>

1. Overview

This User Guide describes data on health insurance coverage in the Health and Retirement Study (HRS) from 2006 through 2014, updating an earlier guide that focused on HRS health insurance data from 1992 through 2006 (Levy and Gutierrez 2009). We list the main variables used to measure health insurance coverage, which were largely consistent between 2006 and 2014. Next, we discuss changes to the data collection in response to two major new policies: Medicare Part D, implemented in 2006, and the Affordable Care Act, the major coverage provisions of which were implemented in 2014. Finally, we present trends in coverage from 2006 through 2014, benchmarking HRS results to those from two large national cross-sectional surveys, the National Health Interview Survey (NHIS) and the American Community Survey (ACS).

2. Description of health insurance data collected in HRS

The HRS collects insurance information in Section N, which also queries respondents about their use of health services and out-of-pocket spending on those services. Section N begins by asking respondents about whether they are covered by Medicare or Medicaid, then asks whether the respondent has any private coverage. Respondents who have private coverage are asked about up to three private plans. Exhibit 1 summarizes the key HRS questions about health insurance coverage, which are consistent between 2006 and 2014 except for minor changes noted in the last column of the exhibit and discussed in more detail below.

One methodological change that does not appear in the table and did not affect the question text is that beginning in 2012 the names of private health insurance plans reported in the previous wave were pre-loaded into the survey. This was intended to reduce respondent burden by simplifying the process of “naming” private plans at question N024. Note that while plan names reported by respondents at N024 have never been included in publicly-released data, the process of preloading and confirming plan names resulted in the creation of an indicator for whether each plan a respondent names is the same as one of the plans named the last interview (N280). We do not believe that this change should affect responses; as noted, the goal was to simplify the plan listing process in order to reduce respondent burden.

Additional insurance-related questions in Section N collect detail on health insurance premiums; whether respondents with Medicare are enrolled in Medicare Advantage; and the availability of retiree health insurance, among other topics. Researchers interested in working with the HRS health insurance data are strongly encouraged to read through the entire Section N questionnaire, available at <http://hrsonline.isr.umich.edu/index.php?p=qnaires>.

3. Changes to HRS data collection in response to Medicare Part D

The Medicare Part D prescription drug insurance program was created by the Medicare Modernization Act of 2003 and began providing coverage to beneficiaries in 2006. In response

to Medicare Part D, we modified the core Section N questionnaire and administered supplemental mail surveys to a subset of respondents in 2005, 2007, and 2009.

Changes to the core questionnaire in response to Medicare Part D

Because the core HRS already collected information on whether or not respondents had prescription drug coverage from other sources, including Part D and Medicare Advantage, the changes in response to Part D mostly required adding new questions rather than any changes to existing ones; as a result, the data can provide a pre-reform baseline against which the increase in coverage from Part D can be measured (see, for example, Levy and Weir 2010).

Exhibit 2 provides a diagram of how key Part D variables changed over time. Interested users should consult the questionnaires in each year for the exact changes, using the variable names in Exhibit 2 as a guide. We briefly describe some of the changes here:

- Questions about Part D were added to the core questionnaire in 2006, including N352 (“Have you signed up for the new Medicare prescription drug coverage?”). The wording of N352 was slightly modified in 2008 and later years (“Are you enrolled in Medicare Part D, also known as the Medicare Prescription Drug Plan?”)
- In response to concern about the complexity of the Part D program and the difficulty that seniors might face enrolling, the 2006 core survey included a series of questions on respondents’ decision-making around Part D. Respondents who reported that they had enrolled in Part D were asked whether they or someone else chose their plan (N394). Respondents who reported not having signed up for Part D were asked why (N356). Both enrollees and non-enrollees were asked about resources used to make a decision (N397/N398/N400/N401), how difficult it was to make their decision (N399/N402), and how confident they were that they made the right decision (N403). Non-enrollees were also asked the likelihood that they would sign up next year (N358).
- In 2008, some of these questions were modified slightly; for example, the questions about resources used to make a decision were modified to allow respondents to say which, if any, of their children had helped them (N410/N411/N413 and N418/N419/N421). Individuals with Part D coverage in both 2006 and 2008 were asked if they had switched plans and if so, why (N415).
- Our initial attempt in 2006 to ask respondents about their use of the Low-Income Subsidy associated with Part D (N354/N355) suggested either that respondents were very confused about the program or that our questions were unclear (Levy and Weir 2007). We revised the question in 2008 (N425/N426/N427) and discontinued it in 2014.
- Detailed questions about Part D decision-making were phased out in 2010 and 2012. Questions about whether the respondent had Part D coverage (N351, N352) and the reason for switching plans (N415) remain in the core.
- Note also that the skip pattern for the Part D enrollment question (N352) was changed in 2008, so that respondents with drug coverage through an MA plan (N351=1) are not

asked this question. By definition, MA drug coverage is Part D, although enrollees are not necessarily aware of this, as we observed in 2006 when a large fraction of respondents with N351=1 responded “no” when asked at N352 whether they had enrolled in Part D.

Researchers interested in Part D and in prescription drug issues more generally should also be aware of supplemental surveys administered to random subsamples of HRS respondents in 2005, 2007, and 2009. The 2005 Prescription Drug Study (n=4,684), 2007 Prescription Drug Study (n=3,536), and 2009 Health and Well-Being Study (n=5,333) collected data on prescription drug access, coverage, and use. The 2005 and 2007 surveys also specifically asked respondents about their experiences with an opinion of the Part D program. Additional information is available on the HRS website.

4. Changes to HRS data collection in response to the Affordable Care Act (ACA)

The Affordable Care Act, enacted in 2010, expanded access to Medicaid and to non-group private insurance purchased through state marketplaces sometimes known as “health insurance exchanges.” Most of these new health insurance options became available in 2014. Because the HRS already collected data on both Medicaid and non-group coverage, relatively few changes to the core data collection were required in order to capture changes in coverage resulting from the ACA. As was the case with Part D, in addition to core changes, we conducted off-year mail surveys to gather additional data on the broader impacts of the ACA. These changes included:

- In 2014 and later, the codeframe for N037 (source of private non-group coverage) was expanded to include “through an insurance exchange.”
- Questions on access to care were added to the core HRS in 2012 and later, including care foregone because of cost (N290), usual source of care (N291/N292), and difficulty finding a provider (N293).
- In 2011 and 2013, we administered mail surveys to random subsamples of respondents in order to assess their experiences with and views of the ACA. For more detail, please refer to online questionnaires for the 2011 Health Care Mail Study and the 2013 Health Care and Nutrition Study.

5. Benchmarking HRS health insurance data to NHIS and ACS

In order to assess the quality of HRS health insurance data, we compare them to two large surveys sponsored by the federal government: the American Community Survey (ACS) and the National Health Interview Survey (NHIS). Both the ACS and the NHIS samples are nationally-representative cross-sections, with data released annually; Turner and Boudreaux (2010) provide an excellent description of the health insurance measures in both surveys. In all three datasets, we restrict the sample to individuals ages 55 and older at the time of the survey. In the HRS, we drop respondents in nursing homes, who make up less than 3 percent of the sample in each year; the other two surveys are household samples and so have no individuals in nursing homes by

design. Exhibit 3 presents unweighted sample sizes in each survey and the fraction of individuals ages 55 and older who are younger than age 65.

Although the health insurance questions in the NHIS and ACS are quite different from those in the HRS, we construct a set of comparable measures across the three surveys describing an individual's health insurance status at the time of the survey. These measures include: uninsured; private insurance, which can be employer-sponsored or non-group; and public insurance, which can be Medicare or Medicaid/other. Exhibit 4 summarizes the variables we use in each survey to create these outcome measures. These measures are not necessarily mutually exclusive; for example, an individual may have both private and public coverage at the same time. "Uninsured" is defined as having neither private nor public coverage.

Because of the discrete change in eligibility for Medicare at age 65, we present results separately for the under-65 and 65-plus age groups.

Results for individuals ages 55 through 64

Figure 1 show the fraction uninsured for individuals ages 55 through 64. The trends are very similar across the three surveys, with a gradual increase in uninsurance between 2006 and 2013, and sharp declines in 2014 and later.

Trends in overall private coverage (Figure 2) are also similar over time, with the HRS within one or two percentage points of the ACS in 2006, 2008, and 2010 and nearly identical in 2012 and 2014. The NHIS shows consistently lower rates of private coverage than HRS or ACS for this age group, by about three or four percentage points, but a similar pattern over time, with coverage declining gradually through 2013 and then increasing sharply in 2014 and 2015.

Looking more closely at the sources of private coverage, estimates of private coverage by type – employer-sponsored or non-group – show somewhat different results across the three surveys. Rates of employer-sponsored coverage are consistently several percentage points higher in HRS than in ACS, which are in turn several points higher than NHIS estimates (Figure 3). These differences in levels notwithstanding, the trend over time in employer coverage – a gradual decline, with some moderation in 2014/2015 – is largely similar across the three surveys. Estimates of non-group coverage in the HRS are nearly identical to those in NHIS, although the ACS estimate is consistently five or six percentage points higher (Figure 4). This estimated difference between NHIS and ACS is consistent with Turner and Boudreaux (2010); Mach and O'Hara (2011) suggest that the ACS' higher rate of non-group coverage may be due to the write-in option for health insurance.

A similar pattern is evident for trends in overall public coverage for individuals ages 55 through 64, with the HRS tracking the NHIS quite closely and the ACS yielding slightly higher levels of public coverage in each year but a similar increasing trend over time (Figure 5). Trends in

specific types of public coverage – Medicare and Medicaid/other – are fairly similar as well (Figures 6 and 7).

Results for individuals ages 65 and older

Nearly all individuals ages 65 and older are covered by Medicare, so we present only a subset of insurance outcomes for this group. Figure 8 show trends in the fraction who report having any private coverage. This outcome shows a large differences across the three surveys in the level of the estimate, with a difference of more than ten percentage points between the low estimate of private coverage (NHIS) and the high one (ACS). HRS lies somewhere between the two. The trend over time – a gradual decline throughout the period examined – is similar across surveys, in spite of the differences in levels. Figure 9 shows trends in employer coverage for the 65-plus population, and looks similar to Figure 8, with NHIS about ten percentage points below ACS and HRS between them; but, again, the trends over time are similar. Figure 10 shows the fraction with private non-group coverage. Here, the HRS gives an estimate that is below the NHIS one by one to three percentage points, while the ACS estimate remains about ten percentage points higher.

Figure 11 shows trends in Medicaid coverage for individuals ages 65 and older. The HRS estimate is nearly identical to the NHIS in all years, while the ACS estimate is about 8 percentage points higher.

6. Conclusion

Our benchmarking exercise shows that trends in health insurance coverage from 2006 to 2014 measured using the HRS data benchmark very well to overall trends measured using data from the NHIS or ACS for population subgroups ages 55 through 64 and 65-plus. For outcomes where there are discrepancies between NHIS and ACS, such as the prevalence of private coverage or Medicaid among the population age 65 and older, the HRS estimates tend to be closer to the NHIS than the ACS. The NHIS, like the HRS, asks multiple questions in order to ascertain respondents' health insurance, in comparison to a single question in the ACS. Overall, the results suggest that the HRS data on health insurance benchmark very well to data from other large-scale national surveys.

7. References

- Cantor, Joel C., Alan C. Monheit, Susan Brownlee, and Carl Schneider. "The Adequacy of Household Survey Data for Evaluating the Nongroup Health Insurance Market." *Health Services Research* 42, no. 4 (2007): 1739-1757.
- Levy, Helen, and Italo Gutierrez. "Documentation and Benchmarking of Health Insurance Measures in the Health and Retirement Study." (2009). Ann Arbor, Michigan: Institute for Social Research, University of Michigan.
- Levy, Helen, and David R. Weir. "Take-Up of Medicare Part D and the SSA Subsidy: Early Results from the Health and Retirement Study." (2007). Michigan Retirement Research Center Working Paper 2007-163.
- Levy, Helen, and David R. Weir. "Take-up of Medicare Part D: Results from the Health and Retirement Study." *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 65, no. 4 (2010): 492-501.
- Mach, Annie, and Brett O'Hara. "Do People Really Have Multiple Health Insurance Plans? Estimates of Nongroup Health Insurance in the American Community Survey." (2011). SEHSD Working Paper Number 2011-28
- Turner, Joanna, and Michel Boudreaux. "Health Insurance Coverage in the American Community Survey: A Comparison to Two Other Federal Surveys." (2010). Chapter 9 in *Databases for Estimating Health Insurance Coverage for Children: A Workshop Summary*. National Academies Press.

Exhibit 1: Summary of HRS questions about health insurance coverage, 2006 through 2014

Question wording (condensed)	Question number	Notes
Public coverage		
Are you currently covered by Medicare health insurance?	N001	
Are you covered under Part B of Medicare?	N004	
Are you enrolled in Medicare Part D, also known as the Medicare Prescription Drug Plan?	N352	Slightly different wording in 2006; skip pattern change in 2008 (see text)
Have you been covered by Medicaid at any time [since the last interview/in the last two years]?	N005	
Are you currently covered by Medicaid?	N006	
Are you currently covered by TRI-CARE, CHAMPUS, CHAMP-VA, or any other military health care plan?	N007	
Private coverage		
<p>Now, we'd like to ask about all the other types of health insurance plans you might have, such as insurance through an employer or a business, coverage for retirees, or health insurance you buy for yourself, including any [Medigap or] other supplemental coverage.</p> <p>Do NOT include long-term care insurance. How many other plans do you have?</p>	N023	
Which is your primary plan, Medicare or (name of first plan)?	N025	Asked only if respondent has Medicare and only for 1 st private plan

Exhibit 1 (continued): Summary of HRS questions about health insurance coverage, 2006 through 2014

Question wording (condensed)	Question number	Notes
Does this plan provide help with paying for regular prescription drugs?	N032	
<i>If respondent is self-employed:</i> Do you obtain this health insurance through your own business or professional organization?	N033	Asked about each private plan
<i>If respondent is working for someone else:</i> Do you obtain this health insurance through your current employer?		
Do you obtain this health insurance through a former employer of yours?	N034	
Do you obtain this health insurance through your husband/wife/partner's <u>current</u> employer?	N035	
Do you obtain this health insurance through your husband/wife/partner's <u>former</u> employer?	N036	
Did you purchase this plan directly from an insurance company, [through an insurance exchange { <i>this option was added in 2014</i> }], through your (or your [husband's/wife's/partner's]) union, through a group such as AARP, a church, or other organization, or what?	N037	Asked about each private plan; codeframe modified in 2014 to include "through an insurance exchange"
Not including government programs, do you now have any long-term care insurance which specifically covers nursing home care for a year or more or any part of personal or medical care in your home?	N071	
Overall		
If insured: Were you ever without health insurance coverage at any time (since last interview/in the last two years)?	N091	
If uninsured: About how long has it been since you last had health care coverage?	N260	Added in 2010

Note: Please see online questionnaire for exact question text, skip patterns, and additional information

Exhibit 2
Summary of selected questions about Part D coverage in HRS, 2006 – 2014

Topic	2006	2008	2010	2012	2014
Does private plan cover drugs	N032				
Does MA plan cover drugs	N351				
Drug coverage from some other source		N417			
Enrolled in Part D	N352 “Beginning in 2006, Part D of Medicare provides coverage for prescription drugs. Have you signed up for the new Medicare prescription drug coverage?”	N352 (slightly different wording) “Part D of Medicare provides coverage for prescription drugs, usually through a private insurance provider. Are you enrolled in Medicare Part D, also known as the Medicare Prescription Drug Plan?”			
Chose own plan	N394 “Did you choose your own plan, did someone you know choose for you, or were you enrolled in it automatically?”				
Month signed up	N395				
Resources used to make decision	N397,398,400,401	N410,411,413 and N418, 419, 421			
Confident right decision	N403				
Non-enrollees: why didn’t sign up	N356				
Non-enrollees: will you sign up next year	N358				
How much time looking at Part D plans? (if part D or MA-PDP)		N422	N422		
Part D enrollees who switched plans since prior wave: Why did you switch		N415			
Low-income subsidy/Extra help	N354/355	N425, 426, 427			

Exhibit 3: Sample sizes by survey, respondents ages 55 and older
HRS, ACS, NHIS

Non-institutionalized respondents ages 55 and older						
	Unweighted sample size			Fraction <65 years (weighted)		
	HRS	ACS	NHIS	HRS	ACS	NHIS
2006	15,768	-	15,744	0.473	-	0.466
2007	-	-	16,040	-	-	0.472
2008	15,482	854,665	16,247	0.471	0.465	0.474
2009	-	880,616	19,713	-	0.468	0.477
2010	16,751	903,618	20,217	0.477	0.476	0.480
2011	-	958,268	24,006	-	0.479	0.482
2012	16,911	976,951	26,561	0.475	0.472	0.477
2013	-	988,116	26,439	-	0.468	0.472
2014	16,537	1,017,147	29,194	0.470	0.464	0.468
2015	-	1,041,502	28,199	-	0.461	0.464

Exhibit 4

Variables used to construct comparable health insurance measures in HRS, NHIS, and ACS

Variable:	Dataset		
	HRS	ACS	NHIS
Private coverage	=1 if N023>0 and <98	=1 if HINS1, HINS2 or HINS5=1	=1 if PRIVATE=1
Employer coverage	=1 if N033, N034, N035, N036, or N007=1; or N037 = 2,3, or 5	=1 if HINS1 or HINS5=1	=1 if PLNWRKS1 or PLNWRKS2 = 1,2,3 or 4
Non-group coverage	=1 if N037=1,4,6,7,8 or 9	=1 if HINS2=1	=1 if PLNWRKS1 or PLNWRKS2 = 5 or 6
Public coverage	=1 if N001 or N006 =1	=1 if HINS3, HINS4 or HINS6==1	=1 if MEDICARE, MEDICAID, OTHPUB, SCHIP, or OTHGOV=1
Medicare	=1 if N001=1	=1 if HINS3=1	=1 if MEDICARE=1
Medicaid/other public	=1 if N006=1	=1 if HINS4=1	=1 if MEDICAID, OTHPUB, SCHIP, or OTHGOV=1
Uninsured	Private coverage = 0 & public coverage = 0	=1 if HICOV=2	=1 if NOTCOV==1

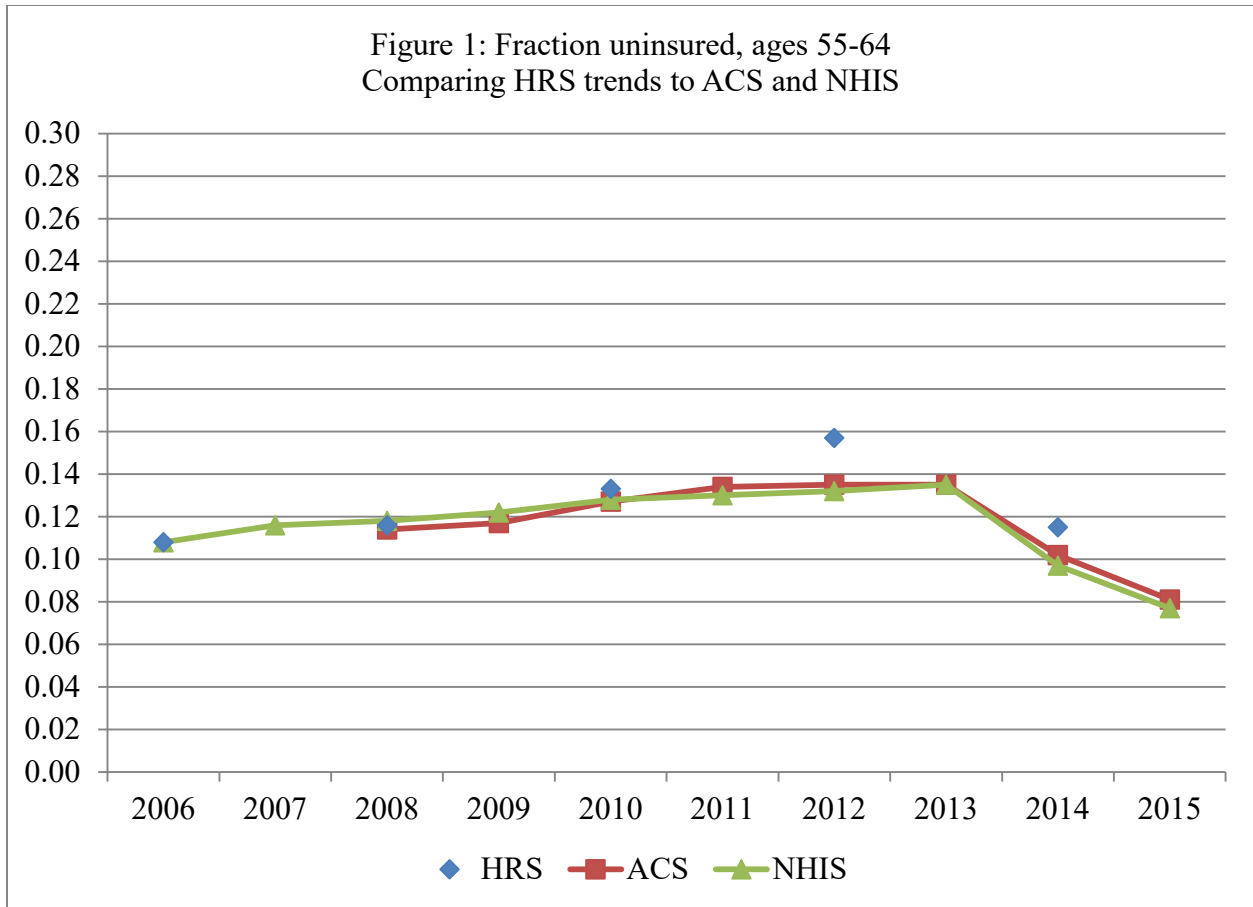
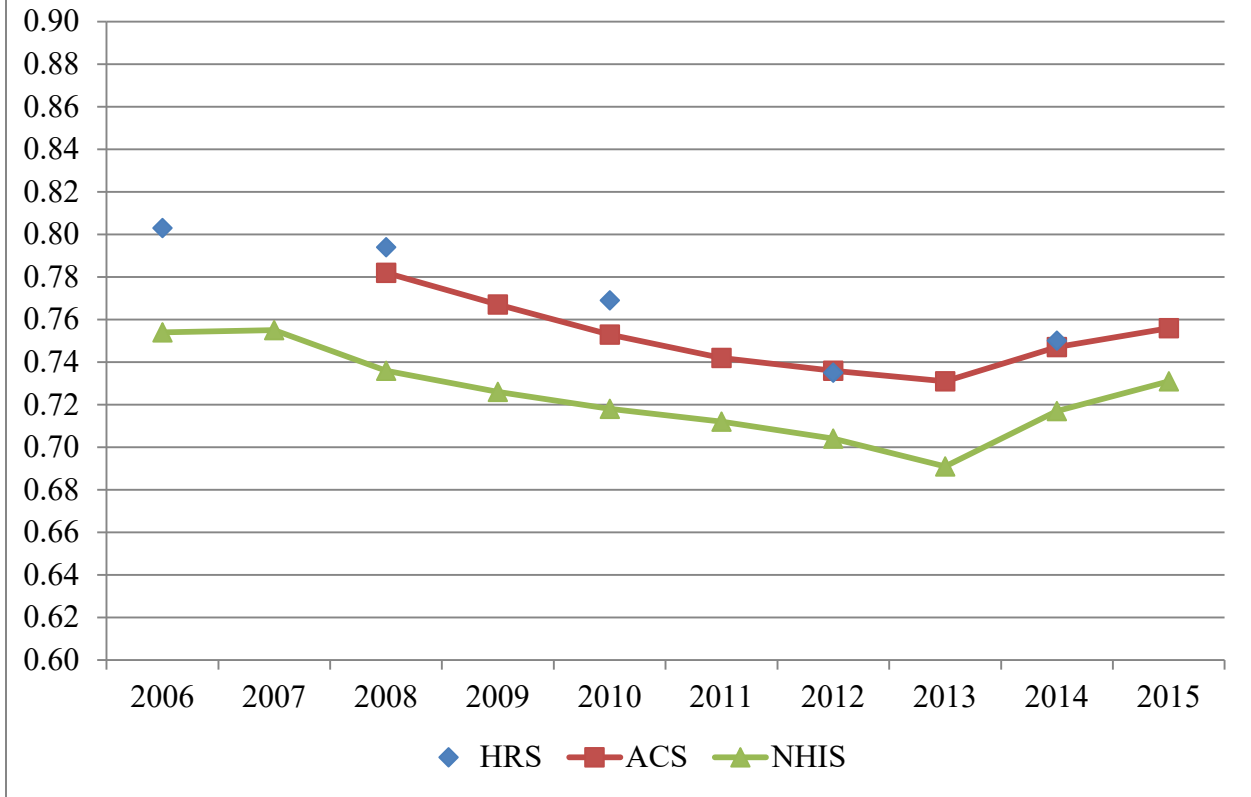
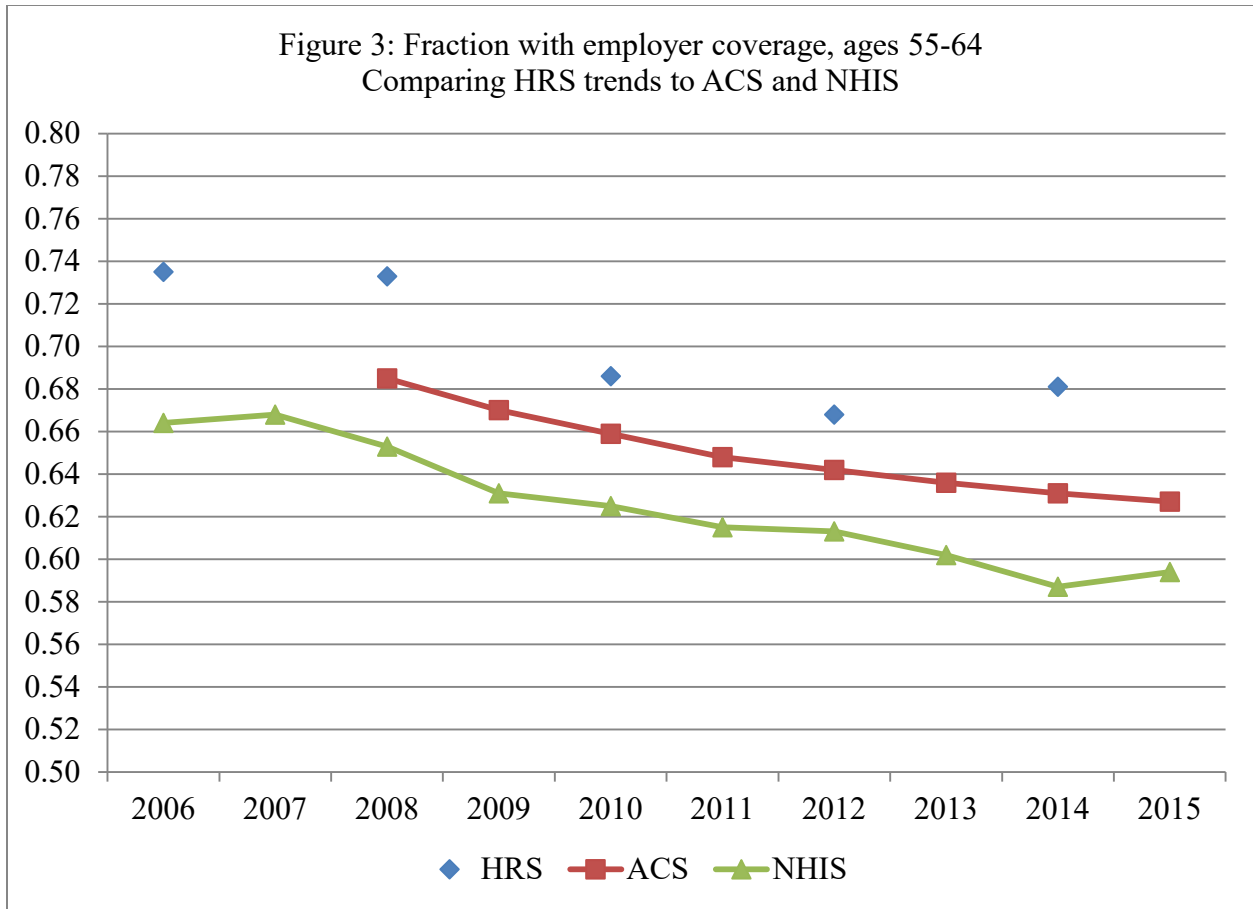


Figure 2: Fraction with private coverage, ages 55-64
Comparing HRS trends to ACS and NHIS





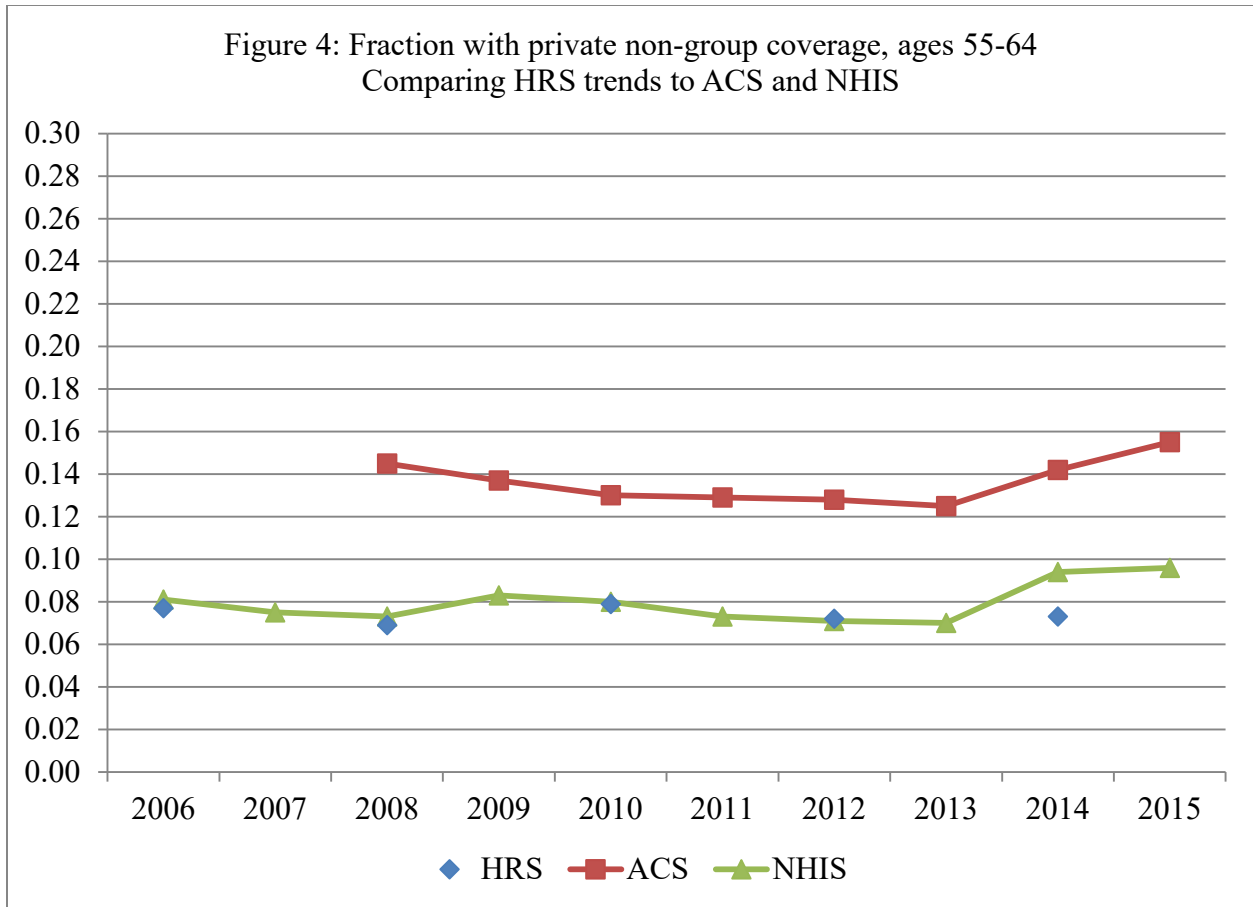


Figure 5: Fraction with public coverage, ages 55-64
Comparing HRS trends to ACS and NHIS

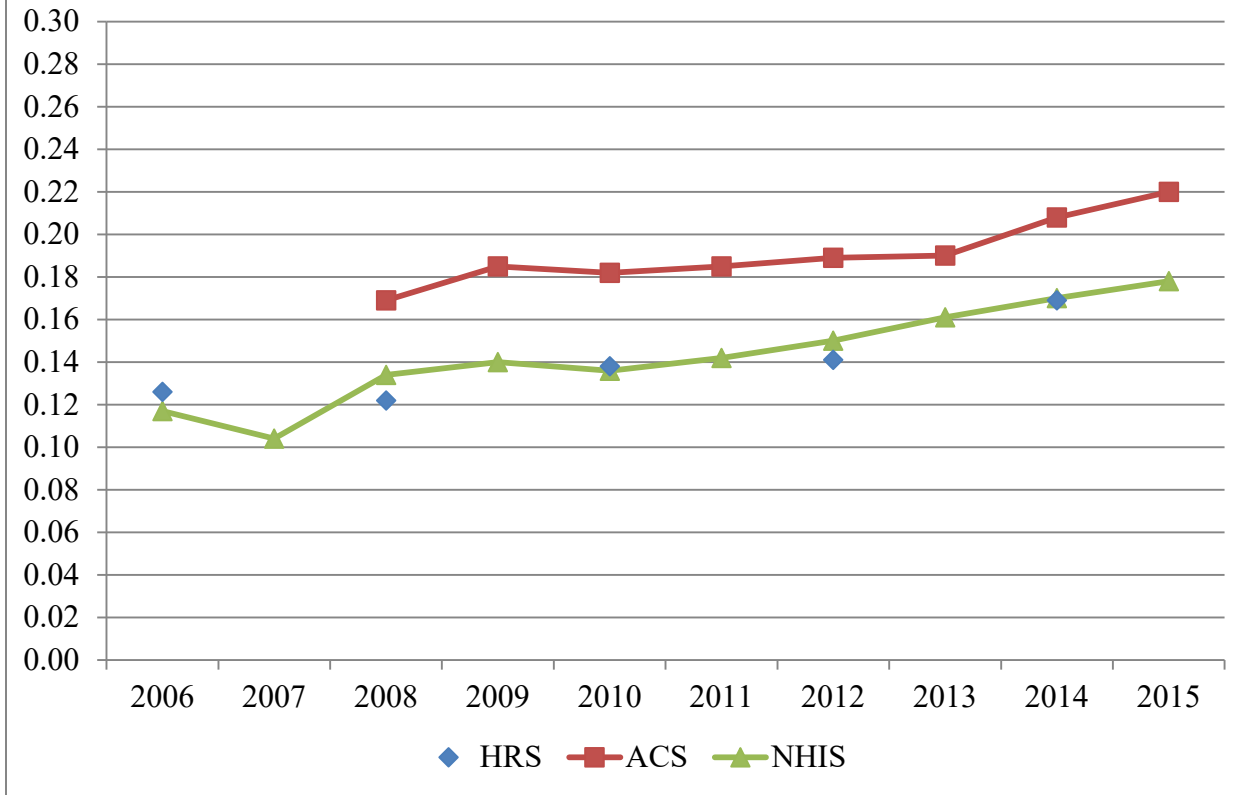
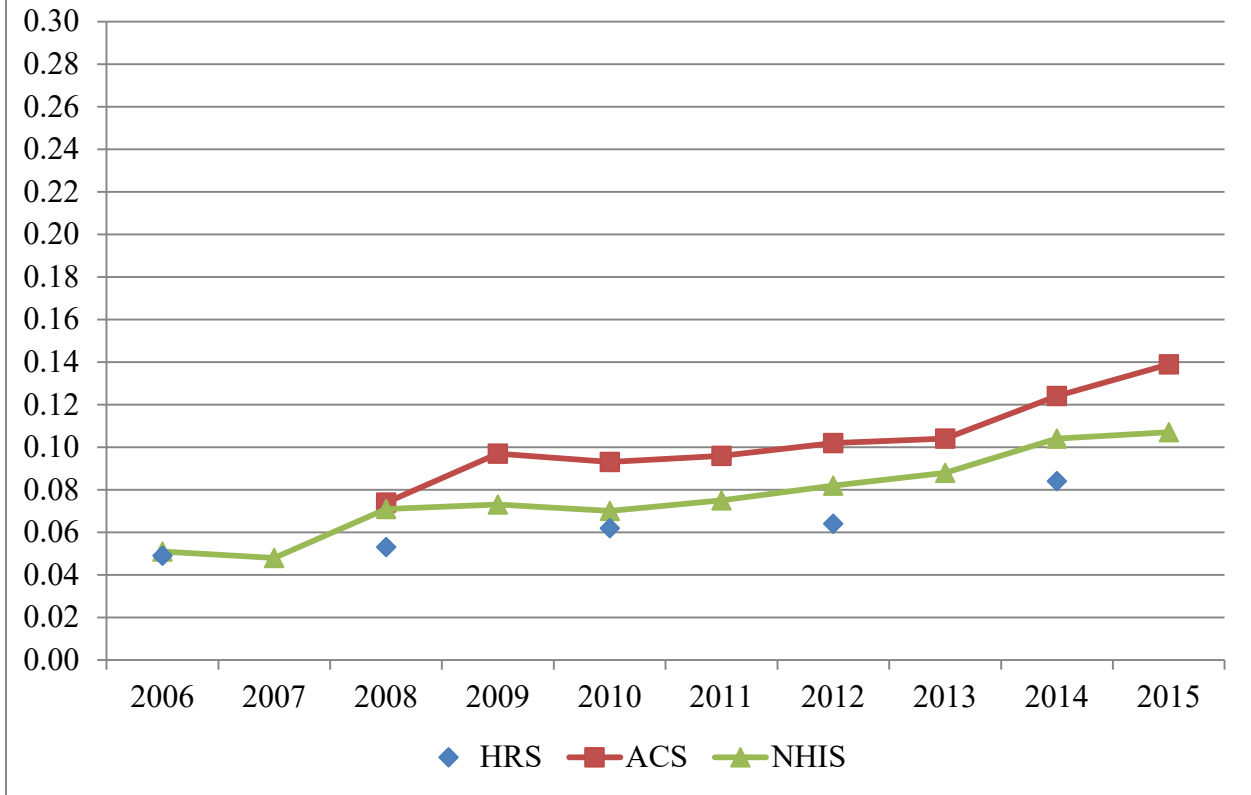
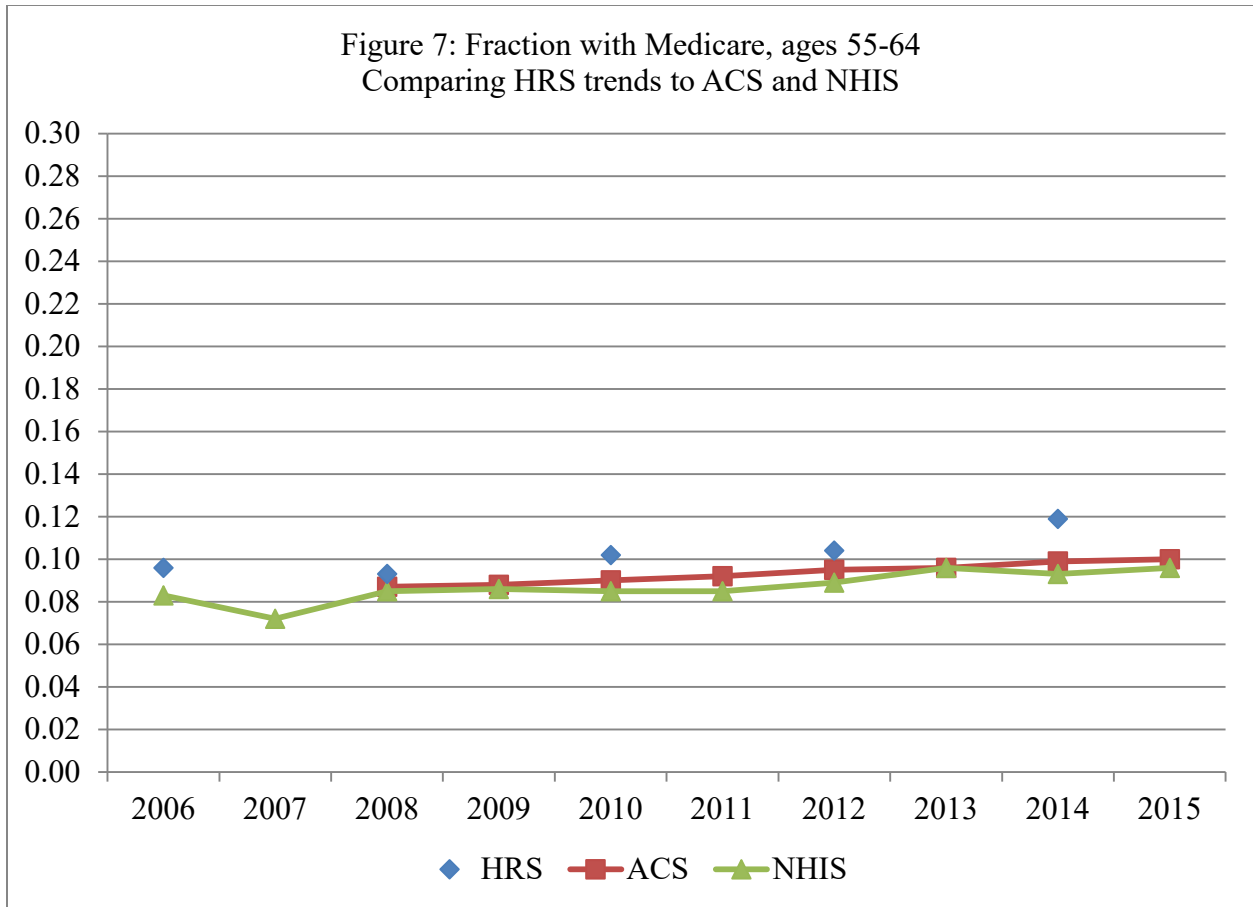


Figure 6: Fraction with Medicaid, ages 55-64
Comparing HRS trends to ACS and NHIS





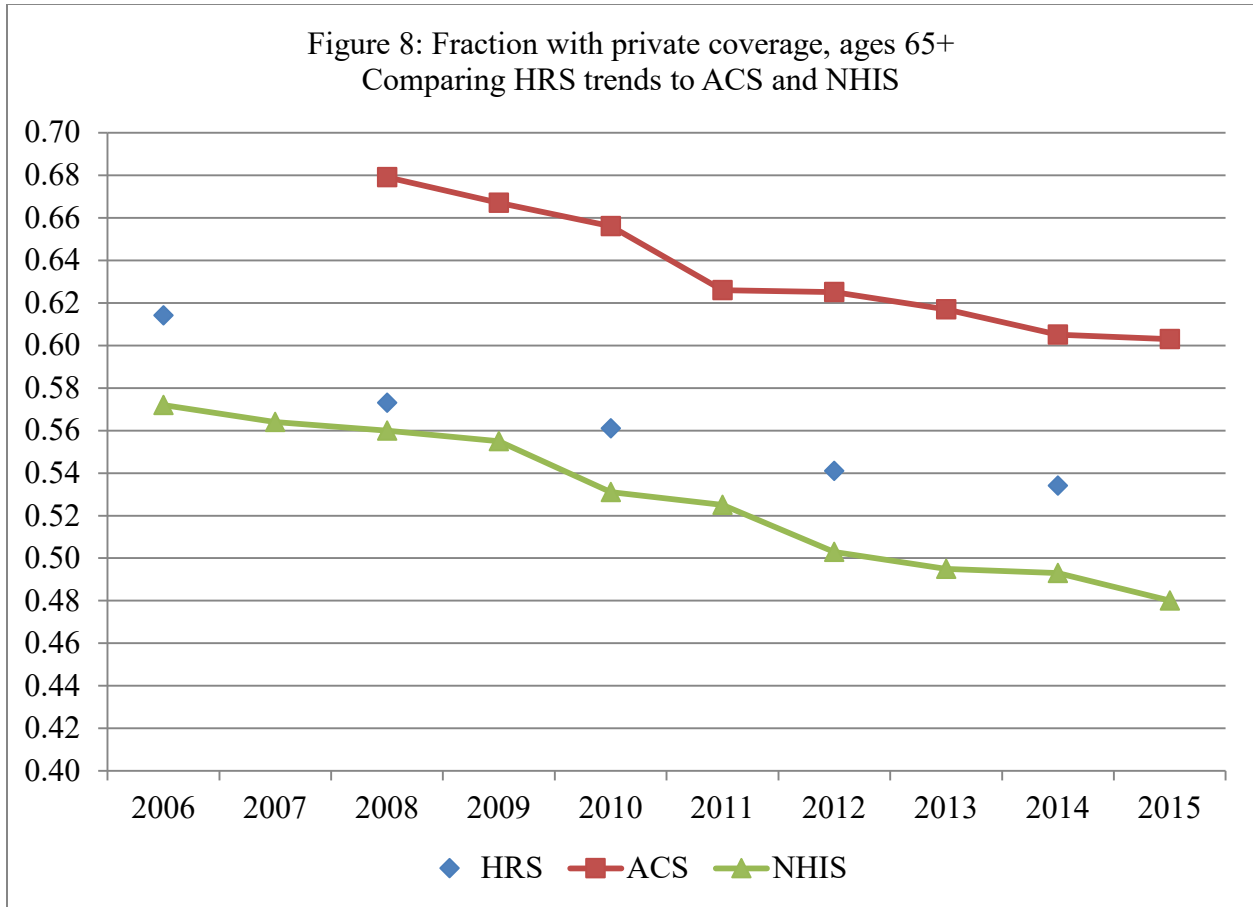
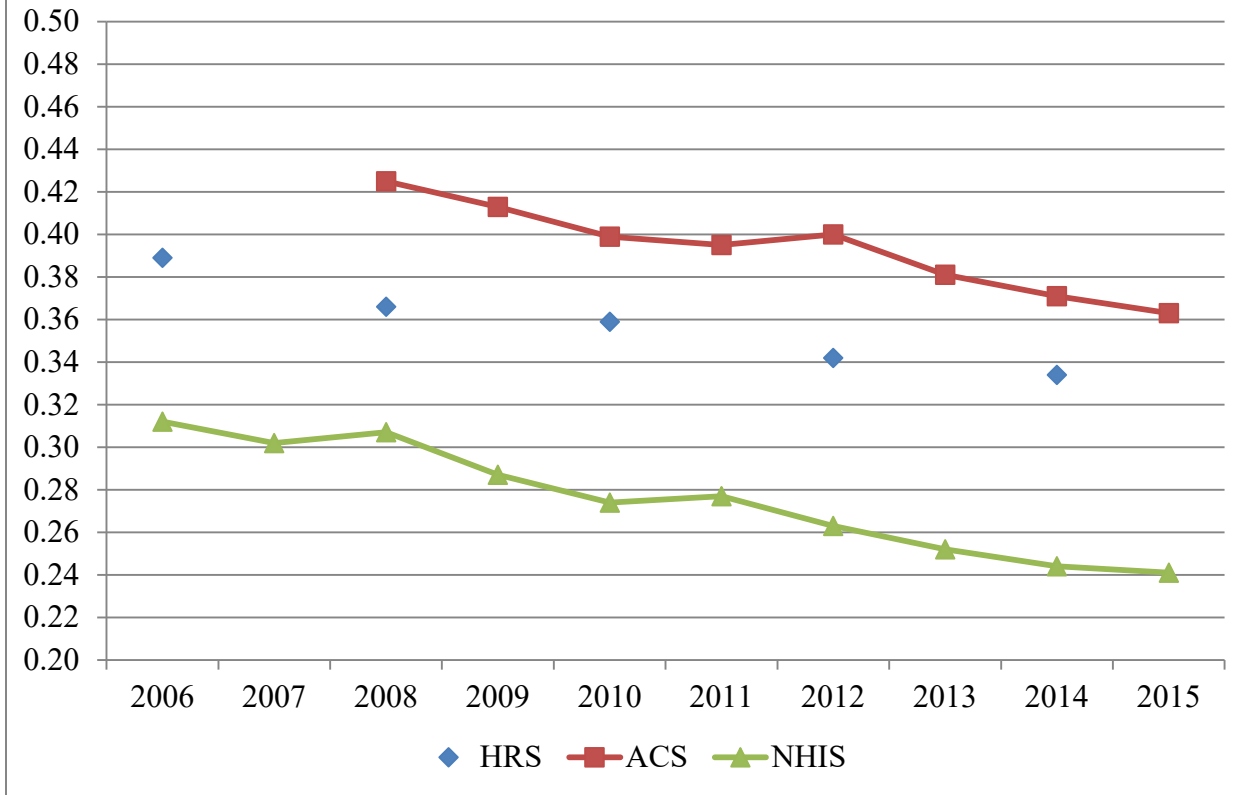


Figure 9: Fraction with employer coverage, ages 65+
Comparing HRS trends to ACS and NHIS



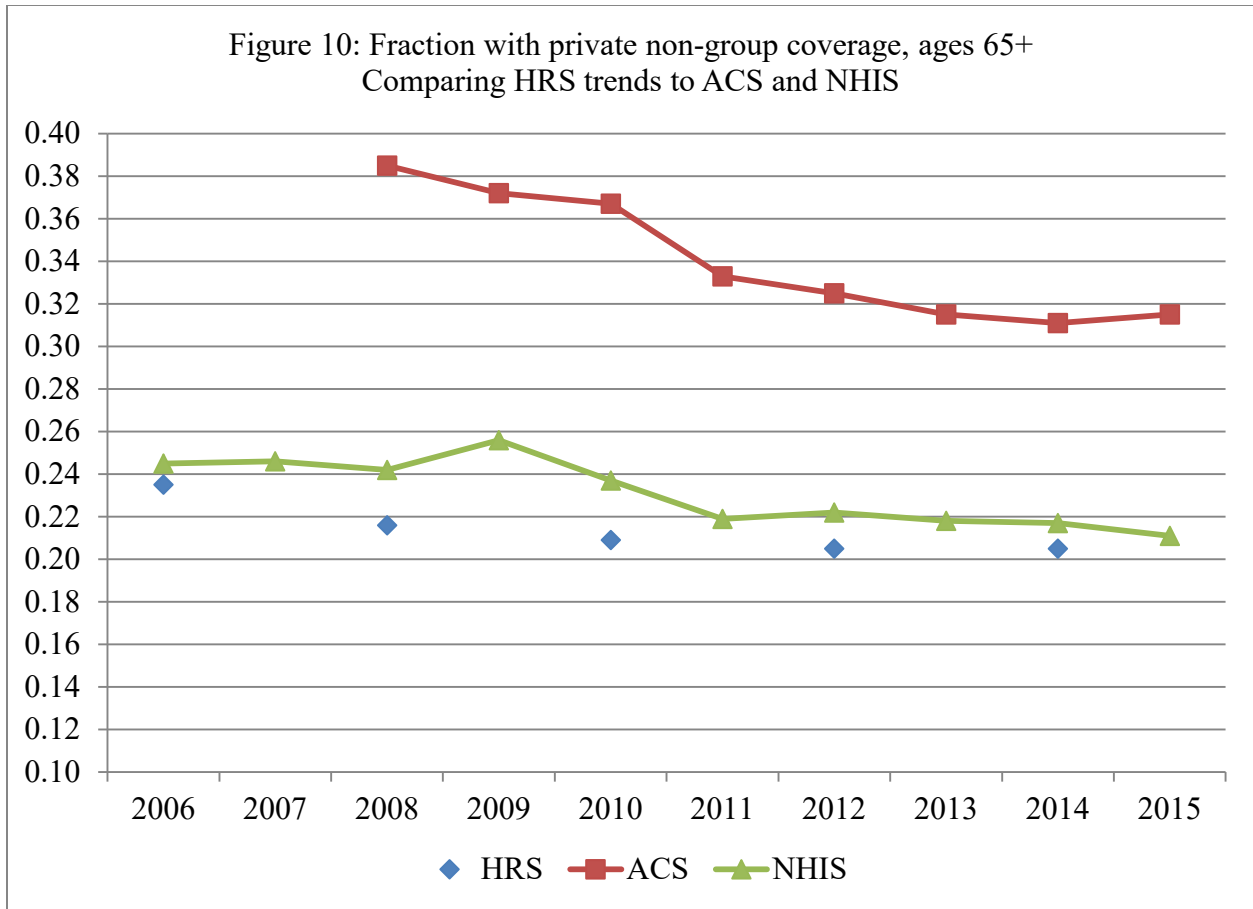


Figure 11: Fraction with Medicaid, ages 65+
Comparing HRS trends to ACS and NHIS

