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Working Paper #55

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## EXECUTIVE SUMMARY

### Introduction

Enrollment in high deductible health plans (HDHPs) has increased amid concerns about growing health care costs to patients, employers, and insurers, yet little is known about rural participation in these plans. Prior research indicates that privately insured rural individuals pay a higher proportion of their income for out-of-pocket health care costs compared to their urban counterparts, a difference related both to the lower income of rural residents and to the types of private plans through which they have coverage. While HDHPs may be attractive to rural enrollees due to their lower premiums, the income status of rural residents may limit their participation in savings accounts and make deductible and co-insurance costs burdensome. This study examines rural residents' enrollment in HDHPs and explores the implications of the findings for the Health Insurance Marketplaces.

### Methods

Using the 2007-2010 National Health Interview Survey (NHIS), this study examines HDHP enrollment by socio-demographic, economic, and health plan characteristics among rural and urban residents with private health insurance under age 65. These data are linked to the Rural-Urban Continuum Codes to examine residents living in urban areas, rural areas adjacent to urban areas, and rural areas not adjacent to urban areas.

### Findings

Though we find higher HDHP enrollment among rural residents than urban at the bivariate level, these differences cease to exist when controlling for socio-demographic and employment characteristics. Characteristics associated with rural residence—such as being White, not Hispanic, being married, and not currently working—are associated with a greater likelihood of enrollment in HDHPs plans. Rural-urban differences in HDHP enrollment may be driven by regional differences in health insurance markets, with large segments of the privately insured rural population living in areas where HDHPs are more common (e.g., Midwest and Western regions).

### Policy Implications

Enrollment in private HDHPs is likely to continue to grow given current market trends and the implementation of the tiered health plan options in the Health Insurance Marketplaces. Our findings suggest that rural enrollment in HDHPs may be proportionately greater than among urban residents especially in remote rural areas. The impact of greater enrollment in HDHPs among rural residents deserves careful monitoring in light of research suggesting that greater out-of-pocket costs associated with both premium payments and high deductibles tend to create barriers to appropriate use of health services, especially among lower income people. HDHP enrollees may be reluctant to incur costs, limiting needed service use, or may incur unaffordable costs given the high out-of-pocket maximum ($6,350 for individuals and $12,700 for families). It is important that consumer education, outreach, and enrollment strategies tied to the new insurance Marketplaces provide information about deductible and cost-sharing responsibilities for all plan types and the need to plan for annual out-of-pocket costs. In addition, ensuring that enrollees understand HDHP features such as the availability of first-dollar coverage of preventive care will be critical.

## INTRODUCTION

Employers and individuals have attempted to curb rapidly growing health insurance premiums by shifting to plans with higher consumer cost-sharing, including higher deductibles. High deductible health plans (HDHPs) are health insurance plans with lower premiums and higher consumer cost-sharing than traditional plans. By requiring consumers to fund a greater amount of their own care, these plans aim to reduce premium costs by promoting informed, cost-conscious decision-making about health care use. HDHPs typically offer catastrophic coverage once consumer copayments, coinsurance, and deductibles meet an established threshold.[1] To pay for health care expenses incurred before the deductible is met, HDHPs may be offered with a tax-advantaged health savings account – an arrangement commonly referred to as a consumer-directed health plan (CDHP).[2]

Enrollment in high-deductible plans has grown rapidly in recent years and this growth is expected to continue. During the first three months of 2012, 29.7% of persons under age 65 with private health insurance were enrolled in a HDHP, including 10.8% who were enrolled in a CDHP.[3] These figures represent a 47% increase in HDHP enrollment since 2007 and a nearly 140% increase in CDHP enrollment.[3]

While the effects of current market trends on HDHP enrollment in both the employer and individual markets seem clear, insurance provisions in the Patient Protection and Affordable Care Act of 2010 (ACA) and implementation of Health Insurance Marketplaces with tiered health plan options that include HDHPs may prompt additional growth in high-deductible plans. Provisions in the ACA that penalize employers and insurers for high-cost plans may encourage further use of HDHPs.[4,5] Additionally, the experience of Massachusetts' health reform initiative

suggests that individuals who purchase unsubsidized insurance are more likely to select lower premium cost plans with higher deductibles and co-insurance,[6] which may imply significant take-up among high-deductible and catastrophic plans available through the individual and small business marketplaces.

Prior research indicates that rural individuals are more likely than their urban counterparts to face high out-of-pocket health care costs relative to income, despite coverage through private health insurance.[7] This difference is related both to the lower income of rural residents generally and to the quality of the private plans through which they have coverage. In part, this is explained by the concentration of the rural workforce among small employers and self-employed individuals, with employees of small firms being more likely to have any deductible, and to have a higher deductible, than employees of large firms.[8] Moreover, Gabel and colleagues' analysis of the relative actuarial value of insurance plans shows that rural employers pay more for the same plan than their urban counterparts and that plans in rural areas are more likely to involve a higher deductible compared to plans in urban areas (69% compared to 43%).[8] Given these findings, we suspect that privately insured rural people are more likely to be covered by high deductible plans; however, the empirical evidence to support this assumption is limited.

The ACA has the potential to greatly expand health insurance coverage for many rural Americans. However, the impact on access to health care may depend, in part, on the benefit design of the plans into which rural residents enroll. Under the ACA's provisions, Affordable Insurance Marketplaces and Small Business Health Options Programs will offer tiered products, including HDHPs that vary by premium and consumer cost-sharing requirements. Despite a growing research literature examining the impact of HDHPs on access to care and consumer

costs, no known research has examined rural-urban variation in HDHP enrollment compared to other private plans and the socio-demographic, economic, and health plan characteristics associated with these coverage types. Compared to urban residents, rural residents have disproportionately lower-income, poorer health status, non-group policies, and are more likely to be employed by small firms or in low-wage jobs.[9] While HDHPs may be attractive to rural residents due to their lower premiums, the income status of rural workers may make deductible and co-insurance costs burdensome and are likely to limit their participation in savings accounts. This study examines rural residents' enrollment in HDHPs and explores the implications of the findings for the Health Insurance Marketplaces.

## BACKGROUND

### HDHP Characteristics

As of 2010, the National Health Interview Survey defined the HDHP annual deductible amount as $1,200 or more for individual coverage or $2,400 or more for family coverage, an amount adjusted annually for inflation.[10] HDHPs are most commonly available in the private sector, though efforts are underway to make HDHPs available to Medicare and Medicaid enrollees through demonstration programs.[11,12]

Consumer-directed health plans (CDHPs) are high-deductible plans accompanied by a savings mechanism, used by the consumer for health care expenses not covered by the plan. CDHPs may have either a health reimbursement arrangement (HRA) or health savings account (HSA). Initially offered by employers in 2001, HRAs were established and funded by employers for the use of employees in paying for health care, with the employer determining whether funds can be carried over plan years.[13] HRAs may also be offered with health maintenance organizations (HMOs) and preferred provider organizations (PPOs). Though there is no cap on

contributions, HRAs are not portable across jobs.[14] Initiated under the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, employees and employers are allowed to contribute to an HSA when the employee is enrolled in an HDHP.[13] Consumers may keep their HSAs if they change jobs or are no longer enrolled in an HDHP.[15] There are several tax advantages of health savings accounts including: tax deductible contributions to the account for either the employee or employer; funds deposited into the accounts are deducted from taxable income; and earnings on the funds accrue tax free and are not subject to taxes at withdrawal when the funds are used for medical costs. Additionally, after age 65, accrued balances can be withdrawn without penalty and used for expenses that are not health related.[2] As of 2010, annual contributions to HSAs are capped at $3,050 for individuals and $6,150 for families. In 2010, employers were more likely to offer an HSA than a HRA, 10% compared to 2%.[13]

Despite growing CDHP participation, nearly 40% of those eligible to enroll in an HSA in 2010 did not open an account. Reasons for not opening an account included lack of information, could not afford, did not need an HSA, and tax savings were not attractive.[15,16] Additionally, over one-third of surveyed employers did not contribute to HSAs on behalf of their employees.[15] The individual portability of HSAs may make them somewhat unattractive to employers.[17]

### Enrollment Variation by Employer Characteristics

Across all firm sizes, the percent of employers offering HDHPs has been a small but increasing in recent years. Among all firms with three or more workers, 4% of employees were enrolled in a CDHP in 2006, growing to 13% in 2010. Among firms with 1,000 or more workers, 10% offered a CDHP in 2006 compared to 28% in 2010.[13] HDHP subscribers were more likely to have no plan choice compared to those enrolled in traditional plans.[18] HDHPs are more prevalent among small firms and among the self-employed, common characteristics of

rural employment. Among covered workers in smaller firms (3-199 workers), 16% are enrolled in a HDHP with a savings option compared to 12% of covered workers in large firms (200 or more workers). When considering covered workers with an annual single deductible of $1,000 or more, 46% of small firm workers have high-deductible coverage compared to 17% of large firm workers.[13] Additionally, over 50% of the self-insured were enrolled in a HDHP,[19] implying significant coverage of the self-employed or not employed through high-deductible plans. The average premium for an HDHP in the non-group market was almost twice that of an employer-based/offered plan.[20]

### Variation by Income and Health Status

Past research has suggested that low-income persons are more likely to be enrolled in a HDHP than higher-income persons,[17,21] with higher-income persons more likely to have an HSA[15] and to receive employer contributions to their saving accounts.[22] However, relatively recent work has found no income differences in CDHP enrollment[16] or the presence of a savings account for health care expenses.[22] CDHP and HDHP enrollees were found to be more highly educated than traditional plan enrollees.[16]

HDHPs generally involve a trade-off lower premiums and higher out-of-pocket costs. Despite their lower premiums, HDHPs may be unaffordable for low-income persons who are also unlikely to benefit from tax advantaged HSAs. The tax subsidy may not generate benefits for individuals who cannot afford to adequately fund an HSA account.[2,20] While premiums in 2005 for HSA-qualified health plans were about 30% lower than other group plans, the average deductible associated with these plans was six times higher than that of a PPO, the most common plan type.[20] Premium cost-sharing, common among smaller employers, add to these higher deductible and co-insurance costs associated with HDHPs for lower income workers.

### Impact of HDHPs on Access and Cost

A growing body of literature suggests that enrollees in HDHPs may face greater health access problems that reduce their use of health services. Among adult HDHP enrollees, 17% reported an unmet need for medical care or prescription drugs as a result of cost, compared to 10% of adults enrolled in a traditional health plan.[23] Focus group participants enrolled in a New England-based HDHP reported delaying or avoiding visits as a way to control costs.[24] Enrollees in a CDHP were more likely than those with other private coverage to forgo care when they thought they needed it or to take a lower dose of a prescription drug than recommended compared to those in a lower deductible CDHP or a traditional PPO.[25] Compared to those enrolled in other private health plans, HDHP enrollees were less likely to report receipt of common preventive services and were more likely to have foregone a prescription and to report that they had health problems as result of avoiding a physician visit due to cost.[26] Among employees in a large manufacturing firm, enrollees in HDHPs with a savings option were more likely to discontinue highly effective antihypertensive and lipid lowering drugs, suggesting that HDHP enrollees may not distinguish between necessary and unnecessary care.[27]

## METHODS

This study examines rural-urban differences in HDHP enrollment among those who are privately insured. We address the following questions: 1) Are privately insured rural versus urban residents more likely to be covered by HDHPs?; 2) What socio-demographic and regional characteristics are associated with enrollment in HDHPs compared to other private plans?; and 3) How do coverage features differ between rural and urban HDHP enrollees (e.g., how coverage was obtained, prescription drug coverage, premium costs)?

## Data

This study uses data from the 2007-10 National Health Interview Survey (NHIS) and the 2009-10 Area Resource File (ARF). The NHIS is designed to monitor the health of the U.S. population on a broad range of health topics including trends in illness and disability, barriers to care, health status, health related behaviors, and risk factors as well as socio-economic and demographic information.[28] Beginning in 2007, NHIS respondents were asked about their participation in high-deductible plans and use of associated savings accounts.[*] Data were collected for approximately 75,000 respondents in 2007 and 2008 and 89,000 respondents in 2009 and 2010. We use the NHIS Person file and exclude respondents aged 65 and older because they are covered by Medicare. Data on certain employer characteristics (e.g., firm size, ownership, and wages) are available only in the Sample Adult File; thus, to identify whether there are rural-urban differences in the employment characteristics associated with HDHP enrollment, we use this file and limit this sub-analysis to adults age 18-64.

The ARF is a national source of county-level health data collected by the federal Health Resources and Services Administration that contains geographic identifiers, including the Rural-Urban Continuum Codes (RUCC). Because the public use NHIS datasets do not contain a rural-urban indicator, we followed the process of the National Center for Health Statistics Research Data Center (RDC) to link the NHIS to select variables from the ARF. Since previous studies have shown that rural sources of coverage vary by population density and proximity to urban areas,[9,29] we compare urban counties to rural counties that border an urban county (adjacent) or that are more remote (not adjacent), based on the RUCC.

[*] High-deductible plans may or may not be associated with a health savings account; those plans with a savings account are known as consumer-directed health plans.

## Analysis

Examining whether privately insured rural residents are more likely than those in urban areas to have high-deductible coverage, we use HDHP enrollment as our dependent variable. Based on the IRS definition, the 2010 NHIS identified an HDHP as one where the annual deductible is $1,200 or more for individual coverage or $2,400 or more for family coverage, an amount adjusted annually for inflation. It should be noted that this is a conservative definition of "high deductible" and anecdotal evidence suggests a growing segment of individuals purchase coverage with deductibles ranging from $5,000 to $10,000. The extent to which more rural residents fall into this latter group cannot be ascertained from the current data.

Using a combination of bivariate and multivariate techniques, we compare rural and urban enrollment in HDHPs and other private plans. Our bivariate analyses examine differences by socio-demographic, economic, and health plan characteristics across rural and urban participants. For rural-urban comparisons of HDHP enrollment, we estimate a logistic regression model to assess whether enrollment in an HDHP is greater in rural areas controlling for other factors. These control variables include age, gender, race and ethnicity, health status, chronic condition limitation, region of residence, marital status, employment status, and family income.

Because the NHIS employs a complex sampling strategy, weights are assigned to each record based on the probability of selection and adjusted for key sociodemographic characteristics. All statistical tests are calculated using SUDAAN version 10 (Research Triangle Institute, Research Triangle Park, NC) because of its ability to account for sample design parameters and to yield valid standard errors for the weighted data.[30] Frequency differences are evaluated with Cochran-Mantel-Haenszel chi-square tests; unless stated otherwise, reported differences are statistically significant at the .05 level or less.

## FINDINGS

### Rural-Urban Differences in HDHP Enrollment

Among all individuals under age 65 with private insurance during 2007-2010, 26% of those living in a rural, not adjacent county have an HDHP, compared to 21% of those living in a rural adjacent county and 20% in an urban county (Table 1). Regardless of residence, CDHPs[†] are less common than HDHPs without a savings option; however, rural, not adjacent residents are slightly more likely to enroll in CDHPs than urban residents. Among individuals with private insurance, 7% of those living in a rural, not adjacent area have a CDHP, compared to 5% in rural adjacent areas, and 6% in urban areas (data not shown).

Higher rates of rural HDHP enrollment among the privately insured persist across nearly all the sociodemographic groups examined (Table 1). For example, while HDHP enrollment rates increase with higher educational status, within each educational level, those in rural areas are more likely to have an HDHP (e.g., 29% for rural, not adjacent adults with a college degree versus 21% in urban). Similarly, white, non-Hispanic individuals are more likely to have HDHP coverage; however, rural rates of HDHP enrollment are higher for each racial and ethnic category analyzed. The primary exception to this is region of residence, where variation in HDHP enrollment is pronounced. Rural HDHP enrollment is higher than urban in three out of four regions. In the South, however, the urban coverage rate is actually higher than for rural (21% versus 19% for both rural adjacent and not adjacent). HDHP enrollment rates for rural individuals are highest in the West (29%); for urban individuals they are highest in the Midwest (25%).

[†] Consumer-directed health plans (CDHPs) are high-deductible plans accompanied by a savings mechanism, used by the consumer for health care expenses not covered by the plan.

Among all those with a HDHP, over half of rural enrollees have graduated high school or its equivalency, while over half of urban enrollees are college graduates (data not shown). Similarly, about 50% of rural HDHP enrollees have income below 400% of the federal poverty level (FPL), while 56% of urban enrollees have income at or above 400% (data not shown).

### Rural and Urban HDHP Enrollment by Employment Characteristics

To better understand the employment characteristics associated with rural and urban HDHP enrollment, we conducted sub-analyses for adults under age 65 and, again, found that rural rates of HDHP coverage are generally higher than urban regardless of employment characteristic (Table 2). While HDHP coverage is generally higher among small business employees (fewer than 25 workers), the rate is 29% for rural workers in small firms compared to 26% for urban. Additionally, among those workers paid an hourly wage, the rate of HDHP enrollment among rural, not adjacent residents is 23% compared to 19% of urban residents. Although HDHP coverage is generally lower among those who work for county, state, or federal governments, 20% of rural, not adjacent public workers have an HDHP, compared to 13% of urban public workers. Private firm employees are also more likely to have a HDHP when they live in rural, not adjacent areas than private firm employees in urban areas. Roughly one-third of workers with self-employment income have HDHP coverage, and this is somewhat higher in rural areas.

### Health Plan Characteristics by Plan Type and Residence

Rural, not adjacent residents with an HDHP are less likely than rural adjacent and urban residents to have prescription drug coverage (80% compared to 87% and 88% respectively; Table 3). Rural, not adjacent residents are more likely to have obtained their HDHP coverage through non-group sources versus an employer (28%) compared to rural adjacent (23%) and

urban residents (20%). Only 7% of rural individuals with non-HDHP private coverage get it from a non-group source and this did not differ significantly from those in urban areas. Among individuals with HDHPs, there are no rural-urban differences in annual premiums or family medical costs. However, persons with high-deductible coverage pay more in out-of-pocket premium costs and in family spending for medical care than persons with some other private coverage, regardless of residence. Rural residents with HDHPs are less likely to have an associated HSA than urban residents (26% vs. 30%).

### Factors Associated with HDHP Enrollment

To assess the contribution of selected socio-demographic and employment factors, we estimated a logistic regression model with HDHP enrollment as a dichotomous outcome variable and include age, race and ethnicity, health status, marital status, employment status, family income and region as covariates (Table 4). Though we found rural-urban differences in HDHP enrollment at the bivariate level, these differences disappeared when controlling for the characteristics described above. Characteristics associated with rural residence also appear to be associated with a greater likelihood of enrollment in HDHPs. For example, the odds of HDHP enrollment are higher among individuals who are White, not Hispanic, are married, and are not currently working—characteristics that are each also more common in rural areas (data not shown). In addition, our multivariate analyses confirm that there is significant variation in HDHP enrollment by region, with the odds of having an HDHP being 79% higher in the South, and about double in the West and Midwest, when compared to the Northeast. Among the privately-insured generally, a larger percentage of rural residents live in the South and Midwest compared to the Northeast and West (data not shown). Thus, the bivariate rural-urban differences in HDHP enrollment may be driven by regional differences in health insurance

markets, with large segments of the privately insured rural population living in areas where HDHPs are more common.

## LIMITATIONS

The NHIS does not reveal actual deductible amounts respondents face in their HDHPs and it sets the threshold for defining a HDHP relatively low compared with current plans offered in most health insurance markets. As a result, we are limited in our ability to assess the true impact of higher out-of-pocket costs associated with HDHPs on rural residents. Thus, our study may understate the extent of the cost-sharing burden on rural residents and the degree to which this differs from urban residents. Additionally, because we do not have access to information on the availability of plans in different markets, we cannot assess whether rural enrollment in HDHPs is associated with limited plan choice or other factors.

## SUMMARY & POLICY IMPLICATIONS

Growth in privately purchased high-deductible plans is likely given the continuing rise in health insurance costs and current market and policy trends.[4,5] This growth may occur disproportionately in rural areas overall and remote rural areas in particular. Compared to urban residents, rural residents face disparities in health status and outcomes,[29,31-33] yet obtain fewer health visits and preventive services than urban residents[34,35] and are more likely to defer needed services due to cost.[36] Enrolled in a HDHP with higher out-of-pocket costs and annually renewing deductibles, rural residents may face additional financial barriers to appropriate health use of health services.

Although premium affordability and the presence of HSAs are driving enrollment growth in HDHPs over traditional plans,[16] the cost experience and impact for workers in small firms or the self-employed who make up a large part of the rural workforce is not clear.[37] Among firms

with 10 or fewer workers, 73% of employees were offered an HDHP only[38] and this lack of choice is likely to affect rural workers, given the prevalence of small firms in the rural economy.

Regardless of residence, individuals with high-deductible coverage pay higher amounts in out-of-pocket premium costs and in family spending for medical care than those with other types of private coverage. While the premium finding is counterintuitive given that HDHPs usually have lower absolute premiums than more comprehensive plans, this likely reflects greater cost-sharing borne by the enrollee versus an employer (either because individuals purchase coverage directly or employer contributions are less generous).

Among those covered by an HDHP, rural residents are more likely to have lower incomes and education than urban residents. Subsidized coverage for individuals with income up to 400% of the poverty level through the Marketplace may increase the affordability of coverage for rural residents. Subsidy amounts will be based on income and costs of the mid-level "Silver" plan, a scale thought to reduce cost-sharing while increasing actuarial value.[39]

Rural residents enrolled in an HDHP are less likely to have prescription drug coverage than their urban counterparts. The impact of going without coverage of prescription costs for rural residents is largely unknown. Given that higher prescription costs and copayments reduce medication adherence for those with chronic disease,[40,41] rural residents may face costlier and poorer outcomes under an HDHP when prescriptions are not covered. The inclusion of prescription drugs as part of the essential health benefits for non-grandfathered health insurance coverage is especially important for rural residents, who may be high users of plans available through the Health Insurance Marketplaces.

Among public sector employers, we find much higher rates of HDHP enrollment for rural versus urban employees. This finding is of particular interest given that public employers tend to

offer health insurance plan choices that are more comprehensive than those offered by private employers. At the state and federal levels, individuals living in rural and urban areas would presumably have the same basic plan options (although perhaps not the same number of carriers). This suggests that rural public workers may be more likely to select HDHP coverage from the options available to them than urban public workers. At the local level, rural county and municipal governments may lack the resources may to offer their employees plans with lower deductibles.

Despite the tax and planning advantages of HSAs, funding these accounts may be more difficult for rural residents given their overall lower income. If a family contributed $2,100 to a health savings account (the required minimum family deductible in 2006), the combined premium and savings amounts would consume 15% of household expenditures when annual family income was approximately $25,000.[20] Additionally, the tax subsidy may be negligible for individuals who can afford to put little into the account[2,20] and small employers may not have the financial resources to contribute to health savings accounts for their employees.

Though HDHPs are somewhat more common among rural residents, significant differences between HDHP and other privately insured individuals in both rural and urban areas suggest the importance of monitoring HDHP enrollment, plan affordability, and cost barriers to health care access as these are likely to change with enrollment and experience with plans available through the Health Insurance Marketplaces and Small Business Health Options Program Marketplaces. Among those covered by an HDHP, rural residents are more likely to have lower incomes and to have more limited educational attainment than urban residents. Given these differences, plan outreach and education should include information about deductible and cost-sharing responsibilities for all plans and ensure that enrollees understand

HDHP features such as first-dollar coverage of preventive care and the need to plan for annual out-of-pocket costs and potential use of savings accounts. Promoting informed use of high-deductible and other health plans should be a high priority, especially among vulnerable populations such as those purchasing coverage for the first time. Given the transparency of health care costs to consumers with high deductible plans, these plans may promote more informed and cost-conscious use of health services. However, it will be important to monitor knowledge of HDHP features, and use of health care services, among rural enrollees to ensure that they do not experience excessive cost burden or access barriers.

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## TABLES

**Table 1. Percent of Privately Insured Enrolled in a High Deductible Health Plan by Rural and Urban Residence and Sample Characteristics**

| Sample Characteristics<br>Total (n) | Rural, Not Adjacent<br>25.8% (n=1,700) [a] | Rural Adjacent<br>21.4% (n=2,570) [a] | Rural Total<br>22.9% (n=4,270) [a] | Urban Total<br>20.3% (n=23,325) [a] |
|---|---|---|---|---|
| Age | | | | |
| 0-17 | 27.3 [a,b] | 21.6 [a,b] | 23.6 [a,b] | 21.3 [a,b] |
| 18-34 | 24.2 | 19.0 | 20.8 | 18.7 |
| 35-49 | 23.7 | 23.8 | 23.8 | 20.5 |
| 50-64 | 27.4 | 20.5 | 22.8 | 20.7 |
| Sex | | | | |
| Male | 25.2 | 21.3 | 22.6 | 20.6 [b] |
| Female | 26.4 | 21.5 | 23.1 | 20.1 |
| Race/Ethnicity | | | | |
| White, not Hispanic | 27.2 [a,b] | 22.0 [a,b] | 23.8 [a,b] | 21.7 [a,b] |
| Not White, not Hispanic | 14.5 | 18.5 | 17.5 | 17.0 |
| Any race, Hispanic | 16.4 | 14.3 | 15.1 | 16.0 |
| Health Status | | | | |
| Excellent or very good | 26.5 [a] | 21.7 [a] | 23.3 [a] | 20.5 [a,b] |
| Good | 23.7 | 20.2 | 21.3 | 19.5 |
| Fair or poor | 23.9 | 22.1 | 22.7 | 21.3 |
| Activity Limited by Chronic Condition | 26.5 | 23.1 | 24.2 | 23.3 [b] |
| Region | | | | |
| Northeast | 10.9 [a,b] | 18.0 [a,b] | 17.3 [a,b] | 12.7 [a,b] |
| Midwest | 29.7 | 25.2 | 27.4 | 24.5 |
| South | 18.7 | 19.0 | 18.9 | 21.3 |
| West | 30.6 | 27.8 | 29.0 | 21.3 |
| Marital Status | | | | |
| Married | 25.8 [a] | 21.6 [a] | 23.0 [a] | 20.5 [a,b] |
| Not married | 23.6 | 21.2 | 22.0 | 19.7 |
| Education | | | | |
| Less than high school | 17.5 [a,b] | 16.7 [a,b] | 16.9 [a,b] | 14.9 [a,b] |
| High school or GED | 23.9 | 20.8 | 21.8 | 19.3 |
| College or more | 28.5 | 23.0 | 24.9 | 21.1 |
| Family income as a percent of poverty | | | | |
| <150% FPL | 24.3 [a] | 19.5 [a] | 21.1 [a] | 17.5 [a,b] |
| 150-399% FPL | 26.5 | 21.4 | 23.1 | 20.5 |
| ≥400% FPL | 25.2 | 21.9 | 23.0 | 20.5 |

Note: Marital status, employment and education are reported for adults only. Statistics are weighted to population level using NHIS weights. Sample size is unweighted.
a. Within plan type, residence differences significant at $p \leq .05$.
b. Within residence category, differences between HDHP and other private plan significant at $p \leq .05$.

**Table 2. Percent Of Privately Insured Adults Ages 18-65 Enrolled in a High Deductible Health Plan by Rural And Urban Residence and Employment Characteristics**

| Sample Characteristics | Rural, Not Adjacent | Rural Adjacent | Rural Total | Urban Total |
|---|---|---|---|---|
| **Total (n)** | **25.1 [a] (n=1,235)** | **21.1 [a] (n=1,932)** | **22.4 [a] (n=3,167)** | **19.9 [a] (n=16,928)** |
| Employment status | | | | |
| Employed | 24.6 | 21.0 | 22.2 | 19.5 [b] |
| Not employed | 28.4 | 22.2 | 24.1 | 22.3 |
| Number of full-time workers in family | | | | |
| 2 FT workers | 23.8 [a] | 20.4 [a,b] | 21.5 [a.b] | 18.6 [a,b] |
| 1 FT worker | 27.6 | 21.6 | 23.6 | 21.7 |
| No FT workers | 29.9 | 28.7 | 29.1 | 22.2 |
| Receives income from self-employment | | | | |
| Yes | 36.0 [a,b] | 34.3 [a,b] | 35.0 [a,b] | 32.0 [a,b] |
| No | 23.2 | 19.5 | 20.7 | 18.8 |
| Employer size | | | | |
| <25 employees | 29.9 [a,b] | 27.5 [a,b] | 28.5 [a,b] | 26.1 [a,b] |
| >25 employees | 21.9 | 18.8 | 19.8 | 18.2 |
| Paid an hourly wage | | | | |
| Yes | 22.9 [a,b] | 19.2 [a,b] | 20.4 [a,b] | 18.8 [a,b] |
| No | 28.8 | 25.5 | 26.6 | 22.6 |
| Type of employer | | | | |
| Private employer | 25.6 [a,b] | 21.6 [a,b] | 22.9 [a,b] | 21.0 [a,b] |
| Government (Federal, State, or Local) | 19.9 | 15.3 | 17.0 | 13.4 |
| Self employed | 37.2 | 39.5 | 38.6 | 35.9 |

Note: Statistics are weighted to population level using NHIS weights. Sample size is unweighted. Employment status, full-time workers in a family, and income from self-employment were asked of persons age 18 and older only. Employer size, paid an hourly wage, and type of employer were asked of persons age 18 and older about their current or most recent job for those adults selected for the Sample Adult file, which questions a randomly identified adult from each family for additional occupational and employment questions.

a. Within plan type, residence differences significant at $p \leq .05$.
b. Within residence category, differences between HDHP and other private plan significant at $p \leq .05$.

**Table 3. Percent of Rural and Urban Residents by Type of Private Health Plan and Plan Characteristics**

| Health Plan Characteristics | Rural, Not Adjacent | | Rural Adjacent | | Rural Total | | Urban Total | |
|---|---|---|---|---|---|---|---|---|
| | HDHP | Other Private Plan | HDHP | Other Private Plan | HDHP | Other Private Plan | HDHP | Other Private Plan |
| **Total (n)** | **25.8 [a] (n=1,700)** | **74.2 [a] (n=4,840)** | **21.4 [a] (n=2,570)** | **78.6 [a] (n=9,830)** | **22.9 [a] (n=4,270)** | **77.1 [a] (n=14,670)** | **20.3 [a] (n=23,325)** | **79.7 [a] (n=95,479)** |
| Prescription drug coverage | 80.2 [a,b] | 92.6 [b] | 86.9 [a,b] | 92.8 [b] | 84.4 [a,b] | 92.8 [b] | 88.1 [a,b] | 92.3 [b] |
| Out-of-pocket premium costs | | | | | | | | |
| $0-1,199 | 28.3 [b] | 38.9 [a,b] | 28.0 [b] | 37.8 [a,b] | 28.1 [b] | 38.1 [a,b] | 28.1 [b] | 41.9 [a,b] |
| $1,200-3,599 | 31.3 | 35.4 | 32.6 | 36.8 | 32.1 | 36.3 | 31.6 | 32.6 |
| $3,600-7,199 | 28.7 | 19.2 | 28.0 | 19.2 | 28.3 | 19.2 | 26.6 | 18.5 |
| $7,200 or more | 11.6 | 6.5 | 11.4 | 6.2 | 11.5 | 6.3 | 13.7 | 7.0 |
| Amount family spent for medical care | | | | | | | | |
| Less than $500 | 16.1 [b] | 30.8 [a, b] | 20.5 [b] | 33.9 [a,b] | 18.8 [b] | 32.9 [a,b] | 19.8 [b] | 37.3 [a,b] |
| $500 - $1,999 | 36.9 | 43.5 | 35.1 | 42.5 | 35.8 | 42.8 | 34.3 | 39.4 |
| $2,000 - $2,999 | 15.2 | 12.9 | 18.4 | 11.6 | 17.2 | 12.0 | 15.8 | 11.2 |
| $3,000 - $4,999 | 17.6 | 6.6 | 12.9 | 6.9 | 14.6 | 6.8 | 14.9 | 6.9 |
| $5,000 or more | 14.3 | 6.3 | 13.1 | 5.1 | 13.6 | 5.5 | 15.2 | 5.3 |
| How coverage was obtained | | | | | | | | 93.5 [b] |
| Employer or union | 72.1 [a,b] | 91.9 [b] | 77.1 [a,b] | 93.4 [b] | 75.2 [a,b] | 92.9 [b] | 80.3 [a,b] | 6.5 |
| Non-group sources (self-employed, direct purchase, and school, community program or other) | 27.9 | 8.1 | 23.0 | 6.6 | 24.8 | 7.1 | 19.7 | |
| Presence of a health savings account | 27.9 [a] | NA | 24.0 [a] | NA | 25.5 [a] | NA | 29.8 [a] | NA |
| Couldn't afford prescription drug in past year (sample adults only) | 9.3 [b] | 5.3 [b] | 8.1 | 5.9 | 8.5 [b] | 5.7 [a,b] | 7.3 [b] | 4.7 [b] |

Note: Statistics are weighted to population level using NHIS weights. Sample size is unweighted.

a. Within plan type, residence differences significant at $p \leq .05$

b. Within residence category, differences between HDHP and other private plan significant at $p \leq .05$.

**Table 4. Logistic Regression Predicting High Deductible Health Plan Enrollment**

| Control Variables | O.R. (95% C.I.) (n=136,667) |
|---|---|
| Residence | |
| Urban | 1.0 |
| Rural Adjacent | 1.01 (0.90, 1.14) |
| Rural, Not Adjacent | 1.15 (0.97, 1.36) |
| Age | |
| 0-17 | 1.04 (0.98, 1.10) |
| 18-34 | 0.92 [a] (0.86, 0.98) |
| 35-49 | 1.03 (0.98, 1.08) |
| 50-64 | 1.0 |
| Race / Ethnicity | |
| White, not Hispanic | 1.0 |
| Not white, not Hispanic | 0.74 [a] (0.69, 0.79) |
| Any race, Hispanic | 0.71 [a] (0.65, 0.78) |
| Health status | |
| Excellent or very good | 1.0 |
| Good | 0.98 (0.93, 1.03) |
| Fair or poor | 1.06 (0.98, 1.15) |
| Region | |
| Northeast | 1.0 |
| Midwest | 2.16 [a] (1.90, 2.44) |
| South | 1.79 [a] (1.58, 2.01) |
| West | 1.93 [a] (1.71, 2.18) |
| Marital status | |
| Married | 1.0 |
| Not married | 0.94 [a] (0.90, 0.99) |
| Education | |
| Less than high school | 0.66 [a] (0.59, 0.73) |
| High school or some college | 0.85 [a] (0.80, 0.89) |
| College or more | 1.0 |
| Employment status | |
| Employed | 1.0 |
| Not employed | 1.21 [a] (1.15, 1.28) |
| Family income as a percent of poverty | |
| <150% FPL | 0.93 (0.83, 1.04) |
| 150-399% FPL | 1.06 (0.99, 1.13) |
| ≥400% FPL | 1.0 |

Note: Differences significant at $p \leq .05$ [a].

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