

December 20, 2018 • No. 468



# Consumer Engagement in Health Care: Findings From the 2018 EBRI/Greenwald & Associates Consumer Engagement in Health Care Survey

By Paul Fronstin, Ph.D., Employee Benefit Research Institute, and Edna Dretzka, Greenwald & Associates

#### AT A GLANCE

The EBRI/Greenwald & Associates Consumer Engagement in Health Care Survey (Consumer Engagement Survey) provides reliable national data on the growth of high-deductible plans and their impact on the behavior and attitudes of health care consumers with employment-based coverage or individually purchased coverage. It also looks broadly at consumer engagement and value-based health insurance design. Now in its 14<sup>th</sup> year, it is co-sponsored by the Employee Benefit Research Institute (EBRI) and Greenwald & Associates with support from six private organizations.

The 2018 survey was conducted online August 10–23, using the Ipsos consumer panel. A total of 2,010 adults with private health insurance coverage through an employer, purchased directly from a carrier, or purchased through a government exchange participated in the survey. However, most survey participants (85 percent) received coverage through an employer. The data were weighted by gender, age, education, region, income, and race/ethnicity to reflect the actual proportions in the population ages 21–64 with private health-insurance coverage.

This *Issue Brief* identifies the key findings of the 2018 survey:

- HDHP enrollees have many characteristics equated with greater financial stability. HDHP enrollees
  have higher income and higher education than those enrolled in more traditional health coverage. HDHP
  enrollees are more likely than enrollees with more traditional health coverage to be employed full-time. Despite
  being slightly more likely to smoke, HDHP enrollees were more likely than enrollees in more traditional health
  coverage to report being in very good health.
- **HDHP enrollees are more likely to seek cost information than traditional plan enrollees.** More than one-third (39 percent) of HDHP enrollees versus 25 percent of traditional plan enrollees tried to find cost information in the last two years before receiving care. Among those who searched for information, HDHP enrollees were less likely than more traditional plan enrollees to have found such information.
- High-deductible health plan (HDHP) enrollees are more likely than traditional plan enrollees to exhibit cost-conscious behaviors. Those in a HDHP were more likely than those with traditional coverage to say that they had checked whether the plan would cover care or medication (55 percent HDHP vs. 41 percent traditional); checked the quality rating of a doctor or hospital before receiving care (41 percent HDHP vs. 33 percent traditional); asked for a generic drug instead of a brand name (41 percent HDHP vs. 32 percent traditional); talked to their doctors about prescription options and costs (40 percent HDHP vs. 29 percent traditional); talked to their doctors about other treatment options and costs (37 percent HDHP vs. 31 percent traditional); asked a doctor to recommend less costly prescriptions (31 percent HDHP vs. 22 percent traditional); used an online cost-tracking tool provided by the health plan (25 percent HDHP vs. 14 percent

- traditional); or developed a budget to manage health care expenses (25 percent HDHP vs. 14 percent traditional).
- HDHP enrollees are more likely to delay care than traditional plan enrollees. HDHP enrollees were
  more likely to report that they delayed health care in the past year because of cost. One-third of HDHP
  enrollees reported delaying care, whereas 18 percent of traditional plan enrollees delayed care because of
  costs.
- HDHP enrollees are more likely to have and participate in wellness programs than traditional plan
  enrollees. HDHP enrollees were more likely than traditional plan enrollees to report that their employer
  offered them biometric screenings and were more likely to participate in such screenings. While they were also
  more likely to be offered reimbursement for all or part of fitness memberships, HDHP enrollees were less likely
  to report participating.
- HDHP enrollees are less likely than traditional plan enrollees to report that they do not have any major financial concerns. HDHP enrollees were more likely than traditional plan enrollees to report that they worry a lot about their finances and that debt is negatively impacting their ability to save for retirement. When it came to the top financial concerns, HDHP enrollees were more likely than traditional plan enrollees to report that they were concerned about not being able to retire when they want to, running out of money in retirement, not having enough money to cover out-of-pocket health care expenses not covered by insurance, and being laid off from work. Overall, a large majority of traditional plan and HDHP enrollees reported having major financial concerns. These findings may point to a broader correlation between financial wellness, plan design, and income that is not being captured by the survey findings.

Paul Fronstin is director of the Health Research and Education Program at the Employee Benefit Research Institute (EBRI). Edna Dretzka is senior director of healthcare at Greenwald & Associates. This *Issue Brief* was written with assistance from the Institute's research and editorial staffs. Any views expressed in this report are those of the authors and should not be ascribed to the officers, trustees, or other sponsors of EBRI, Employee Benefit Research Institute-Education and Research Fund (EBRI-ERF), or their staffs. Neither EBRI nor EBRI-ERF lobbies or takes positions on specific policy proposals. EBRI invites comment on this research.

**Suggested Citation:** Paul Fronstin and Edna Dretzka. "Consumer Engagement in Health Care: Findings From the 2018 EBRI/Greenwald & Associates Consumer Engagement in Health Care Survey." *EBRI Issue Brief*, no. 468 (Employee Benefit Research Institute, December 13, 2018).

**Copyright Information:** This report is copyrighted by the Employee Benefit Research Institute (EBRI). It may be used without permission but citation of the source is required.

Report Availability: This report is available on the internet at www.ebri.org

# 2018 Consumer Engagement in Health Care Survey Underwriters

This survey was made possible by funding support from the following organizations: Benefit Wallet, Blue Cross and Blue Shield Association, HealthEquity, Inc., National Rural Electric Cooperative Association, Prudential Financial, Inc., and UMB Financial.

### **Table of Contents**

Introduction

HUOUUCUOIT	3
Consumer Engagement and Consumer-Directed Health Plans	5
Who Is Enrolled in HDHPs?	7
Health Engagement by Plan Type	7
Information Seeking	7
Cost-Conscious Behavior	13
Wellness Program Availability and Participation	16
Financial Wellbeing by Plan Type	17
Conclusion	17
Appendix—Methodology	21
References	21
Endnotes	22
Figures	
Figure 1, Premium Increases Among Employers With 10 or More Employees, Worker Earnings and Inflation, 1988–2019	6
Figure 2, Percentage of Persons With Private Health Insurance Under Age 65 Enrolled in a High-Deductible Health Pla or in a Consumer-Directed Health Plan, 2007–2018	
Figure 3, Household Income Distribution, by Plan Type, 2018	8
Figure 4, Education, by Plan Type, 2018	
rigure 4, Education, by Flair Type, 2010	0

Figure 5, Job Status, by Plan Type, 20189
Figure 6, Race Distribution, by Plan Type, 2018
Figure 7, Marital Status, by Plan Type, 2018
Figure 8, Presence of Children, by Plan Type, 2018
Figure 9, Source of Coverage, by Plan Type, 2018
Figure 10, Choice of Health Plan, by Plan Type, 2018
Figure 11, Length of Time Covered by Health Plan, by Plan Type, 2018
Figure 12, Smoking Behavior, by Plan Type, 2018
Figure 13, Self-Reported Health Status, by Plan Type, 2018
Figure 14, Tried to Find Cost Information in Past Two Years Before Getting Care, by Plan Type, 2018
Figure 15, Ease or Difficulty of Finding Cost Information for Medical Care, Compared to Shopping for Other Types of Services, by Plan Type, 2018
Figure 16, Ease or Difficulty of Finding Ratings of Care Provided by Medical Professionals and Facilities, Compared to Shopping for Other Types of Services, by Plan Type, 2018
Figure 17, Cost-Conscious Behavior, by Plan Type, 2018
Figure 18, Delayed Medical Care in Past Year Because of Costs, by Plan Type, 2018
Figure 19, Employer Offers Wellness Program, by Plan Type, 2018
Figure 20, Individual Participates in Wellness Program Offered by Employer, Among Those Offered a Wellness Program, by Plan Type, 2018
Figure 21, Reasons for Participating in Employer's Wellness Program, by Plan Type, 2018
Figure 22, Confidence That Individual Will Have Enough Money to Live Comfortably in Retirement, by Plan Type, 2018
Figure 23, Financial Wellbeing, by Plan Type, 2018
Figure 24, Top Financial Concerns, by Plan Type, 2018

# Consumer Engagement in Health Care: Findings From the 2018 EBRI/Greenwald & Associates Consumer Engagement in Health Care Survey

By Paul Fronstin, Ph.D., Employee Benefit Research Institute, and Edna Dretzka, Greenwald & Associates

#### Introduction

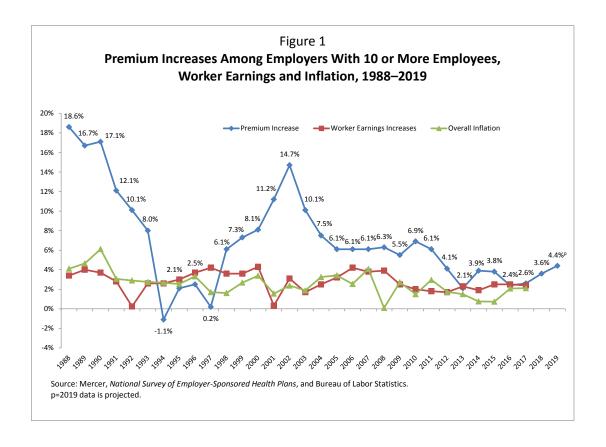
Employment-based health benefits are the most common form of health insurance in the United States. In 2017, 167.4 million individuals under age 65, or 61.7 percent of that population, had employment-based health benefits. In nearly every year between 2008 and 2015, premium increases have exceeded worker-earnings increases and inflation (Figure 1). Overall, health insurance premiums have increased twice as much as worker earnings during that period. 2

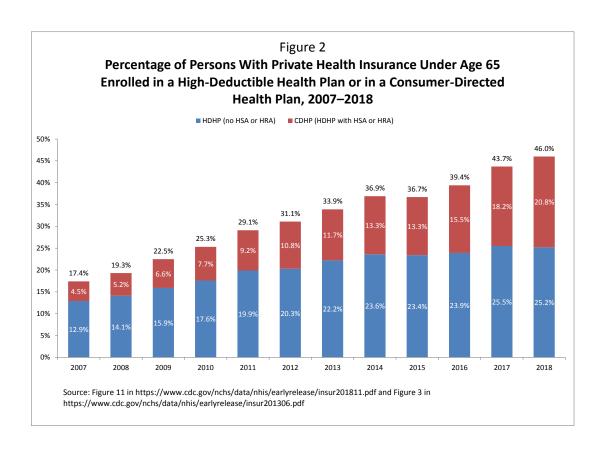
While the gap between premium increases and worker-earnings increases has narrowed more recently, it has not stopped employers from seeking ways to manage health care cost increases. One of the more notable trends has been the movement toward increasing deductibles. Between 2007 and 2018, the percentage of individuals under age 65 enrolled in high-deductible health plans (HDHPs) (plans with deductibles of at least \$1,350 for individual coverage and \$2,700 for family coverage in 2018) increased from 17.4 percent to 46 percent (Figure 2), a 264 percent increase. By 2018, nearly one-half of the people enrolled in an HDHP were in a plan that was paired with either a health savings account (HSA) or health reimbursement arrangement (HRA), collectively known as consumer-directed health plans (CDHPs).

# **Consumer Engagement and Consumer-Directed Health Plans**

Since 2001, there have been numerous studies examining the determinants and effects of CDHPs (For example, see Buchmueller (1998), Bundorf (2012), Buntin, et al. (2011), Fronstin and Roebuck (2013), Fronstin, Sepulveda and Roebuck (2013a), and Fronstin, Sepulveda and Roebuck (2013b)). The initial studies tended to focus on broad questions like who enrolls in a CDHP, how enrollees differ from non-enrollees, risk selection, and the impact of CDHPs on overall use of services and spending. More recent studies have examined more targeted questions about individual health engagement, such as medication adherence for individuals with chronic conditions (Fronstin, Sepulveda and Roebuck 2013a), generic drug use (Fronstin and Roebuck 2014a), the likelihood of price shopping among individuals with a CDHP (Brot-Goldberg, et al. 2015), quality of health care received (Fronstin and Roebuck 2014b), the impact of CDHPs by worker income (Fronstin and Roebuck 2016), and the combination of deductible size, presence of an HSA or HRA, and type of CDHP (Haviland, et al. 2011). The most recent studies have examined plan enrollees' behaviors over longer time periods.

More generally, however, employers have been interested in bringing aspects of consumer engagement into health plans goes back as far as 1978 when they adopted Sec. 125 cafeteria plans and flexible spending accounts (FSAs). More recently, in addition to the movement toward higher deductibles and CDHPs, employers have begun to take a broader view of worker engagement. Some employers have introduced more workplace wellness programs, usually in the form of health-risk assessments or biometric screenings. Employers have often provided financial incentives to increase worker participation in such programs. A few employers have introduced private health insurance exchanges. These programs have given workers more choices for health coverage and more transparency regarding coverage choices and the costs associated with each choice. And some are experimenting with other changes to health plan design as well, such as value-based insurance design, reference-based pricing, telemedicine, and accountable care organizations (ACOs).





To better understand the impact that HDHPs have on consumer engagement, this *Issue Brief* presents findings from the 2018 EBRI/Greenwald & Associates Consumer Engagement in Health Care Survey (Consumer Engagement Survey) — a study designed to provide nationally representative data regarding the growth of CDHPs and HDHPs and the impact of these plans on the behavior and attitudes of adults with private health insurance coverage. Now in its 14<sup>th</sup> year, this study was based on an online survey of 2,010 privately insured adults ages 21–64. The sample was randomly drawn from Ipsos' online panel of internet users who had agreed to participate in research surveys.<sup>3</sup> The final sample included 1,235 in a HDHP and 775 in a more traditional health plan.<sup>4</sup>

The remainder of this *Issue Brief* is outlined as follows. The next section presents differences in the characteristics of individuals enrolled in traditional health plans and HDHPs. The following section then presents differences in attitudes and behaviors by plan type. The last section presents findings related to financial wellbeing and plan type.

#### Who Is Enrolled in HDHPs?

The 2018 Consumer Engagement Survey found a number of similarities and differences between HDHP enrollees and those enrolled in more traditional health coverage. HDHP enrollees have higher income and higher education than those enrolled in more traditional health coverage. Nearly 30 percent of HDHP enrollees had a household income of \$150,000 or more, compared with 17 percent among enrollees in more traditional health coverage (Figure 3). Nearly one-half (45 percent) of HDHP enrollees had a college degree and another 27 percent have a graduate school degree (Figure 4). Among enrollees in more traditional health coverage, 28 percent had a college degree and 18 percent had a graduate degree.

HDHP enrollees were more likely than enrollees with more traditional health coverage to be employed full time (Figure 5), white (Figure 6), married (Figure 7), and parents (Figure 8). While HDHP enrollees were less likely to report having coverage from a working spouse (Figure 9), they were more likely to have a choice of health plan (Figure 10). And, not surprisingly given the recent growth in HDHP enrollment, HDHP enrollees were less likely to be enrolled in their health plan for 10 years or more. Only 13 percent were enrolled in their health plan for 10 years or more, compared with 23 percent among enrollees in more traditional health coverage (Figure 11).

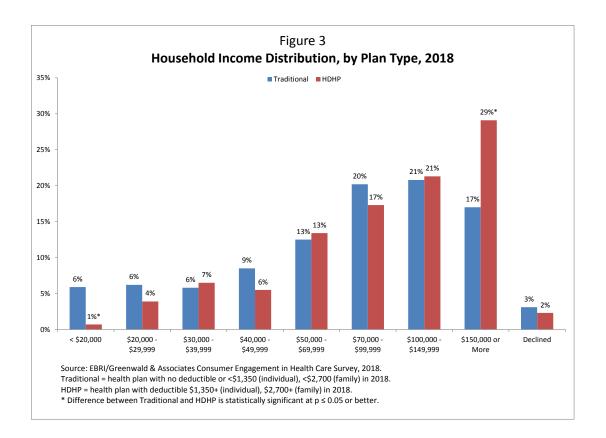
Despite being slightly more likely to smoke (Figure 12), HDHP enrollees were more likely than enrollees in more traditional health coverage to report being in very good health (Figure 13). Otherwise, there were no differences between HDHP enrollees and enrollees in more traditional coverage when it comes to age, gender, whether they have a primary care physician, physical exercise, and BMI (results not shown separately in paper). These similarities and differences are likely to contribute to differences in the attitudes and behaviors of HDHP and traditional plan enrollees as discussed in the remainder of this paper.

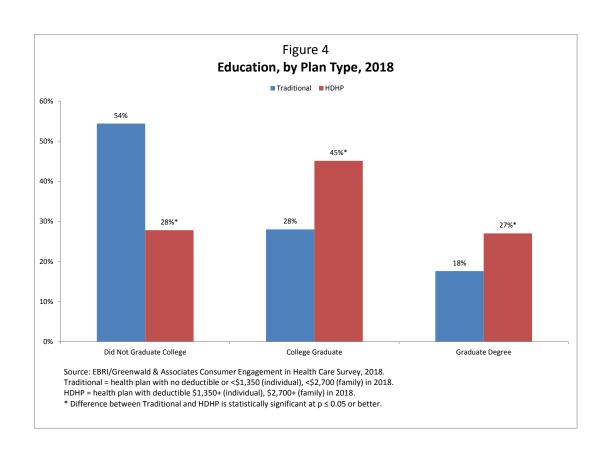
# **Health Engagement by Plan Type**

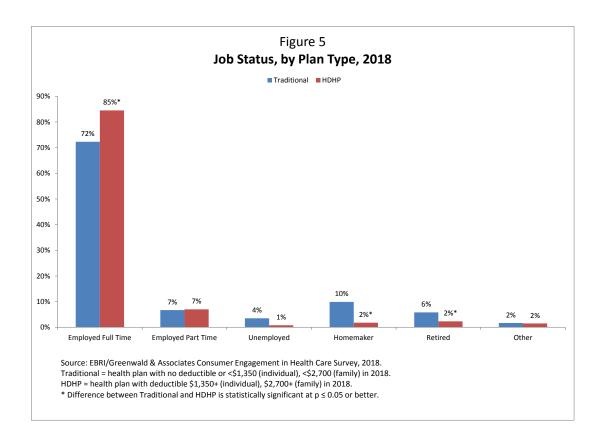
The theory behind raising deductibles is that the higher cost-sharing structure is a tool that will be more likely to engage individuals in their health care, compared with people enrolled in more traditional coverage. The 2018 Consumer Engagement Survey finds evidence that HDHP enrollees were more likely than those in a more traditional plan to exhibit a number of health engagement behaviors.

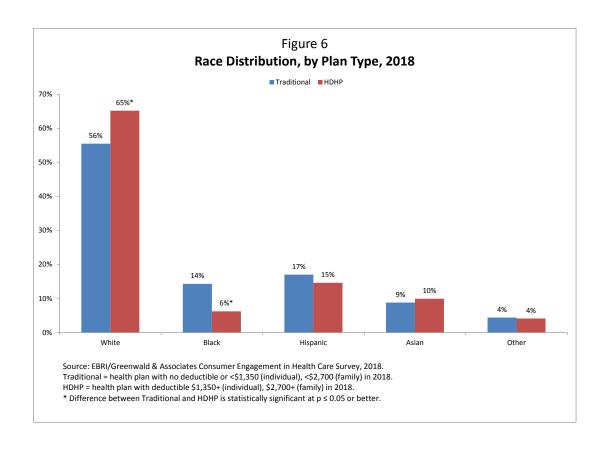
#### **Information Seeking**

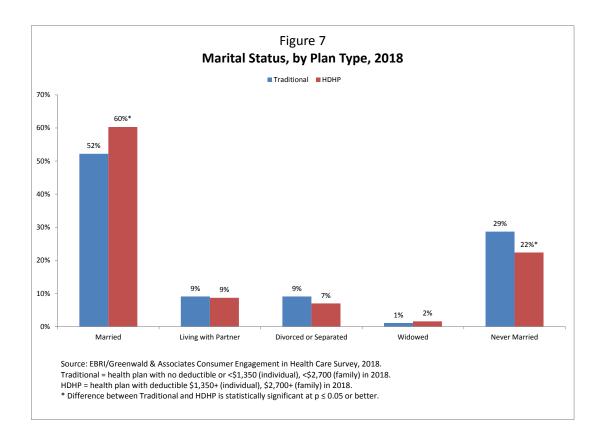
The incentives of CDHPs are designed to promote heightened sensitivity to cost in individuals' decisions about their health care. Yet the ability to make informed decisions is highly dependent on the extent to which people have access to useful information.

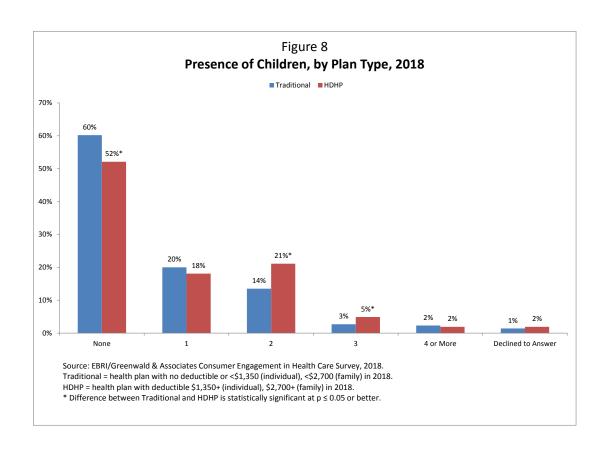


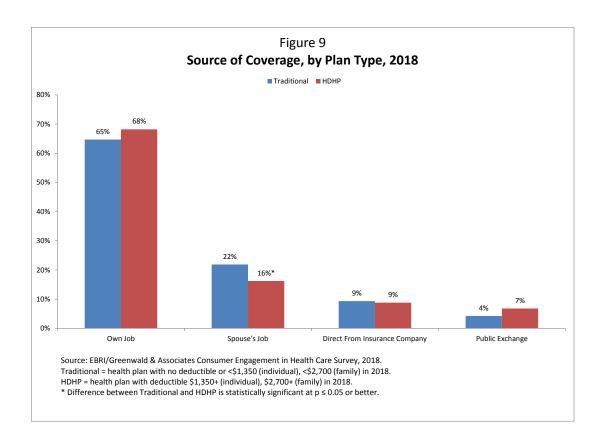


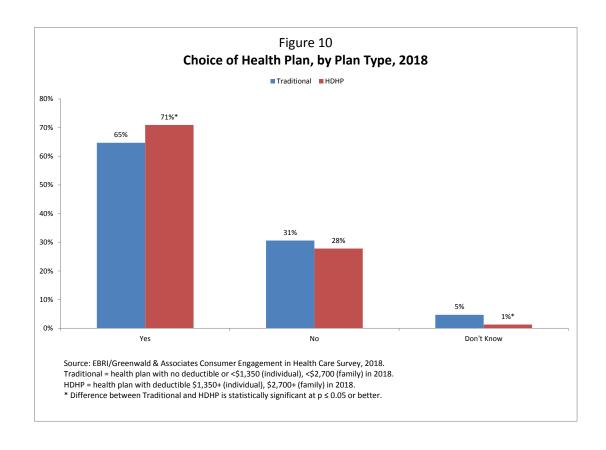


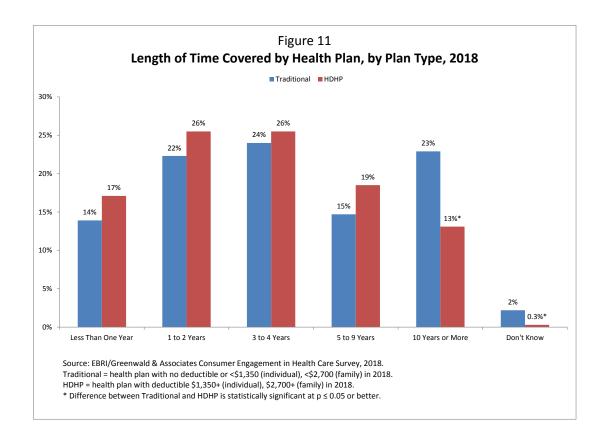


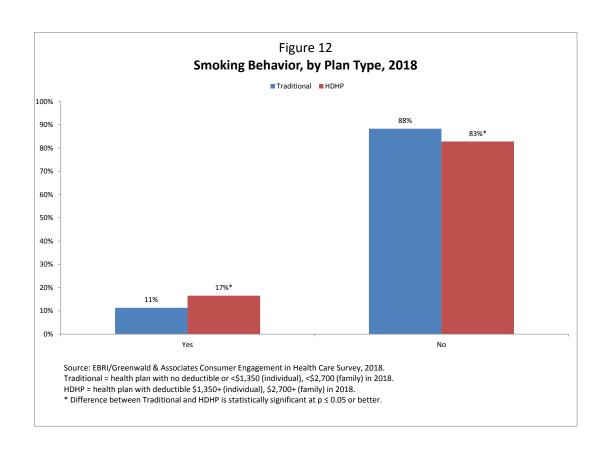


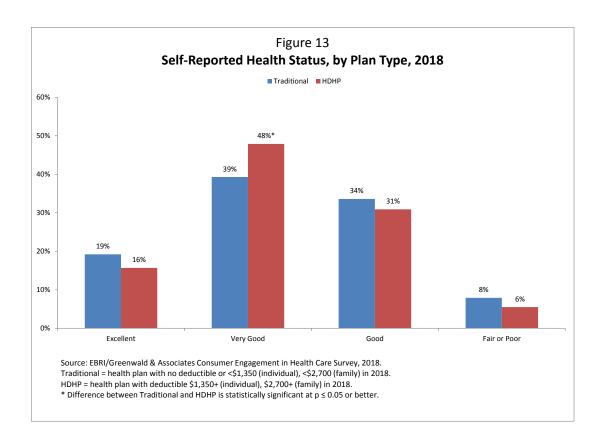










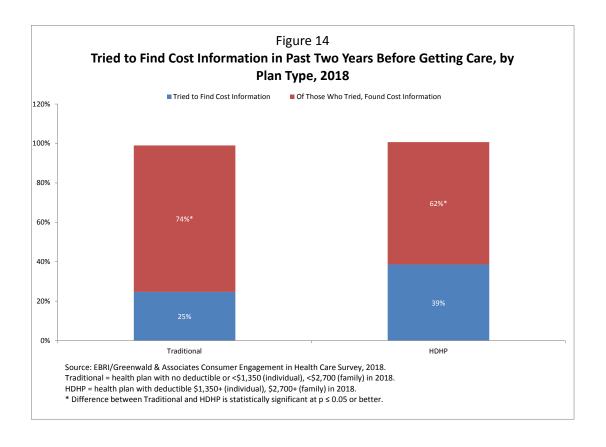


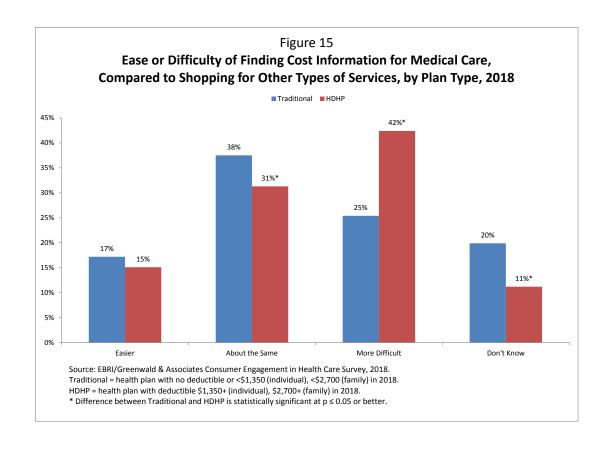
The survey asked if participants tried to find the cost of health care services before getting care and found that HDHP enrollees were more likely than more traditional plan enrollees to report that they tried to find cost information (Figure 14). Overall, 39 percent of HDHP enrollees and 25 percent of more traditional plan enrollees tried to find cost information in the last two years before receiving care. Among those who searched for information, HDHP enrollees were less likely than more traditional plan enrollees to have found such information. Even though HDHP enrollees were less likely to have found such information, HDHP enrollees were more likely than traditional plan enrollees to have sought and found cost information.

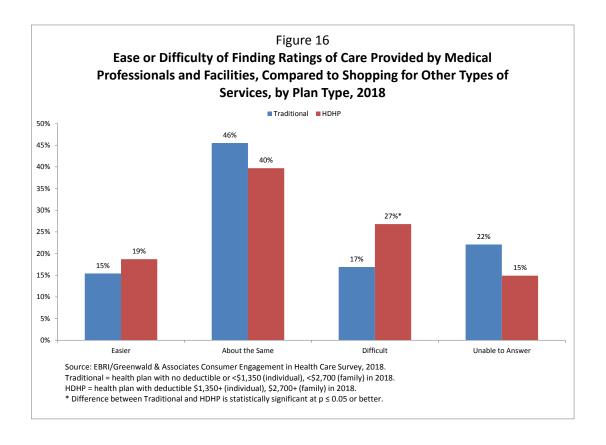
More generally, HDHP enrollees were more likely than traditional plan enrollees to report that it is more difficult to find cost information when compared to shopping for other services, though some of the difference may be due to the fact that traditional plan enrollees were more likely than HDHP enrollees to report that they did not know how difficult it was (Figure 15). Similarly, HDHP enrollees were more likely than traditional plan enrollees to report that it is more difficult to find ratings of care provided by medical professionals and facilities when compared to shopping for other services (Figure 16).

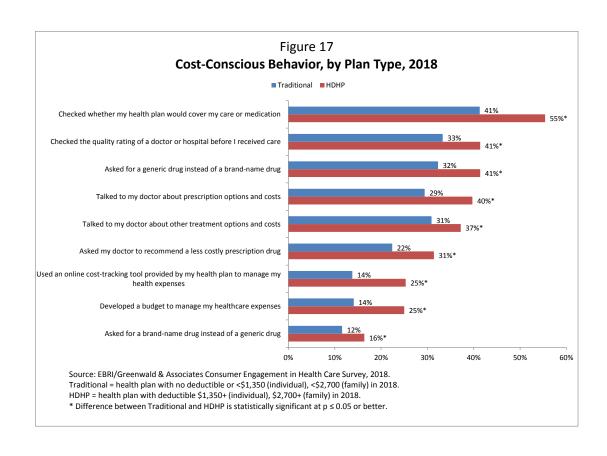
#### **Cost-Conscious Behavior**

The survey asked a number of questions about cost-conscious behavior and generally found that HDHP enrollees are more likely than traditional plan enrollees to exhibit such behaviors. Specifically, those in a HDHP were more likely than those with traditional coverage to say that they had checked whether the plan would cover care or medication (55 percent HDHP vs. 41 percent traditional); checked the quality rating of a doctor or hospital before receiving care (41 percent HDHP vs. 33 percent traditional); asked for a generic drug instead of a brand name (41 percent HDHP vs. 32 percent traditional); talked to their doctors about prescription options and costs (40 percent HDHP vs. 29 percent traditional); talked to their doctors about other treatment options and costs (37 percent HDHP vs. 31 percent traditional); asked a doctor to recommend less costly prescriptions (31 percent HDHP vs. 22 percent traditional); used an online cost-tracking tool provided by the health plan (25 percent HDHP vs. 14 percent traditional); or developed a budget to manage health care expenses (25 percent HDHP vs. 14 percent traditional). HDHP enrollees were also more likely than traditional plan enrollees to ask for a brand-name drug over a generic drug, but while the difference was statistically significant, it was the smallest difference of any cost-conscious behavior question (Figure 17).

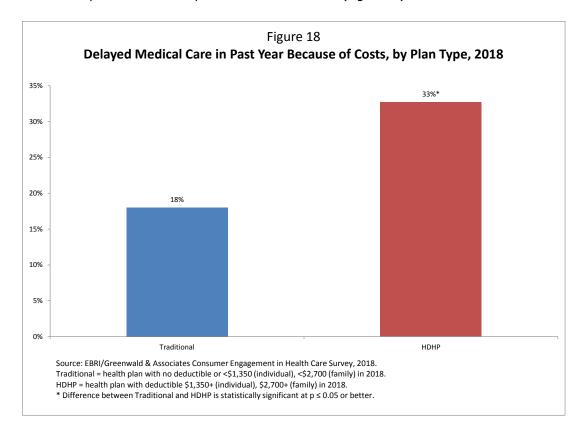








The biggest difference in cost-conscious behavior is that HDHP enrollees were nearly twice as likely to report that they delayed medical care in the past year because of cost. One-third of HDHP enrollees reported delaying care, whereas 18 percent of traditional plan enrollees delayed care because of costs (Figure 18).



#### **Wellness Program Availability and Participation**

The 2018 Consumer Engagement Survey also examined availability and participation in a number of different types of wellness programs. It found that HDHP enrollees were more likely than traditional plan enrollees to report that their employer offered them biometric screenings, financial wellness resources, and reimbursement for all or part of fitness memberships (Figure 19). There were no statistically significant differences by plan type in the percentage reporting the availability of activity-based wellness challenges, health risk assessments, smoking cessation programs, stress management programs, and on-site clinics.

# **Types of Wellness Programs**

A health risk assessment is a questionnaire filled out by the enrollee and then examined by a medical professional to identify any conditions an enrollee may have or that they might be at risk for developing.

Biometric screenings collect blood work to determine an enrollee's health status through blood pressure, cholesterol, weight, height, and other potential measures.

Other wellness programs are used to improve enrollees' health through a combination of smoking cessation, activity-based wellness challenges, seminars, fitness club membership, and other programs.

HDHP enrollees were not only more likely to be offered biometric screenings but were more likely to participate in them as well (Figure 20). In contrast, while they were more likely to be offered reimbursement for fitness club membership, just over a quarter of them participated in such available programs, compared to 42 percent of traditional health care plan enrollees. While they were no more likely to be offered health risk assessments, HDHP enrollees were more likely to report participating in them. Otherwise, there was no difference in participation rates by plan type for any of the other types of wellness programs.

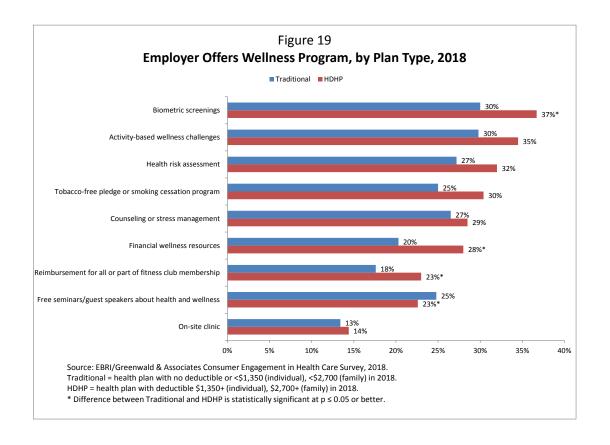
A number of questions were asked to gauge reasons for participating in wellness programs. Improving health was the top reason (Figure 21). Another reason that scored highly was convenience to where the employee worked. There were no statistically significant differences by plan type, with one exception — HDHP enrollees were more likely than traditional plan enrollees to note that their health insurance premiums would have been higher had they not participated in the employer's wellness program.

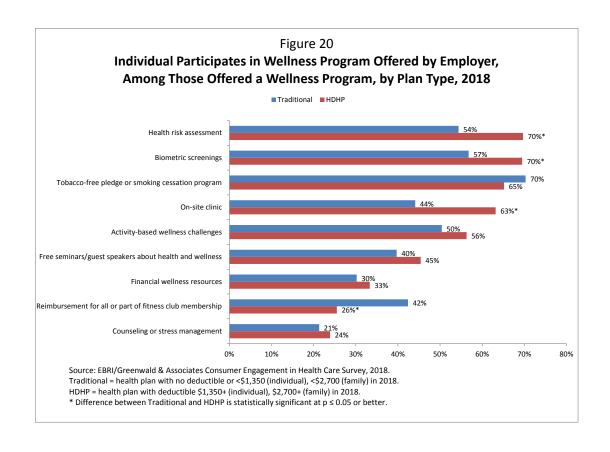
## **Financial Wellbeing by Plan Type**

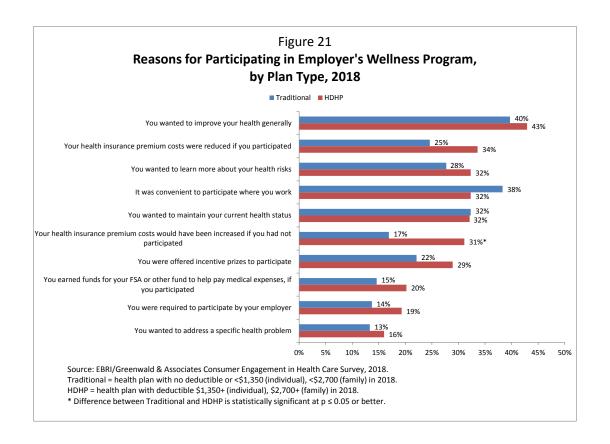
The 2018 Consumer Engagement Survey included a range of questions to better understand the financial wellbeing of survey respondents. We found some differences in financial wellbeing by plan type. Confidence that individuals will have enough money to live comfortably in retirement did not vary by plan type (Figure 22). Similarly, the percentage reporting that they worry about their ability to afford retirement and that they feel financially secure did not vary by plan type (Figure 23). In contrast, HDHP enrollees were more likely than traditional plan enrollees to report that they worry a lot about their finances and that debt is negatively impacting their ability to save for retirement. Finally, when it came to the top financial concerns, HDHP enrollees were more likely than traditional plan enrollees to report that they were concerned about not being able to retire when they want to or running out of money in retirement, not having enough money to cover out-of-pocket health care expenses not covered by insurance, and being laid off from work (Figure 24). They were equally likely to say that not having enough emergency savings for unexpected expenses and not being able to meet monthly expenses/debt were top financial concerns. Overall, HDHP enrollees were less likely than traditional plan enrollees to report that they did not have any major financial concerns. These concerns exist despite the fact that HDHP enrollees have higher income than traditional plan enrollees. Furthermore, in both cases, a large majority reported having major financial concerns. These findings may point to a broader correlation between financial wellness, plan design, and income that is not being captured by the survey findings.

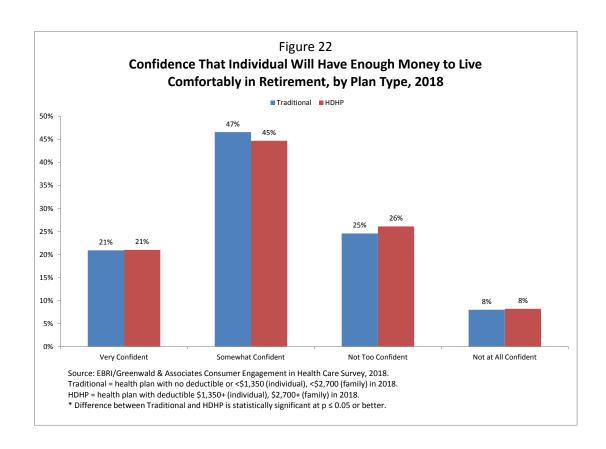
#### **Conclusion**

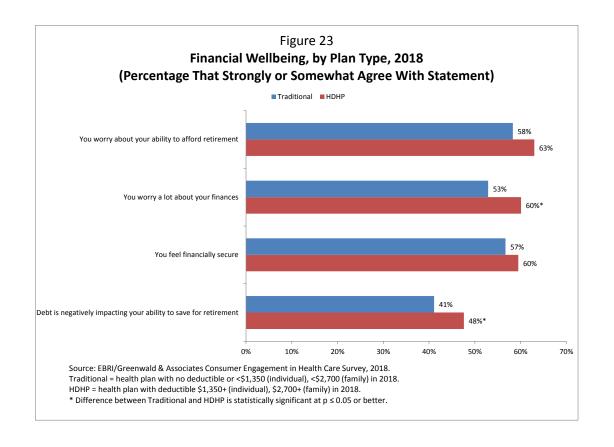
The 2018 Consumer Engagement Survey found that HDHP enrollees are more engaged in their health care than traditional plan enrollees. They are more likely to seek cost and quality information, and more likely to exhibit cost conscious behavior. These differences may be explained by the characteristics of the two populations. For instance, HDHP enrollees have a higher level of education than traditional plan enrollees. Yet, HDHP enrollees are more likely than traditional plan enrollees to report that they have major financial concerns, despite the fact that HDHP enrollees have higher income than traditional plan enrollees. Concerns over the financial wellbeing of workers may be what's holding employers back from adopting HDHPs more broadly.

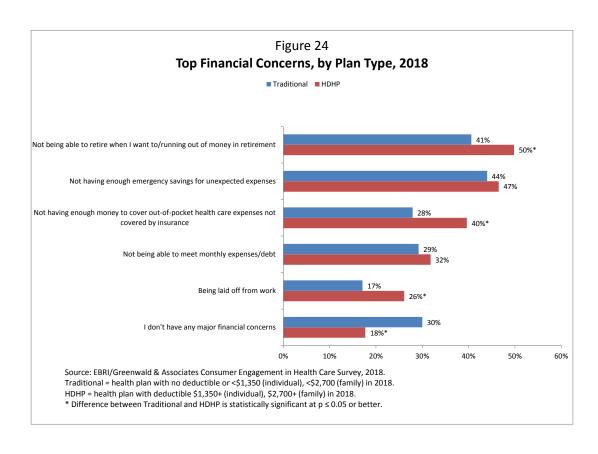












# Appendix—Methodology

The findings presented in this *Issue Brief* were derived from the 2018 EBRI/Greenwald & Associates Consumer Engagement in Health Care Survey, an online survey that examines issues surrounding consumer-driven health care, including the cost of insurance, the cost of care, satisfaction with health care, satisfaction with health care plans, reasons for choosing a plan, and sources of health information. The 2018 Consumer Engagement Survey was conducted within the United States between Aug. 10 and Aug. 23, 2018, through a 15-minute internet survey. The national or base sample was drawn from Ipsos' online panel of internet users who have agreed to participate in research surveys. Over 1,000 adults ages 21–64 who had health insurance through an employer, purchased directly from a carrier, or purchased through a government exchange were drawn randomly from the Ipsos sample for this base sample. This sample was stratified by gender, age, region, income, and race.

To examine the issues mentioned above, the sample was divided into two groups: those with a high-deductible health plan (HDHP) and those with traditional health coverage. Individuals were assigned to the HDHP group if they had a deductible of at least \$1,350 for individual coverage or \$2,700 for family coverage.

The group with traditional health coverage included individuals that had either no deductible or a deductible that was below current HDHP thresholds.

Because the base sample (national sample) included only 275 individuals in an HDHP, an oversample of individuals was added. The oversample included 960 individuals with an HDHP, resulting in a total sample (base plus oversample) of 2,010.

In addition to being stratified, the base sample was also weighted by gender, age, education, region, income, and race/ethnicity to reflect the actual proportions in the population ages 21–64 with private health insurance coverage. The HDHP oversamples were weighted by gender, age, income, and race/ethnicity, using the demographic profile of the HDHP respondents to the omnibus survey described below.

While panel internet surveys are nonrandom, studies have demonstrated that such surveys, when carefully designed, obtain results comparable with random-digit-dial telephone surveys. Taylor (2003), for example, provided the results from a number of surveys that were conducted at the same time using the same questionnaires both via telephone and online. He found that the use of demographic weighting alone was sufficient to bring almost all of the results from the online survey close to the replies from the parallel telephone survey. He also found that, in some cases, propensity weighting (meaning the propensity for a certain type of person to be online) reduced the remaining gaps, but in other cases it did not reduce the remaining gaps. Perhaps the most striking difference in demographics between telephone and online surveys was the under-representation of minorities in online samples.

#### References

Brot-Goldberg, Zarek C., Amitabh Chandra, Benjamin R. Handel, and Jonathan T. Kolstad. 2015. "What Does a Deductible Do? The Impact of Cost-Sharing on Health Care Prices, Quantities, and Spending Dynamics." *NBER Working Paper No. 21632* (National Bureau of Economic Research). http://www.nber.org/papers/w21632.pdf

Buchmueller, Thomas C. 1998. "Does a Fixed-Dollar Contribution Lower Spending?" Health Affairs 228-235.

- Bundorf, M. Kate. 2012. "Consumer-Directed Health Plans: Do They Deliver?" *Research Synthesis Report No. 24* (Robert Wood Johnson Foundation). http://www.rwjf.org/content/dam/farm/reports/2012/rwjf402405
- Buntin, Melinda Beeuwkes, Amelia M. Haviland, Roland McDevitt, and Neeraj Sood. 2011. "Healthcare Spending and Preventive Care in High-Deductible and Consumer-Directed Health Plans." *American Journal of Managed Care* 222-230.
- Fronstin, Paul, and M. Christopher Roebuck. 2013. "Health Care Spending after Adopting a Full-Replacement, High-Deductible Health Plan With a Health Savings Account: A Five-Year Study." *EBRI Issue Brief, no. 388* (Employee Benefit Research Institute).

- Fronstin, Paul, and M. Christopher Roebuck. 2014a. "Brand-Name and Generic Prescription Drug Use After Adoption of a Full-Replacement, Consumer-Directed Health Plan With a Health Savings Account." *EBRI Notes* (Employee Benefit Research Institute) 35 (3).
- Fronstin, Paul, and M. Christopher Roebuck. 2014b. "Quality of Health Care After Adopting a Full-Replacement, High-Deductible Health Plan With a Health Savings Account: A Five-Year Study." *EBRI Issue Brief, no. 404* (Employee Benefit Research Institute).
- Fronstin, Paul. 2015. "Sources of Health Insurance Coverage: A Look at Changes Between 2013 and 2014 from the March 2014 and 2015 Current Population Survey." *EBRI Issue Brief, no. 419* (Employee Benefit Research Institute).
- Fronstin, Paul, and M. Christopher Roebuck. 2016. "The Impact of an HSA-Eligible Health Plan on Health Care Services Use and Spending by Worker Income." *EBRI Issue Brief, no.425* (Employee Benefit Research Institute).
- Fronstin, Paul, Martin J. Sepulveda, and M. Christopher Roebuck. 2013a. "Medication Utilization and Adherence in a Health Savings Account-Eligible Plan." *American Journal of Managed Care* 19 (12): e400-e407.
- Fronstin, Paul, Martin J. Sepulveda, and M. Christopher Roebuck. 2013b. "Consumer-Directed Health Plans Reduce The Long-Term Use Of Outpatient Physician Visits And Prescription Drugs." *Health Affairs* 32 (6): 1126-1134.
- Haviland, Amelia M., Neeraj Sood, Roland McDevitt, and M. Susan Marquis. 2011. "The Effects of Consumer-Directed Health Plans on Episodes of Health Care." *Forum for Health Economics and Policy* 14 (2): 1-27.
- Taylor, Humphrey. 2003. "Does Internet Research 'Work'? Comparing Online Survey Results With Telephone Surveys." *International Journal of Market Research*. Vol. 42, no. 1.

### **Endnotes**

EBRI Issue Brief is registered in the U.S. Patent and Trademark Office. ISSN: 0887-137X/90 0887-137X/90 \$.50+.50

© 2018, Employee Benefit Research Institute-Education and Research Fund. All rights reserved.

<sup>&</sup>lt;sup>1</sup> Unpublished EBRI estimates from the March 2018 Current Population Survey.

<sup>&</sup>lt;sup>2</sup> Calculated from Figure 1.

<sup>&</sup>lt;sup>3</sup> See Appendix for more detail on the methodology.

<sup>&</sup>lt;sup>4</sup> Traditional plans include a broad range of plan types, including health maintenance organizations (HMOs), preferred provider organizations (PPOs), other managed care plans, and plans with a broad variety of cost-sharing arrangements. The shared characteristics of these plans are that they have either no deductibles or deductibles that are below current thresholds that would qualify for tax-preferred HSA contributions.

<sup>&</sup>lt;sup>5</sup> In theory, a random sample of 2,000 yields a statistical precision of plus or minus 2.2 percentage points (with 95-percent confidence) of what the results would be if the entire population ages 21–64 with private health insurance coverage were surveyed with complete accuracy. There are also other possible sources of error in all surveys that may be more serious than theoretical calculations of sampling error. These include refusals to be interviewed and other forms of nonresponse, the effects of question wording and question order, and screening. While attempts are made to minimize these factors, it is impossible to quantify the errors that may result from them.