

Report on Health Plan Choice Study

Delivered to Wisconsin Department of Employee Trust Funds
Office of Strategic Health Policy

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Overview and background

In 2021, the Office of Strategic Health Policy within the Wisconsin Department of Employee Trust Funds (ETF) initiated a research collaboration with Professor Justin Sydnor of the University of Wisconsin, Madison, to study the High Deductible Health Plan (HDHP) option within the State Group Health Insurance Program. As part of the HDHP Programs Strategy initiative, the overall goal of this research collaboration is to help inform the Office of Strategic Health Policy about the functioning of the HDHP program and to create information that can help provide value to ETF members considering enrolling in the HDHP option.

This report presents findings from a field experiment examining the impact of decision aids on health insurance design choices among ETF enrollees. Specifically, the study investigated the impact of two levels of enhanced information about the tradeoffs between the It's Your Choice Health Plan design and the High Deductible Health Plan design during the fall open enrollment period in 2023 for the plan year 2024. The study included voluntary participants from the Universities of Wisconsin.

As in the prior report, the analysis relies in part on de-identified data from ETF's Data Analytics and Insights (DAISI) warehouse and analytics tools administered by Truven by Merative (Truven).

Executive summary

Brief summary of experiment: In conjunction with the fall open enrollment period in 2023, the Universities of Wisconsin Human Resources sent an email to all active employees who were eligible to enroll in the High Deductible Health Plan to participate in a study run by Professor Sydnor. Employees who consented to participate in the study were randomized into three treatment arms:

- a) **Control:** Shown standard information about plan designs available through ETF and UW human resources.
- b) **Tradeoff-Clarification Video:** In addition to standard information, shown a short video narrated by Professor Sydnor discussing financial and other tradeoffs between the plan designs.
- c) **Cost Projection Graphs:** In addition to standard information and the video, given access to detailed estimates of distributions of costs under different plan designs.

After seeing this information, all subjects were asked survey questions about their perceptions of plan options and their intentions for health plan enrollment. Nearly all participants also consented to allow the researchers to partner with ETF to anonymously link the treatment-group exposure status from the study to actual enrollment records for the 2024 plan year.

Key findings:

- Participants' understanding of expected cost savings under the HDHP improved substantially after viewing the enhanced information in the decision aids, with the strongest effects for the cost-projection-graph treatment.
- The most comprehensive decision aid increased intended HDHP selection by 6 percentage points during the survey, though this effect diminished to approximately 2 percentage points in actual enrollment during open enrollment.
- Despite clear shifts in recognition of overall cost savings with the HDHP, the modest enrollment increases suggest other factors, such as inertia, concerns about managing an HSA, or dislike of larger out-of-pocket costs (e.g. copay, coinsurance, and deductibles), outweighed the perception of overall cost for many when making final enrollment decisions.
- The effect of the decision aids on enrollment decisions varied across demographic groups, with moderately stronger impacts for participants with higher education, greater financial liquidity, and those aged 35-65.

Experiment Detail and Primary Findings from the Health Plan Choice Study

In many situations, High-Deductible Health Plans (HDHPs) offer potential cost savings to individuals, yet they often see relatively low enrollment. This study investigates the extent to which a decision aid can improve individuals' understanding of cost differences between HDHP and non-HDHP, and how this improved understanding affects actual enrollment decisions. Focusing on employees of the Universities of Wisconsin, the study explores whether decision aids may support clearer plan comparisons and promote more informed, cost-effective choices.

1 Experiment

1.1 Plan Detail

For the 2024 plan year, most State of Wisconsin employees chose between two health insurance designs within the State Group Health Insurance Plan administered by ETF: the IYC Health Plan (non-HDHP) and the IYC High Deductible Health Plan (HDHP).¹ The non-HDHP featured a \$250 deductible for single coverage and \$115 monthly premium for employees, while the HDHP had a \$1,600 deductible and \$42 monthly employee premium. Additionally, the HDHP included \$750 in state Health Savings Account(HSA) contributions for single coverage. For family coverage, deductibles increased to \$500 for the non-HDHP and \$3,200 for the HDHP, with monthly premiums of \$286 and \$107, respectively. The family-level state HSA contribution was \$1,500. HSA contributions were paid to employee accounts monthly by the state. Additional plan details are provided in Figure 1.

Our analysis of the past claims data, as presented in Report 2, shows that the HDHP with HSA contributions would minimize total costs for nearly all individuals, regardless of their healthcare utilization patterns. Yet despite this clear overall financial advantage, HDHP enrollment remains low. To investigate how information presentation affects plan choice, we conducted a randomized experiment varying the decision aids provided to participants during plan selection. The following subsection describes the experimental design and implementation in detail.

¹Participants were also able to choose the Access Health Plan/Access HDHP, which is a higher-premium option offering nationwide provider access.

Figure 1: Plan Details of 2024 Health Plan

**Table of Major Differences between non-HDHP and HDHP options
2024 individual coverage**

	IYC Health Plan Design (non-HDHP)	High Deductible Health Plan (HDHP)
Monthly premiums you pay from your paychecks (with dental coverage)	\$115	\$42
Annual medical deductible	\$250	\$1,600
Annual medical out-of-pocket limit	\$1,250	\$2,500
Annual prescription drug deductible	None	Combined with medical (\$1,600 for medical + drug)
Annual prescription out of pocket limit	\$600 level 1 & 2 drugs; \$9,100 level 3 & 4 drugs	Combined with medical (\$2,500 for medical + drug)
Paired with health savings account (HSA)?	No	Yes
Amount UW contributes to your HSA	Not applicable	\$750
Links to further information about the plan design:	UW website on IYC Health Plan Design (non-HDHP)	UW website on HDHP Plan design
Link to full plan design comparison:	Full plan comparison details	

(a) Single Coverage

**Table of Major Differences between non-HDHP and HDHP options
2024 family coverage**

	Health Plan Design (non-HDHP)	High Deductible Health Plan (HDHP)
Monthly premiums you pay from your paychecks (with dental coverage)	\$286	\$107
Annual family medical deductible	\$500	\$3,200
Annual family medical out-of-pocket limit	\$2,500	\$5,000
Annual family prescription drug deductible	None	Combined with medical (\$3,200 for medical + drug)
Annual family prescription out of pocket limit	\$1,200 level 1 & 2 drugs; \$18,200 level 3 & 4 drugs	Combined with medical (\$5,000 for medical + drug)
Paired with health savings account (HSA)?	No	Yes
Amount UW contributes to your HSA	Not applicable	\$1,500
Links to further information about the plan design:	UW website on IYC Health Plan Design (non-HDHP)	UW website on HDHP Plan design
Link to full plan design comparison:	Full plan comparison details	

(b) Family Coverage

Note: This figure displays the plan details for the non-HDHP and HDHP options offered by the UW System for 2024 enrollment. Panel (a) details the single coverage, and Panel (b) covers the family coverage. Additionally, this information served as the baseline data provided to all participants before introducing the visual aid.

1.2 Experiment Details

In the fall of 2023, Professor Sydnor and graduate student Iris SooJin Park ran a survey experiment study in partnership with ETF and the Universities of Wisconsin. The survey launched on September 20, 5 days before the annual benefits open enrollment period for the University of Wisconsin, and ran until the end of open enrollment on October 20, 2023. At the start of this period, the Universities of Wisconsin Human Resources sent an email to active employees who it estimated would be eligible to enroll in the HDHP (e.g., excluding graduate students), letting them know that there was a study on health insurance being conducted and giving them a link to participate. Participation was voluntary, and all participants signed an informed consent form that was approved by the University of Wisconsin, Madison Institutional Review Board (IRB) with Professor Sydnor as the principal investigator for the study. A total of 2,852 employees consented to participate, and this report details the results for the 2,718 subjects who continued with the survey to the point that they were randomly assigned to treatment vs. control conditions. Within the survey, participants were randomized with equal probability into one of three treatment groups: a) control, b) video, and c) graph. These treatment variations are described in more detail below.

Table 1 reports averages of demographic, financial, and prior-year health insurance enrollment variables for each randomized treatment groups. The first thing to note is that for each measure, the averages are similar across the three treatment groups, which reflects the random assignment and shows that these are balanced groups that are similar on average. Second, while the survey includes a diverse population spanning different ages, education, and household levels, the set of participants who opted into the survey are not representative of the broader population of state employees enrolled in the State Group Health Insurance Program (SGHIP). If we compare the distributions in Table 1 here to Table 2 in Report 1, we see that the respondents to this survey were significantly more likely to already be enrolled in the HDHP as of 2023 (36%) than the broader SGHIP population (19%), which includes both employees and their dependents. The sample was also predominantly female (71%), even though the broader SGHIP member population was more evenly split by gender (52% female, as reported in Report 1). Because the study uses random assignment to treatment, we can be confident that it reflects the true impact of the decision aids among this population, but it is important to keep in mind that the broader population could potentially respond somewhat differently if they were similarly exposed to these treatments.

After answering some questions about their current health insurance status, all subjects were shown the plan comparison tables in Figure 1 and additional written descriptions of how the HSA account functions for the HDHP. Participants randomly assigned to the control group then went on to answer questions about their perceptions of and enrollment intentions between the different plan design options. If the respondent was randomly assigned to either of the treatment groups,

Table 1: Combined Respondent’s Demographic and Financial Information

	Control	Video	Graph
Demographic Information			
<i>Age Groups</i>			
Under 25	0.02	0.01	0.03
25 - 34	0.22	0.23	0.24
35 - 44	0.32	0.30	0.32
45 - 54	0.26	0.25	0.25
55- 64	0.15	0.19	0.14
65 and over	0.02	0.02	0.02
<i>Gender</i>			
Female	0.71	0.72	0.68
Male	0.27	0.26	0.30
Other/non-binary	0.01	0.01	0.01
Prefer not to state	0.01	0.01	0.01
<i>Education Level</i>			
High school graduate	0.03	0.04	0.04
Associates degree	0.05	0.04	0.03
College degree	0.33	0.32	0.34
Graduate degree	0.57	0.60	0.58
Prefer not to state	0.01	0.01	0.01
Financial Information			
<i>Household Income</i>			
Less than \$40,000 annually	0.03	0.04	0.03
\$40,000 - \$80,000 annually	0.29	0.27	0.29
\$80,000 - \$120,000 annually	0.28	0.25	0.29
\$120,000 - \$160,000 annually	0.17	0.18	0.16
More than \$160,000 annually	0.19	0.20	0.18
<i>Financial Confidence</i>			
I am certain I could not come up with \$2,000	0.08	0.09	0.08
I could probably not come up with \$2,000	0.06	0.06	0.07
I could probably come up with \$2,000	0.23	0.22	0.21
I am certain I could come up with the full \$2,000	0.59	0.62	0.61
Plan Enrolled - 2023			
<i>Health Plan</i>			
Health Plan (non-HDHP)	0.59	0.60	0.61
High Deductible Health Plan (HDHP)	0.36	0.36	0.35
Not sure	0.04	0.04	0.04
<i>Coverage Tier</i>			
Family Coverage	0.63	0.63	0.62
Single coverage	0.34	0.34	0.36
Other coverage	0.03	0.03	0.02
N	915	895	908

Note: This table provides a distribution of demographic and financial characteristics for respondents across three different groups: Control, Video, and Graph. The total number of participants was 2,852 responses and the number of respondents who were assigned a group was 2,718.

after viewing the plan details, they also watched a video narrated by Professor Sydnor, walking through a comparison of the tradeoffs between the HDHP and non-HDHP in simple terms. The video explained that for most families (or singles), the overall savings with the HDHP would exceed \$1,000 (\$500 for singles) per year, and for many it would be more than \$2,000 (\$1,000 for singles). Additionally, the video explained details of Health Savings Accounts as well as considerations individuals should weigh when selecting HDHP plans, such as needing to manage a new account or setting aside funds for emergencies. The slides used in the video are presented in Figure 2.

Figure 2: Video Content Shown to the Video and Graph Group - Single Coverage

Comparing the HDHP vs non-HDHP



Most features are the same...

- Same options for healthcare networks.
- Same benefits covered.
- Free preventative care & some preventative medications.
- Get care and receive bills similarly.

What differs?

- Premium vs. out-of-pocket cost tradeoffs.
- Health Savings Account (HSA) with HDHP.
 - UW System contributes \$750 to the HSA for individual.
- Additional considerations.

HDHP vs. non-HDHP Financial Comparison



Sources of savings with HDHP plan
Lower premiums: \$73 per month / \$876 per year.
UW System contributes to HSA: \$63 per month / \$750 per year.
\$136 per month / \$1,626 per year combined.

Higher out-of-pocket costs with HDHP
\$1,350 higher deductible (co-pays after deductible is met).
\$1,250 higher out-of-pocket limit.
Combined vs. separate medical and drug limits.

Vast majority of situations save money for the year overall with HDHP
\$1,626 combined premium + UW HSA contribution vs Worst case about \$1,350 higher out of pocket costs.

The Health Savings Account (HSA)



Key things to know:

1. You choose how much to contribute up to maximums set by IRS each year.
2. It is your money. You keep it if you leave UW or retire.
3. Money in your HSA rolls over at the end of the year (unlike FSA).
4. Can be used for deductibles, co-pays, dental, vision, other medicines and supplies.
5. HSA funds earn interest and can be invested. All earnings are tax free.

Check <https://www.wisconsin.edu/abe/> for rules on eligibility for HSA.

Additional considerations



Need to set aside \$ for out-of-pocket costs.



Thinking about health care costs and receiving bills can be stressful.



Need to manage new account.



Will HDHP cause you to avoid health care that you need?

Note: This is the Presentation Slides used for the video Aid for Single Coverage. For Family Coverage, the premium and out-of-pocket cost is \$3,650 combined premium + UW HSA contribution, and worst case, about \$3,000 higher out-of-pocket costs. In this video, we explain the difference between HDHP and non-HDHP as well as the pros and benefits of each plan.

For treatment-group participants in the video group, after seeing this video, they progressed to the questions about understanding and intentions related to the plan design options. For participants randomly assigned to the graph group, after watching the video, they received detailed and personalized projections of the distribution of potential costs they would face for both plan designs. This treatment involved two steps: a) a process to help participants pick a risk level that was appropriate for their family, and b) access to detailed cost projections based on recent experiences of families enrolled in each plan design within the SGHIP with that level of risk.

To determine their risk level and provide accurate cost projections, we asked three screening questions: 1) How many family members will be covered by your plan in 2024? 2) Will any covered family members be 55 or older in 2024? and 3) Do any covered family members have a prior diagnosis of diabetes, hypertension, and/or coronary artery disease? Based on their responses, respondents were shown a risk-level table where they could identify their risk level based on probabilities derived from prior years' claims data. We classified state employees into five distinct risk levels, with Risk Level 1 representing the healthiest 20% (lowest expected healthcare costs) through Risk Level 5 representing the highest-risk 20% (greatest expected costs). The table also displayed median values for total family healthcare spending, family office visit costs, and family prescription drug spending for each risk level to help respondents better understand the spending patterns associated with their risk classification. Figure 3 shows an example of the risk level table presented to respondents. For instance, if the respondent has a family of 5, with at least one member with any chronic condition and at least one who is 55 or older, then the table indicates that 88% of individuals with the same situation were in risk level 5.

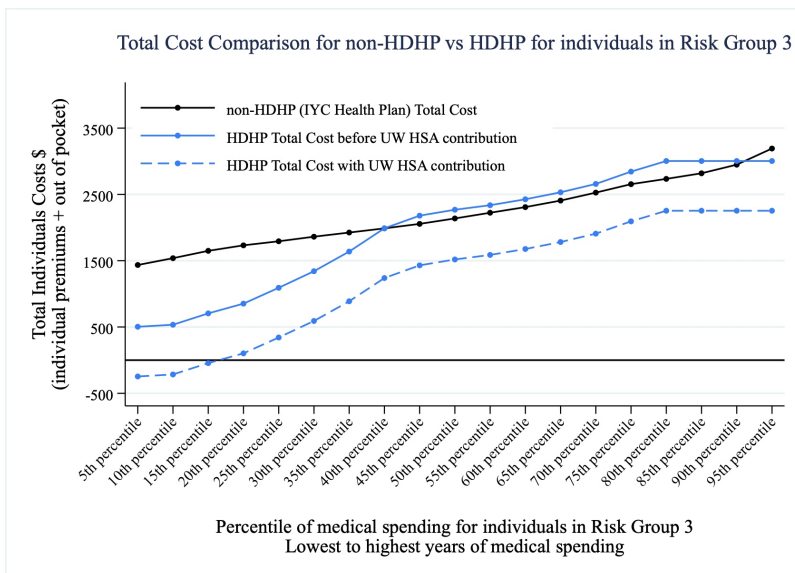
Figure 3: Family of 5 with at least one member with a chronic condition and at least one who is 55 or older

Family Type: Family of 5 with at least one member with a chronic condition and at least one who is 55 or older				
Risk Level	Median Total Family Healthcare Spending	Median Family Spending on Office Visits	Median Family Prescription Drug Spending	Fraction of Your Family Type in Each Risk Level
1	\$970	\$440	\$30	0%
2	\$3,160	\$1,240	\$190	0%
3	\$5,510	\$2,150	\$330	0%
4	\$8,830	\$2,970	\$640	11%
5	\$19,530	\$4,240	\$1,900	88%

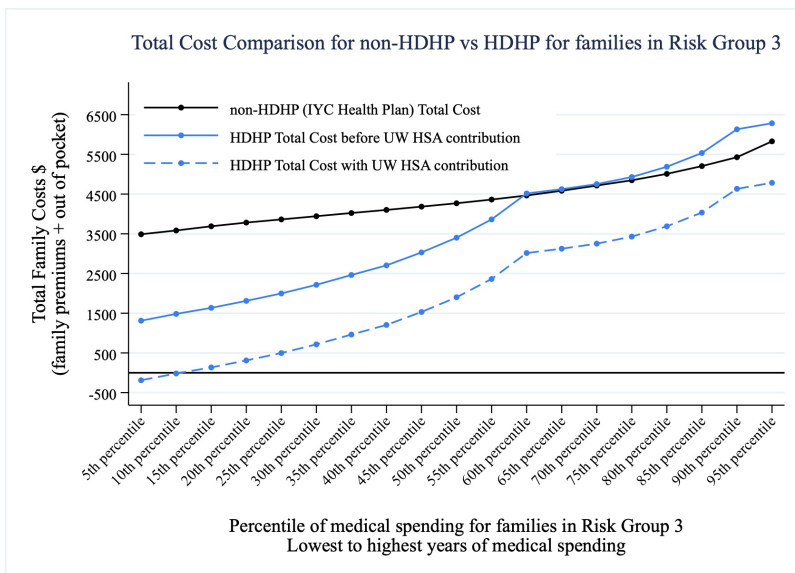
Note: This table was shown to the study participants to aid them in identifying participant risk levels based on prior year spending quintiles. The first column indicates the potential risk level for each participant, segmented into five distinct groups. Columns 2 to 4 display the median allowed spending for each risk level, providing insight into typical expenditures within these groups. The fifth column presents the probability of an individual belonging to each risk level, calculated based on the number of enrolled family members, the presence of chronic conditions, and age. These demographic details are gathered through the survey.

After participants selected their risk level, we presented them with three key analytical results: a detailed cost projection graph (Figure 4), a simplified cost projection graph (Figure 5), and the average overall yearly savings (or additional costs if negative) with the HDHP plan (Table 2). These cost comparisons between the two plan designs were projected using historical data to provide realistic spending scenarios. Report 2 provides additional details about this approach to cost-projection comparisons.

Figure 4: Detailed Graph Shown to Participants - Risk Level 3



(a) Single Coverage



(b) Family Coverage

Note: The figure illustrates total costs under the IYC Health Plan and HDHP for each risk level in family coverage. A higher line indicates higher costs for the family in that year. Families in each risk level have an equal probability of falling anywhere along these lines, with approximately 5% of families represented at each dot. The sample includes active employees and their dependents (spouses and children) enrolled in the State Group Health Insurance Program who were eligible to enroll in the HDHP option. The analysis uses the plan detail for 2023 and uses the sample period between 2015-2022.

Figure 4 illustrates the potential out-of-pocket costs a family might incur under each plan option, showing the graphs for the middle risk-level (Risk Level 3).² The black solid line represents total costs (including premiums) under the traditional non-HDHP plan. For the HDHP, two blue scenarios are displayed: the solid blue line indicates costs before HSA contributions, while the dotted blue line shows costs after accounting for HSA contributions. Each point along these lines represents a possible cost outcome, with individuals/families at this risk level having approximately equal probability (5%) of experiencing any of these spending levels. The graph demonstrates that the total cost of the HDHP after accounting for the state contributions to the HSA is lower at every spending percentile for middle-risk individuals/families with the HDHP.

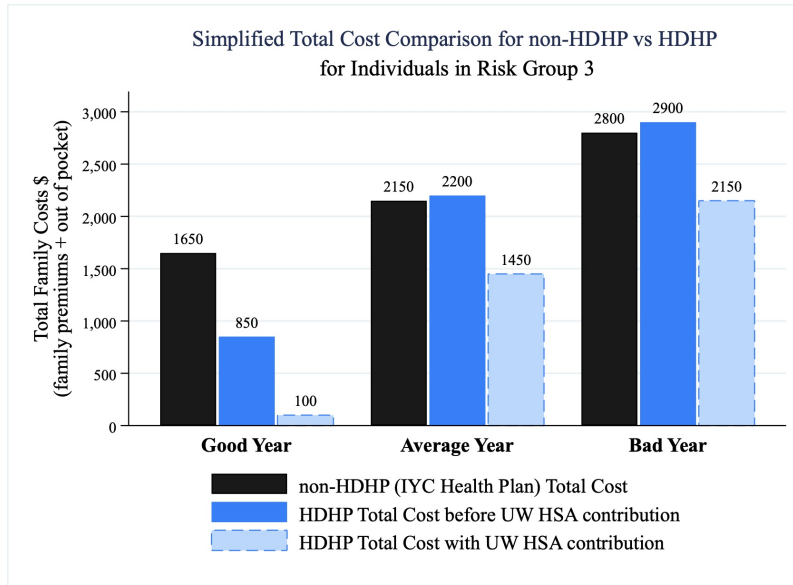
In addition to the detailed cost projection, we presented a simplified version for enhanced comprehension. Figure 5 provides a simpler breakdown categorizing healthcare utilization into three scenarios: “good years” representing the lowest 30% of medical costs, “average years” encompassing the middle 40%, and “bad years” reflecting the highest 30% of medical expenses. Both Figure 4 and Figure 5 demonstrate that participants consistently achieve better financial outcomes with the HDHP plan, regardless of whether their annual health needs are high or low. To make the information even more accessible, we also provided participants with a single average savings number for quick reference, with these numbers reported in Table 2.

Following the presentation of this cost information, participants in the graph treatment, like those in the other two groups, were asked questions about their perceptions of and intentions for enrollment in the different plan designs for 2024.

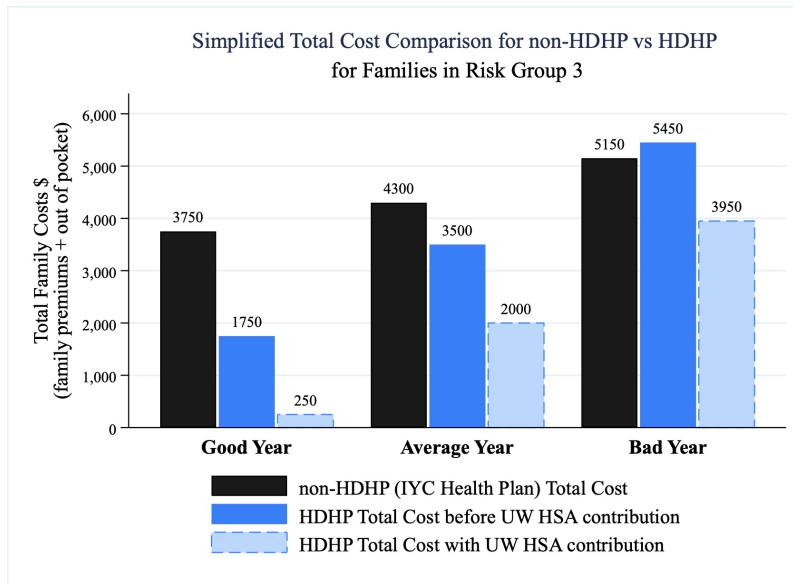
The survey questions asked of all participants included questions aimed at assessing comprehension and preferences regarding plan details and HSA account features. We also asked all participants to estimate how much more or less they would expect to spend the following year in the HDHP versus the non-HDHP option. Additionally, participants reported their perceived likelihood of reaching the annual out-of-pocket maximum and were given an open text field to explain the reasoning for their intended plan selection. The survey concluded with demographic questions covering gender, age, educational attainment, and key financial characteristics.

²The projections for other risk levels are available in Appendix Figures A.1, A.3, A.2, and A.4.

Figure 5: Simplified Graph Shown to Participants - Risk Level 3



(a) Single Coverage



(b) Family Coverage

Note: This figure displays potential out-of-pocket costs for families under non-HDHP and HDHP. Costs are categorized based on “good years” (lowest 30% of medical costs), “average years” (middle 40%), and “bad years” (highest 30%). This percentage was calculated based on the prior year’s healthcare costs for each risk level. The analysis was created for five risk levels, each for single and family coverage. The sample includes active employees and their dependents (spouses and children) enrolled in the State Group Health Insurance Program who were eligible to enroll in the HDHP option. The analysis uses the plan detail for 2023 and uses the sample period between 2015-2022.

Table 2: Total Out of Pocket costs under each Plan and the Savings with HDHP

Risk Level	Out of Pocket + Premium		With HSA	Total Savings
	Non-HDHP	HDHP	HDHP	with HDHP
<i>Family Coverage</i>				
Risk 1	\$4,030	\$2,750	\$1,250	\$2,780
Risk 2	\$4,200	\$3,190	\$1,690	\$2,510
Risk 3	\$4,410	\$3,580	\$2,080	\$2,330
Risk 4	\$4,730	\$4,240	\$2,740	\$1,990
Risk 5	\$5,380	\$5,150	\$3,650	\$1,730
<i>Single Coverage</i>				
Risk 1	\$1,690	\$1,060	\$310	\$1,380
Risk 2	\$1,960	\$1,630	\$880	\$1,080
Risk 3	\$2,220	\$1,980	\$1,230	\$990
Risk 4	\$2,450	\$2,230	\$1,480	\$970
Risk 5	\$2,690	\$2,510	\$1,760	\$930

Note: This table presents average annual savings with HDHPs across various coverage tiers and risk levels, based on prior years' out-of-pocket costs. For single coverage, premiums were \$115 for non-HDHP and \$42 for HDHP. For family coverage, premiums were \$286 for non-HDHP and \$107 for HDHP. Employer HSA contributions totaled \$750 for single and \$1,500 for family coverage. The amount of savings was also shown with the visual aids for the graph group, along with the figures shown above.

2 Primary Findings

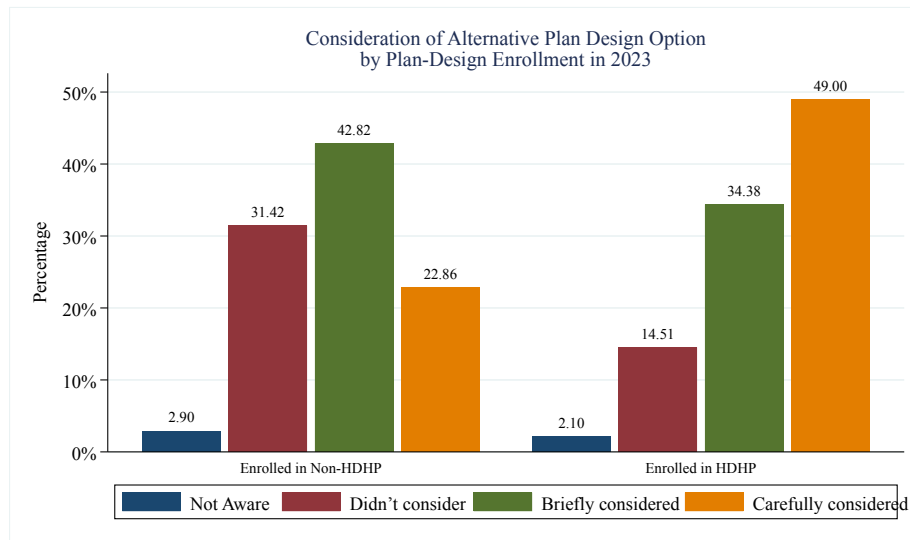
2.1 Survey Results

In this section, we present the primary findings from the experiment examining how different information formats affected participants' understanding of each plan and intended health plan choices during the survey.

2.1.1 Baseline Plan Consideration and Confidence

Before examining how decision aids affected participants' cost-benefit perceptions, we first establish baseline patterns of plan evaluation behavior and confidence levels among our sample prior to the study. Figure 6 presents the distribution of time participants reported spending evaluating alternative plan options in 2023 by their actual plan enrollment. The figure reveals substantial differences in evaluation patterns across plan types. Overall, 68% of participants in our sample either briefly considered or did not consider the alternative plan option at all, with this limited consideration varying significantly by enrolled plan. As shown in the figure, individuals enrolled

Figure 6: Consideration of Alternative Plan Design Option

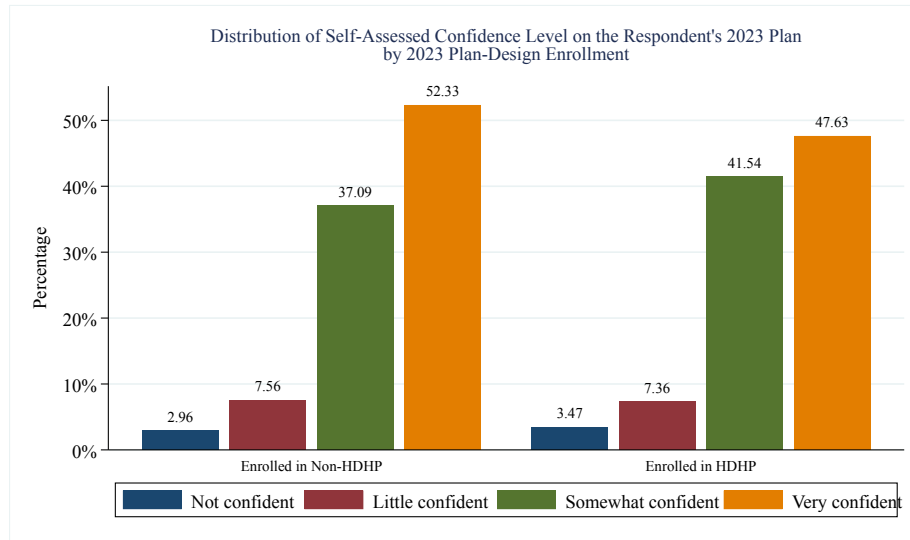


Note: This figure shows the distribution of self-reported consideration levels for alternative plan designs, disaggregated by participants' current plan enrollment. Participants were asked: "In the past, which best describes how much you have considered the other health insurance plan design option (that is, the non-HDHP vs. HDHP)?"

in non-HDHPs were notably less likely to engage in thorough plan comparison. Specifically, only 23% of non-HDHP enrollees reported carefully considering the alternative plan, compared to 49% of HDHP enrollees who engaged in careful consideration of other options.

Despite these marked differences in evaluation effort, self-assessed confidence levels remained remarkably similar across plan types, as presented in Figure 7. Approximately 90% of participants across both plan designs reported being somewhat or very confident that their current plan represents the best option for their circumstances. However, examining the intensity of this confidence reveals a modest difference: while 52% of non-HDHP enrollees expressed being "very confident" in their plan choice, 48% of HDHP enrollees reported this highest level of confidence. This difference becomes more intriguing when considering that non-HDHP enrollees spent much less time considering alternatives compared to HDHP enrollees, yet reported slightly higher levels of confidence in their plan selection. The disconnect between evaluation effort and decision confidence indicates that consumers may benefit from additional information to better assess the true costs and benefits of different health plan designs.

Figure 7: Distribution of Self-Assessed Confidence Level on Respondent's 2023 Plan



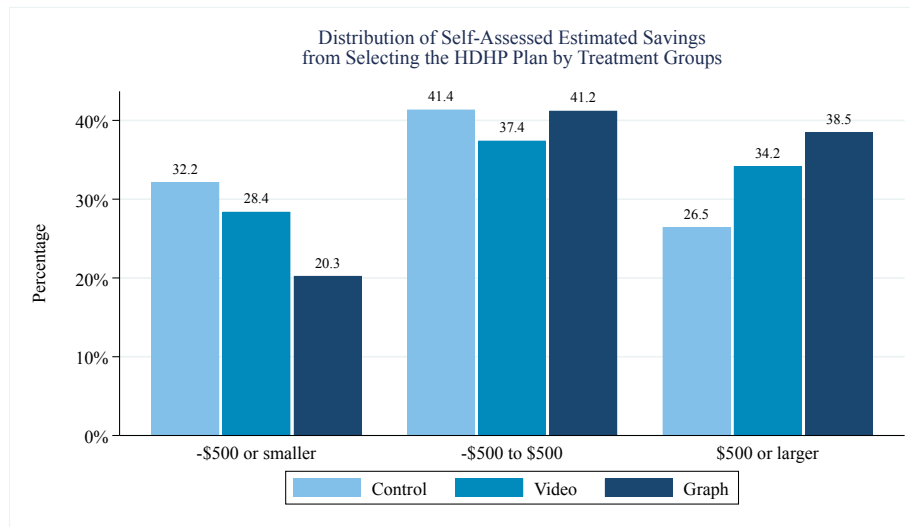
Note: This figure shows the distribution of self-assessed confidence levels in participants' 2023 plan choice by current plan enrollment. Participants were asked: "How confident are you that the plan design you have this year (2023) is the best option for you (your family)?"

2.1.2 Understanding of costs and benefits

We begin by examining how the decision aids affected participants' understanding of the costs and benefits of the high deductible plan. Following exposure to their respective information formats, participants were asked to indicate how much more or less they would spend in total in the following year with the HDHP versus non-HDHP designs. Figure 8 shows individuals' perceived savings from HDHP enrollment across treatment groups. While 26% of the control group believed the HDHP would generate savings exceeding \$500, this perception increased to 34% in the video group and 39% in the graph group, representing a 13 percentage point difference between the control and graph groups. Conversely, participants' expectations of losses showed the opposite pattern: while 32% of respondents in the control group expected to lose \$500 or more with the HDHP, this decreased to 28% for the video group and 20% for the graph group. This pattern suggests that the decision aids led to substantial shifts in participants' cost-benefit perceptions, with 12-13% of participants shifting their perception of which plan would end up costing their family more for the next year in the direction of recognizing savings with the HDHP. These shifts in perception remain statistically significant even when controlling for demographic characteristics.

We observed consistent patterns when examining participants' responses to direct comparative questions. During the study, participants were also asked to identify whether specific cost scenarios favored the HDHP or non-HDHP option, as shown in Figure 9. For "total amount I am likely to

Figure 8: Distribution of Self-Assessed Estimated Savings from HDHP Plan by Treatment Group



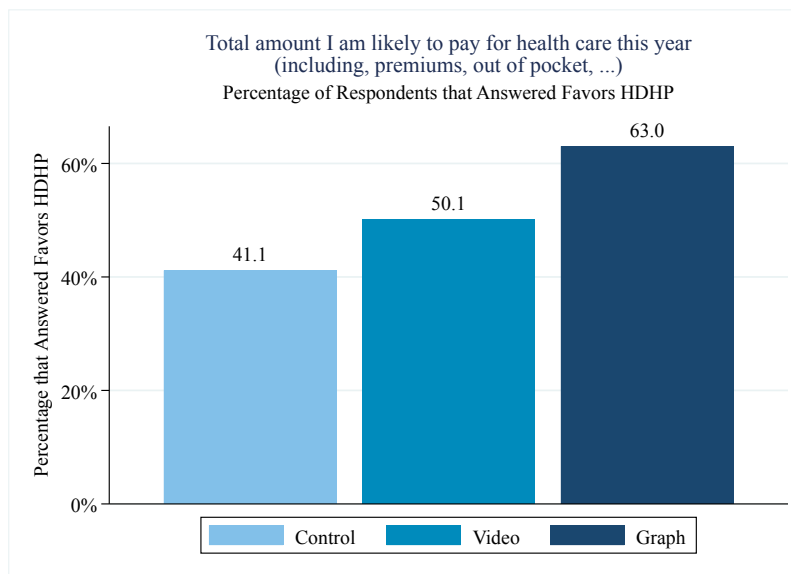
Note: This figure shows the perceived savings with HDHP by treatment group. “-\$500 or smaller” indicates that the individual thinks that enrolling in HDHP will lead them to spend more money. On the other hand, “\$500 or larger” indicates that the individual thinks that HDHP will save them more money.

pay this year (including premiums, out of pocket, HSA),” the percentage indicating this favors the HDHP increased from 41% in the control group to 50% in the video group and 63% in the graph group. For “worst case possibility of what I could pay this year,” responses favoring the HDHP rose from 23% in the control group to 30% and 36% in the video and graph groups, respectively. These findings mirror our savings estimate results, showing that decision aids influenced perceptions about the cost benefits of HDHP across multiple question formats, with some measures revealing even more substantial effects. We note that these results collectively highlight that exposure to the decision aids meaningfully shifted average perceptions, but did not lead the majority of participants to have perceptions of cost savings fully in line with statistical estimates.

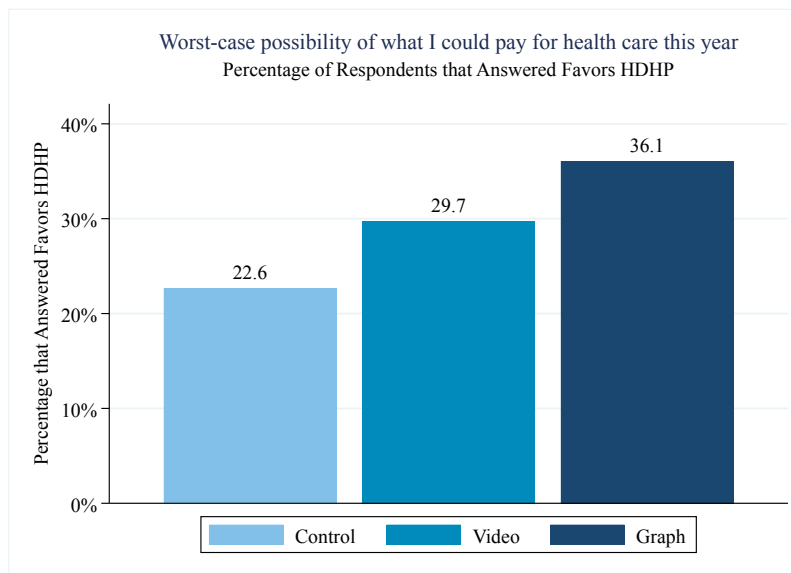
It is also important to note that the decision aid not only improved people’s understanding of the cost benefit of the HDHP but also improved people’s understanding of the details of the HSA. Figure 10 shows participants’ responses to statements about HSA features. Worry about HSA accessibility when switching plans or leaving UW dropped from 39% agreement in the control group to 31% and 30% in the video and graph groups. Concerns about unspent HSA funds decreased even more dramatically, from 33% agreement in the control group to just 17% in both treatment groups. This suggests the decision aids clarified not only the financial advantages of HDHP but also the practical aspects of HSA management.

Overall, these findings demonstrate that the decision aids successfully helped participants

Figure 9: Impact of Decision Aids on Perceived Cost Advantages of HDHP



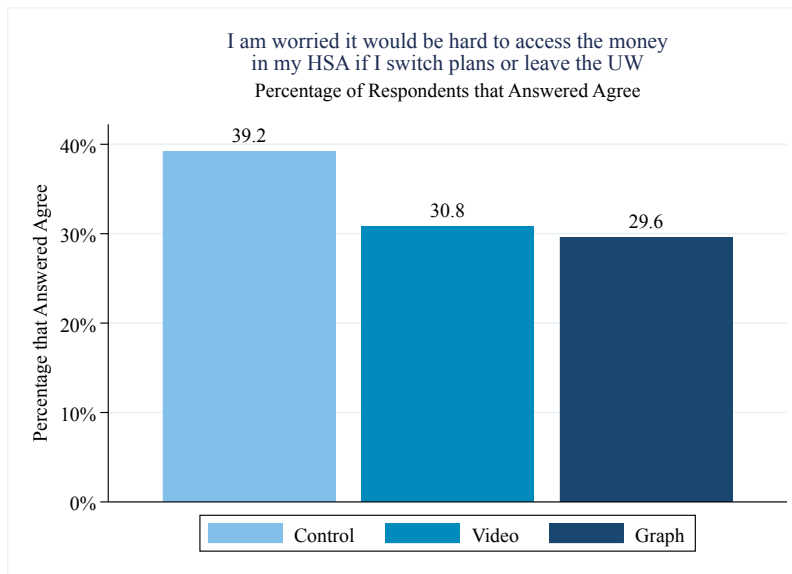
(a) Total amount I am likely to pay for health care this year



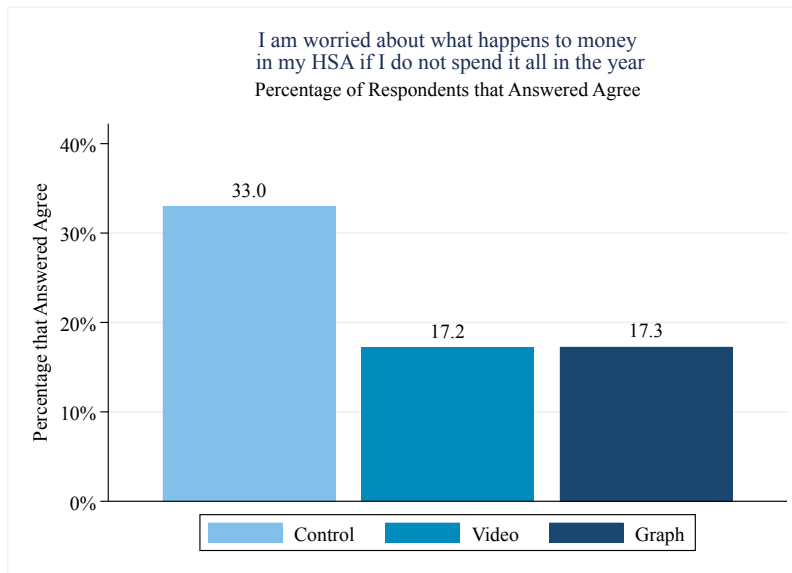
(b) Worst-case possibility of what I could pay for health care this year

Note: The figure presents responses to direct comparative questions regarding which health plan (HDHP vs. non-HDHP) is more favorable under two cost-related scenarios. The panel (a) focuses on total expected annual costs (including premiums, out-of-pocket spending, and HSA funds), while the panel (b) addresses worst-case spending possibilities.

Figure 10: Impact of Decision Aids on understanding of Health Savings Account



(a) Concerns About HSA Access After Plan Changes or Leaving UW



(b) Concerns About HSA Fund Rollover After Year-End

Note: The figure presents responses to direct comparative questions regarding which health plan (HDHP vs. non-HDHP) is more favorable under two cost-related scenarios. The panel (a) focuses on total expected annual costs (including premiums, out-of-pocket spending, and HSA funds), while the panel (b) addresses worst-case spending possibilities.

understand the costs, benefits, and details of the HDHP. Given these clear impacts on the understanding of the plan-design options, the next question is whether and how access to this information impacts intentions and actual enrollment decisions.

2.1.3 Plan-design choice intentions

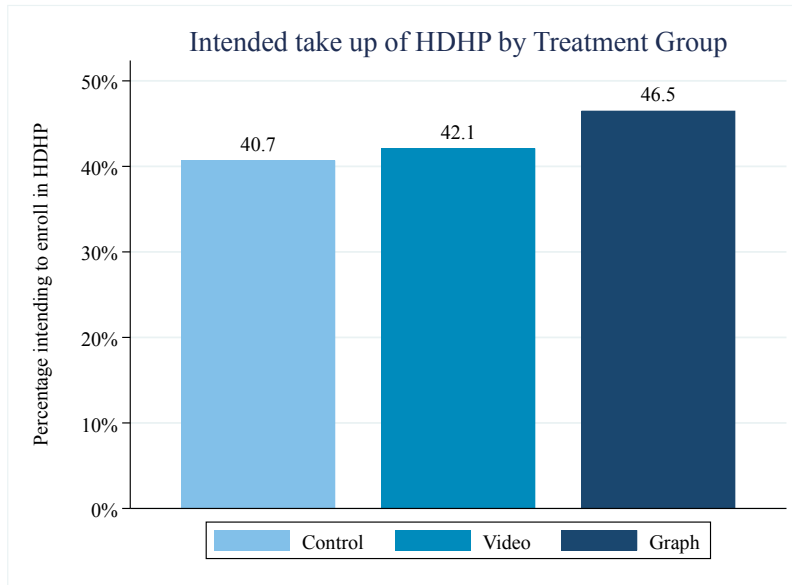
The survey asked participants which plan design they intended to choose during open enrollment. Figure 11 shows the intended HDHP selection rates across treatment groups. Forty-one percent of participants in the control group stated they intended to select the HDHP for 2024. The video treatment had a very small and statistically insignificant impact on intended enrollment. The more comprehensive decision aid in the graph treatment led to a 6 percentage point increase in intended HDHP enrollment, with an estimated 95% confidence interval ranging from 3% to 9%.

These enrollment effects are modest compared to the more significant impacts observed on participants' understanding of the HDHP's relative costs and features. The improved understanding of the lower total costs with the HDHP did not translate strongly into intentions to change plan choice.

To investigate whether this pattern of limited enrollment response holds uniformly across subgroups or varies by participant characteristics, we examine how the impact of the treatments varies across key demographic and baseline factors. The survey collected information on respondents' financial flexibility, educational background, and age to explore these subgroup effects.

Figure 12a shows how the treatment impacted people differently by their level of financial liquidity. We measured financial liquidity by respondents' ability to come up with \$2,000 if an unexpected need arose within the next month. Eighty-two percent of respondents said that they probably or certainly could come up with \$2,000 in an emergency and are labeled as having "high liquidity". The impact of the treatments for the "high liquidity" group was similar to and a little clearer overall than for the full sample. By contrast, for the 18% of respondents reporting less ability to come up with \$2,000 for an unexpected need ("low liquidity") we observe that a) the percentage intending to purchase the HDHP across all groups is lower than for the high-liquidity group (e.g., 32% vs. 43% in control) and b) the treatments actually had the opposite effect, and modestly decreased intended enrollment in the HDHP. This pattern could be attributed to the fact that premium savings and state HSA contributions accrue monthly, while larger out-of-pocket shocks can happen early in the year with the HDHP before sufficient savings have been generated to cover those costs. Individuals with lower liquidity may also recognize greater challenges in budgeting and setting aside premium savings for covering the additional out-of-pocket costs of the HDHP. For individuals with limited financial flexibility, a better understanding of HDHP benefits through our

Figure 11: High Deductible Take up by Treatment Group



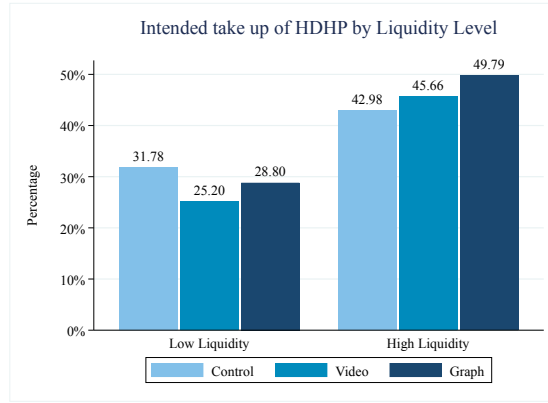
Note: This figure shows the percentage of HDHP take-up during the experiment. After the treatment, we asked which plan the participants intend to enroll in for 2024.

decision aids might highlight this potential financial burden, which could have discouraged plan switching despite the HDHP's total-annual-cost advantage.

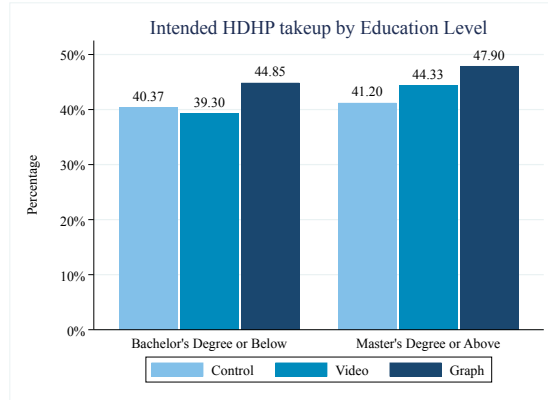
Figure 12b shows patterns by educational attainment. Education levels are high among UW System employees, so for this analysis, we compare the 41% of respondents with a Bachelor's degree or less to the 58% with Graduate degrees. Overall, intended enrollment rates in the HDHP are similar between these educational-attainment groups for respondents in the control group. The decision aids increased intended enrollment in the HDHP somewhat more in the higher-education group, though for all groups the impacts remain modest and in line with the overall results.

The enrollment-pattern differences are most pronounced when examining intended HDHP selection by age group. Figure 12c displays intended enrollment across age groups. Among control-group participants, we see the expected strong enrollment gradient by age, with 52% of 25-34 year olds intending to enroll in the HDHP compared with only 35% of the 45-64 year olds. The treatment effects of the decision aids, especially the most comprehensive graph group, were close to zero in the youngest group and stronger in the two older groups. As a consequence, the age gradient in intended HDHP enrollment is more muted for those exposed to the most comprehensive decision aid.

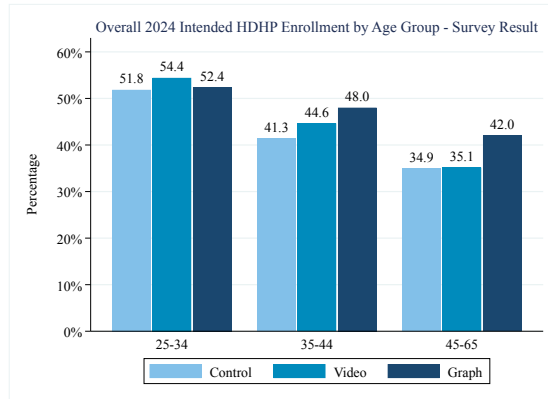
Figure 12: Intended HDHP Take-up by Socioeconomic and Demographic Factors



(a) Liquidity



(b) Education



(c) Age

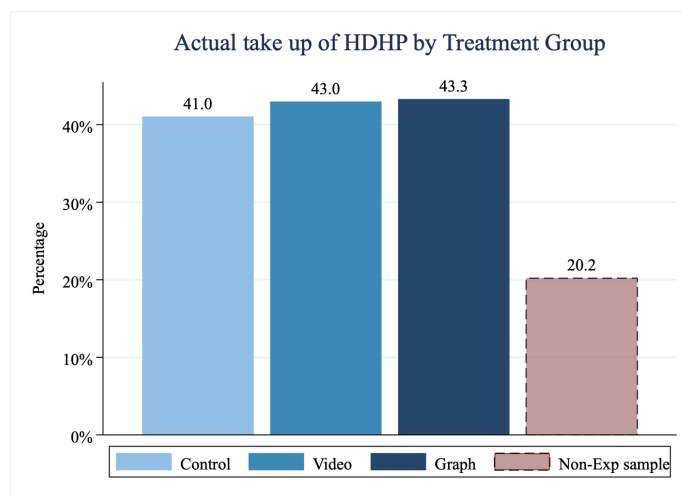
Note: Each panel displays intended HDHP take-up by treatment group across different subgroups. Liquidity is measured by whether participants could access \$2,000 within a month. For education, we distinguish participants by whether they hold a master's degree or higher, given that most respondents in our sample are highly educated. The third panel shows variation by age category.

Despite these meaningful differences across subgroups, the overall pattern remains consistent: even among the most responsive populations, the impacts of the decision aid on intended enrollment decisions are relatively moderate compared to the substantial improvements in understanding of the HDHP plan design observed across all treatment groups.

2.2 Enrollment Outcomes

Our analysis thus far has focused on treatment effects on participants’ understanding of HDHP features and their stated enrollment intentions measured during the survey. We now examine whether these effects translated into actual enrollment behavior. Through a collaboration between the UW Madison academic team, Universities of Wisconsin Human Resources and ETF, we were able to embed an anonymized indicator of the treatment arm for participants in the study that could be linked to enrollment and claims records in the Truven database.³ This allows us to report on how the treatment exposure impacted actual enrollment, but it is not possible to do the range of subsample splits that we could do with the survey data on intentions for enrollment.

Figure 13: Actual take-up of HDHP by Treatment Group



Note: This figure shows the percentage of HDHP take-up during the experiment. After the treatment, we asked which plan the participants intend to enroll in for 2024.

The transition from intended to actual enrollment reveals a further attenuation of treatment effects. While we observed a 2% treatment effect for the video group and 6% for the graph group

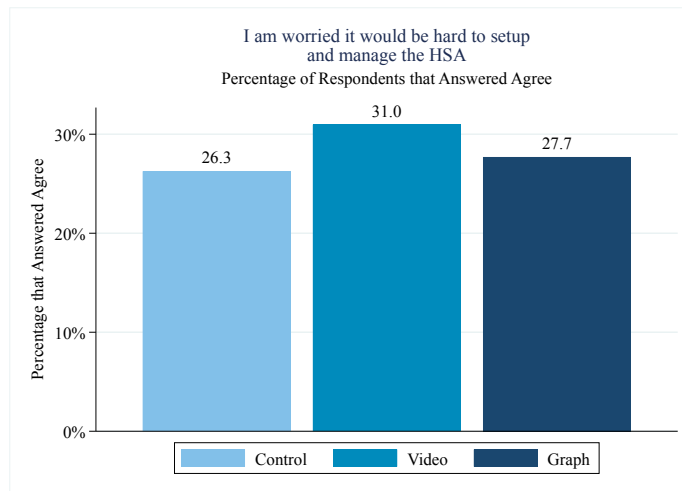
³No data from the survey was linked to Truven records other than an indicator of treatment arm, which allows us to preserve anonymity and privacy for subjects. Subjects in the study were informed about this linking process and had the option to consent to allowing this link or declining, with 97% of participants consenting to the link.

on intended enrollment during the survey, Figure 13 shows that these effects diminished in actual enrollment decisions. HDHP enrollment increased from 41% in the control group to 43% in both treatment groups. These increases are not statistically significantly different from zero. We note that for the control group, the actual enrollment share in HDHP perfectly matches the 41% reporting intention to enroll in the HDHP in the survey, suggesting that the survey provided a reliable measure of intentions. The fact that the treatment effects of the decision aids on enrollment were more modest than the effects on intentions reported in the survey suggests there was an attenuation of the impact of the decision aid information between the survey participation and actual enrollment decisions.

2.3 Disconnection between Understanding and Enrollment

So far, we have observed noticeable improvements in participants' understanding of HDHP cost benefits and plan details, yet these gains translated into only modest enrollment effects. What could explain this disconnect between enhanced understanding and limited behavioral change? While multiple factors likely contribute, responses from our study offer a few initial insights.

Figure 14: Barriers to HSA Adoption



Note: This figure shows the percentage of individuals who reported concerns about the difficulty of setting up and managing an HSA, by treatment group.

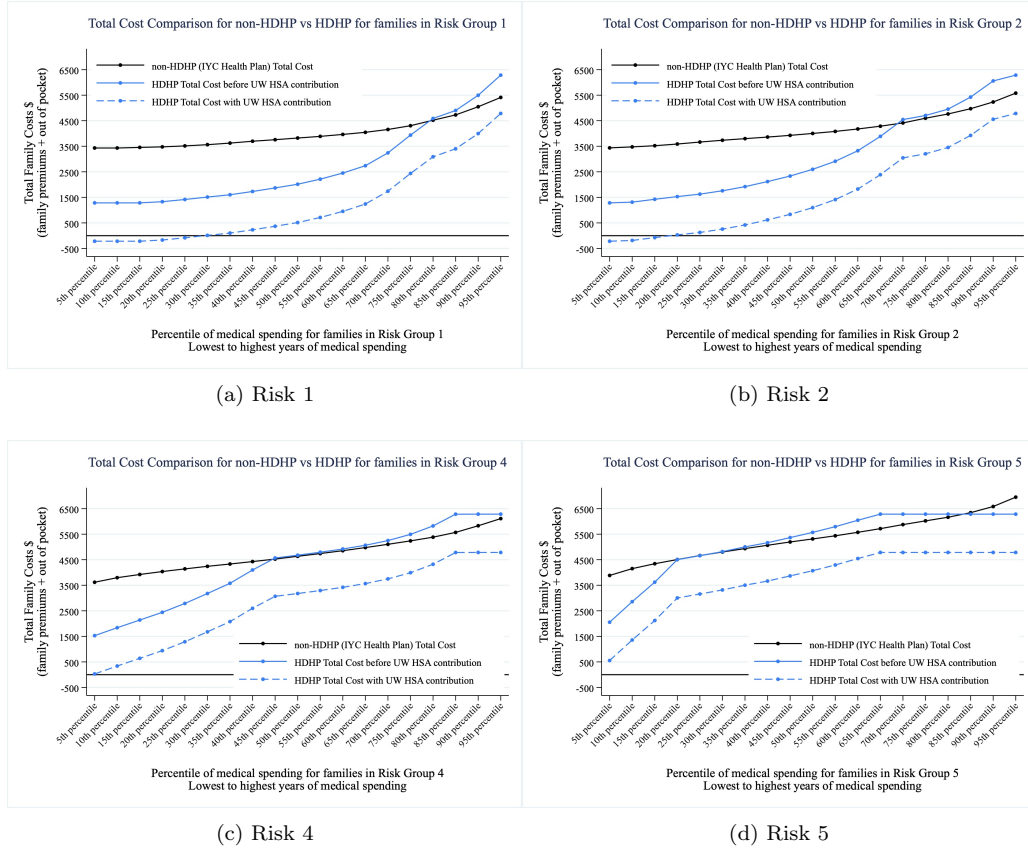
Figure 14 shows the percentage of participants who expressed concerns about HSA setup and management by treatment group. While 26% of control group participants agreed with the statement "I am worried it would be hard to set up and manage the HSA," this figure increased to 31% for the video group and 28% for the graph group. This pattern suggests that understanding the cost

benefits led participants to consider the full scope of HDHP enrollment, including HSA management, which they perceived as an unwelcome burden despite the financial advantages. Investigating free responses asking participants why they chose the plan they did, we also observe a number of comments that support this point, such as “I do not want to manage an HSA”.

The other pattern we detect in free responses in the survey suggests a potentially important form of inertia. We see comments from those in the treatment groups who enrolled in the IYC Health Plan, such as: “because it is what we have been doing for years and I am nervous to switch it up,” and “what I am used to and know the most about.” These responses suggest that the greater familiarity with the IYC Health Plan may make participants nervous about trying the HDHP, even if they absorb information that it is likely to save them money overall for the year. This possibility suggests value in finding ways to help employees to better understand the tradeoffs between the plan-design options when they are initially making health-insurance enrollment decisions as new employees, while neither plan design has this type of “familiarity advantage”.

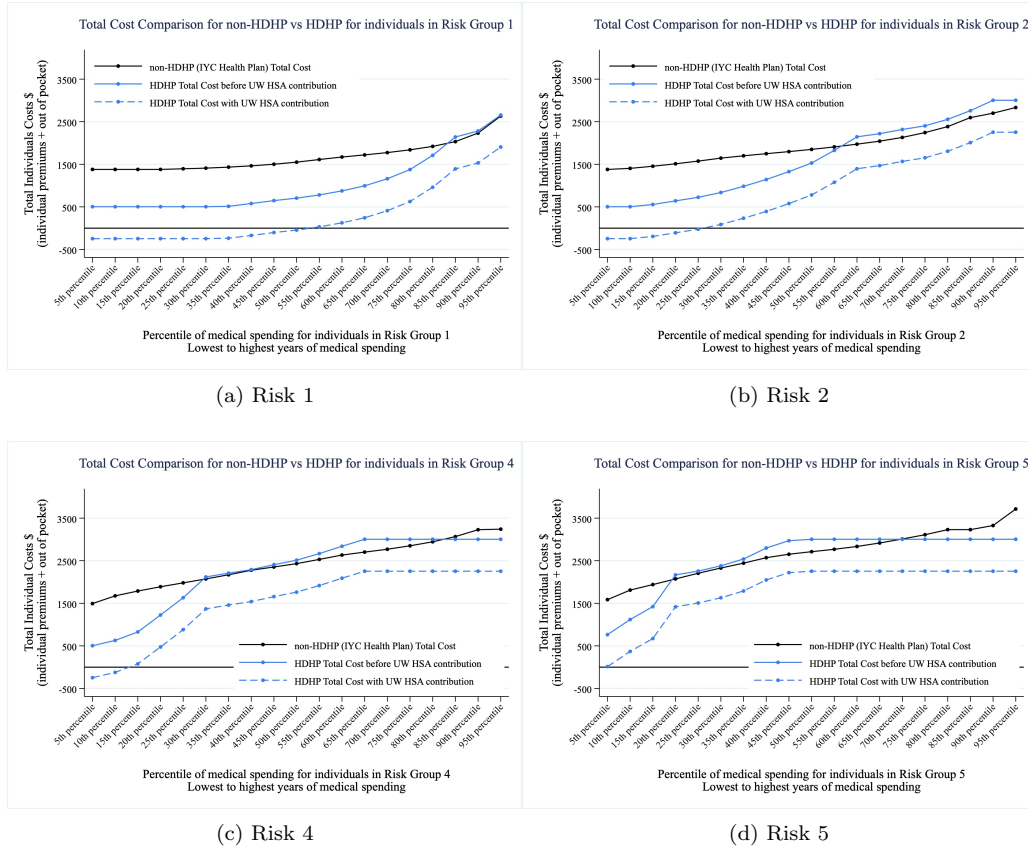
Appendix

Figure A.1: Family Coverage: Detail Cost Projection Graph



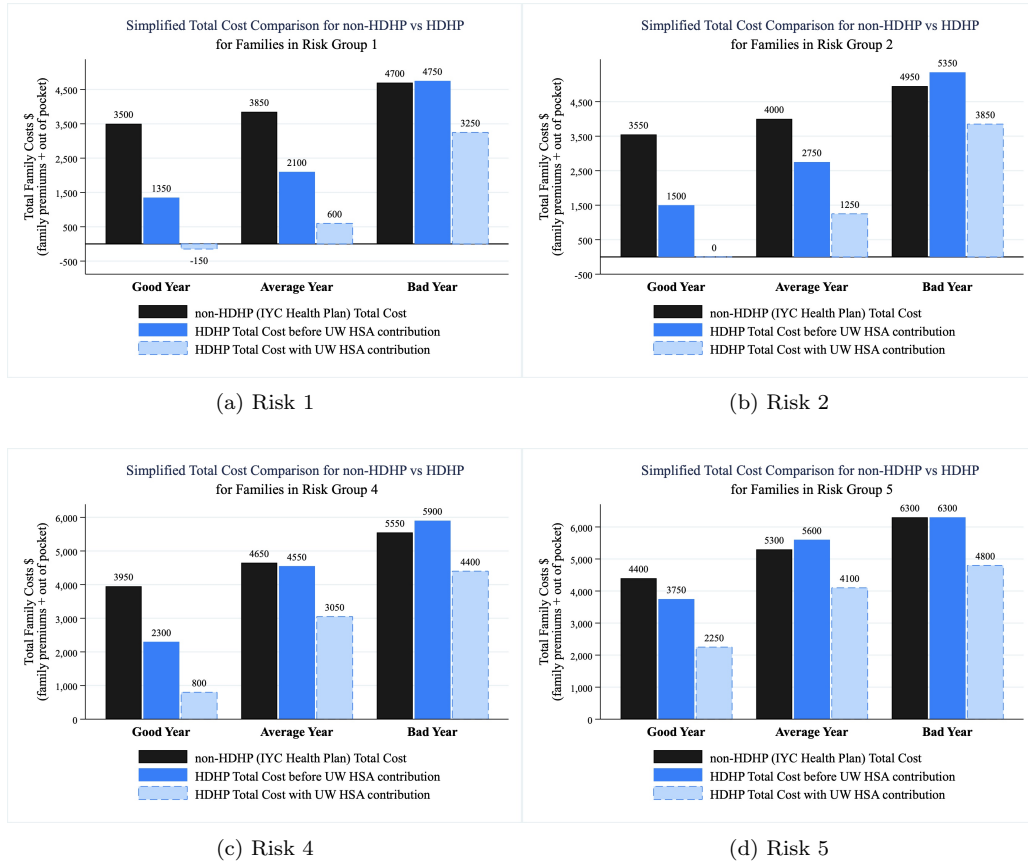
Note: This figure shows potential out-of-pocket costs for families under non-HDHP and HDHP. The black line illustrates total costs under the non-HDHP, while the blue lines represent HDHP costs, with the solid line showing costs before HSA contributions and the dotted line after. Each point along these lines represents a possible cost outcome, with each family having approximately a 5% chance of incurring costs at that point based on their healthcare utilization. The sample includes active employees and their dependents (spouses and children) enrolled in the State Group Health Insurance Program who were eligible to enroll in the HDHP option. The analysis uses the plan detail for 2023 and uses the sample period between 2015-2022.

Figure A.2: Single Coverage: Detail Cost Projection Graph



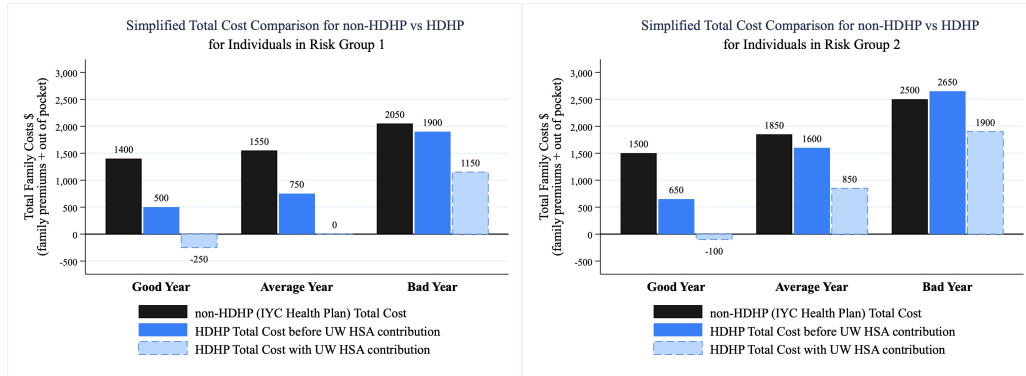
Note: This figure shows potential out-of-pocket costs for singles under non-HDHP and HDHP. The black line illustrates total costs under the non-HDHP, while the blue lines represent HDHP costs, with the solid line showing costs before HSA contributions and the dotted line after. Each point along these lines represents a possible cost outcome, with each individual having approximately a 5% chance of incurring costs at that point based on their healthcare utilization. The sample includes active employees and their dependents (spouses and children) enrolled in the State Group Health Insurance Program who were eligible to enroll in the HDHP option. The analysis uses the plan detail for 2023 and uses the sample period between 2015-2022.

Figure A.3: Family Coverage: Simplified Cost Projection Graph



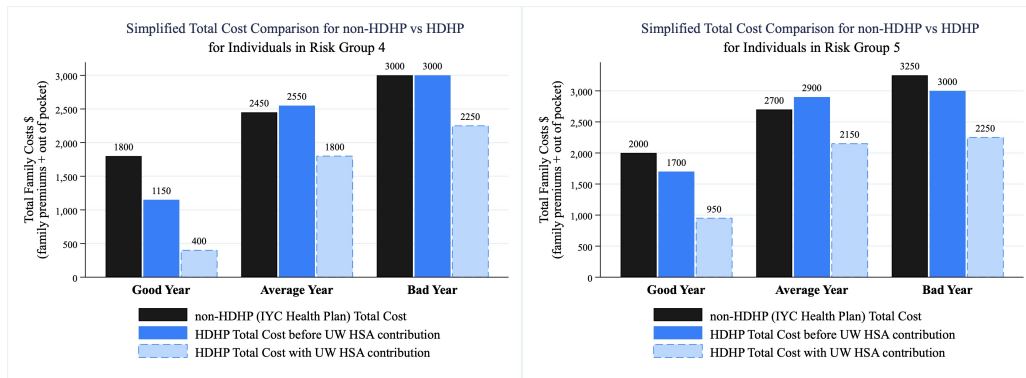
Note: This figure displays potential out-of-pocket costs for families under non-HDHP and HDHP. Costs are categorized based on “good years” (lowest 30% of medical costs), “average years” (middle 40%), and “bad years” (highest 30%). This percentage was calculated based on the prior year’s healthcare costs for each risk level. The analysis was created for five risk levels each for family coverage. The sample includes active employees and their dependents (spouses and children) enrolled in the State Group Health Insurance Program who were eligible to enroll in the HDHP option. The analysis uses the plan detail for 2023 and uses the sample period between 2015-2022.

Figure A.4: Single Coverage: Simplified Cost Projection Graph



(a) Single Image 1

(b) Single Image 2



(c) Single Image 3

(d) Single Image 4

Note: This figure displays potential out-of-pocket costs for individuals under non-HDHP and HDHP. Costs are categorized based on “good years” (lowest 30% of medical costs), “average years” (middle 40%), and “bad years” (highest 30%). This percentage was calculated based on the prior year’s healthcare costs for each risk level. The analysis was created for five risk levels each for single coverage. The sample includes active employees and their dependents (spouses and children) enrolled in the State Group Health Insurance Program who were eligible to enroll in the HDHP option. The analysis uses the plan detail for 2023 and uses the sample period between 2015-2022.