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High Deductible Health Plans: What's Working and What Needs Improvement

2017 MHMC & MMA SYMPOSIUM

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Employee Benefit Research Institute
Washington, DC
Percent of Private or Employment-Based Health Insurance Market Enrolled in CDHP, 2016

Private Health Insurance Market
- AHIP: 10% (20 mil.)
- NHIS: 15% (32 mil.)
- EBRI: 14% (29 mil.)

Employment-Based Market
- KFF: 29% (48 mil.)
- Mercer: 29% (48 mil.)

Note: AHIP & NHIS estimates are HSA only. EBRI, KFF, & Mercer estimates are HSA & HRA.
HSA & HRA Offer Rates, 2005-2016

Source: Kaiser Family Foundation.
Percentage of Employers Offering an HSA or HRA, by Firm Size, 2016

- Total: 28%
- 3-199 workers: 27%
- 200 or more workers: 51%

Source: Kaiser Family Foundation.

Source: Mercer’s National Survey of Employer-Sponsored Health Plans.
Plan Offerings Among Maine Health Management Coalition Members

HSA/HRA as the “Only Plan Option” in Employment-Based Market on the Rise, 2012-2016 (aka Full Replacement Plan)

HSA Assets Reached $37 billion in 2016: 20 million Accounts

Source: Devenir.
# HSA Expansion Proposals

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Roth HSAs</td>
<td>Raise HSA contribution limit</td>
<td>Increase contribution limits</td>
</tr>
<tr>
<td>- Fed or state govt deposit funds to purchase health insurance and cover cost sharing</td>
<td>to maximum deductible amount</td>
<td>to max OOP.</td>
</tr>
<tr>
<td>- Double tax advantage - build up and distributions are tax free</td>
<td>- Expand access to HSAs for certain groups (e.g Tricare)</td>
<td>- Reduce excise tax on non-qualified distributions to 10%</td>
</tr>
<tr>
<td>- Contributions counted as taxable income</td>
<td>- Spouse catch-up contributions to same HSA</td>
<td>- Use HSA for expenses incurred prior to establishment of HSA</td>
</tr>
<tr>
<td>- Individual contributions limited to $5,000 + govt contributions</td>
<td>- Reimbursement for expenses incurred within 60 days of HSA establishment</td>
<td>- Easier for spouses to make catch-up contributions</td>
</tr>
<tr>
<td>- Tax-deductible HSA contributions are phased out.</td>
<td></td>
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</tbody>
</table>

All proposals are silent on enhancing HDHP
The EBRI/Greenwald & Associates Consumer Engagement in Healthcare Survey was conducted online using a panel. Oversample records were pre-screened using an online omnibus study.

**Eligibility:** Americans age 21 to 64 with private health insurance coverage

**Sample Groups:**
1. Traditional sample n=1,490
2. CDHP sample* n=1,285 (259 – national; 1,026 – oversample)
3. HDHP sample* n=815 (255 – national; 560 – oversample)

*Groups 2 and 3 are composed of national sample records and oversample records

**Weighting:** The national sample is weighted by gender, age, income, ethnicity, education and region to reflect the actual proportions in the population. The CDHP and HDHP samples are weighted by gender, age, income, and ethnicity.

**Survey Dates:** August 4th – August 21th, 2015

**Survey Length:** 12 minutes (mean)

**Response rate:** 34.4%
## Cost-Conscious Decision Making, by Type of Health Plan, 2015

<table>
<thead>
<tr>
<th>Activity</th>
<th>Traditional</th>
<th>HDHP</th>
<th>CDHP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checked whether plan would cover care</td>
<td>46%</td>
<td>55%*</td>
<td>54%*</td>
</tr>
<tr>
<td>Asked for generic drug instead of brand name drug</td>
<td>36%</td>
<td>47%*</td>
<td>52%*</td>
</tr>
<tr>
<td>Talked to doctor about prescription options and costs</td>
<td>30%</td>
<td>41%*</td>
<td>39%*</td>
</tr>
<tr>
<td>Asked doctor to recommend less costly prescription drug</td>
<td>29%</td>
<td>40%*</td>
<td>39%*</td>
</tr>
<tr>
<td>Talked to doctor about treatment options and costs</td>
<td>31%</td>
<td>40%*</td>
<td>36%*</td>
</tr>
<tr>
<td>Developed budget to manage health care expenses</td>
<td>21%</td>
<td>28%*</td>
<td>27%*</td>
</tr>
<tr>
<td>Used online cost tracking tool provided by health plan</td>
<td>18%</td>
<td>23%*</td>
<td>27%*</td>
</tr>
</tbody>
</table>

Informed Decision Making for Health Plan Choice, by Type of Health Plan, 2015

Individual Participates in Wellness Program Offered by Employer, Among Those Offered a Wellness Program, by Type of Health Plan, 2015

Self-Reported Health Status, by Plan Type, 2015

Percentage Currently Smoking Cigarettes, by Plan Type, 2015

CDHP Enrollees Older than Traditional Plan Enrollees, 2015

CDHP Enrollees Higher Income than Traditional Plan Enrollees, 2015

CDHP Enrollees More Educated than Traditional Plan Enrollees, 2015

EBRIs
Center for Research on Health Benefits Innovation

*Helping employers assess the impact of plan design—*with the goal of increasing consumer engagement—*on cost, quality, and access to health care*
Research Partners

- American Express
- Ameriprise
- Aon Hewitt
- Blue Cross Blue Shield Association
- Boeing
- Deseret Mutual
- Federal Reserve Employee Benefits System
- General Mills
- Healthways
- IBM
- JP Morgan Chase
- Kaiser Permanente
- Mercer
- Pfizer
Findings from the Longest-Ever Study of a Full-Replacement HSA-Eligible Health Plan

- A large Midwestern employer replaced PPOs with an HSA-eligible plan on Jan. 1, 2007
- Choice of two deductibles:
  - $1,250 (individual)/$2,500 (family)
  - $2,500 (individual)/$4,300 (family)
- Pharmacy and medical administrative claims data and insurance enrollment information obtained from a large employer
- Data used from Jan. 1, 2006 – Dec. 31, 2010
- Deductibles and HSA contributions unchanged over 5-year period
- Between 10,000 & 18,000 continuously enrolled during the 5-year period
- Data from second employer used to create a comparison group
Topics Addressed

"Consumer-Directed Health Plans Reduce The Long-Term Use Of Outpatient Physician Visits And Prescription Drugs." *Health Affairs*, June 2013.


Summary of Findings – Use of Health Care Services

- Outpatient office visits fell in all years
- Prescription drug fills fell in all years
- Both generic and brand name use fell
  - Brand name fell more than generics, so generic dispensing rate increased
- Medication adherence fell for hypertension, dyslipidemia and diabetes in year 1
  - May be rebounding in year 2 for dyslipidemia and diabetes
  - No effect on Asthma/COPD or depression
- Emergency department visits higher in years 3 & 4
HSA Reduced Rx Use: Number of Prescription Fills, by Group, 2006-2010

Proportion of Population With Various Chronic Conditions that Adherent to Medication

Proportion of Population With Various Chronic Conditions that Adherent to Medication

HSA Increased ER Use: Number of Emergency Room Visits (Per 1,000), by Group, 2006-2010

Summary of Findings – Quality Measures

Preventive services not subject to deductible

• Office visits fell in years 1 and 4
• Breast cancer screening fell in year 1, higher in year 4
• Cervical cancer screening fell in years 1 and 4
• Colorectal cancer screening lower in all years

Other services

• Medication monitoring fell
• Higher use of imaging for back pain & antibiotics for bronchitis
• Lower LDL testing for diabetics
• No impact on HbA1c testing for diabetics
Estimates of the Impact of the HSA Plan on Health Spending Per Person, by Year

Statistical significance denoted as follows: *** p<0.01; ** p<0.05; * p<0.10.

Summary of Findings – Spending

• Spending lower in all 4 years relative to 2006 baseline
  • 25% lower in year 1
  • 6% lower in year 4
• Year 1, spending reductions across the board
• Year 4, spending reductions limited to Rx and lab
<table>
<thead>
<tr>
<th>Cost Measure</th>
<th>2007</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total %</td>
<td>-25%***</td>
<td>-6%*</td>
</tr>
<tr>
<td>Inpatient</td>
<td>-33%</td>
<td>11%</td>
</tr>
<tr>
<td>Emergency Dept.</td>
<td>-17%*</td>
<td>5%</td>
</tr>
<tr>
<td>Outpatient</td>
<td>-13%*</td>
<td>-12%</td>
</tr>
<tr>
<td>Office visit</td>
<td>-14%***</td>
<td>5%</td>
</tr>
<tr>
<td>SA/MH</td>
<td>-22%**</td>
<td>0%</td>
</tr>
<tr>
<td>Laboratory</td>
<td>-36%***</td>
<td>-19%*</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>-32%***</td>
<td>-20%***</td>
</tr>
</tbody>
</table>

Statistical significance denoted as follows: *** p<0.01; ** p<0.05; * p<0.10.

### Estimates of the Impact of the HSA Plan on Pharmacy Spending, by 2006 Spending Quintile and Year

<table>
<thead>
<tr>
<th>2006 Spending Quintile</th>
<th>2007</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (lowest spending)</td>
<td>-47%***</td>
<td>-41%***</td>
</tr>
<tr>
<td>2</td>
<td>-44%***</td>
<td>-25%*</td>
</tr>
<tr>
<td>3</td>
<td>-40%***</td>
<td>-21%*</td>
</tr>
<tr>
<td>4</td>
<td>-42%***</td>
<td>-30%***</td>
</tr>
<tr>
<td>5 (highest spending)</td>
<td>-24%***</td>
<td>-5%</td>
</tr>
</tbody>
</table>

Statistical significance denoted as follows: *** p<0.01; ** p<0.05; * p<0.10.

## Estimates of the Impact of the HSA Plan on Total Spending, by 2006 Spending Quintile and Year

<table>
<thead>
<tr>
<th>2006 Spending Quintile</th>
<th>2007</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (lowest spending)</td>
<td>-12%</td>
<td>9%</td>
</tr>
<tr>
<td>2</td>
<td>-14%</td>
<td>-1%</td>
</tr>
<tr>
<td>3</td>
<td>-29%***</td>
<td>-15%**</td>
</tr>
<tr>
<td>4</td>
<td>-31%***</td>
<td>-9%</td>
</tr>
<tr>
<td>5 (highest spending)</td>
<td>-15%*</td>
<td>-1%</td>
</tr>
</tbody>
</table>

Statistical significance denoted as follows: *** p<0.01; ** p<0.05; * p<0.10.

IMPACT OF HSA-ELIGIBLE HEALTH PLAN AND INCOME ON HEALTH SERVICES UTILIZATION
Background

• Although the topic of **price elasticity of demand for healthcare** has been well-studied, little work has examined **income elasticity of demand for healthcare**
• Maybe because datasets often capture changes in health services “prices” (i.e., patient cost-sharing), but within-person income variation is uncommon
• Multiple sources of endogeneity/confounding
• Perhaps also because income is not usually considered a policy lever
• If healthcare is a necessity, then its demand should be income inelastic
• If healthcare is free (e.g., zero patient cost-sharing), income shouldn’t affect demand except through opportunity cost of patient time
• Under high cost-sharing, income may have a more profound impact
• Therefore the undesirable effects of high deductibles (i.e., underutilization of high value care) may differ according to income
Research Questions

- What is the impact of CDHP on health services utilization?
- Does the impact of CDHP on health services utilization vary by income?
- Are lower income employees more likely to skimp on high valued services?
- If so, what are the longer term implications for complications, and higher health spending?
- Does income affect healthcare use independent of coverage generosity?
- Can a better plan design be designed that addresses income disparities?
Data

- We used enrollment and health insurance claims data from a large firm that also provided annual income information for all of its employees.
- We examined 150,000 to 200,000 full-time active members and their dependents (age<65), enrolled for 2 to 6 full calendar years between 2009-2014 resulting in an unbalanced panel dataset of over 800,000 observations.
- Included were members in either a preferred provider organization (PPO) plan or an HSA-eligible health plan.
- In 2013, the employer encouraged enrollment in the HSA plan via low premiums, which led to an increase from 3% to 23% percent of the sample, but enrollment was still voluntary (i.e., not full-replacement).
Health Plan Enrollment, by Year, 2009-2014

HSA-Eligible Health Plan  PPO

<table>
<thead>
<tr>
<th>Year</th>
<th>HSA-Eligible</th>
<th>PPO</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>98%</td>
<td>2%</td>
</tr>
<tr>
<td>2010</td>
<td>98%</td>
<td>2%</td>
</tr>
<tr>
<td>2011</td>
<td>97%</td>
<td>3%</td>
</tr>
<tr>
<td>2012</td>
<td>97%</td>
<td>3%</td>
</tr>
<tr>
<td>2013</td>
<td>74%</td>
<td>26%</td>
</tr>
<tr>
<td>2014</td>
<td>72%</td>
<td>28%</td>
</tr>
</tbody>
</table>
Distribution of Annual Earnings, 2014

- Under $50,000: 7%
- $50,000-$74,999: 15%
- $75,000-$99,999: 29%
- $100,000-$124,999: 22%
- $125,000 or more: 28%
Impact of HSA-Eligible Health Plan on Office Visits, by Employee Income

Source: EBRI analysis of administrative claims data.
*** p<0.01, ** p<0.05, * p<0.10
Impact of HSA-Eligible Health Plan on Prescription Drug Fills, by Employee Income

Source: EBRI analysis of administrative claims data.

*** p<0.01, ** p<0.05, * p<0.10
Impact of HSA-Eligible Health Plan on Likelihood of Receiving Preventive Services, by Employee Income (Per 100 Individuals)

Source: EBRI analysis of administrative claims data.

*** p<0.01, ** p<0.05, * p<0.10
Impact of HSA-Eligible Health Plan on Likelihood of Receiving Preventive Cancer Screenings, by Employee Income

Source: EBRI analysis of administrative claims data.

*** p<0.01, ** p<0.05, * p<0.10
Impact of HSA-Eligible Health Plan on Number of Inpatient Admissions and Emergency Department Visits, by Employee Income

Source: EBRI analysis of administrative claims data.

*** p<0.01, ** p<0.05, * p<0.10
Other Findings

Health care services unaffected by enrollment in HSA-eligible health plan, both overall and by worker income

• Inpatient hospital days
• Avoidable emergency department visits
• Pneumonia vaccinations
• HPV vaccinations
• HbA1c testing for individuals with diabetes
Learning Effect & Implications

• When 2014 claims data were included in the analysis, the positive effects on emergency department use and inpatient admissions for individuals with income below $50,000 were no longer statistically significant.
• Employers could provide higher HSA contributions to lower income workers
• Education needed regarding preventive services
Other Research on CDHPs and Worker Income

Wharam, et al. (2007) – examined emergency dept use after adoption fo HDHP. Found use of high-severity office visits fell 25% among lowest income groups, while only 1.3% amount highest income groups. Geo-coded income.

Hibbard, Greene & Tusler (2008) - found reductions in both high- and low-priority office visits were greater for hourly employees than for salaried employees. No income data. Study on HRA with $1,000 deductible and $750 employer contribution.

Feldman & Parente (2010) - found that income was not a predictor of total spending, but based on sample of only 429 HRA enrollees. Had actual income data.

Haviland, et al. (2011) – examined data from 43 employers during 2004-2007 and found that CDHPs affected lower-income and higher-income populations to the same extent, but used geo-coded income data.

Brot-Goldberg, et al. (2015) – data from large, self-insured employer with full replacement HSA. Included actual income data. Found that higher-income groups reduced spending more than lower-income groups, but driven by higher spending by the lower-income groups in the year before the HSA-plan was introduced. Only 6% of sample below $100,000 in income.

- Found spending reductions of 12-14%.
- Spending reductions are entirely due to outright reductions in quantity.
- Found no evidence of consumers learning to price shop after two years in CDHP.
- Consumers reduce quantities across the spectrum of health care services, including potentially valuable care (e.g. preventive services) and potentially wasteful care (e.g. imaging services).
### Sherman, et al., *Health Affairs*, February 2017

<table>
<thead>
<tr>
<th></th>
<th>Lowest-wage group</th>
<th>Highest-wage group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any use of preventive care</td>
<td>19%</td>
<td>38%</td>
</tr>
<tr>
<td>Inpatient admissions (per 1,000)</td>
<td>31</td>
<td>17</td>
</tr>
<tr>
<td>Avoidable admissions</td>
<td>4.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Emergency department visits (per 1,000)</td>
<td>370</td>
<td>120</td>
</tr>
</tbody>
</table>
Unanswered Research Question

The role of the account

As account balances increase:
• Impact on use of health care services
• Impact on choice of deductible

Who uses the account to save for retirement
EBRI : Just the Facts™

www.ebri.org
www.choosetosave.org