

Towards Consumer Empowerment:

What has been learned from Consumer Driven Health Plans?

Stephen T. Parente, Ph.D. University of Minnesota

Funded by the Robert Wood Johnson Foundation
Health Care Financing and Organization Initiative,
Department of Health & Human Services and Pfizer

With: Roger Feldman, Jon Christianson, Jean Abraham,
and Robert Town

May, 2007

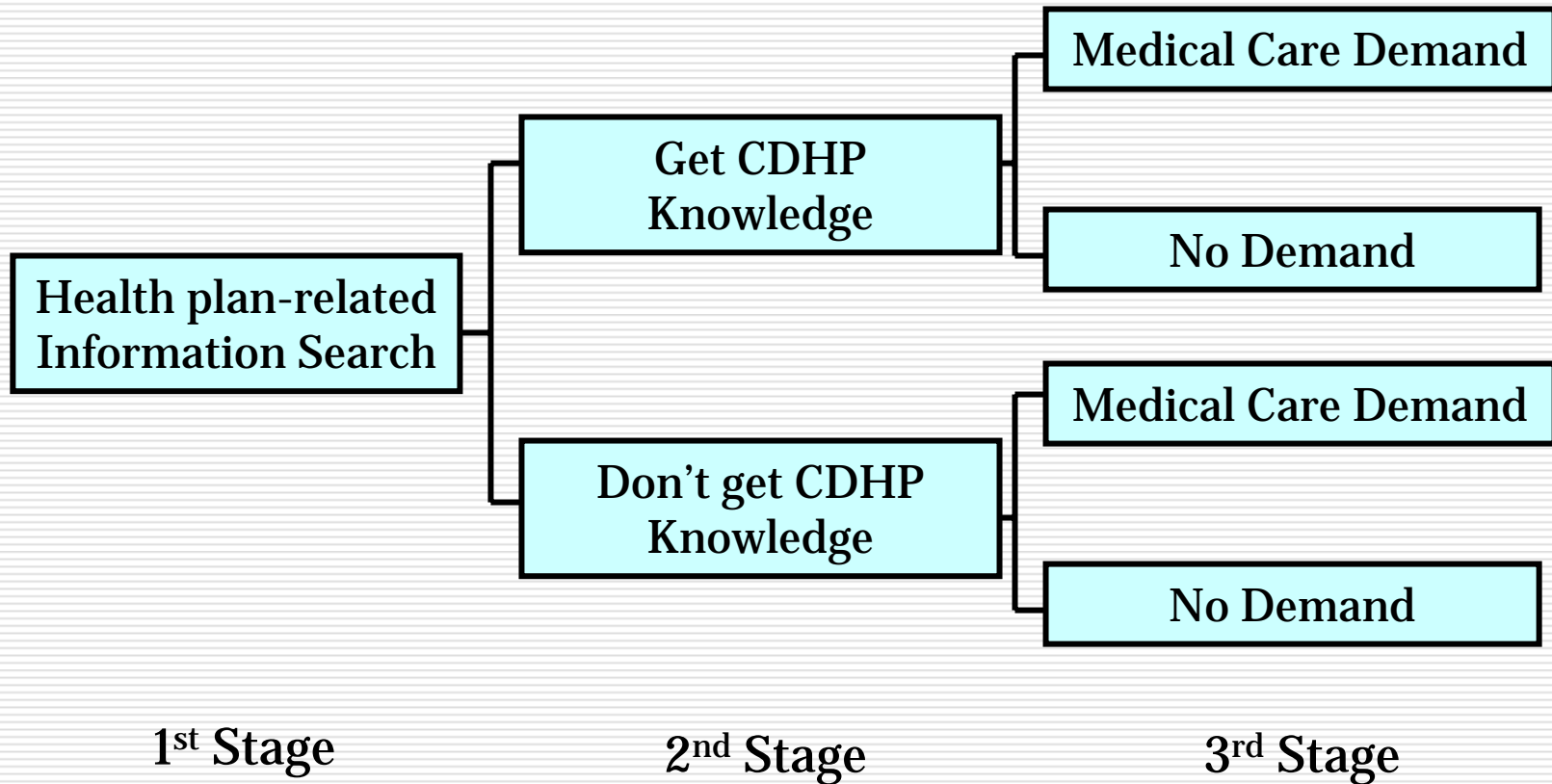
CARLSON
SCHOOL OF MANAGEMENT
UNIVERSITY OF MINNESOTA

UNIVERSITY OF MINNESOTA

Presentation Overview

- CDHP Evidence on Consumer Behavior & \$\$
 - Do CDHP members use the internet to reduce expenditures?
 - Are HSA or HRA holders the better risk (from an insurer/employer perspective)?
 - Can/do Consumers make health wealth trade-off?
 - Implications
-

A Conceptual Model of the Impact of CDHP Information Search on Medical Care Demand



How Has the Internet Been Used in a CDHP?

Descriptive Statistics from a CDHP

1. How many CDHP members go online?
 2. Who uses the health plan web site?
 3. What are members looking at the web site?
-

What is the Impact of the CDHP Web Portal Use on Total Expenditure?

definity health | [Contact Preferences](#) | [Common Questions](#) | [Contact Us](#) | [Logout](#)

Welcome **STEPHEN T PARENTE**
Sponsor: **University of Minnesota**
[You have 3 messages](#)

[Home](#) | [My Account](#) | [My Benefits](#) | [Doctors & Hospitals](#) | [Pharmacy](#) | [Healthcare Costs](#) | [Health Resources](#)

DISCOVER A NEW DIRECTION IN HEALTHCARE

We're committed to providing a more personalized healthcare experience. And many of you seem to agree: 95% of last year's members re-enrolled in Definity Health for 2004, and 90% of all members report being very satisfied or satisfied. Take a few minutes to explore this site; we've updated many of the sections and are offering a broader range of tools and resources.

Welcome to Definity Health, **STEPHEN T PARENTE** [Help](#)

- My Account**
 - » Claim and account [details](#)
 - » [My share](#) of claim expenses
 - » [Submit a claim](#) for reimbursement
- My Benefits**
 - » Get an [ID card](#)
 - » [Benefit snapshot](#)
 - » How [my network](#) works
- Doctors & Hospitals**
 - » View hospital [quality and cost](#)
 - » Find a [doctor](#)
 - » Find a [hospital or other facility](#)
- Pharmacy**
 - » [Mail order](#) prescriptions
 - » [Drug information](#)
 - » Check [drug interactions](#)
- Healthcare Prices**
 - » Find cost of [procedure or condition](#)
 - » Estimate [prescription drug prices](#)
 - » Find [cost of a doctor visit](#)
- Health Resources**
 - » Contact a [Health Coach](#)
 - » [Health information](#) database
 - » Tips on [getting the best healthcare](#)

Announcements

- Receive messages from a Health Coach.
- We don't know what causes multiple sclerosis (MS), but we do know this...
- Pregnancy - When can it start, and when will it end?
- Information to share with your doctor about Definity Health

My Messages (displaying 3 of 3)

- » [Your PCA Balance is \\$0.](#)
- » [Savings Opportunity on HYDROCODONE/ACETAMINOPHEN](#)
- » [Your PCA Balance is Under \\$100](#)

[View All Messages](#)

[Privacy Policy](#) | [Terms & Conditions](#)

My Account

- » Claim and account [details](#)
- » [My share](#) of claim expenses
- » [Submit a claim](#) for reimbursement

Healthcare Prices

- » Find cost of [procedure or condition](#)
- » Estimate [prescription drug prices](#)
- » Find [cost of a doctor visit](#)

Pharmacy

- » [Mail order](#) prescriptions
- » [Drug information](#)
- » Check [drug interactions](#)

Doctors & Hospitals

- » View hospital [quality and cost](#)
- » Find a [doctor](#)
- » Find a [hospital or other facility](#)

Do members use their health plan website for health information?

	2003	2004
# Members	64,437	125,418
% Logged on	51.8	44.7

Who uses the health plan web site?

		Total Number of Log-ons				
		0	1	2-5	6-10	11+
2003						
Mean Family Size		2.1	2.45	2.61	2.72	2.79
Illness Burden		91.36	99.17	111.91	130.15	168.12
2004						
Mean Family Size		2.06	2.39	2.56	2.68	2.76
Illness Burden		91	94.88	105.78	132.06	170.04

Family is the unit of analysis

What are members looking at?

N=56,073	Percent Accessed	
	No	Yes
My Account	24.98	75.02
Doctors & Hospitals	32.83	67.17
My Benefit	35.76	64.24
Healthcare Costs	64.50	35.50
Health Resources	73.19	26.81
Pharmacy	68.01	31.99

2004 data; Family is the unit of analysis

Research Questions

1. What is the Impact of the **CDHP Web Portal Use** on Total Expenditure?
 2. What is the Impact of **Pharmacy Web Information** on Rx Expenditure?
 3. What is the Impact of **Active Monitoring of Personal Care Account (PCA)** on Spending?
-

What is the Impact of Pharmacy Web Information on Rx Expenditure?

DRUG PRICE ESTIMATES:				
Drug description	30 Day Cost		Annual Cost	
	Retail	Mail	Retail	Mail
Brand Name				
Lipitor 20 MG Tablet	\$108.65	\$96.73	\$1,303.76	\$1,160.71
Save an estimated \$143.05 annually by choosing mail order over retail! Get Started Now				
Generic Equivalent				
<i>No generic available.</i>				
Pill-Splitting Options				
Is pill-splitting right for me?				
Lipitor 40 MG Tablet	\$51.78	\$46.06	\$621.40	\$552.71
Save an estimated \$682.36 annually by splitting your pills!				
Prices are estimates only. Restrictions may apply. Read More.				

What is the Impact of Active Monitoring of PCA on Spending?

ACCOUNT BALANCES BY COVERAGE PERIOD			
	Coverage Period: 1/1/05 - 12/31/05		
	Initial	Applied	Remaining
Personal Care Account (PCA) ¹	\$1,200.00	(\$1,200.00)	\$0.00
Combined (In/Out Network) Deductible	\$3,000.00	(\$3,000.00)	\$0.00
Health Coverage		\$4,772.36	

¹includes \$0.00 rolled over from prior coverage period.

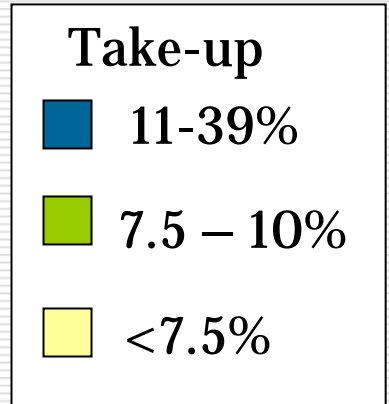
Last updated on 6/24/05

Personal Care Account		as of 6/24/05			
Beginning PCA amount:	\$1,200.00	PCA balance:	\$0.00		
Amount rolled from prior plan year	\$0.00				
View Options:					
Coverage Period:	1/1/05 - 12/31/05	Member Name:	ALL		
			Go		
CLAIMS PROCESSED FROM PERSONAL CARE ACCOUNT					
Claim Number	Processed Date	Patient	Provider	Description	Amount
20	3/29/05		SNYDER'S DRUG STORE	100 MG TABLET	\$47.83
20	3/10/05		FAIRVIEW UNIVERSITY MED CTR RIVERSIDE	Medical	\$81.00
20	3/8/05		BERTHA LIN	Medical	\$69.09
20	3/1/05		SNYDER'S DRUG STORE	100 MG TABLET	\$401.50
20	2/24/05		SNYDER'S DRUG STORE	50 MG TABLET	\$99.54
20	2/1/05		SNYDER'S DRUG STORE	100 MG TABLET	\$401.50
20	1/26/05		SNYDER'S DRUG STORE	50 MG TABLET	\$99.54
	1/1/05			Reenrollment with	\$1,200.00
Claim Total					\$1,200.00

Research Questions - Answers

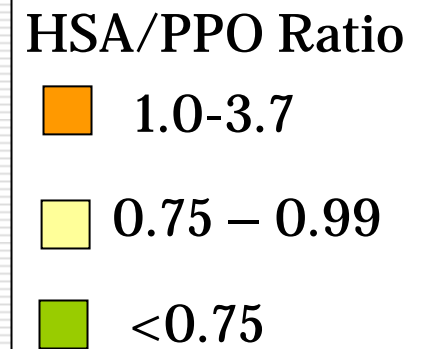
1. What is the Impact of the **CDHP Web Portal Use** on Total Expenditure?
 - Total \$\$ goes up – associated with increase web use.
 2. What is the Impact of **Pharmacy Web Information** on Rx Expenditure?
 - Rx \$\$ goes down.
 3. What is the Impact of **Active Monitoring of Personal Care Account (PCA)** on Spending?
 - Total \$\$ go down.
-

Who Chooses a CDHP? Where do They Live?



Data based on 1 large employer representing ~50,000 covered lives with HSA initial year offering in 2006 along with low and high HRAs.

Are CDHP-HRA Enrollees Sicker? HRA High/PPO Risk Ratio

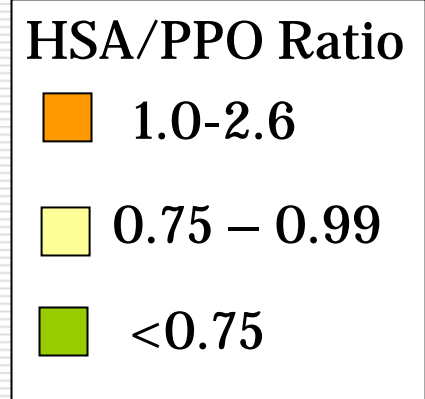
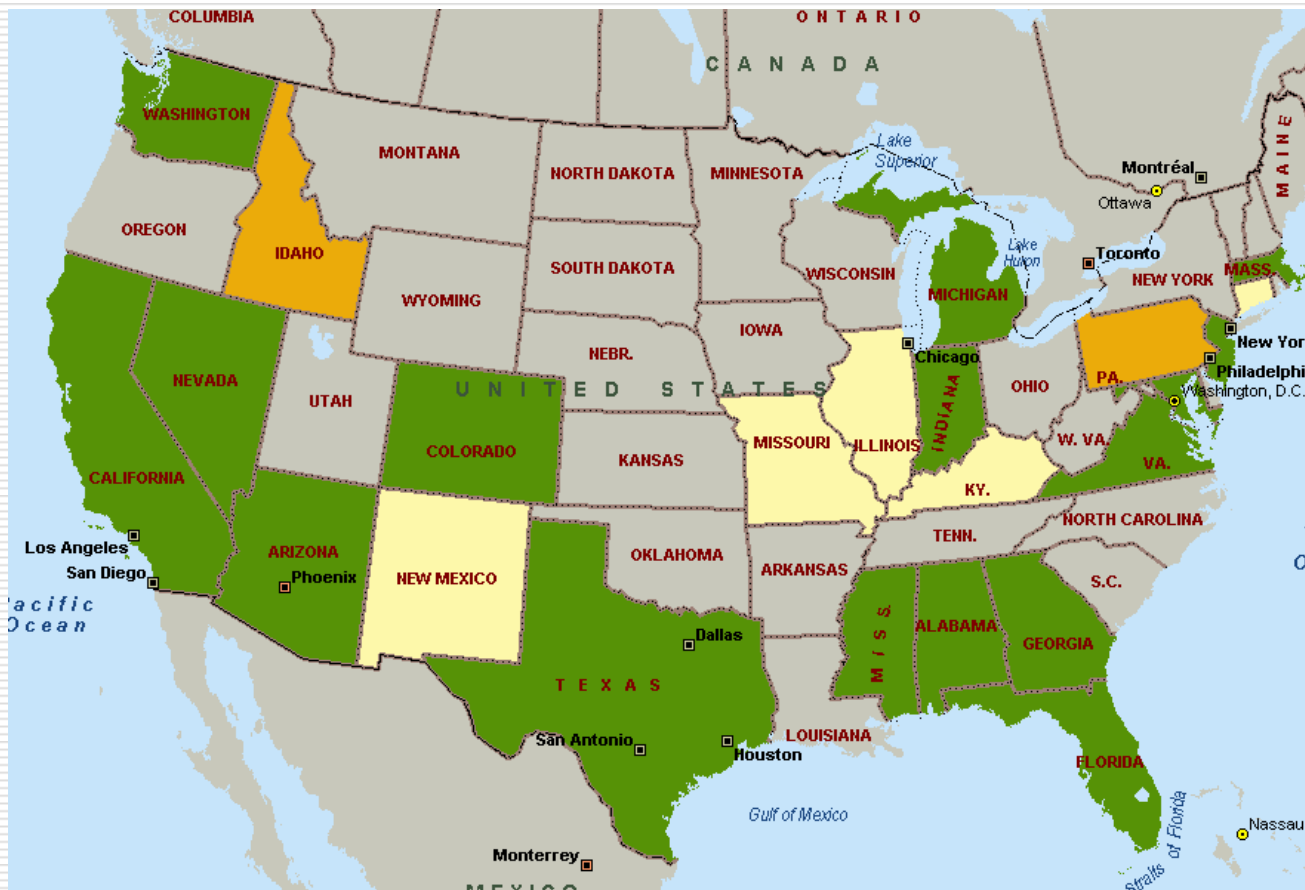


Data based on 1 large employer representing ~50,000 covered lives with HSA initial year offering in 2006.

Risk Score based 2005 Claims data analysis using RxRisk

Are CDHP-HSA Enrollees Sicker?

HSA/PPO Risk Ratio



Data based on 1 large employer representing ~50,000 covered lives with HSA initial year offering in 2006.

Risk Score based 2005 Claims data analysis using RxRisk

Health & Wealth: Key Questions

- Is HSA choice related to retirement investment decisions?
 - Bonus question: What personal attributes are associated with the choice of an HSA?
 - If HSA choice is related to retirement investment decisions, do consumers make ‘rational’ retirement portfolio decisions?
 - Rational will depend on investor objectives priors. Big Caveat, we just developing what rational should be.
-

Are These Real World Questions?

Late Breaking News: 5-1-2007

- Exante Financial Services is launching three new Health Savings Account (HSA) designs tailored to meet consumers' individual health care financial needs.
 - **Health eAccess HSA** is designed for **health care spenders** who do not carry a large balance in their HSAs and may prefer a basic account with easy access to funds and a lower monthly maintenance fee (waived if the balance is \$500 or higher).
 - **Health eSaver HSA** is designed for **health care savers** who carry higher balances in their HSAs in order to take advantage of higher interest-rate returns and prefer to keep most of their funds in an FDIC- insured account. This account carries more competitive interest rates depending on the account balance and maintains free access to investments if the balance exceeds \$2,000.
 - **Health eInvestor HSA** is designed for consumers interested in maximizing the **long-term savings potential of their HSA for future health care expenses**, and who primarily use the account for investing purposes. They can opt for a lower minimum investment threshold (\$500) for expanded access to an array of highly rated mutual fund options.
-

Data to Test Hypotheses

- ❑ Large University employer with 16,000 employees.
 - ❑ Quasi-experimental pre (2005)/post (2006) design with introduction of HSA in 2006.
 - ❑ Examined 2 cohorts of workers continuously employed from 2005-2006:
 - Chose HSA in 2006
 - Chose PPO/EPO/POS/HMO in 2006
 - ❑ Supplemental retirement data
 - Amount contributed in 2005 & 2006
 - Pool 403(b) and 457 \$\$ together
 - ❑ Employee characteristics: age, gender, salary, plan premium (after-tax), chronic illness (from prior year claims), job class.
-

Descriptive Statistics 2005-2006 Employees Characteristics of HSA versus non-HSA Cohorts

<i>Variable</i>	2006 HSA	2006 Non-HSA	<i>T-test</i>
	<i>Sample Mean</i>	<i>Sample Mean</i>	
<i>Employee Chararacteristics</i>			
Employee's tax-adjusted medical insurance annual premium	\$ 682.91	\$ 865.90	***
Employee or immediate family member has chronic condition=1, else=0	0.113	0.187	*
Employee elected a single contract=1, family=0	0.547	0.455	
Number of dependents	0.811	1.133	*
Employee's salary minus tax liabilities	\$ 75,802.58	\$ 53,243.57	***
Employee is female=1, male=0	0.472	0.533	
Employee age in 2006	47.04	45.92	
Years at Employer in 2006	10.68	11.82	
Professional job class=1, else =0	0.849	0.635	***

Statistical Significance

*** $p \leq .001$, ** $p \leq .01$, * $P \leq .05$

Health & Wealth: Key Questions

- Is HSA choice related to retirement investment decisions? **YES**
 - Bonus question: What personal attributes are associated with the choice of an HSA? **\$\$\$**, **GOOD HEALTH**
 - If HSA choice is related to retirement investment decisions, do consumers make ‘rational’ retirement portfolio decisions? **COULD BE**
 - Rational will depend on investor objectives priors. Big Caveat, we just developing what rational should be.
-

Implications

- ❑ Transparency might not save money, but consumers would be empowered.
 - ❑ Consumers who like value driven plans have active decision making in health choice.
 - ❑ Is clinical quality being affected? Stay Tuned.
 - ❑ Are consumers satisfied? It depends. But, within employers, HRA turnover is 5 to 10%, HSA turnover is at least double.
 - ❑ Consumers are savvy enough to make health wealth decisions.
 - ❑ Are all decisions rational? Too soon to tell. Need to figure out what is rational first.
-

**For more information on our research
Please visit:**

www.ehealthplan.org
sparente@csom.umn.edu

Thank You!
