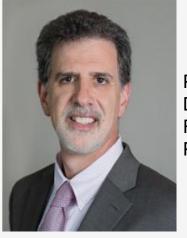


The Problem With a One-Size-Fits-All Approach to Health Care Claims: Policy Implications and Solutions

January 2020

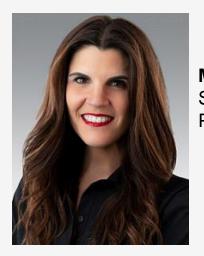
Speakers



Paul Fronstin, Ph.D., Director, Health Research and Education Program, EBRI

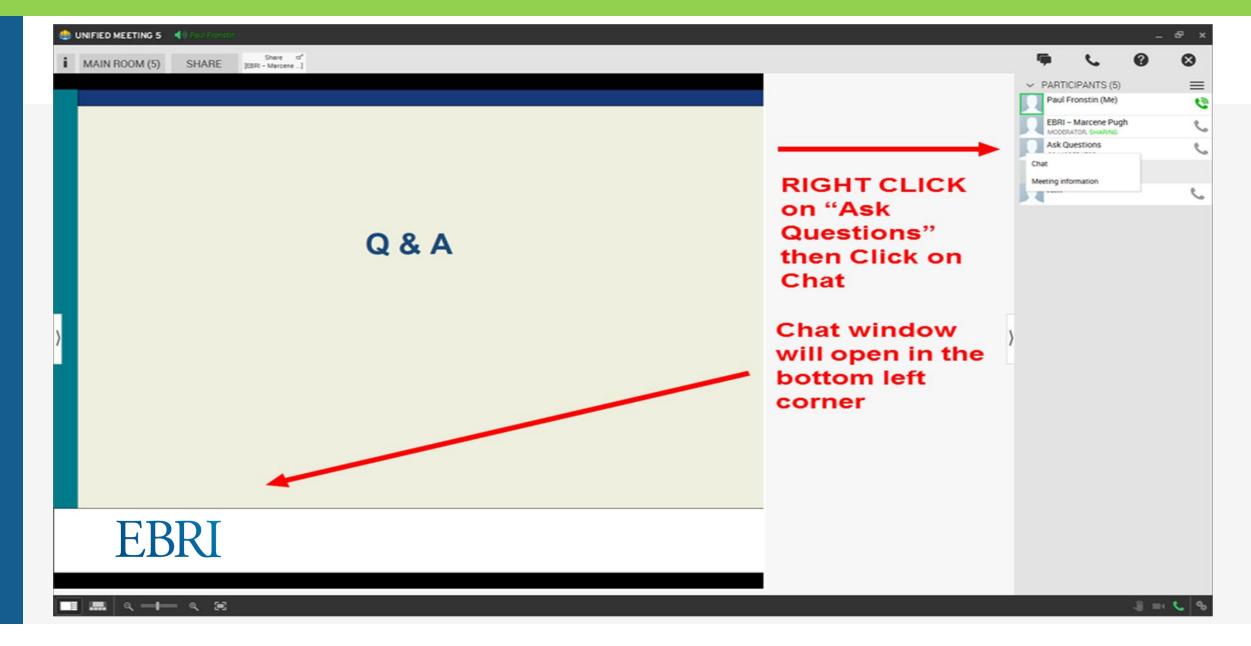


Lee Murphy, Ph.D., Founder and CEO, Inspera Health



Moderated by: Tami Simon, Senior Vice President, Segal









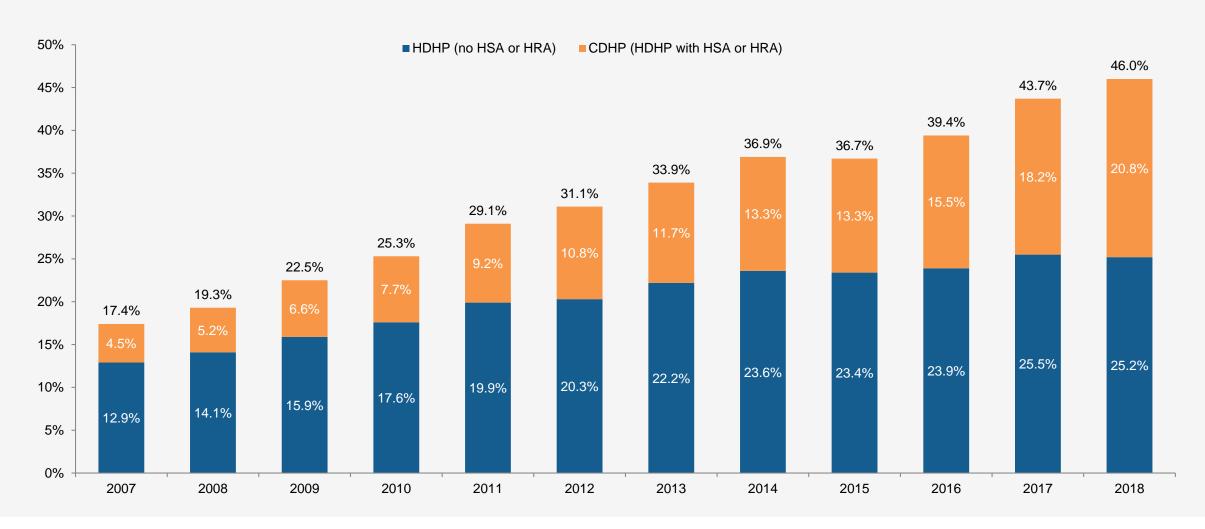
Persistency in High-Cost Claims Among Individuals with Employment-Based Health Benefits

Paul Fronstin, Ph.D.

Employee Benefit Research Institute

January 2020

Percentage of Persons With Private Health Insurance Under Age 65 Enrolled in HDHP or CDHP, 2007–2018





Distribution of Health Spending, Among Individuals with Employment-Based Health Coverage, Continuous Enrollment in 2017

Percentage of Enrollees	Percentage of Median Spending Per Spending Person		Mean Spending Per Person	Minimum Spending Per Person	Percent Reaching OOP Maximum
1%	28%	\$120,500	\$168,500	\$ 80,000	70-80%
5%	56%	\$41,500	\$65,315	\$ 23,000	60-70%
10%	70%	\$23,500	\$41,300	\$ 12,000	50-60%
20%		\$12,700	\$24,900	\$ 5,400	30-40%



Questions that could be addressed in a study

- How do define high-cost claimant?
 20/80, 10/50
- Who are the people with persistent high-cost claims?
- What percent of spending do they represent?
- What percent of claimants and spending is temporarily high-cost?
- How do we define persistent? Recent paper on Medicare looked at 3 years. We can look at 5 years.
- · Age, gender, policyholder vs. dependent
- Type of health plan
- What are the high-cost health conditions (start with 17conditions in Charlson Comorbidity Index)?

- How do characteristics of those who are persistently high-cost different from those who are temporarily highcost?
- What role do rare diseases play?
- Where is the spending in high-cost claimants (persistent vs. temporary)?
- What are the options to address high-cost claimants (persistent vs. temporary)?
- Role of out-of-network use?
- What options do not work with high-cost claimants?
- How does plan design fit in?
- Are employers properly focusing their efforts?

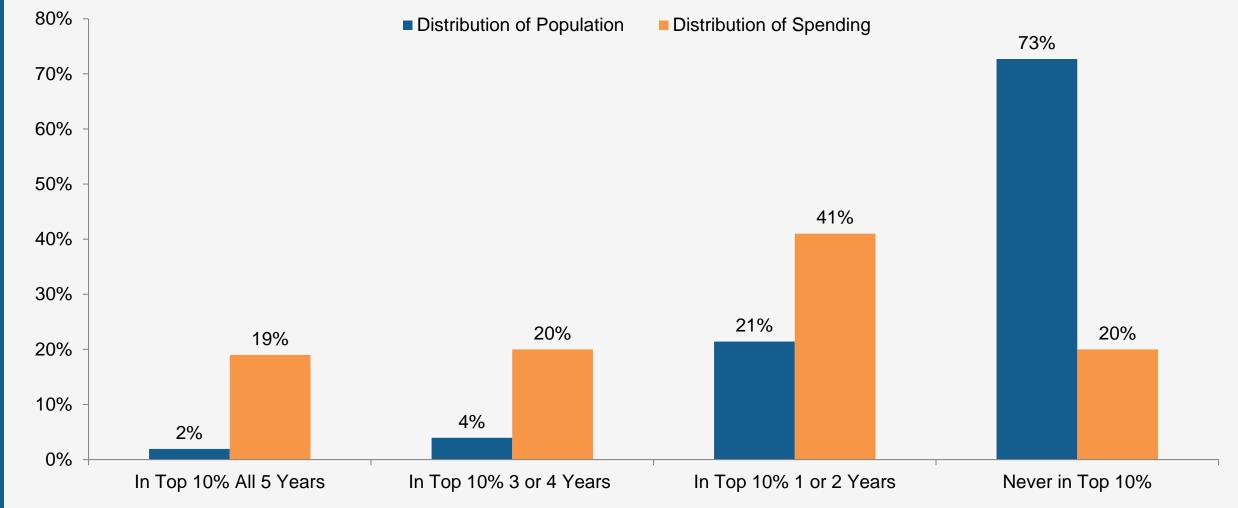


Data

- Truven Marketscan Database
- Medical and pharmacy claims data on 14-16 million people with employment-based health benefits in any given year between 2013-2017
- 5.8 million individuals with employment-based health benefits trackable over 2013-2017
- Limitations of using continuously enrolled sample
 - Missing many \$1 million babies
 - Missing other potentially high cost claimants who drop from sample because they become disabled, eligible for Medicare or pass away



Length of Time in Top 10 Percent of Spending During 2013-2017 and Distribution of Total Spending in 2017; 27% of Population in Top 10% of Claims at Least Once, Accounted for 73% of Spending





Characteristics in 2017, Within Patterns of High Cost Claims During 2013-2017 -- High Claimants are Disproportionately Older

	Patterns of High Cost Categories							
	Never in Top 10%	In Top 10% In Top 10% In Top 10% 3 or 4 Years		In Top 10% All 5 Years				
Variables	N=112,909	N=230,864	N=1,251,397	N=4,247,808				
Age: 0-12	15%	4%	2%	3%				
Age: 13-17	10%	4%	3%	2%				
Age: 18-24	15%	9%	6%	4%				
Age: 25-34	6%	8%	5%	4%				
Age: 35-49	24%	29%	25%	24%				
Age: 50-64	30%	47%	59%	63%				
Male	52%	41%	40%	44%				
Female	48%	59%	60%	56%				



Characteristics in 2017, Within Patterns of High Cost Claims During 2013-2017 -- High Claimants are Disproportionately the Covered Spouse

	Patterns of High Cost Categories						
	Never in Top 10%	In Top 10% 1 or 2 Years	In Top 10% 3 or 4 Years	In Top 10% All 5 Years			
Policyholder	43%	57%	59%	57%			
Covered Spouse	16%	25%	29%	32%			
Covered Children/Other Dependents, n	41%	17%	12%	10%			
HMO/EPO	13%	13%	12%	12%			
PPO/POS	56%	61%	66%	66%			
HRA	19%	17%	15%	15%			
HSA-Eligible	11%	9%	7%	7%			

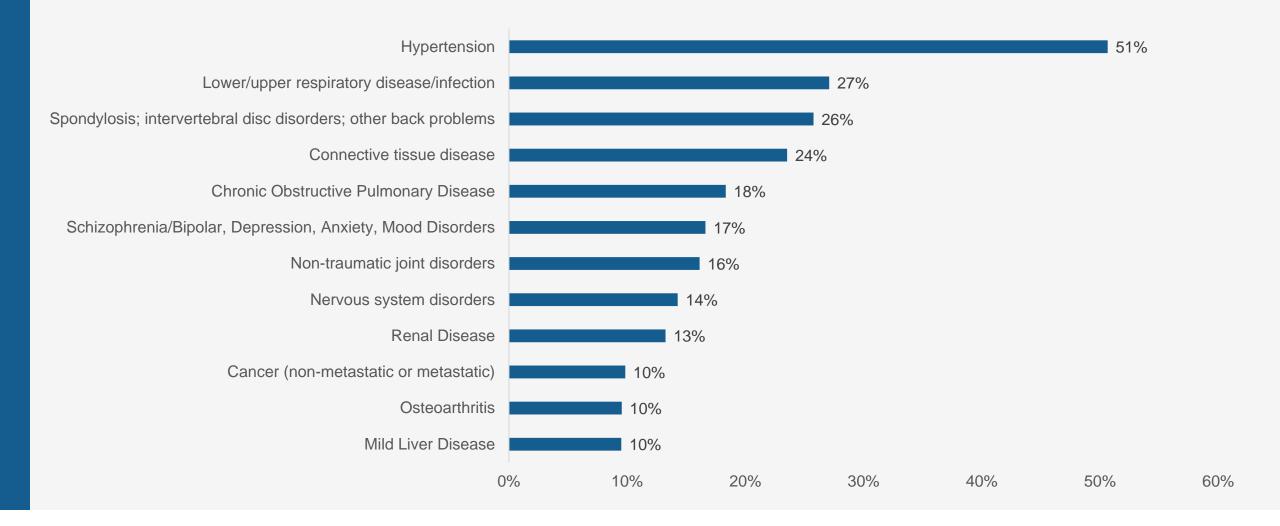


Health Conditions in 2017, Within Patterns of High Cost Claims During 2013-2017 - High Claimants Have A Lot of Health Conditions

		Patterns of High Cos	t Categories	
	Never in Top 10%	In Top 10% 1 or 2 Years	In Top 10% 3 or 4 Years	In Top 10% All 5 Years
Hypertension	9%	21%	32%	35%
Dyslipidemia	11%	21%	31%	34%
Diabetes (With or Without Complications)	4%	11%	26%	33%
Spondylosis; intervertebral disc disorders; other back problems	5%	12%	23%	26%
Lower/upper respiratory disease/infection	9%	15%	22%	26%
Connective tissue disease	3%	10%	19%	22%
Schizophrenia/Bipolar, Depression, Anxiety, Mood Disorders	5%	10%	18%	20%
Chronic Obstructive Pulmonary Disease	5%	9%	15%	18%
Non-traumatic joint disorders	3%	9%	14%	15%
Nervous system disorders	1%	4%	10%	14%
Rheumatoid Disease	0.3%	1%	4%	10%
Cancer (non-metastatic or metastatic)	1%	6%	12%	10%

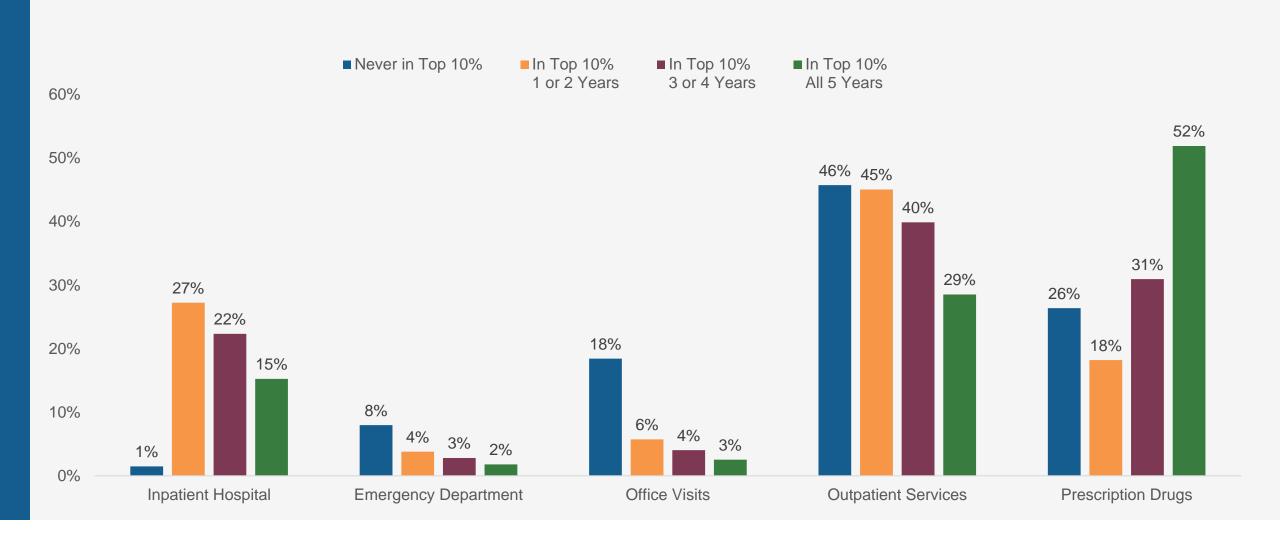


Comorbidities Among Diabetics in Top 10% of Health Spending, 2013-2017



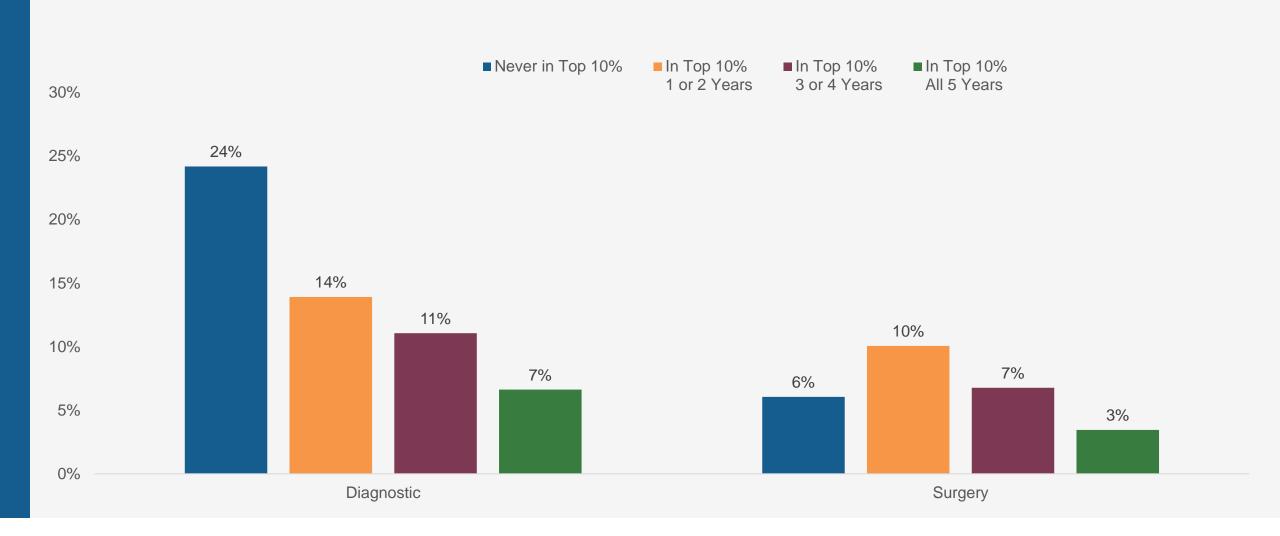


Health Spending in 2017, Within Patterns of High Cost Claims During 2013-2017





Health Spending on Diagnostics and Outpatient Survey in 2017, Within Patterns of High Cost Claims During 2013-2017





Implications of Findings

- The "average" health care user (e.g. Cadillac tax)
- Medicare buy-in for individuals ages 50+ or 55+
- Price transparency
- Cost sharing



Next Steps

- Update study with 2018 data
- Seeking data from individual employers



EBRI Webinar:

Persistency in High-Cost Health Care Claims

The Inspera Health Program







WHO IS INSPERA HEALTH?

- > Health improvement company exclusively targeting high cost claimants
- Laser-focused on multiple chronic conditions (MCCs) since 1996
- Part of a comprehensive large claim cost and liability reduction strategy
- Utilize validated metrics to measure investment and health outcomes





Why We Were Invited

1. Large Claim Impact – 3-year aggregate look – active members only

a) Overall, by age, by employment tenure, by membership categories

2. Categorize Chronic Conditions –to 5 diagnosis levels as lifestyle diagnosis often not coded primary

- a) Chronic Condition Indicator (CCI) from HCUP publicly available https://www.hcup-us.ahrq.gov/toolssoftware/chronic/chronic.jsp
- b) Adapted CCI list to remove "Traumas & Tragedies" (primarily cancer)
- c) Add biometric data if available (BMI/Weight risk typically not coded in claims)
- d) Calculate a per chronic condition 3-year cost/member

3. Look at members with 3 or more conditions

- a) Overall, by age categories, by employment tenure, by membership category
- b) How many with 3+ conditions add additional conditions each year?
- c) What is engagement in present health optimization initiatives & with what results?

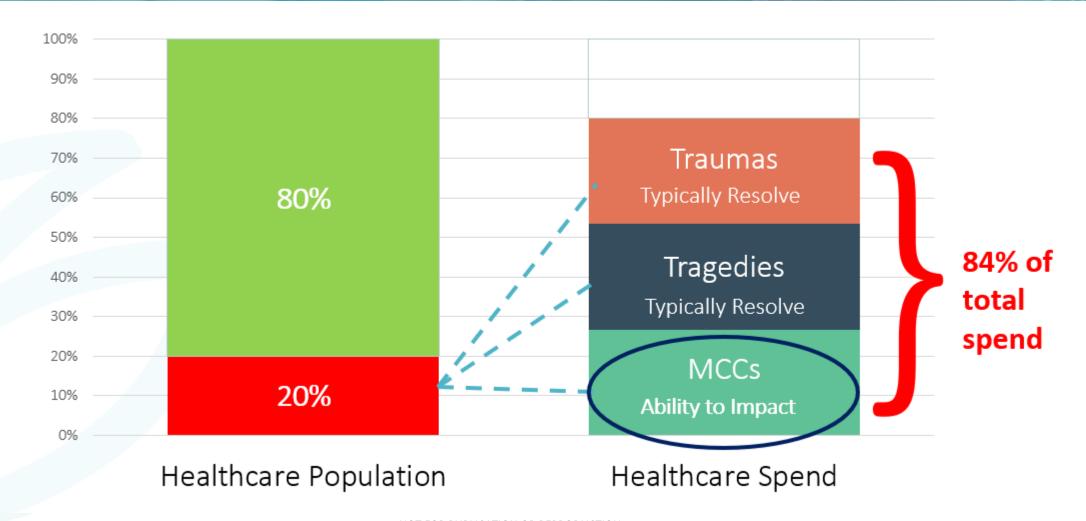
4. Develop a program or integrate current resources to target this population

- a) Integrate AHRQ MCC Model: Personalize, Fully Integrate Mental Health, Personalize, Personalize
- b) Measure change sustainability NOT change initiation
- c) Patience, Diligence, Accountability and Compassion must be integrated

20

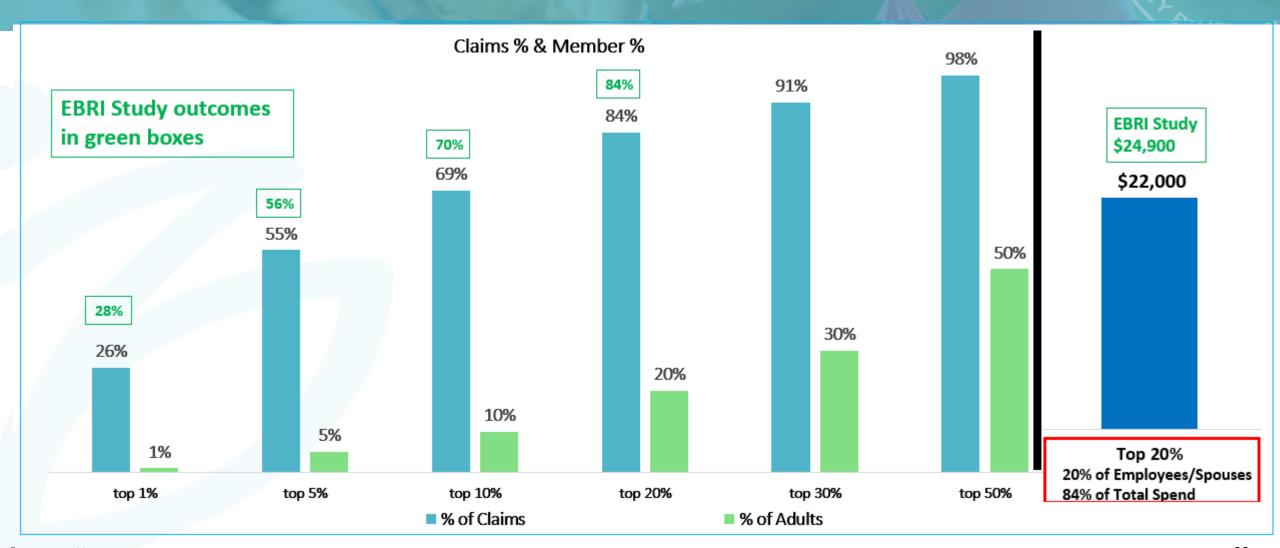


SAMPLE ORGANIZATION HIGH COST CLAIMANTS: 20% OF ADULTS ACCOUNT FOR 84% OF TOTAL SPEND





2016-2018 Pareto (Large Claim) Experience



Finding "Hidden" Value in Claims Data



3+-year time analysis creates strategic opportunities



High Cost/High Risk Claimants are priority focus

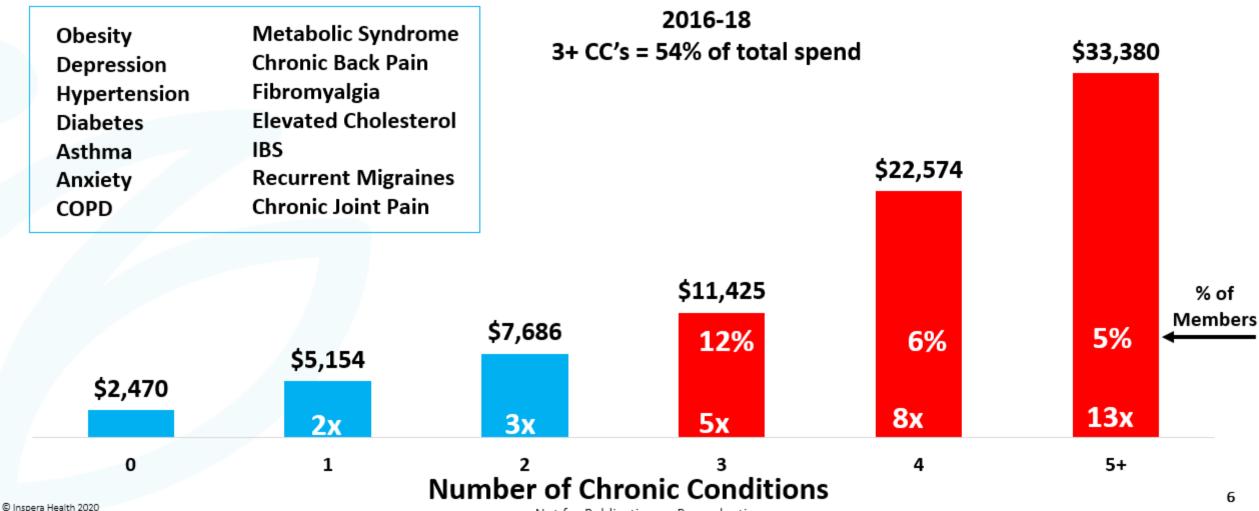


Identifying areas of impact proactively is important

'Reacting' to large claims limits possibilities

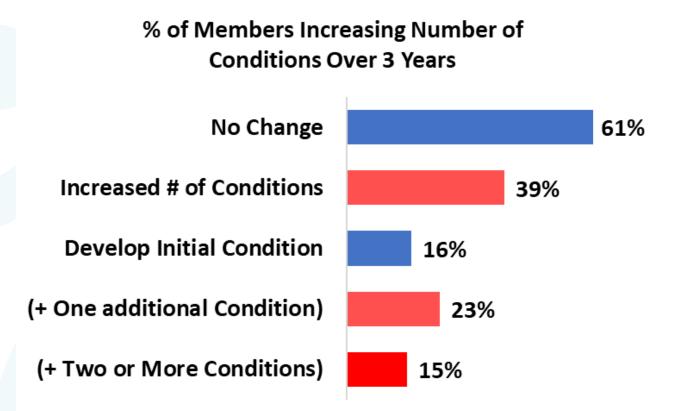


AVERAGE ANNUAL COST PER MEMBER BY NUMBER OF **CHRONIC CONDITIONS 2016-18**





MCC INCREASE OVER 3 YEARS



Number of	<u>Annual</u>	% cost
Conditions	Average	increase vs.
	Cost per	0 conditions
	Member	
0	\$2,470	n/a
1	\$5,154	105%
2	\$7,686	202%
3	\$11,425	364%
4	\$22,574	684%
5	\$33,380	1,211%

Average Cost Increase per CC 70%



MCC POPULATION ATTRIBUTES



Have longer tenure (not career mobile); typically 50% longer than average



75% have behavioral health conditions which amplify other conditions



Not identified as a strategic target focus



The medical system AND employer health improvement solutions are better suited to address single specific conditions, multiple conditions become very complex to address.



The MCC population is one of the only components of the high cost/high risk group that can be *proactively identified* <u>and</u> addressed.



TYPICAL INSPERA HEALTH MCC MEMBER

Obese

Hypertension

Degenerative Disc Disease

Defibrillator

8 Medications

Denial

Family Stress

Sedentary

Financial Stress



Depression

Hearing Loss

Elevated Cholesterol

Asthma

Chronic Pain

Job Stress

Drug Affordability

Poor Home Environment

Child Care Needs

AHRQ MCC Research Network Findings:

Effective Management Attributes

Short term, digital solutions will NOT produce sustainable outcomes for those with 5+ MCCs



People with MCC are more than just a collection of diseases

2

Patient preferences and values need to be assimilated

3

Consideration of the person in context of their relationships

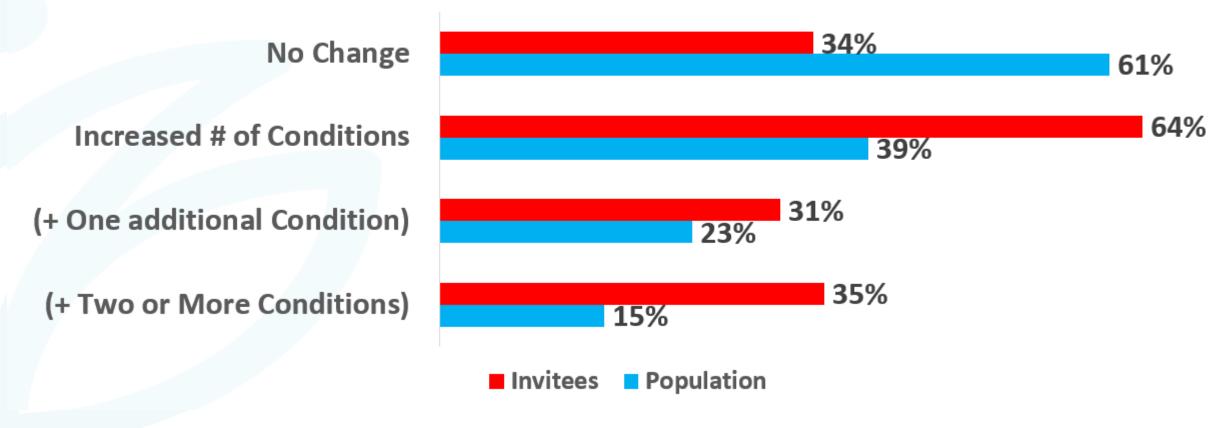
4

Inclusion of mental health care as an integral part of health



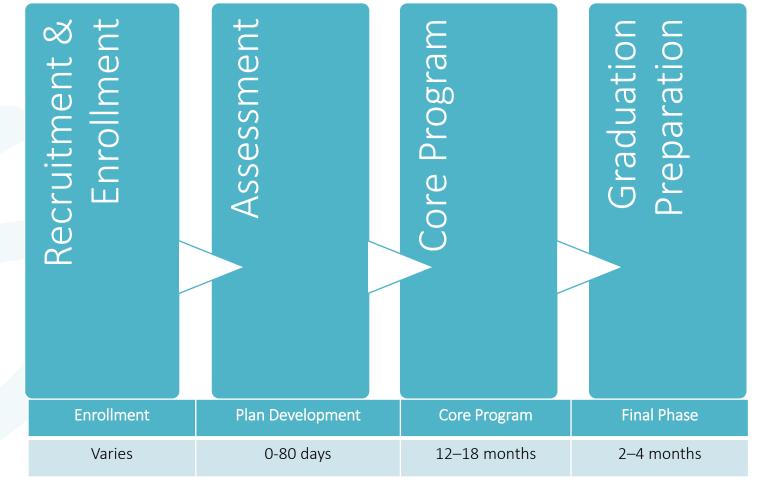
Invitations MCC Increase: 2016 through 2018

Program Invitees versus Overall Membership





INSPERA HEALTH PROGRAM OVERVIEW





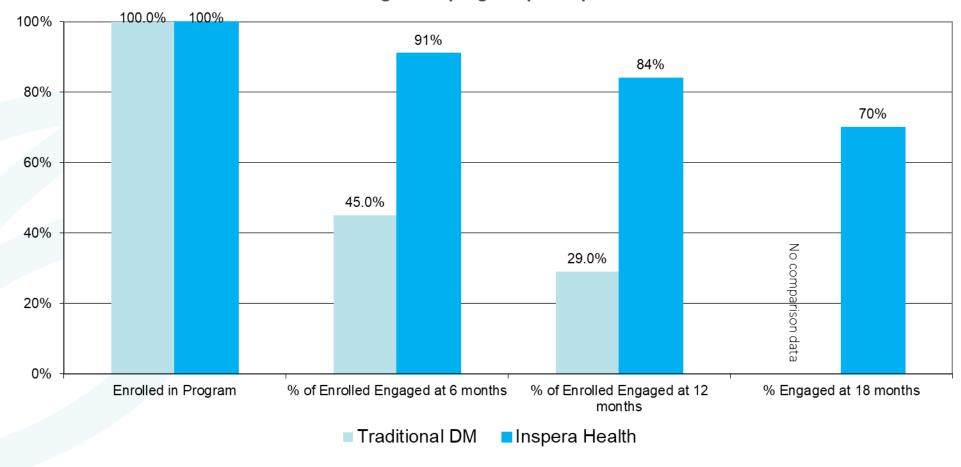
PROGRAM SERVICES INCLUDE

Provider Type	Inspera Health Approach <u>Includes</u> :		
Intake including Behavioral Health Assessment	5 – 7 hours		
Health Improvement Coach Ongoing	18 – 24 hours		
Behavioral Health	Up to 38 Sessions (co-pay support)		
Biometric Testing	If not provided by employer or annual physical		
Nutrition Counseling	18 Hours 12 Months/26 Hours		
Fitness Membership/Personal Trainer			
Financial Counseling	4 – 8 Hours		
Massage Therapy	18 Hours		
External (Licensed, Independent) resources for assessment & impact measurement	Pro-Change®, SF-36v2®, PAM®		
One on One Health Improvement Support	Range 50 – 125 hours; Average 72 hours		



ENGAGEMENT & RETENTION

Disease management program participation over time





Participant Outcomes

- Focus on baseline measures at elevated or high risk
- For each person this is different
- We collapse 10 different measures into an MCC Health Impact Index Score (MCC HII Score)
- MCC HII Score aggregates and combines all at risk measures into a single baseline score
- Impact is measured quarterly





MCC Impact Should be Systematically Measured

	· · · · · · · · · · · · · · · · · · ·		
Area	High Risk (6-10 points)	Elevated Risk (1-5 points)	Data Source
Engagement	<80% engaged	<90% engaged	Confirmed 1 on 1 monthly session
Activity Minutes	Below 75/week	Below 150/week	Linked Activity Tracker
Sleep	Below 6 hours	Below 7 hours	Linked Wi-Fi Scale
Physical Health (PCS) Mental Health (MCS) SF36v2® Health Activation PAM® Score	Score of < 40 (one standard deviation below US population norm) Level 1 or 2 (disengaged)	Score of < 50 (norm for US population) Midpoint of Level 3 (moderately engaged)	Externally Validated Instruments (taken quarterly)
BMI Blood Pressure (Sys) LDL Cholesterol Blood Sugar (A1C/Glucose)	Above 40 Over 130 Over 130 Over 8.1/225	Above 30 Over 120 Over 100 Over 5.7/100	Biometrics collected with employer health fair or with follow up labs
Blood Sugar (A1C/Glucose)	Over 8.1/225	Over 5.7/100	

34



MCC HEALTH IMPACT INDEX OUTCOMES SUMMARY BY MEASURE

MCC Health Impact Index Score

	Baseline	3 Mos	6 Mos	9 Mos	12 Mos	Graduation
	30.7	27.4	22.6	23.3	20.0	19.0
BMI	3.1	3.0	2.8	2.7	2.7	2.6
Exercise	5.8	4.9	3.2	2.9	3.2	3.3
Blood Sugar	0.9	0.8	0.8	0.7	0.8	0.8
LDL	1.9	1.9	2.1	2.1	2.2	2.0
Mental Health	2.3	1.9	1.8	1.4	1.5	1.4
Health Engagement	1.9	1.6	1.2	1.3	0.9	1.1
Physical Health	3.2	2.7	2.2	2.1	1.7	1.8
Sleep	3.6	3.6	2.8	2.8	2.8	2.2
Blood Pressure	3.0	2.9	2.7	2.4	2.7	2.3
Engagement	5.0	4.0	3.0	2.0	1.5	1.5



MCC HEALTH IMPACT INDEX OUTCOMES OVERALL SUMMARY

	n	Baseline	3 Months		9 Months		Improvement @ 12 Mo	\	Improvement @ Graduation
Cohort 1	154	30.7	27.4	22.6	23.3	20.0	34%	19.0	38%

We see 30+% improvement in health & 30+% reduction in claims costs

Targeting and transforming the health of members with 5+ lifelong chronic conditions is possible!



Data Review – MCC Population

1. Large Claim Impact – 3-year aggregate look – active members only

- a) Overall, by age, by employment tenure, by membership categories
- 2. Categorize Chronic Conditions –to 5 diagnosis levels as lifestyle diagnosis often not coded primary
 - a) Chronic Condition Indicator (CCI) from HCUP publicly available https://www.hcup-us.ahrq.gov/toolssoftware/chronic/chronic.jsp
 - b) Adapted CCI list to remove "Traumas & Tragedies" (primarily cancer)
 - c) Add biometric data if available (BMI/Weight risk typically not coded in claims)
 - d) Calculate a per chronic condition 3-year cost/member

3. Look at members with 3 or more conditions

- a) Overall, by age categories, by employment tenure, by membership category
- b) How many with 3+ conditions add additional conditions each year?
- c) What is engagement in present health optimization initiatives & with what results?

4. Develop a program or integrate current resources to target this population

- a) Integrate AHRQ MCC Model: Personalize, Fully Integrate Mental Health, Personalize, Personalize
- b) Measure change sustainability NOT change initiation
- c) Patience, Diligence, Accountability and Compassion must be integrated

37



THE COST OF DOING NOTHING

500 Members 52 Average Age Average Tenure 19 years 13 Years to Medicare 5% Attrition MCC Trend 4% PV Discount 2%

Future Health Costs for Inspera Health Program Invitees

	# of 5+ MCC Members (10% enroll)	Average Claims /Member	Expected Health Claims	Include Indirect Health Costs*	Average Total Health Costs /Member	
Current (2019)	50	\$33,380	\$1,669,000	\$2,587,000	\$51,739	
2020	50	\$34,035	\$1,702,000	\$2,638,000	\$52,753	
2021	48	\$34,702	\$1,648,000	\$2,555,000	\$53,788	
2022	45	\$35,382	\$1,597,000	\$2,475,000	\$54,843	
2023	43	\$36,076	\$1,547,000	\$2,397,000	\$55,918	
4 Year Totals			\$6,493,000	\$10,064,000		

^{*}For every dollar spent in health claims cost for people with chronic conditions there is another \$0.55 of indirect spend. Source: Hoffman, Catherine et al. <u>Persons With Chronic Conditions: Their Prevalence and Costs.</u> JAMA. Nov 13, 1996.

38

Closing Question

Will a typical one-size-fitsall approach to health plan design sustainably improve the health of members with 5 or more lifelong chronic conditions?

Thank you





For more information on the Inspera Health Program please contact:

Lee Murphy, PhD, CPA, MBA CEO/Founder Lee.Murphy@insperahealth.com 630.444.2022



PARTICIPANT EXAMPLE RECENT GRADUATE

Overview

Diabetes & Obesity

No understanding of diabetes

A1C 8.3

Chronic Stress

Marital

Parental

Education

GI Issues

GERD

IBS

7 Rx

Intrinsic Motivation:

Lose weight and improve diabetes so I can be there and play with my two young children

Program Overview

- ► Health education
- Behavioral Counseling
- Personal Training
- Nutrition Counseling
- 22 months ending 12/2018

All services included as part of program costs. For mental health counseling we cover copayments

Impact

- ▶ Fully engaged in diabetic care:
 - Est. w/endocrinologist
 - Checking BS 2-3x daily; avg 100
 - Expressed confidence in ability to maintain diabetic care ongoing
- Chronic Stress
 - Divorced, moved to new home
 - Began school to improve career options
 - Maintaining counseling for self & children; diet & exercise for self through stress of divorce & move
- Metrics
 - A1C 8.3 reduced 20% to 6.7
 - 31-pound weight loss (193 to 162) BMI 34.2 to 28.7
 - Sleep improved 60%; 5 hours to 8 hours
 - Health Engagement 27% better, (PAM 62 to 79, level 3 to 4)

4:



PARTICIPANT EXAMPLE MORE IMMEDIATE IMPACT (SPOUSE)

Overview

Diabetes / Hypertension / Hyperlipidemia

Sleep

previously evaluated for Obstructive Sleep Apnea, disclosed had sleep issues

Sedentary

Chronic Pain

9 Rx

Struggling to make it through day due to lack of restorative sleep. His PCP told him no change = death.

Intrinsic Motivation:

Do more things with my grandkids, grow old with my wife, play baseball again.

Program Overview

- See PCP for sleep Reinforced use of CPAP
- Nutrition counseling
- Personal Training
- 9 months still active

"I needed to buy a new belt"

All services included as part of program costs. For mental health counseling we cover copayments

Impact to Date

- Diuretic, Statin & Glipizide doses halved by PCP
- Daily joint pain gone
- Cut out all junk food, fast food & sugary drinks
- Metrics:
 - Now getting 7-8 hours of restful sleep
 - 15 lb. weight loss (295 to 280)
 - Blood sugars from 230s to 125
 - Activity 0 to 300 min/week
 - Health Engagement improved 20% (PAM 50 to 60; level 2 to level 3)

42

PARTICIPANT EXAMPLE MORE IMMEDIATE IMPACT

Overview

Nausea & vomiting since surgery 1 yr ago, Zofran 2x/wk

Persistent fluid in pelvic cavity

Chronic Pain (10-point scale)

Arthritis, hip (6) daily

Bilateral hand and finger (4) daily

Back (4) constant

Diabetes

Blood sugars in 140s

8 Rx

Intrinsic Motivation:

I want to be pain free so I can play with my granddaughter and walk a 5k again.

Program Overview

- Personal Training
- Massage
- Nutrition Counseling
- ► 10 months still active

All services included as part of program costs. For mental health counseling we cover copayments

Impact to Date

- Nausea gone
 - Fluid in peritoneal cavity gone
- Chronic Pain
 - Daily joint pain gone
 - "I never realized how much the chronic pain negatively impacted my mood."
- Diabetes
 - Working with MD to decrease insulin
- Metrics
 - 19 lb. weight loss (241 to 222)
 - Blood sugars from 140 to 65-95
 - Health Engagement improved 17% (PAM 72 to 84; level 3 to level 4)
 - Physical Wellbeing improved 50% (SF36 from 36 to 55)
 - Activity 0 to 450 min/week

Example:

Measuring Mental Health Outcomes

SF36v2: 36 questions on overall well-being

2 composite scores: Physical & Mental Health

Mental Health Composite has 4 primary sub-scales:

Vitality (level of energy)

Social Functioning (impact of mental health on social life)

Role Emotional (impact of mental health on work performance)

Mental Health (questions on mood)

Scoring -50 = US adult non-institutionalized population average

Every 10 points in either direction is a standard deviation

a 5-point change on an individual level is significant;

a 3-point change on a group level is signification

Inspera Health Program Participants:

15% have MCS score of <40 High Risk

30% have MCS score of 40 – 50 Elevated Risk

55% have MCS score of 50+ Lower risk

Inspera Health Program participants at graduation

Graduation Ava

Change

Racolina Ava

Mental Health Impact

SF 36v2®
Mental Composite
Score (MCS)
Change

	Baseline Avg.	Graduation Avg.	<u>Cnange</u>								
High Risk	31.5	46.2	+47%								
1	14-point change is transformational										
Note: base	Note: baseline below 34 is diagnosable clinical depression										
Elevated Ris	k 44.8	50.2	+10%								
5	5.4-point change in a group is significant										
Lower Risk	56.7	55.7	(2%)								
1.0-point change in a group is insignificant											
Overall	49.6	52.7	+6%								
3	3.0-point change in a group is significant										

Overall population average masks meaningful analysis;

<u>Inspera Health impact is reported on those individuals in the high risk &</u> elevated risk cohorts

INSPERA HEALTH IMPACT

5 Year Client Case Study Outcomes

Over 85% of participants report improved health.[1]





71% lose weight at 6, 12, 18 months. Average loss 4%^[2]



90% increase physical activity at 6, 12, 18 months. Average increase 600%^[3]



2.5x Return on Investment

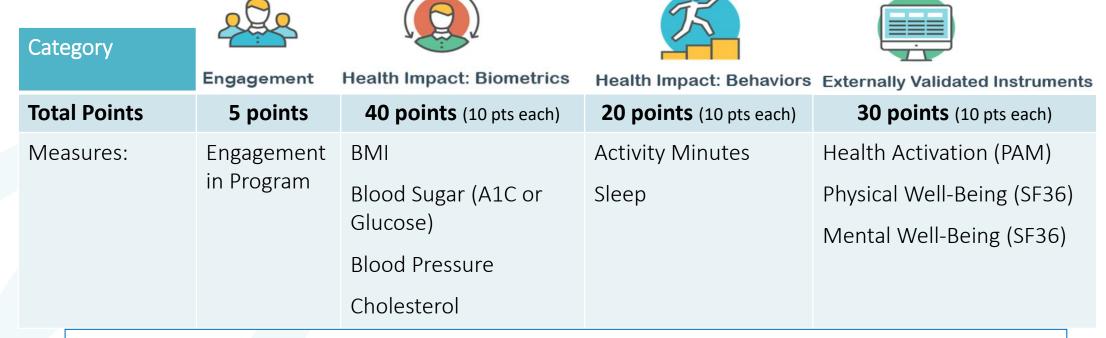
- ² Health Impact: Biometrics
- ⁴ Financial Impact

Health Impact: Behaviors

Externally Validated Instruments



MCC HEALTH IMPACT INDEX SCORING



Scoring the MCC Health Improvement Index:

- All measures are scored 1-10 except engagement which is 1-5
- Baseline established at intake
- Scoring for each measure: High risk between 6 &10; Elevated risk between 1 & 5; Normal risk = 0
- Lower score is healthier; reduction is score shows health improvement

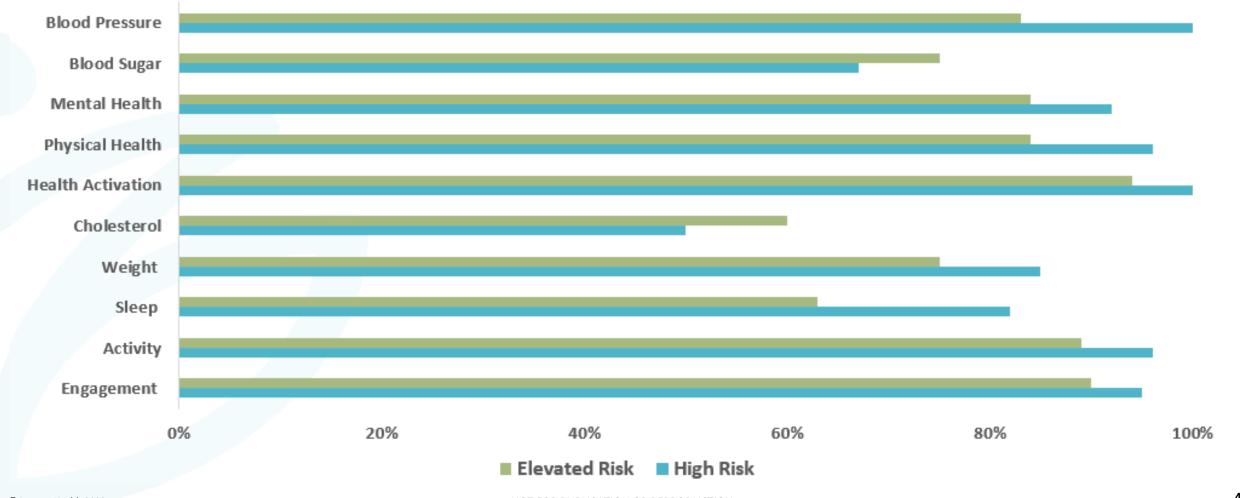


MCC HEALTH IMPACT INDEX OUTCOMES DETAILS BY PARTICIPANT

					MCC Health Improvement Index (MCC HII)											
Unique ID	Timing	Enrollment Date	Graduation Date	Early Exit Date	Early Exit Reason	MCC HII Score	Engagement	A1c or Glucose	Blood Pressure	BMI	LDL Choles	Activity Minutes	Sleep Hours	PAM Score	SF36 MCS Score	SF36 PCS Score
10000872	Baseline	7/11/2017	9/21/18			45	5	1	8	0	1	7	10	8	0	5
10000872	Latest	7/11/2017	9/21/18			28	1	1	0	0	3	3	9	8	0	3
10000874	Baseline	8/17/2017	8/27/19			41	5	7	4	2	2	10	6	0	0	5
10000874	Latest	8/17/2017	8/27/19			19	0	3	0	2	2	3	6	0	0	3
10000920	Baseline	4/6/2017	3/20/19			30	5	1	6	8	0	10	0	0	0	0
10000920	Latest	4/6/2017	3/20/19			22	0	0	5	7	0	10	0	0	0	0
10000921	Baseline	4/13/2017	3/13/19			38	5	3	5	10	0	10	0	0	0	5
10000921	Latest	4/13/2017	3/13/19			32	1	5	6	10	0	5	0	0	0	5



% of Participants Showing Improvement at Graduation (15 – 24 months)



Q&A



Engage with EBRI

Here are some ways:

Register for upcoming webinars

Check out our website – www.ebri.org

Support our Research Centers

Sponsor our events and webinars

Sign up for EBRInsights

Join EBRI as a Member. Membership questions? Contact Ryan Smith, Member Relations Specialist, ryans@ebri.org.

Follow us on Twitter and LinkedIn

Save the Date for EBRI's next Policy Forum on Wednesday, May 13, 2020

Our next webinar, "Cost Differences for Oncology Medicines Based on Site of Treatment", will be on Tuesday, February 26th. Reserve your spot today at ebri.org!