

THE COUNTY OF DuPAGE
• WHEATON, ILLINOIS •

Operations Review

PRESENTED BY: EMPOWER HEALTH SERVICES



Year in Review 2017

Why Invest in Wellness?

Wellness programs have been proven to:



Improve Health

Understanding current health status and the lifestyle and decision-making habits that contribute to that status can make a big difference.



Identify Illness Early On

Studies show that up to 90% of high cost medical claims stem from preventable health conditions.



Lower Risk and Cost

Regular screening and assessment results in risk reduction and lower medical claims.



Increase attendance

Healthy and informed employees miss fewer days of work each year.



Increase Productivity

When employees feel well, they function at a higher productivity level.

Empower Health Services Program Goals

A Fresh Approach to a Healthy Life



Service Suite Provided to DuPage County

A Fresh Approach to a Healthy Life

 Promotional Campaign	 Custom Registration Portal	 On-Site Screening Events	 Off-Site Patient Service Testing	 Year over Year Comparison	 Blood Pressure Reading & Consult
 Panel C Profile - 37 Blood Chemistry	 Additional Blood Testing Options	 Custom Personal Health Portal	 Custom Member Reporting	 Immediate RN Critical Care Outreach	 Ongoing Engagement

From December, 2017 – January, 2018, EHS proudly provided 19 on-site screening events at 6 key DuPage County locations. A total of 1,926 participants engaged in the program.

DuPage County 2017 Participation Statistics

A Fresh Approach to a Healthy life

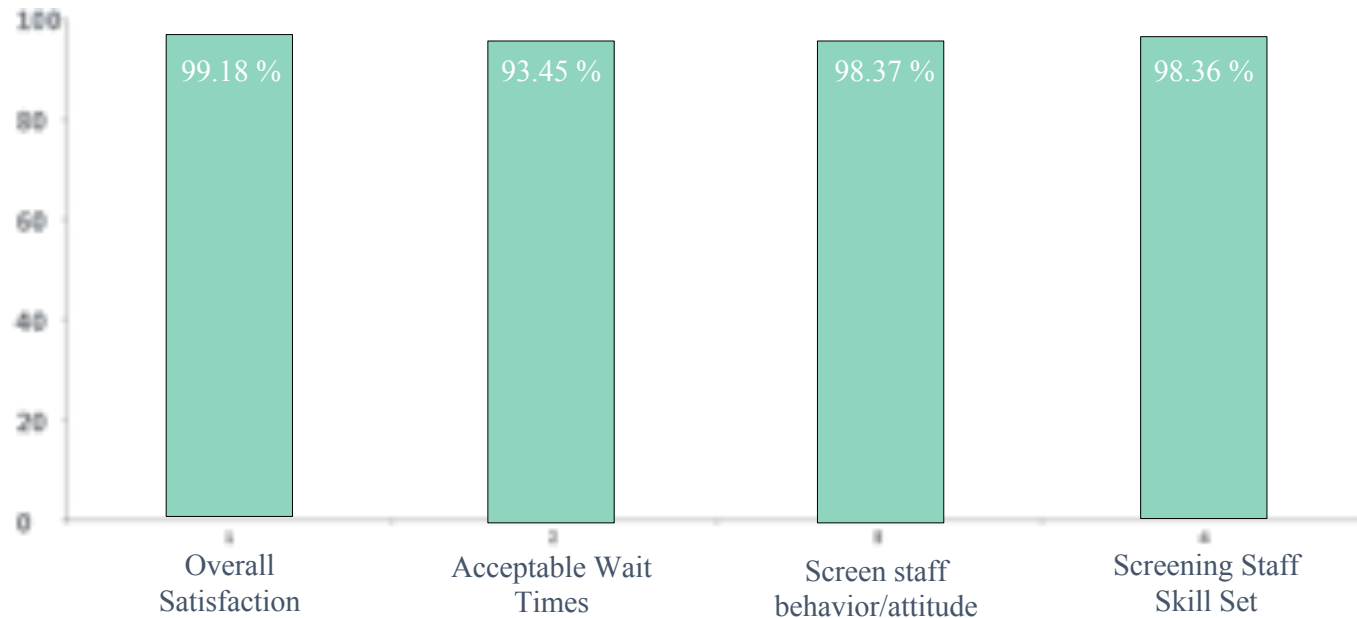
Participant Count	Males	Females	Total
Employees	774	1149	1923
Spouses	1	1	2
Other Dependents	0	0	0
Other	0	1	1
Contract	0	0	0
Clergy	0	0	0
Totals	775	1151	1926
# with Screenings	774	1149	1923
# with Both HRAs & Screenings	723	1112	1835

Understanding the eligibility and gender breakdown of participants helps determine if we can do a better job in reaching and engaging certain segments of the eligible population.

Empower Health Services – Satisfaction Survey Results

A Fresh Approach to a Healthy Life

91% of DuPage County employees offered to participate in the EHS satisfaction Survey. (1,752 out of 1,926 participants)



DuPage County Feedback on Participation

A Fresh Approach to a Healthy Life



Understanding why employees elect to participate in the program provides insight for potential improvements in communications, incentives, and delivery.

Biometrics

Granular Overview

Test Name	Very Low	Low	In-Range	High	Very High	Percent Out-of-Range	Percent In-Range	National Average
Systolic	-	-	689	1008	218	63.82%	36.18%	52.76%
Diastolic	-	-	929	826	160	51.33%	48.67%	44.10%
BMI	144	-	509	674	709	73.45%	26.55%	64.80%

01.

Systolic Blood Pressure

Indicates how much pressure your blood is exerting against your artery walls when the heart beats

02.

Diastolic Blood Pressure

Indicates how much pressure your blood is exerting against your artery walls when the heart is resting

03.

Body Mass Index Readings

Elevated body mass index readings represent increased risk of heart disease and type 2 diabetes

04.

Key Takeaway

Greater than 50% of participants represented elevated blood pressure reading and 3 out of every 4 participants had elevated body mass index readings

Lipids / Fats in Blood

Granular Overview

Test Name	Very Low	Low	In-Range	High	Very High	Percent Out-of-Range	Percent In-Range	National Average
LDL Cholesterol	-	-	767	1046	104	59.99%	40.01%	57.52%
Non-HDL Cholesterol	-	-	935	544	439	51.25%	48.75%	49.05%
Total Cholesterol	-	4	1199	562	153	37.49%	62.51%	36.41%
Triglycerides	-	-	1394	288	236	27.32%	72.68%	21.67%
Cholesterol Ratio	-	-	1616	294	8	15.75%	84.25%	12.85%
HDL	8	288	1622	-	-	15.43%	84.57%	12.02%

01.

Bad Cholesterol

60% of participants had abnormal LDL readings.

Over 51% had abnormal non-HDL readings

02.

Triglycerides

1 out of every 4 participants had abnormal Triglycerides readings

03.

HDL

1/6 of the population has low HDL – typically due to a lack of exercise.

04.

Cholesterol Ratio - 16% had abnormal readings

Research shows that an abnormal cholesterol ratio readings are the most indicative of a future cardiac event.

Blood Sugars

Granular Overview

Test Name	Very Low	Low	In-Range	High	Very High	Percent Out-of-Range	Percent In-Range	National Average
Hemoglobin A1C	-	1	26	15	2	40.91%	59.09%	36.90%
Glucose	-	8	1334	437	139	30.45%	69.55%	23.13%

01.

Glucose

Nearly 3 out of every 10 participants had an abnormal glucose reading

02.

Hemoglobin A1C

Hemoglobin A1C readings provide insight into a participant's blood sugar over the last 90 days. Higher than National Average probably due to selection process

03.

Blood Sugar

Having abnormal blood sugar readings is a warning for hypoglycemia or pre-diabetes/diabetes.

04.

Correlation

Participants with abnormal blood sugar readings often suffer from other issues including hypertension and obesity.

CBC – Complete Blood Count

Granular Overview

Test Name	Very Low	Low	In-Range	High	Very High	Percent Out-of-Range	Percent In-Range	National Average
MCHC	1	53	1844	20	-	3.86%	96.14%	3.31%
MCV	26	39	1801	52	-	6.10%	93.90%	5.30%
MCH	47	51	1781	39	-	7.14%	92.86%	6.17%
RDW	0	4	1802	69	43	6.05%	93.95%	4.57%
Platelet Count	11	18	1782	82	25	7.09%	92.91%	5.40%
Hematocrit	1	36	1859	22	-	3.08%	96.92%	2.08%
WBC	4	13	1854	47	-	3.34%	96.66%	3.20%
RBC	8	8	1852	45	5	3.44%	96.56%	2.50%
Hemoglobin	28	25	1855	10	-	3.28%	96.72%	2.50%

01.

Profile Specifics

This grouping of tests focuses on blood cell counts, size and content. RBC, WBC and Platelets are key.

02.

Risk Level

While many of these readings show a low percentage of out-of-range readings, abnormal blood cell values can indicate serious issues.

03.

Highest Abnormal Percentages

MCV measures the size of red blood cells. MCHC measures the amount of hemoglobin in the red blood cells.

04.

Key Takeaway

Both MCV and MCHC are used as early indicators for anemia and other vitamin deficiencies. These are inversely related.

Other Core Screenings

Granular Overview

Test Name	Very Low	Low	In-Range	High	Very High	Percent Out-of-Range	Percent In-Range	National Average
LD (LDH)	7	25	1762	107	17	8.13%	91.87%	6.33%
ALT (GPT)	-	-	1672	157	89	12.83%	87.17%	8.99%
Creatinine	2	40	1779	40	57	7.25%	92.75%	6.44%
Total Bilirubin	-	-	1799	9	110	6.20%	93.80%	5.56%
Total Iron	19	7	1815	24	53	5.37%	94.63%	5.19%
Alkaline Phosphatase	1	40	1826	43	8	4.80%	95.2%	5.08%
GGT	-	-	1783	133	2	7.04%	92.96%	4.57%
Sodium	-	6	1860	52	-	3.02%	96.98%	3.04%
Potassium	-	1	1837	79	1	4.22%	95.78%	2.89%
Uric Acid	8	14	1800	89	7	6.15%	93.85%	4.46%
Magnesium	7	12	1859	40	-	3.08%	96.92%	2.24%

01.

Profile Specifics

This grouping of tests primarily focuses on kidney and liver function

02.

Risk Level

The implications of abnormal kidney and liver function can be life threatening.

03.

Highest Abnormal Percentages

LDH helps produce energy. ALT is associated with the Liver. Creatinine measures kidney and muscle function

04.

Key Takeaways

The top three risk areas are associated with tissue damage, liver damage, and kidney damage

Other Core Screenings (cont.)

Granular Overview

Test Name	Very Low	Low	In-Range	High	Very High	Percent Out-of-Range	Percent In-Range	National Average
AST (SGOT)	-	-	1824	24	70	4.90%	95.10%	3.47%
Phosphorus	9	25	1846	34	4	3.75%	96.25%	3.19%
Calcium	1	19	1867	31	-	2.66%	97.34%	2.24%
BUN	-	5	1865	48	-	2.76%	97.34%	2.24%
eGFR	49	8	1858	-	3	3.13%	96.87%	2.46%
Chloride	-	35	1873	10	-	2.35%	97.65%	2.19%
T4	7	6	1895	7	3	1.20%	98.80%	1.23%
GFR African American	-	21	1893	-	4	1.30%	98.70%	0.85%
Albumin	-	1	1907	10	-	0.57%	99.50%	0.54%
Total Protein	-	5	1913	-	-	0.26%	99.74%	0.37%
Bilirubin Direct	-	-	1914	4	-	0.21%	99.79%	0.21%

01.

Profile Specifics

This grouping of tests looks for nutritional issues, tissue damage, and additional heart, liver, and kidney function

02.

Risk Level

DuPage County's participating population had low levels of risk in this profile

03.

Highest Abnormal Percentages

AST levels elevate when heart, liver, muscle, pancreas, or kidneys experience injury or damage.

04.

Key Takeaways

DuPage County had 94 participants with abnormal AST Readings

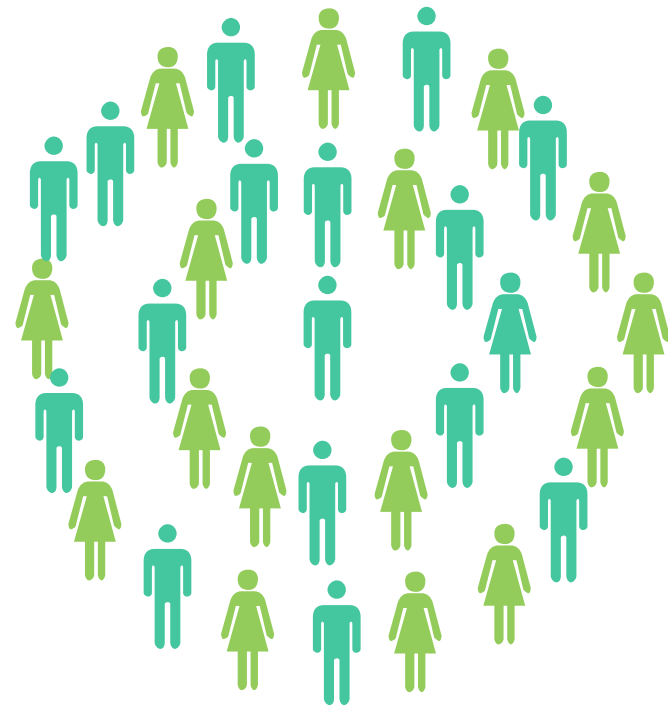
Summary of Key Metrics 2017

Test Type	At Risk		Borderline		Normal Range	
Body Mass Index	734	38.1%	674	35.0%	509	26.4%
Blood Pressure: Systolic	244	12.7%	920	47.8%	663	34.4%
Blood Pressure: Diastolic	211	11.0%	725	37.6%	891	46.3%
Cholesterol	149	7.7%	536	27.8%	1145	59.4%
HDL	7	0.4%	479	24.9%	1344	69.8%
LDL	461	23.9%	639	33.2%	708	36.8%
Total/HDL Ratio	8	0.4%	280	14.5%	1542	80.1%
Glucose	134	7.0%	413	21.4%	1283	66.6%
Triglyceride	214	11.1%	272	14.1%	1342	69.7%

Critical Call Follow Up Report

Increasing the health and awareness of High Risk Participants.

- Outreach to 18 participants with critically abnormal EHS screening results
- EHS Nursing Staff spoke with 16 participants
- 2 participants received notification and follow up letters
- 2 participants were aware of the issue(s) and currently receiving care
- 14 were unaware of the issue(s). EHS nursing staff provided consultation and direction.
- Conditions Covered: Liver, Kidney, Prostate Cancer, Hemoglobin A1c, Cholesterol, Glucose, Blood Cell Count



Metabolic Syndrome

77 individuals at risk for Metabolic Syndrome

Had a minimum of 3 risk factors:

- Elevated BMI/Waist
- Elevated Triglycerides
- Hypertension
- Low HDL Cholesterol
- Elevated Glucose

Exponentially increases risk for:

- Diabetes
- Heart Disease
- Cirrhosis of the liver
- Early Onset dementia
- Kidney Failure

Additional annual medical cost for Metabolic Syndrome:

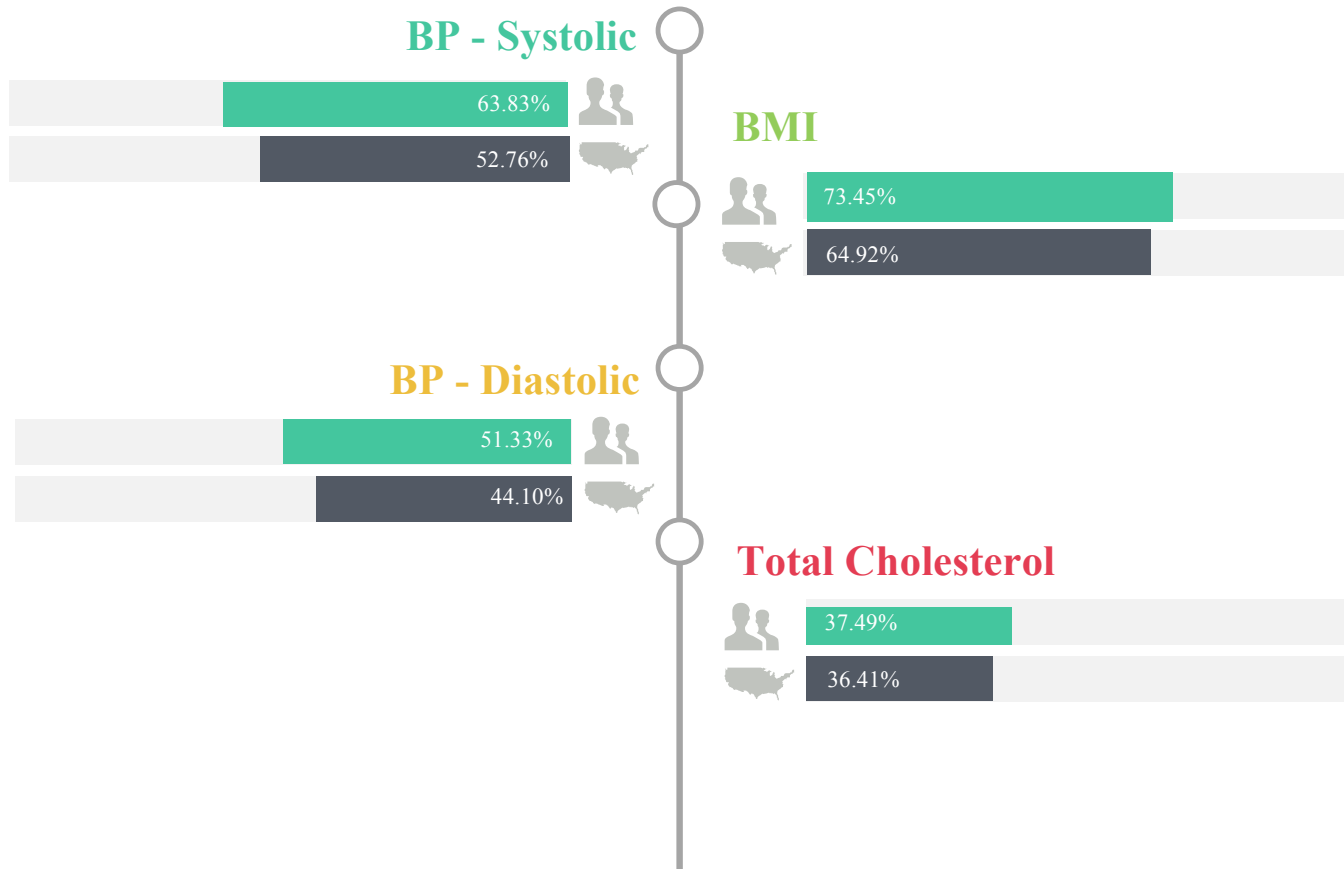
- \$2,000 - \$3200 per participant

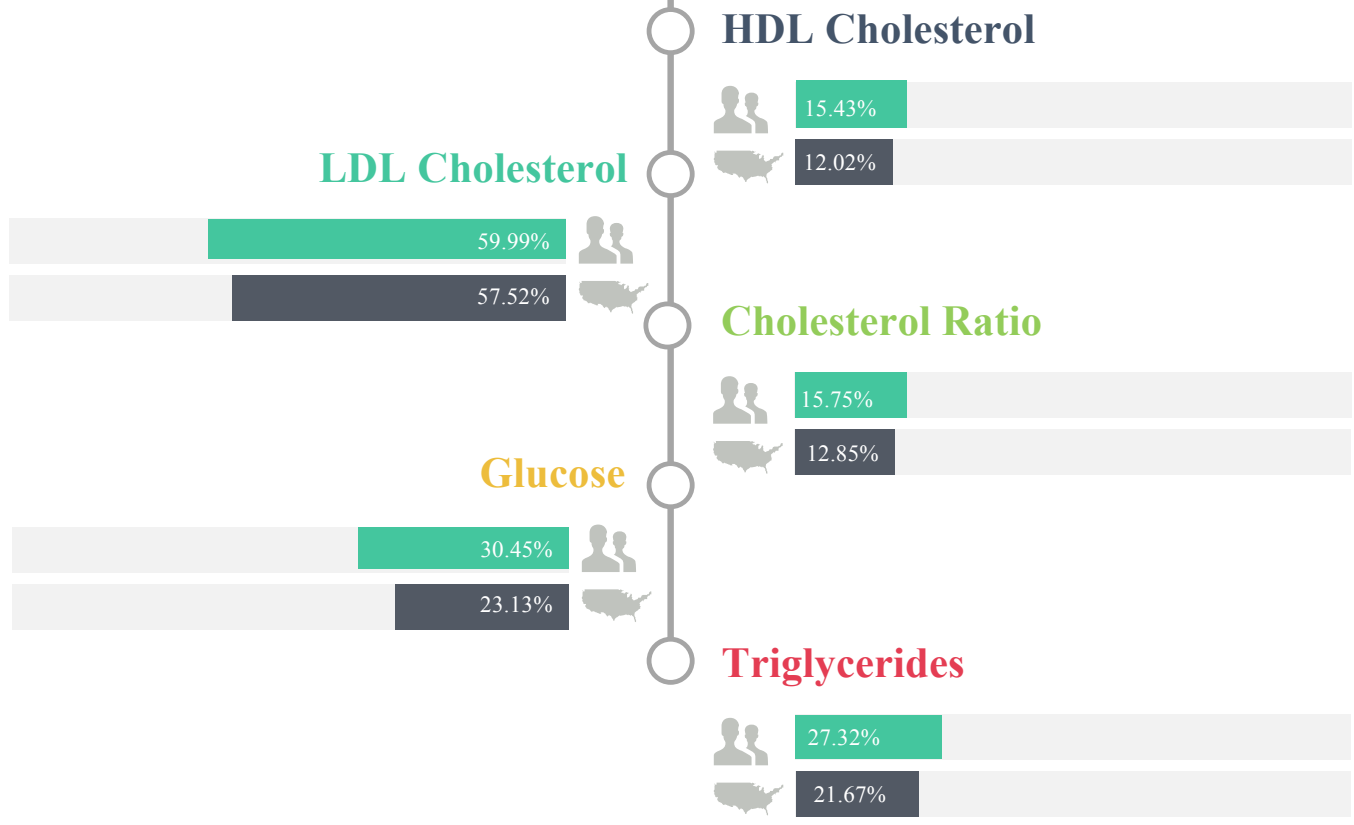
Total Annual Cost of Care: \$154,000 - \$246,400



DuPage County Results vs. EHS National Average

Comparison of Out of Range Results





** NATIONAL AVERAGE BASED ON EHS NATIONAL BOOK OF BUSINESS – 2017

Lifestyle and Decision-making - Nutrition

Granular Overview

Health Measures	At Risk		Borderline		OK		No Risk*		Page
	#	%	#	%	#	%	#	%	
Nutrition									
Insufficient servings of fruits most days	452	23.5%	664	34.5%	722	37.5%	N/A	0%	47
Insufficient servings of vegetables most days	963	50%	400	20.8%	475	24.7%	N/A	0%	48
Insufficient servings of fiber-rich foods most days	984	51.1%	557	28.9%	297	15.4%	N/A	0%	49
Excess servings of high-fat foods most days	21	1.1%	79	4.1%	1738	90.2%	N/A	0%	50
Insufficient servings of calcium-rich foods most days	451	23.4%	872	45.3%	515	26.7%	N/A	0%	51
Does not consume a healthy breakfast each day	422	21.9%	N/A	0%	1416	73.5%	N/A	0%	52
Excess servings of sugar-rich foods most days	60	3.1%	133	6.9%	1645	85.4%	N/A	0%	53
Insufficient water consumption each day	455	23.6%	477	24.8%	906	47%	N/A	0%	54
Readiness to eat healthier	0	0%	N/A	0%	0	0%	1838	95.4%	55
Insufficient healthy oils each week	920	47.8%	528	27.4%	390	20.2%	N/A	0%	56
Insufficient vitamin D each week	204	10.6%	207	10.7%	1427	74.1%	N/A	0%	57
Insufficient vitamin C each week	643	33.4%	376	19.5%	819	42.5%	N/A	0%	58

➤ Moderate Risk

➤ 23% of the population is at risk relative to consumption of fruit, calcium rich foods and water intake.

➤ Over 50% of the population is at risk relative to sufficient consumption of vegetables and fiber-rich foods.

Lifestyle and Decision-making - Fitness

Granular Overview

<u>Health Measures</u>	At Risk		Borderline		OK		No Risk*		<u>Page</u>
	#	%	#	%	#	%	#	%	
Fitness & Exercise									
Insufficient aerobic exercise	244	12.7%	576	29.9%	1018	52.9%	N/A	0%	59
Insufficient strength building exercise	669	34.7%	N/A	0%	1169	60.7%	N/A	0%	60
Readiness to exercise	0	0%	N/A	0%	0	0%	1838	95.4%	61
Readiness to reach ideal weight	0	0%	N/A	0%	0	0%	1838	95.4%	62
Average minutes of exercise	652	33.9%	428	22.2%	758	39.4%	N/A	0%	63

➤ Moderate Risk

➤ 13% of the population is at risk for insufficient cardio exercise

➤ 35% of the population is at risk relative to insufficient strength training exercise

➤ Over a third of the population does not get enough weekly exercise of any type

Lifestyle and Decision-making – Alcohol and Tobacco

Granular Overview

Health Measures	At Risk		Borderline		OK		No Risk*		Page
	#	%	#	%	#	%	#	%	
Alcohol									
Drinks Alcohol	0	0%	N/A	0%	799	41.5%	1039	53.9%	64
Excessive average alcohol consumption per day	30	1.6%	154	8%	855	44.4%	N/A	0%	65
Excess alcohol consumption in any day	185	9.6%	303	15.7%	551	28.6%	N/A	0%	66
Excessive alcohol in a given week	18	0.9%	20	1%	1001	52%	N/A	0%	67
Readiness to drink less alcohol	0	0%	N/A	0%	0	0%	1039	53.9%	68
Tobacco									
Use tobacco products	87	4.5%	N/A	0%	1751	90.9%	N/A	0%	86
Use smokeless tobacco	16	0.8%	N/A	0%	71	3.7%	N/A	0%	87
Smoke cigars or pipe tobacco	18	0.9%	N/A	0%	69	3.6%	N/A	0%	88
Smoking cigarettes	72	3.7%	N/A	0%	15	0.8%	N/A	0%	89
Readiness to change use of tobacco	0	0%	N/A	0%	0	0%	87	4.5%	90

➤ Low to Moderate Risk

➤ Less than 10% of the population is at risk relative to alcohol (16% borderline)

➤ Less than 5% of the population is at risk relative to tobacco.

Lifestyle and Decision-making - Safety

Granular Overview

Health Measures	At Risk		Borderline		OK		No Risk*		Page
	#	%	#	%	#	%	#	%	
Safety									
DUI and/or ride with a DUI driver	51	2.6%	N/A	0%	1787	92.8%	N/A	0%	69
Insufficient seat belt usage	78	4%	N/A	0%	1760	91.4%	N/A	0%	70
Exceeding the posted speed limit	402	20.9%	413	21.4%	1023	53.1%	N/A	0%	71
Insufficient safe lifting techniques for back health	134	7%	237	12.3%	1467	76.2%	N/A	0%	72
Not getting at least 20 minutes of sun exposure each day	633	32.9%	183	9.5%	1022	53.1%	N/A	0%	73
Avoid excess sun (UV radiation) using shade, clothing, hats, sunblock and other actions.	354	18.4%	N/A	0%	1484	77.1%	N/A	0%	74

➤ Low Risk

➤ 21% of the population consistently drives over the speed limit

➤ 18-33% of the population either does not get enough sun exposure or gets too much.

Lifestyle and Decision-making – Hygiene and Immunizations

Granular Overview

Health Measures	At Risk		Borderline		OK		No Risk*		Page
	#	%	#	%	#	%	#	%	
Hygiene and Immunization									
Insufficient hand washing	112	5.8%	N/A	0%	1726	89.6%	N/A	0%	75
Infrequent tetanus vaccination	297	15.4%	N/A	0%	1541	80%	N/A	0%	76
Infrequent flu vaccination	638	33.1%	N/A	0%	1200	62.3%	N/A	0%	77
Readiness to improve resistance to germs	0	0%	N/A	0%	0	0%	1838	95.4%	78
Floss your teeth daily to prevent infections affecting your gums, teeth, heart & social life	138	7.2%	494	25.6%	1206	62.6%	N/A	0%	79
Pneumonia vaccine	N/A	0%	N/A	0%	314	16.3%	1612	83.7%	80
Shingles vaccine	N/A	0%	N/A	0%	258	13.4%	1668	86.6%	80
Hepatitis B vaccine (series of 3-4 doses over 4 months)	N/A	0%	N/A	0%	694	36%	1232	64%	80
Hepatitis A vaccine	N/A	0%	N/A	0%	397	20.6%	1529	79.4%	80
Chickenpox vaccine - or I had chickenpox as a child	N/A	0%	N/A	0%	1180	61.3%	746	38.7%	80

➤ Moderate Risk

➤ 1/3 of the population does not get an annual flu vaccination

➤ 1/6 of the population is not current relative to the tetanus vaccination

Lifestyle and Decision-making – Healthcare - Prevention

Granular Overview

<u>Health Measures</u>	At Risk		Borderline		OK		No Risk*		<u>Page</u>
	#	%	#	%	#	%	#	%	
Health Care									
Not performing the recommended self-exams	564	29.3%	361	18.7%	913	47.4%	N/A	0%	81
No physical exam within the last 5 years	38	2%	N/A	0%	1800	93.5%	N/A	0%	82
Have no primary care physician	90	4.7%	N/A	0%	1748	90.8%	N/A	0%	83
Not sharing screening results with their doctor	128	6.6%	N/A	0%	1710	88.8%	N/A	0%	84
Conditions--have	659	34.2%	N/A	0%	0	0%	1179	61.2%	85

➤ Moderate to High Risk

➤ 29% of the population is not completing the recommended self-exams

➤ Another 19% of the population only complete some of the recommended self-exams

Lifestyle and Decision-making – Healthcare - Treatment

Granular Overview

<u>Current Conditions & Healthcare Received</u>	Currently Have		Receiving Care		Not Receiving Care	
	#	%	#	%	#	%
Anxiety and/or Depression	130	6.7%	122	93.8%	8	6.2%
Asthma	134	7%	106	79.1%	28	20.9%
Bipolar, schizophrenia or other mental health condition(s)	112	5.8%	90	80.4%	22	19.6%
Blind or have trouble seeing	180	9.3%	114	63.3%	66	36.7%
Chronic pain - in back, joints, other places	20	1%	16	80%	4	20%
Deaf or have trouble hearing	97	5%	22	22.7%	75	77.3%
Diabetes	320	16.6%	225	70.3%	95	29.7%
Digestive Disorders - e.g., celiac disease, Crohn's disease, irritable bowel syndrome (IBS), intolerances (lactose, gluten).	303	15.7%	117	38.6%	186	61.4%
Emphysema, COPD, or other lung disease	11	0.6%	10	90.9%	1	9.1%
Heart disease (blockages of arteries or heart failure)	152	7.9%	74	48.7%	78	51.3%
High blood pressure	356	18.5%	319	89.6%	37	10.4%
If other, click box and enter type(s) of condition(s) in the question below	133	6.9%	63	47.4%	70	52.6%
Intellectual or developmental disability	54	2.8%	46	85.2%	8	14.8%
Parkinson's, MS, cerebral palsy, paralyzed (waist down or neck down) or other neurologic conditions	9	0.5%	6	66.7%	3	33.3%
Pregnant (or might be now)	64	3.3%	38	59.4%	26	40.6%

➤ High Risk

➤ Many areas where participants are aware of a current health issue but are not receiving treatment.

➤ High percentages within population with inactive treatment.

Lifestyle and Decision-making – Stress

Granular Overview

Health Measures	At Risk		Borderline		OK		No Risk*		Page
	#	%	#	%	#	%	#	%	
Stress & Resilience									
Insufficient network of family and friends	0	0%	N/A	0%	1838	95.4%	N/A	0%	91
Do not seek information/assistance with difficult decisions	546	28.3%	370	19.2%	922	47.9%	N/A	0%	92
Do not make time for daily prayer, meditation, or relaxation	582	30.2%	397	20.6%	859	44.6%	N/A	0%	93
Do not have at least one best friend at work	243	12.6%	N/A	0%	1586	82.3%	9	0.5%	94
Insufficient hours of sleep each night	610	31.7%	393	20.4%	835	43.4%	N/A	0%	95
Volunteers less than 100 hours per year	813	42.2%	367	19.1%	658	34.2%	N/A	0%	96
Have to volunteer (vs want to)	0	0%	N/A	0%	0	0%	1838	95.4%	97

➤ High Risk

➤ 30% of the population does not take time to de-stress.

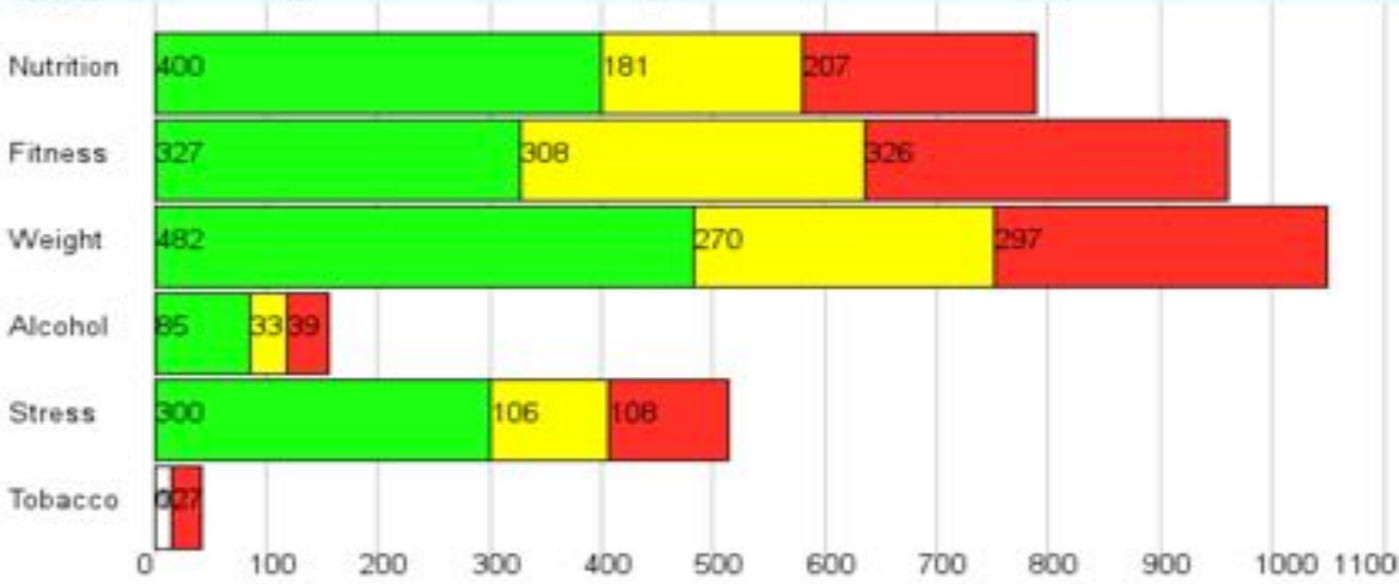
➤ 32% of the population does not get enough sleep

➤ 28% of the population are not seeking/receiving assistance when faced with difficult situations

Readiness To Change

Granular Overview

Category	Number Recently Changed	Number Will Change in One Month	Number Will Change in Six Months	Total Number Likely Ready For Support
Nutrition	400	181	207	788
Fitness	327	308	326	961
Weight	482	270	297	1049
Alcohol	85	33	39	157
Stress	300	106	108	514
Tobacco	0	15	27	42

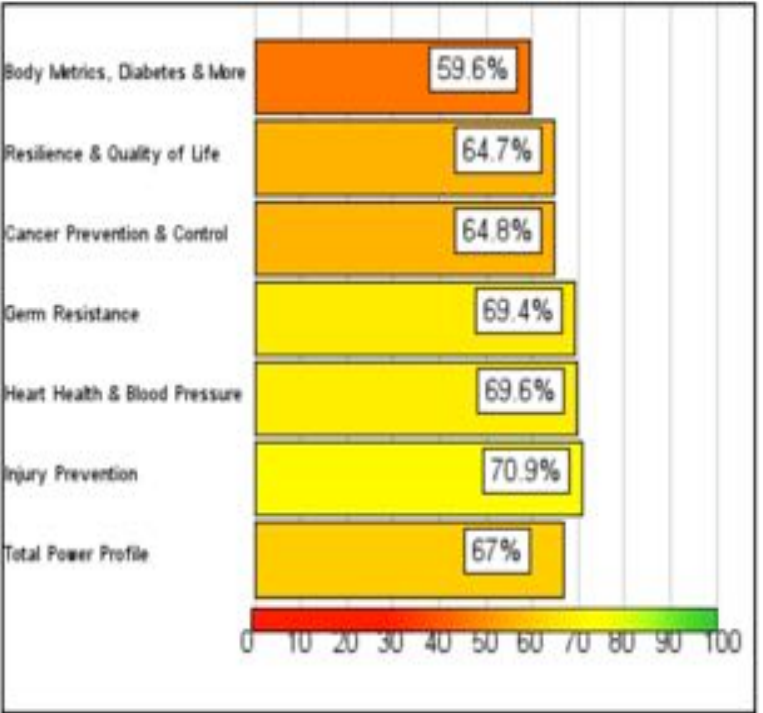
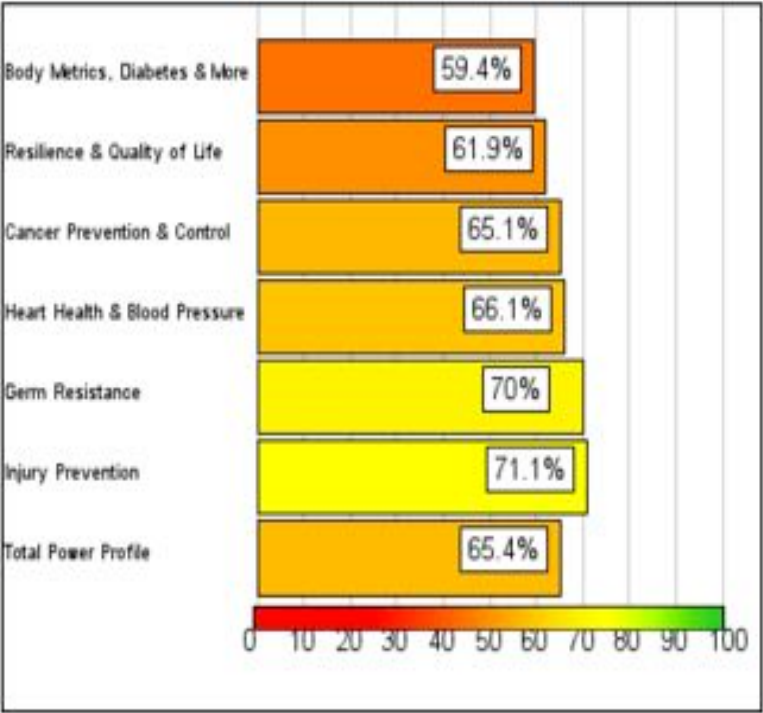


Success Profile and Comparison

Granular Overview

2017

2016



Isolation Report – Repeat Participants

There were a total of **1,689** repeat participants (2016 and 2017). With these individuals we were able to monitor 9 key metrics and categorize each into At-Risk, Borderline, Normal.

Test Type	2016		2017		Change
	At Risk	In Range	At Risk	In Range	
Triglycerides	29%	71%	28%	72%	1%
Total Cholesterol	39%	61%	39%	61%	0%
Total/HDL Ratio	18%	82%	18%	82%	0%
HDL Cholesterol	18%	82%	18%	82%	0%
LDL Cholesterol	61%	39%	66%	36%	3%
Glucose	31%	69%	34%	66%	3%
BMI	72%	28%	62%	30%	2%
Systolic	65%	35%	64%	36%	1%
Diastolic	63%	37%	65%	35%	2%

Thank You

It has been our privilege to serve your employees.

Our mission is to help individuals and organizations better understand their health, the factors that impact their vitality and take steps toward improvement.

Thank you for partnering with Empower Health Services.

