

NAHDO 2021  
36<sup>th</sup> Annual Conference  
Virtual

Spotlight Session  
September 28 – 30, 2021

***Drivers of Health Status Disparities:  
An Examination of Variation Using Population-Based Surveys***

**Executive Summary**  
**Sample Characteristics**  
**Regression Summary**  
**Regression Analysis**  
**Presentation Slides**

Brian Williams, MBA; Janine Molino, MS, PhD; and David Stern, MBA

[www.sternconsulting.com](http://www.sternconsulting.com)



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## Key Points

- Health status in the United States varies by race and by income.
- There is an interaction effect between race and income indicating that the effect of race on health differs across income levels.
- At individual income levels, most racial groups tend to have worse health compared to Non-Hispanic Whites at all but the highest income levels.
- After controlling for sociodemographics, behaviors, and medical conditions, medical conditions tend to drive differences in health outcomes, particularly at lower-income levels.
- At higher income levels, sociodemographic factors become more prominent. (Although at this level most are reporting good health.)

## Background

Health status is a broad concept. It may be studied through a number of objective and subjective mechanisms, and may be considered within or without the context of a formal medical system.

## Objective

In this presentation, we focus on three indicators of health status: self-reported health, bed days, and work days lost due to illness or injury. We examine the demographic, social, economic, and medical factors that may influence these outcomes and contribute to variations across the U.S. population.

## Methods

### Sources

We obtained data for the paper from two sources: the 2018 versions of the National Health Interview Survey (NHIS) and the Household Component of the Medical Expenditure Panel Survey (MEPS). These sources are large population-based surveys that contain the desired outcome measures as well as a wide range of variables by which to assess variation.

### Variables

#### Dependent Variables:

The dependent variables addressed self-reported health and days lost due to illness.

The specific NHIS dependent variables were “Reported health status” (PHSTAT), “Number of work loss days, past 12 months” (WKDAYR), and “Number of bed days, past 12 months” (BEDDAYR).

For MEPS, the dependent variables were “Perceived Health Status” (RTHLTH42) and “Number of days missed work due to illness/injury, 2018 (DDNWRK18).

#### Key Independent Variables:

The key independent variables used in the analysis were race/ethnicity and ratio of income to poverty level.

For NHIS, the specific key independent variables were “Race/ethnicity recode” (HISCODI3) and “Ratio of family income to the poverty threshold” (RAT\_CAT5).

For MEPS, the key independent variables were “Race/Ethnicity” (RACETHX), and “Family Income as a Percent of Poverty Line” (POVCAT18).

## Control Variables

We controlled for important sociodemographics and medical conditions.

See the “Sample Characteristics” table for a complete listing of study variables and their descriptive statistics.

## Statistical Analysis

We used ordinal logistic regression models to understand the sociodemographic, behavioral, and medical factors that were associated with self-reported health. We used negative binomial regression models to understand the sociodemographic, behavioral, and medical factors that were associated with bed days and work days lost. All regression models took into account the complex sample design of the NHIS and MEPS datasets. We applied survey-provided weights so that the findings were representative of the U.S. population aged 18 years and older. All analyses were completed in SAS version 9.4 (SAS Institute Inc., Cary, NC).

## Results

### *National Health Interview Survey (NHIS)*

#### Self-Reported Health

##### Unstratified Analyses

- 1.) Race and income are important determinants of health, both in unadjusted and adjusted models.
- 2.) The fact that race and income are important in the adjusted model, suggests that even after adjusting for potential differences in sociodemographics and health conditions, race and income still matter. This indicates that there are other factors that we have not controlled for that may explain these differences. These could include cultural factors, physician/practice level factors (such as unconscious biases), or access to care.

##### Interaction Terms

- 1.) The interaction term is significant in the unadjusted model. This tells us that the effect of race on self-reported health differs by income.

##### Stratified Analyses

- 1.) Race becomes a bigger factor in explaining self-reported health as income increases.
- 2.) In the middle-income categories (low and medium), unadjusted models show some minority categories as having better self-reported health, but after controlling for sociodemographics and medical conditions, their self-reported health is reported as worse.
- 3.) In lower-income categories, the medical conditions/related variables tend to determine self-reported health. As income increases, the sociodemographics play a larger role.

## **Work Days Lost**

### **Unstratified Analyses (working)**

- 1.) After adjusting for sociodemographics and medical conditions, race and income are significant predictors of work days lost, with minorities and lower-income individuals reporting fewer lost days.
- 2.) Among control variables, medical conditions/related variables are more strongly related to work days lost than are sociodemographics.

### **Interaction Terms**

- 1.) The interaction terms are significant in both the unadjusted and adjusted models, indicating that the effect of race on work days lost differs by income level.

### **Stratified Analyses**

- 1.) Race matters more for work days lost in the very low-, low-, and medium-income categories. Minorities report fewer days lost, even after controlling for sociodemographics and medical conditions, suggesting that unobserved factors, such as cultural beliefs/traditions, play a role in this association.
- 2.) Race does not predict work days lost in the high-income category. In this income level, medical conditions are driving the increase in days lost.

## **Bed Days**

### **Unstratified Analyses**

- 1.) Race is important in the unadjusted model, but becomes non-significant in the adjusted model, suggesting that differences in sociodemographics and medical conditions across the races explain the differences in bed days.
- 2.) Medical conditions are stronger drivers of bed days than are sociodemographics.

### **Interaction Terms**

- 1.) The interaction term is significant in the unadjusted model, suggesting that the effect of race on bed days differs by income category.

### **Stratified Analyses**

- 1.) Minority races are reporting fewer bed days than Non-Hispanic Whites. These differences remain after controlling for sociodemographics and medical conditions, suggesting that cultural factors may also play a role.
- 2.) At low-income levels, medical conditions drive bed days. As income increases, sociodemographic factors start to play a bigger role.

## **Medical Expenditure Panel Survey (MEPS)**

### **Self-Reported Health**

#### **Unstratified Analyses**

- 1.) After adjusting for sociodemographics and medical conditions, minority races and low-income individuals report worse self-reported health.

#### **Interaction Term**

- 1.) In unadjusted models, the interaction between race and income is statistically significant, indicating that the effect of race on self-reported health differs by income level.

#### **Stratified Analyses**

- 1.) In unadjusted models it appears that race has no effect or leads to improved self-reported health. However, after adjusting for sociodemographics and medical conditions, these groups have worse self-reported health. Since controlling for sociodemographics and medical conditions puts people on the same playing field, this seems to suggest that there are differences in the way different race groups view their health.
- 2.) For the most part, the medical conditions/health related variables are significantly associated with self-reported health whereas the sociodemographics are not.

#### **Comparison to NHIS**

- 1.) The change in direction of association between race and self-reported health across income categories is qualitatively comparable/consistent between NHIS and MEPS.
- 2.) In NHIS, sociodemographics begin to play a bigger role in explaining differences in self-reported health at higher income levels. However, in MEPS this does not appear to happen.
- 3.) The MEPS sample is reporting slightly better overall self-reported health, with people in the good to very good range, on average, in both samples.

## **Work Days Lost**

### **Unstratified Analyses (working)**

- 1.) In the unadjusted model, race matters, with Hispanics and Non-Hispanic Asians reporting fewer work days lost and Non-Hispanic Blacks and multiple races reporting more days lost.
- 2.) After adjusting for sociodemographics and medical conditions, the effect of race basically disappears.
- 3.) Medical conditions/related variables are driving work days lost.

### **Interaction Term**

- 1.) Interaction between race and income is significant in the unadjusted models, suggesting that the effect of race on work days lost differs by income level.

### **Stratified Analyses**

- 1.) In the very low-, low-, and medium-income levels, the unadjusted models show that racial minorities (except multiple races) are reporting fewer work days lost. Controlling for sociodemographics and medical conditions, causes these differences to become insignificant, suggesting that these other factors are better predictors of work days lost than race. This seems to suggest in these income categories, Non-Hispanic Whites may have more health issues overall. Once we control for them, they seem to mimic other race categories.
- 2.) In the high-income category, race is significant in the unadjusted model, with minorities reporting more work days lost compared to Non-Hispanic Whites. After controlling for sociodemographics and medical conditions, race becomes non-significant, suggesting these other factors are driving the differences.
- 3.) In all income categories, the medical conditions/related variables are the driving predictors of work days lost.

### **Comparison to NHIS**

- 1.) The effect of race appears to be consistent between MEPS and NHIS for the very low-, low-, and medium-income categories, particularly in the unadjusted models.
- 2.) In NHIS, race does not matter in the high-income category but does in MEPS.
- 3.) As in NHIS, medical conditions/related variables are the major predictors of work days lost.
- 4.) Overall, respondents reported fewer work days lost in MEPS than in NHIS.



## Conclusion

Overall health differs across racial and ethnic groups, but the effects are nuanced and vary depending on income level. These differences appear to act primarily through the prevalence of medical conditions and diseases across races and income groups.

Because underlying disease prevalence may be the primary driver of overall health, policy-makers and public health professionals seeking to improve population health status should consider targeting medical conditions while tailoring the messaging towards specific income and racial groups.

Ultimately, further research would be useful to understand the provider- and system-level factors that influence disparities.

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Executive Summary

**Sample Characteristics**

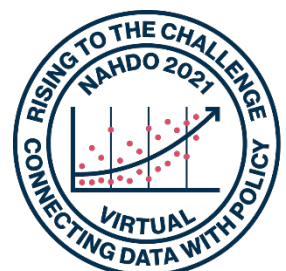
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## Sample Characteristics

### Sources

Data for the study were obtained from two sources:

- National Health Interview Survey (NHIS)
- Household Component of the Medical Expenditure Panel Survey (MEPS).

These sources were selected as they are large population-based surveys that contain the desired outcome measures as well as a wide range of variables by which to assess variation. NHIS and MEPS are both based on the civilian non-institutionalized population (CNIP).

### Study Subset

The study was limited to persons aged 18 and older. Analysis of “work days lost” was further limited to the working population.

### Variables

**Dependent Variables:** The dependent variables were self-reported health, work days lost due to illness or injury, and bed days. The specific fields from each of the surveys included:

- NHIS
  - Reported health status (PHSTAT)
  - Number of work loss days, past 12 months (WKDAYR)
  - Number of bed days, past 12 months (BEDDAYR)
- MEPS
  - Perceived Health Status (RTHLTH42)
  - Number of days missed work due to illness/injury, 2018 (DDNWRK18).

**Key Independent Variables:** The key independent variables used in the analysis were race/ethnicity and ratio of income to poverty level. The specific fields from each of the surveys included:

- NHIS
  - Race/ethnicity recode” (HISCODI3)
  - Ratio of family income to the poverty threshold” (RAT\_CAT5).
- MEPS
  - Race/Ethnicity (RACETHX)
  - Family Income as a Percent of Poverty Line (POVCAT18).

**Control Variables:** We controlled for important sociodemographics and medical conditions.

See the following “Sample Characteristics” table for a complete listing of study variables and their descriptive statistics.

## Sample Characteristics

### NHIS: Dependent Variables

	Sample Data n= 25,417		Population Estimates N = 249,455,533	
<b>Categorical</b>	<b>Frequency</b>	<b>Percent</b>	<b>Frequency</b>	<b>Percent</b>
<b>Self-Reported Health</b>				
Excellent	6,328	24.90%	68,501,358	27.46%
Very good	8,405	33.07%	82,531,191	33.08%
Good	7,040	27.70%	66,668,210	26.73%
Fair or poor	3,635	14.30%	31,648,047	12.69%
Missing	9	0.04%	106,727	0.04%
<b>Continuous</b>				
	<b>Mean</b>	<b>St Dev</b>	<b>Mean</b>	<b>St Dev</b>
<b>Bed days</b>	5.56	28.51	5.27	27.95
<b>Work days lost*</b>	4.11	17.31	3.97	17.19

\*"Work days lost" is based on working persons for whom data were reported : n= 16,150, N= 170,832,080.

## Sample Characteristics

### NHIS: Independent Variables

	Sample Data n= 25,417		Population Estimates N = 249,455,533	
<b>Categorical</b>				
<b>Sociodemographic</b>	<b>Frequency</b>	<b>Percent</b>	<b>Frequency</b>	<b>Percent</b>
<b>Cost</b>				
Cost did not prevent care	23,548	92.65%	233,364,187	93.55%
Cost prevented care	1,860	7.32%	16,011,533	6.42%
Missing	9	0.04%	79,813	0.03%
<b>Education</b>				
Less than high school	2,822	11.10%	28,380,740	11.38%
High school diploma/GED	10,791	42.46%	107,232,228	42.99%
Associate's degree	3,041	11.96%	29,377,765	11.78%
Bachelor's degree	5,406	21.27%	52,917,862	21.21%
Master's, Doctorate degree	3,251	12.79%	30,203,520	12.11%
Missing	106	0.42%	1,343,418	0.54%
<b>Food Security</b>				
High security	21,576	84.89%	212,350,243	85.13%
Marginal security	1,609	6.33%	15,842,401	6.35%
Low security	384	1.51%	3,505,841	1.41%
Very low security	1,848	7.27%	17,757,048	7.12%
<b>Health Insurance</b>				
Public	10,851	42.69%	88,561,980	35.50%
Private	12,169	47.88%	133,825,207	53.65%
Uninsured	2,316	9.11%	25,798,441	10.34%
Missing	81	0.32%	1,269,905	0.51%
<b>Marriage</b>				
Married or live w partner	12,943	50.92%	149,373,400	59.88%
Widowed, divorced, separated	6,827	26.86%	41,363,036	16.58%
Never married	5,594	22.01%	58,299,708	23.37%
Missing	53	0.21%	419,389	0.17%
<b>Occupation</b>				
White collar	14,958	58.85%	142,890,563	57.28%
Service	3,911	15.39%	39,623,540	15.88%
Blue collar	5,042	19.84%	50,303,957	20.17%
Other	105	0.41%	812,525	0.33%
Missing	1,401	5.51%	15,824,948	6.34%

## Sample Characteristics

### NHIS: Independent Variables

	Sample Data n= 25,417		Population Estimates N = 249,455,533	
<b>Categorical</b>				
<b>Sociodemographic (cont.)</b>	<b>Frequency</b>	<b>Percent</b>	<b>Frequency</b>	<b>Percent</b>
<b>Race/Ethnicity</b>				
Hispanic	3,179	12.51%	40,749,392	16.34%
Non-Hispanic White	17,569	69.12%	159,146,863	63.80%
Non-Hispanic Black	2,978	11.72%	30,713,582	12.31%
Non-Hispanic Asian	1,326	5.22%	15,596,034	6.25%
Non-Hispanic all other race groups	365	1.44%	3,249,662	1.30%
<b>Ratio of Income to Poverty Level</b>				
< 1.00	2,869	11.29%	24,028,152	9.63%
1.00 – 1.99	4,339	17.07%	40,314,635	16.16%
2.00 – 3.99	6,764	26.61%	66,605,209	26.70%
4.00 +	9,874	38.85%	102,715,705	41.18%
Missing	1,571	6.18%	15,791,832	6.33%
<b>Sex</b>				
Male	11,550	45.44%	120,441,598	48.28%
Female	13,867	54.56%	129,013,935	51.72%
<b>Speak English</b>				
Very well	22,752	89.51%	219,925,479	88.16%
Well	1,569	6.17%	16,003,567	6.42%
Not well or at all	1,091	4.29%	13,442,499	5.39%
Missing	5	0.02%	83,988	0.03%
<b>Usual Place of Care</b>				
No usual place	3,129	12.31%	33,798,313	13.55%
Usual place	22,141	87.11%	214,011,096	85.79%
Missing	147	0.58%	1,646,124	0.66%

## Sample Characteristics

### NHIS: Independent Variables

	Sample Data n= 25,417		Population Estimates N = 249,455,533	
Categorical	Frequency	Percent	Frequency	Percent
<b>Behavior/BMI</b>				
<b>Alcohol</b>				
Lifetime abstainer	4,500	17.70%	48,329,542	19.37%
Former drinker	3,954	15.56%	34,139,729	13.69%
Current drinker	16,511	64.96%	162,558,813	65.17%
Missing	452	1.78%	4,427,449	1.77%
<b>Smoking</b>				
Current smoker	3,764	14.81%	34,210,770	13.71%
Former smoker	6,283	24.72%	54,987,313	22.04%
Never smoker	15,292	60.16%	159,569,243	63.97%
Missing	78	0.31%	688,207	0.28%
<b>BMI</b>				
< 18.5 (Underweight)	400	1.57%	4,081,352	1.64%
18.5 – < 25.0 (Normal)	7,980	31.40%	78,567,991	31.50%
25.0 – < 30.0 (Overweight)	8,551	33.64%	83,047,575	33.29%
30.0 – < 35.0 (Obesity I)	4,566	17.96%	44,960,982	18.02%
35.0 – < 40.0 (Obesity II)	1,876	7.38%	18,594,159	7.45%
40.0 + (Extreme Obesity III)	1,256	4.94%	12,289,810	4.93%
Missing	788	3.10%	7,913,664	3.17%

## Sample Characteristics

### NHIS: Independent Variables

	Sample Data n= 25,417		Population Estimates N = 249,455,533	
Continuous	Mean	St Dev	Mean	St Dev
<b>Sociodemographic</b>				
Age	51.69	18.34	47.61	18.19
<b>Medical</b>				
Count of Medical Conditions (causing limitations)	0.72	1.24	0.62	1.16
Count of Medical Conditions (ever)	1.88	1.95	1.63	1.83
Count of Medical Conditions (recent)	2.87	2.66	2.61	2.57
Functional Limitation Score	4.23	8.12	3.53	7.51
Kessler Score of Psychological Distress*	2.90	4.07	2.87	4.04

\*"Kessler Score" statistics are limited to persons for whom data are reported for at least 1 indicator of psychological distress:  
n= 24,857, N= 243,913,400.



## Sample Characteristics

### MEPS: Dependent Variables

	Sample Data n= 22,666		Population Estimates N = 250,588,758	
<b>Categorical</b>	<b>Frequency</b>	<b>Percent</b>	<b>Frequency</b>	<b>Percent</b>
<b>Self-Reported Health</b>				
Excellent	4,953	21.85%	59,652,937	23.81%
Very good	7,532	33.23%	89,019,775	35.52%
Good	6,794	29.97%	70,066,238	27.96%
Fair or poor	3,250	14.34%	30,687,495	12.25%
Missing	137	0.60%	1,162,313	0.46%
<b>Continuous</b>	<b>Mean</b>	<b>St Dev</b>	<b>Mean</b>	<b>St Dev</b>
Work days lost*	3.74	9.94	3.49	9.32

\*Data for the study are limited to persons aged 18 and over.

"Work days lost" is based on a subset of those data – working persons for whom data were reported:  
n= 12,792, N= 154,279,950.

## Sample Characteristics

### MEPS: Independent Variables

	Sample Data n= 22,666		Population Estimates N = 250,588,758	
	Frequency	Percent	Frequency	Percent
<b>Categorical</b>				
<b>Sociodemographic</b>				
<b>Cost (Dental)</b>				
Cost did not prevent care	19,658	86.73%	220,028,295	87.80%
Cost prevented care	2,807	12.38%	28,411,643	11.34%
Missing	201	0.89%	2,148,819	0.86%
<b>Cost (Medical)</b>				
Cost did not prevent care	21,143	93.28%	235,021,481	93.79%
Cost prevented care	1,330	5.87%	13,619,770	5.44%
Missing	193	0.85%	1,947,506	0.78%
<b>Cost (Prescription Meds)</b>				
Cost did not prevent care	21,481	94.77%	239,113,478	95.42%
Cost prevented care	995	4.39%	9,484,421	3.78%
Missing	190	0.84%	1,990,858	0.79%
<b>Education</b>				
Less than high school	3,432	15.14%	28,347,290	11.31%
High school diploma/GED	10,554	46.56%	112,599,892	44.93%
Associates degree or some college	1,986	8.76%	24,588,819	9.81%
Bachelors degree	4,024	17.75%	51,838,765	20.69%
Masters/Doctorate degree	2,450	10.81%	31,337,801	12.51%
Missing	220	0.97%	1,876,191	0.75%
<b>Food Stamps</b>				
Did not purchase food stamps	19,436	85.75%	222,323,649	88.72%
Purchased food stamps	2,766	12.20%	22,834,157	9.11%
Missing	464	2.05%	5,430,952	2.17%
<b>Health Insurance</b>				
Public	9,519	42.00%	91,057,158	36.34%
Private	10,082	44.48%	130,470,869	52.07%
Uninsured	3,065	13.52%	29,060,731	11.60%
<b>Marriage</b>				
Married (pre-existing)	11,157	49.22%	126,594,810	50.52%
Widowed, divorced, separated (pre-existing)	4,823	21.28%	47,798,320	19.07%
Never married	6,299	27.79%	72,128,497	28.78%
Married (new)	196	0.86%	2,355,297	0.94%
Widowed, divorced, separated (new)	184	0.81%	1,694,573	0.68%
Missing	7	0.03%	17,261	0.01%

## Sample Characteristics

### MEPS: Independent Variables

	Sample Data n= 22,666		Population Estimates N = 250,588,758	
Categorical	Frequency	Percent	Frequency	Percent
<b>Sociodemographic (Cont.)</b>				
<b>Occupation</b>				
White collar	7,836	34.57%	100,818,696	40.23%
Service	2,472	10.91%	25,580,725	10.21%
Blue collar	2,807	12.38%	30,531,119	12.18%
Other	44	0.19%	189,247	0.08%
Not working	9,255	40.83%	90,747,371	36.21%
Unclassifiable	252	1.11%	2,721,600	1.09%
<b>Other Language</b>				
Speaks English	16,842	74.31%	195,189,717	77.89%
Speaks other language	5,804	25.61%	55,253,826	22.05%
Missing	20	0.09%	145,214	0.06%
<b>Race/Ethnicity</b>				
Hispanic	4,784	21.11%	40,941,842	16.34%
Non-Hispanic White Only	12,619	55.67%	156,820,023	62.58%
Non-Hispanic Black Only	3,346	14.76%	29,776,947	11.88%
Non-Hispanic Asian Only	1,192	5.26%	15,312,707	6.11%
Non-Hispanic Other Race	157	0.69%	1,653,778	0.66%
Non-Hispanic Multiple Race	568	2.51%	6,083,461	2.43%
<b>Ratio of Income to Poverty Level</b>				
< 1.00 (Poor)	3,336	14.72%	26,413,862	10.54%
1.00 – 1.99 (Near Poor/Low Income)	4,258	18.79%	39,776,786	15.87%
2.00 – 3.99 (Middle Income)	6,574	29.00%	71,186,076	28.41%
4.00 + (High Income)	8,498	37.49%	113,212,034	45.18%
<b>Sex</b>				
Male	10,580	46.68%	121,026,455	48.30%
Female	12,086	53.32%	129,562,303	51.70%
<b>Speak English</b>				
English	16,842	74.31%	195,189,717	77.89%
Non-English very well	3,161	13.95%	32,483,487	12.96%
Non-English well	1,017	4.49%	9,687,342	3.87%
Non-English not well or at all	1,626	7.17%	13,082,997	5.22%
Missing	20	0.09%	145,214	0.06%
<b>Usual Place of Care</b>				
No usual place	5,865	25.88%	65,937,593	26.31%
Usual place	15,955	70.39%	176,607,655	70.48%
Missing	846	3.73%	8,043,510	3.21%

## Sample Characteristics

### MEPS: Independent Variables

	Sample Data		Population Estimates	
	n = 22,666		N = 250,588,758	
Categorical	Frequency	Percent	Frequency	Percent
<b>Behavior/BMI</b>				
<b>Alcohol</b>				
Heavy drinking event past 12 mos	3,404	15.02%	44,116,637	17.61%
No heavy drinking event past 12 mos	15,158	66.88%	166,470,861	66.43%
Did not report	4,104	18.11%	40,001,259	15.96%
<b>Smoking</b>				
Non-smoker	18,791	82.90%	211,055,143	84.22%
Smoker	3,495	15.42%	35,839,264	14.30%
Missing	380	1.68%	3,694,351	1.47%
<b>BMI</b>				
< 18.5 (Underweight)	709	3.13%	7,455,784	2.98%
18.5 – < 25.0 (Normal)	5,362	23.66%	64,995,202	25.94%
25.0 – < 30.0 (Overweight)	5,949	26.25%	67,360,216	26.88%
30.0 – < 35.0 (Obesity I)	3,416	15.07%	38,180,659	15.24%
35.0 – < 40.0 (Obesity II)	1,613	7.12%	17,368,922	6.93%
40.0 + (Extreme Obesity III)	1,203	5.31%	12,420,163	4.96%
Did not report	4,414	19.47%	42,807,813	17.08%

## Sample Characteristics

### MEPS: Independent Variables

	Sample Data n= 22,666		Population Estimates N = 250,588,758	
Continuous	Mean	St Dev	Mean	St Dev
<b>Sociodemographic</b>				
Age	48.99	18.39	47.71	18.3
Total Medical Care Expenditures	7362.80	19281.43	7129.8	18873.24
<b>Medical</b>				
Count of Medical Conditions (ever)	1.60	1.84	1.4863	1.774
Count of Medical Conditions (recent)	0.40	0.61	0.38672	0.597
VR-12 Mental Component Summary (MCS)*	51.97	9.10	52.218	8.809
VR-12 Physical Component Summary (PCS)*	48.97	10.76	49.935	10.292

\*Data are limited to participants in the "Veterans RAND 12 (VR-12) Item Health Survey" for whom data were available via direct response or imputation.

MCS: n= 19,516, N= 220,736,919.

PCS: n= 19,518, N= 220,732,697

NAHDO 2021  
36<sup>th</sup> Annual Conference  
Virtual

Spotlight Session  
September 28 – 30, 2021

***Drivers of Health Status Disparities:  
An Examination of Variation Using Population-Based Surveys***

Executive Summary

Sample Characteristics

**Regression Summary**

Regression Analysis

Presentation Slides

Brian Williams, MBA; Janine Molino, MS, PhD; and David Stern, MBA

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## Regression Summary

(See "Regression Analysis" for the detailed results.)

The attached tables provide a summary of the five regressions run for the study.

### Regressions

The five regressions reflect the use of two data sources and the availability of the required dependent variables as follows:

Dependent Variable	Data Source	
	National Health Interview Survey (NHIS)	Medical Expenditure Panel Survey (MEPS)
Self-reported health	✓	✓
Work days lost	✓	✓
Bed days	✓	

### Summary Results

The summary results include the level of significance, degree and direction, for all independent variables/variable levels with a statistically significant effect on the outcomes.

**Statistical significance** is indicated by the number of asterisks as follows:

* p < 0.05	** p < 0.01	*** p < 0.001
------------	-------------	---------------

**Direction and degree** of the effect is measured by the Odds Ratio (OR)/Incidence Rate Ratio (IRR) and is reflected in the summary tables via the following color coding:

"Blue" indicates worse outcomes		"Red" indicates better outcomes	
	OR/IRR: between 1 and 1.25 (small effect size)		OR/IRR: between 0.75 and 1 (small effect size)
	OR/IRR: between 1.26 and 1.5 (medium effect size)		OR/IRR: between 0.50 and 0.74 (medium effect size)
	OR/IRR: between 1.51 and 2 (large effect size)		OR/IRR: < 0.5 (large effect size)
	OR/IRR: > 2 (very large effect size)		

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables. Used for "Work Days Lost" and "Bed Days" analyses.

## Stratification

We tested for interaction between race/ethnicity and income (ratio of family income to poverty level). The "Ratio of Income to Poverty Level x Race/Ethnicity" interaction term is statistically significant for each of the outcome measures in our otherwise unadjusted model. This indicates that the effect of race on health differs by income and as such we stratified subsequent analyses by income level.

The "income levels" are defined as follows:

Level	Ratio of Income to FPL*	Description
1	< 1.00	Low income
2	1.00 – 1.99	Very low income
3	2.00 – 3.99	Medium income
4	4.00 +	High income

\*Federal poverty level. Throughout the study, the term "poverty level" refers to FPL. Likewise, the term "income level" refers to the ratio of family income to the FPL.

## Adjustment Status

Summary results are shown for both adjusted and unadjusted regression models.



## Drivers of Health Status Disparities

### Regression Analysis – Summary Tables<sup>1</sup>

#### Data Sources:

National Health Interview Survey (NHIS) and Medical Expenditure Panel Survey (MEPS), 2018

Table A summarizes our initial regression of race/ethnicity by three measures of health status. The analysis shows that health status, unadjusted for other factors, varies by race/ethnicity for each of the selected outcome measures for both of the source surveys. Results are shown for those races/ethnicities with statistically significant differences from the reference group. The degree, direction and level of significance are as indicated.

**Table A**  
**Selected Health Status Outcomes by Race/Ethnicity**

Unstratified – Unadjusted Models

Independent Variable	Race/Ethnicity by Dependent Variable by Dataset						Race/Ethnicity by Dataset by Dependent Variable			
	Self-Reported Health (SRH)		Work Days Lost (WDL)		Bed Days (BD)		NHIS			MEPS
	NHIS	MEPS	NHIS	MEPS	NHIS		SRH	WDL	BD	SRH WDL
Hispanic				***	***				***	***
Non-Hispanic White (reference)										
Non-Hispanic Black	***			***	***		***		***	***
Non-Hispanic Asian	**	*	***	***	***		**	***	***	*
Non-Hispanic all other race groups	***						***			
Non-Hispanic multiple race				***						***

\* p < 0.05      \*\* p < 0.01      \*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
OR/IRR: between 1.26 and 1.5 (medium effect size)  
OR/IRR: between 1.51 and 2 (large effect size)  
OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
OR/IRR: between 0.50 and 0.74 (medium effect size)  
OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables. Used for "Work Days Lost" and "Bed Days" analyses.

Table B summarizes the test for interaction between race/ethnicity and income (ratio of family income to poverty level). The "Ratio of Income to Poverty Level x Race/Ethnicity" interaction term is statistically significant for each of the outcome measures in our otherwise unadjusted model. This indicates that the effect of race on health differs by income and as such we stratified subsequent analysis by income level.

**Table B**  
**Interaction Term: Ratio of Income to Poverty Level x Race/Ethnicity**

Interaction Term	Interaction Term by Dependent Variable by Dataset						Interaction Term by Dataset by Dependent Variable			
	Self-Reported Health (SRH)		Work Days Lost (WDL)		Bed Days (BD)		NHIS			MEPS
	NHIS	MEPS	NHIS	MEPS	NHIS		SRH	WDL	BD	SRH WDL
Ratio of Income to Poverty Level x Race/Ethnicity	**	***	***	***	***		**	***	***	***

\* p < 0.05      \*\* p < 0.01      \*\*\* p < 0.001

<sup>1</sup> The "Summary Tables" are one component of "Drivers of Health Status Disparities" presented by Stern Consulting at the National Association of Health Data Organizations (NAHDO) Annual Conference, 2021. For additional material, please see our "virtual display booth" accessed via the "Spotlight Sessions" link on the conference home page.

## Regression Analysis – Summary Tables

Table C summarizes our regression of race/ethnicity by three measures of health status, stratified by income levels ("ratio of family income to poverty level"). Results are shown for those races/ethnicities with statistically significant differences from the reference group. The degree, direction and level of significance are as indicated.

**Table C**  
**Selected Health Status Outcomes by Race/Ethnicity, Stratified by Ratio of Income to Poverty Level**

Stratified – Unadjusted Models

Independent Variable	Race/Ethnicity by Dependent Variable by Dataset					Race/Ethnicity by Dataset by Dependent Variable				
	Self-Reported Health (SRH)		Work Days Lost (WDL)		Bed Days (BD)	NHIS			MEPS	
	NHIS	MEPS	NHIS	MEPS	NHIS	SRH	WDL	BD	SRH	WDL
<b>Level 1 : Very Low Income (&lt;1.00)</b>										
Hispanic		***	**	***	***		**	***	***	***
Non-Hispanic White (reference)										
Non-Hispanic Black		**	**	***	***		**	***	**	***
Non-Hispanic Asian				***	***			***		***
Non-Hispanic all other race groups			*				*			
Non-Hispanic Multiple Race										
<b>Level 2 : Low Income (1.00 – 1.99)</b>										
Hispanic	***	**	**	***	***	***	**	***	**	***
Non-Hispanic White (reference)										
Non-Hispanic Black					**			**		
Non-Hispanic Asian	***		***	***	*	***	***	*		***
Non-Hispanic all other race groups			***	***			***			***
Non-Hispanic Multiple Race		*		***					*	***
<b>Level 3 : Medium Income (2.00 – 3.99)</b>										
Hispanic	*	**		***	***	*		***	**	***
Non-Hispanic White (reference)										
Non-Hispanic Black				***	***			***		***
Non-Hispanic Asian	*	**	***	***	***	*	***	***	**	***
Non-Hispanic all other race groups		*							*	
Non-Hispanic Multiple Race		*		***					*	***
<b>Level 4 : High Income (4.00+)</b>										
Hispanic				***	*			*		***
Non-Hispanic White (reference)										
Non-Hispanic Black	**			***		**				***
Non-Hispanic Asian				***						***
Non-Hispanic all other race groups										
Non-Hispanic Multiple Race										

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
OR/IRR: between 1.26 and 1.5 (medium effect size)  
OR/IRR: between 1.51 and 2 (large effect size)  
OR/IRR: > 2 (very large effect size)

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 0.75 and 1 (small effect size)  
OR/IRR: between 0.50 and 0.74 (medium effect size)  
OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables. Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Analysis – Summary Tables

Data in Table D are based on the National Health Interview Survey (NHIS), 2018. Table D summarizes our regression of race/ethnicity by three measures of health status, stratified by income levels ("ratio of family income to poverty level"). It includes the addition of several independent variables by which the data are adjusted. Results are shown for those variables/variable levels with statistically significant effects on the outcomes. The degree, direction and level of significance are as indicated.

**Table D**  
**Selected Health Outcomes Stratified by "Ratio of Income to Poverty" Levels**  
Adjusted for Designated Independent Variables  
National Health Interview Survey (NHIS), 2018

Independent Variables	Self-Reported Health					Work Days Lost					Bed Days				
	Ratio of Income to Poverty Level					Ratio of Income to Poverty Level					Ratio of Income to Poverty Level				
Sociodemographics	All	Very low	Low	Medium	High	All	Very low	Low	Medium	High	All	Very low	Low	Medium	High
<b>Ratio of Income to Poverty Level</b>															
< 1.00 (Very low income)	***					***									
1.00 – 1.99 (Low income)	***					***									
2.00 – 3.99 (Medium income)	***					***									
4.00 + (High income)															
<b>Race/Ethnicity</b>															
Hispanic	*				*	***	*	*				*		***	*
Non-Hispanic White															
Non-Hispanic Black	***			**	***	***	***		***			*	***	***	***
Non-Hispanic Asian	***			*	***	***			***						***
Non-Hispanic all other race groups			+					**							
<b>Age</b>	***	**	**	***	*	***	**	***	***	***	***	***	***	***	***
<b>Cost Prevented Care</b>	***	*	*	*	*	***	***		*		***			***	***
<b>Education</b>															
Less than high school															
High school diploma/GED	*			**		***	***								
Associates degree	**			*								**			
Bachelors degree	***			**											
Masters, Doctorate degree	***			**	**										
<b>Female</b>	*					***	***		***		***			***	***
<b>Food Security</b>															
High security															
Marginal security	*	**				***	***								
Low security	**		**	*											
Very low security	***	**	***		***	***	***							**	
<b>Have a Usual Place of Care</b>						***	***		*	**	**		**	***	***
<b>Health Insurance</b>															
Public						***	***							***	***
Private															
Uninsured						***	***								***
<b>Marriage</b>															
Married or live w partner									*					***	***
Widowed, divorced, separated	**			**		***	***		***					***	***
Never married					**		***							***	***
<b>Occupation</b>															
White collar															
Service				***		***	***	*				**	***	***	***
Blue collar	***	*	*			***	***							***	***
Other								***	WARNING: Only 7 subjects in this group			*			
<b>Speak English</b>															
Very well														*	***
Well	***			**	**				***					*	
Not well or at all	***		**	*							***		*		

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
OR/IRR: between 1.26 and 1.5 (medium effect size)  
OR/IRR: between 1.51 and 2 (large effect size)  
OR/IRR: > 2 (very large effect size)

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 0.75 and 1 (small effect size)  
OR/IRR: between 0.50 and 0.74 (medium effect size)  
OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables. Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Analysis – Summary Tables

Data in Table D are based on the National Health Interview Survey (NHIS), 2018. Table D summarizes our regression of race/ethnicity by three measures of health status, stratified by income levels ("ratio of family income to poverty level"). It includes the addition of several independent variables by which the data are adjusted. Results are shown for those variables/variable levels with statistically significant effects on the outcomes. The degree, direction and level of significance are as indicated.

**Table D (continued)**  
**Selected Health Outcomes Stratified by Ratio of Income to Poverty Levels**  
 Adjusted for Designated Independent Variables  
 National Health Interview Survey (NHIS), 2018

Independent Variables	Self-Reported Health					Work Days Lost					Bed Days				
	Ratio of Income to Poverty Level					Ratio of Income to Poverty Level					Ratio of Income to Poverty Level				
Behavior/BMI	All	Very low	Low	Medium	High	All	Very low	Low	Medium	High	All	Very low	Low	Medium	High
<b>Alcohol</b>															
Lifetime abstainer															
Former drinker						***					*			***	***
Current drinker						***	***	*						***	***
<b>BMI</b>															
< 18.5 (Underweight)		*		*						**					
18.5 – < 25.0 (Normal)															
25.0 – < 30.0 (Overweight)	***			**	***	***	***		***					***	***
30.0 – < 35.0 (Obesity I)	***	*		***	***	***	***							*	***
35.0 – < 40.0 (Obesity II)	***	*	***	***	***	***			*		*			*	***
40.0 + (Extreme Obesity III)	***	**	***	***	***	***									***
<b>Smoking</b>															
Current smoker	***	**	**	***	***	***	***							***	***
Former smoker	**					***	***		***					***	***
Never smoker															
<b>Medical</b>															
Count of Medical Conditions (causing limitations)	***			***	**	***	***		***		***	***		***	***
Count of Medical Conditions (ever)	***	***	***	***	***	***	***	***	***	**	***	***	***	***	***
Count of Medical Conditions (recent)	***	**	***	***	***	***	***	***	***	***	***	***	***	***	***
Functional Limitation Score	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Kessler Score of Psychological Distress	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables. Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Analysis – Summary Tables

Data in Table E are based on the Medical Expenditure Panel Survey (MEPS), 2018. Table E summarizes our regression of race/ethnicity by three measures of health status, stratified by income levels ("ratio of family income to poverty level"). It includes the addition of several independent variables by which the data are adjusted. Results are shown for those variables/variable levels with statistically significant effects on the outcomes. The degree, direction and level of significance are as indicated.

**Table E**  
**Selected Health Outcomes Stratified by Ratio of Income to Poverty Levels**  
Adjusted for Designated Independent Variables  
Medical Expenditure Panel Survey (MEPS), 2018

Independent Variables	Self-Reported Health					Work Days Lost				
	Ratio of Income to Poverty Level					Ratio of Income to Poverty Level				
	All	Very low	Low	Medium	High	All	Very low	Low	Medium	High
<b>Sociodemographics</b>										
<b>Ratio of Income to Poverty Level</b>										
< 1.00 (Very low income)	***									
1.00 – 1.99 (Low income)	**									
2.00 – 3.99 (Medium income)	**									
4.00 + (High income)										
<b>Race/Ethnicity</b>										
Hispanic	***	**	*		*					
Non-Hispanic White										
Non-Hispanic Black	**				*					
Non-Hispanic Asian	**			***			*			
Non-Hispanic all other race groups						***		*	**	
Non-Hispanic Multiple Race								*		
<b>Age</b>	*					***	***	***	***	***
<b>Cost Prevented Care (Dental)</b>			**							
<b>Cost Prevented Care (Medical)</b>	**	**	*		*	*				
<b>Cost Prevented Care (Prescriptions)</b>										
<b>Education</b>										
Less than high school										
High school diploma/GED										
Associates degree	**									
Bachelors degree	**		**							
Masters, Doctorate degree	*	*					*			
<b>Female</b>						***			***	***
<b>Food Stamps</b>				*			*	**		
<b>Have a Usual Place of Care</b>				*				*		
<b>Health Insurance</b>										
Public	**			*	*					
Private										
Uninsured										
<b>Marriage</b>										
Married (pre-existing)			*		*			*		
Widowed, divorced, separated (pre-existing)	**				*					
Never married	*				*					
Married (new)						*				
Widowed, divorced, separated (new)									**	*
<b>Occupation</b>										
White collar										
Service						**				
Blue collar							*			
Other		***								
Not working	***			*						
Unclassifiable										
<b>Speak English</b>										
English										
Non-English very well	**				***					
Non-English well	***		**	*	**					
Non-English not well or at all	***									
<b>Total Expenditures</b>	***			***	***	***	***	***	***	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
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OR/IRR: between 0.75 and 1 (small effect size)  
OR/IRR: between 0.50 and 0.74 (medium effect size)  
OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

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## Regression Analysis – Summary Tables

Data in Table E are based on the Medical Expenditure Panel Survey (MEPS), 2018. Table E summarizes our regression of race/ethnicity by three measures of health status, stratified by income levels ("ratio of family income to poverty level"). It includes the addition of several independent variables by which the data are adjusted. Results are shown for those variables/variable levels with statistically significant effects on the outcomes. The degree, direction and level of significance are as indicated.

**Table E (continued)**  
**Selected Health Outcomes Stratified by Ratio of Income to Poverty Levels**  
 Adjusted for Designated Independent Variables  
 Medical Expenditure Panel Survey (MEPS), 2018

Independent Variables	Self-Reported Health					Work Days Lost				
	Ratio of Income to Poverty Level					Ratio of Income to Poverty Level				
Behavior/BMI	All	Very low	Low	Medium	High	All	Very low	Low	Medium	High
<b>Alcohol</b>										
Non-heavy drinker										
Heavy drinker							*			
Did not report		*					*	*		
<b>BMI</b>										
< 18.5 (Underweight)										
18.5 – < 25.0 (Normal)										
25.0 – < 30.0 (Overweight)	***				***					
30.0 – < 35.0 (Obesity I)	***		*	***	***					
35.0 – < 40.0 (Obesity II)	***	*	**	***	***					
40.0 + (Extreme Obesity III)	***	***	***	***	***					
Did not report	**									
<b>Smoking</b>										
Smoker	***	***	***	***	***	**				
Non-smoker										
<b>Medical</b>										
Count of Medical Conditions (ever)	***	*	**	***	***	**		***	***	***
Count of Medical Conditions (recent)	***	*		***	*	***			***	***
VR-12 MCS	***	***	***	***	***	***	***	***	***	***
VR-12 PCS	***	***	***	***	***	***		***	***	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

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Presentation Slides

Brian Williams, MBA; Janine Molino, MS, PhD; and David Stern, MBA

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## Regression Analysis

The attached tables provide the results of the regression analyses. The tables are organized as follows:

### Data Sources

Separate regressions are provided for the two source datasets:

- National Health Interview Survey (NHIS): Table Series F, G, H
- Medical Expenditure Panel Survey (MEPS): Table Series J, K

### Dependent Variables

Separate regressions are included for each of the three dependent variables. The dependent variable is specified in the title number and table description:

- Self-reported health: Table series F and J
- Work days lost (due to illness or injury): Table Series G and K
- Bed days: Table series H (NHIS only)

### Stratification

Regression results are stratified by “ratio of income to family poverty level (FPL).” Unstratified results are also provided:

- **Stratification Levels:**
  - Unstratified: No table number suffix (that is, letter only, F, G, H, J, K)
  - Very low income (<1.00 FPL): Table number suffix is 1 (F-1, G-1, H-1, J-1, K-1)
  - Low income (1.00 – 1.99 FPL): Table number suffix is 2
  - Medium Income (2.00 – 3.99 FPL): Table number suffix is 3
  - High income (4.00+ FPL): Table number suffix is 4

### Adjustment Status

Results are provided using adjusted and unadjusted regression models. For each table, the unadjusted results are provided at the top with the adjusted data below.

The list of regression tables using the naming conventions described above is as follows:



## Regression Tables

Table Number	Data Source	Dependent Variable	Stratification (Income Level)
F	NHIS	Self-reported health	Unstratified
F-1	NHIS	Self-reported health	Very low income (<1.00 FPL)
F-2	NHIS	Self-reported health	Low income (1.00 – 1.99 FPL)
F-3	NHIS	Self-reported health	Medium Income (2.00 – 3.99 FPL)
F-4	NHIS	Self-reported health	High income (4.00+ FPL)
G	NHIS	Work days lost	Unstratified
G-1	NHIS	Work days lost	Very low income (<1.00 FPL)
G-2	NHIS	Work days lost	Low income (1.00 – 1.99 FPL)
G-3	NHIS	Work days lost	Medium Income (2.00 – 3.99 FPL)
G-4	NHIS	Work days lost	High income (4.00+ FPL)
H	NHIS	Bed days	Unstratified
H-1	NHIS	Bed days	Very low income (<1.00 FPL)
H-2	NHIS	Bed days	Low income (1.00 – 1.99 FPL)
H-3	NHIS	Bed days	Medium Income (2.00 – 3.99 FPL)
H-4	NHIS	Bed days	High income (4.00+ FPL)
J	MEPS	Self-reported health	Unstratified
J-1	MEPS	Self-reported health	Very low income (<1.00 FPL)
J-2	MEPS	Self-reported health	Low income (1.00 – 1.99 FPL)
J-3	MEPS	Self-reported health	Medium Income (2.00 – 3.99 FPL)
J-4	MEPS	Self-reported health	High income (4.00+ FPL)
K	MEPS	Work days lost	Unstratified
K-1	MEPS	Work days lost	Very low income (<1.00 FPL)
K-2	MEPS	Work days lost	Low income (1.00 – 1.99 FPL)
K-3	MEPS	Work days lost	Medium Income (2.00 – 3.99 FPL)
K-4	MEPS	Work days lost	High income (4.00+ FPL)

NHIS: National Health Interview Survey

MEPS: Medical Expenditure Panel Survey

FPL: Federal Poverty Level

## Regression Results

Table F

National Health Interview Survey (NHIS)			Self-Reported Health		Unstratified			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	0.06	0.05	1.54	0.2150	1.06	0.97	1.17	
Non-Hispanic White	Reference							
Non-Hispanic Black	0.32	0.05	39.83	<.0001	1.38	1.25	1.52	***
Non-Hispanic Asian	-0.19	0.06	10.66	0.0011	0.83	0.74	0.93	**
Non-Hispanic all other race groups	0.59	0.15	16.29	<.0001	1.81	1.36	2.42	***
Independent Variable		Adjusted Model						
Ratio of Income to Poverty Level								
< 1.00	0.33	0.07	22.65	<.0001	1.39	1.21	1.59	***
1.00 – 1.99	0.23	0.06	17.18	<.0001	1.26	1.13	1.40	***
2.00 – 3.99	0.18	0.04	16.31	<.0001	1.20	1.10	1.30	***
4.00 +	Reference							
Race/Ethnicity								
Hispanic	0.13	0.06	5.05	0.0246	1.14	1.02	1.28	*
Non-Hispanic White	Reference							
Non-Hispanic Black	0.29	0.06	25.57	<.0001	1.34	1.20	1.51	***
Non-Hispanic Asian	0.35	0.07	22.97	<.0001	1.42	1.23	1.65	***
Non-Hispanic all other race groups	0.20	0.16	1.58	0.2091	1.23	0.89	1.69	
Age	0.01	0.00	44.90	<.0001	1.01	1.01	1.01	***
Cost Prevented Care	0.30	0.07	18.15	<.0001	1.35	1.17	1.54	***
Education								
Less than high school	Reference							
High school diploma/GED	-0.16	0.07	6.14	0.0132	0.85	0.75	0.97	*
Associates degree	-0.21	0.08	7.39	0.0065	0.81	0.70	0.94	**
Bachelors degree	-0.29	0.08	14.59	0.0001	0.75	0.64	0.87	***
Masters, Doctorate degree	-0.47	0.08	36.95	<.0001	0.62	0.54	0.73	***
Female	-0.07	0.03	3.93	0.0475	0.94	0.87	1.00	*
Food Security								
High security	Reference							
Marginal security	0.16	0.07	4.97	0.0258	1.17	1.02	1.35	*
Low security	0.50	0.16	10.21	0.0014	1.64	1.21	2.23	**
Very low security	0.47	0.08	33.22	<.0001	1.60	1.36	1.87	***
Have a Usual Place of Care	0.05	0.06	0.73	0.3942	1.05	0.94	1.17	
Health Insurance								
Public	-0.02	0.04	0.23	0.6314	0.98	0.90	1.07	
Private	Reference							
Uninsured	-0.01	0.07	0.03	0.8537	0.99	0.86	1.13	
Marriage								
Married or live w partner	Reference							
Widowed, divorced, separated	-0.13	0.04	9.15	0.0025	0.88	0.81	0.96	**
Never married	-0.03	0.05	0.49	0.4833	0.97	0.88	1.07	
Occupation								
White collar	Reference							
Service	0.09	0.05	2.66	0.1031	1.09	0.98	1.21	
Blue collar	0.19	0.05	16.15	<.0001	1.21	1.10	1.33	***
Other	0.28	0.22	1.64	0.2010	1.33	0.86	2.05	
Speak English								
Very well	Reference							
Well	0.29	0.08	13.25	0.0003	1.33	1.14	1.55	***
Not well or at all	0.52	0.11	23.79	<.0001	1.68	1.36	2.07	***
Alcohol								
Lifetime abstainer	Reference							
Former drinker	0.07	0.07	1.25	0.2640	1.08	0.95	1.22	
Current drinker	-0.07	0.05	1.78	0.1820	0.93	0.85	1.03	
BMI								
< 18.5 (Underweight)	0.24	0.13	3.21	0.0730	1.27	0.98	1.66	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	0.20	0.04	26.29	<.0001	1.22	1.13	1.32	***
30.0 – < 35.0 (Obesity I)	0.52	0.05	112.36	<.0001	1.68	1.53	1.85	***
35.0 – < 40.0 (Obesity II)	0.86	0.06	196.04	<.0001	2.36	2.09	2.66	***
40.0 + (Extreme Obesity III)	1.11	0.09	163.87	<.0001	3.02	2.55	3.58	***
Smoking								
Current smoker	0.48	0.05	93.40	<.0001	1.61	1.46	1.78	***
Former smoker	0.11	0.04	7.16	0.0074	1.12	1.03	1.22	**
Never smoker	Reference							
Count of Medical Conditions (causing limitations)	0.13	0.02	34.90	<.0001	1.14	1.09	1.20	***
Count of Medical Conditions (ever)	0.21	0.01	235.46	<.0001	1.23	1.20	1.27	***
Count of Medical Conditions (recent)	0.11	0.01	113.51	<.0001	1.11	1.09	1.13	***
Functional Limitation Score	0.07	0.00	342.18	<.0001	1.08	1.07	1.08	***
Kessler Score of Psychological Distress	0.06	0.01	119.41	<.0001	1.06	1.05	1.07	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table: F1

National Health Interview Survey (NHIS)			Self-Reported Health		Stratified: Very Low Income (< 1.00 FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.16	0.11	2.05	0.1517	0.86	0.69	1.06	
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.07	0.11	0.39	0.5322	0.93	0.75	1.16	
Non-Hispanic Asian	-0.08	0.19	0.19	0.6647	0.92	0.64	1.34	
Non-Hispanic all other race groups	0.02	0.26	0.01	0.9411	1.02	0.61	1.71	
Independent Variable		Adjusted Model						
Race/Ethnicity								
Hispanic	0.08	0.18	0.22	0.6423	1.09	0.76	1.55	
Non-Hispanic White	Reference							
Non-Hispanic Black	0.17	0.13	1.73	0.1883	1.18	0.92	1.51	
Non-Hispanic Asian	0.40	0.23	3.04	0.0812	1.49	0.95	2.34	
Non-Hispanic all other race groups	-0.02	0.31	0.00	0.9504	0.98	0.53	1.82	
Age	0.01	0.00	7.66	0.0056	1.01	1.00	1.02	**
Cost Prevented Care	0.30	0.1514	4.03	0.0447	1.36	1.01	1.82	*
Education								
Less than high school	Reference							
High school diploma/GED	-0.10	0.14	0.55	0.4577	0.90	0.69	1.19	
Associates degree	-0.10	0.19	0.28	0.5936	0.91	0.63	1.30	
Bachelors degree	-0.27	0.21	1.69	0.1942	0.76	0.51	1.15	
Masters, Doctorate degree	-0.36	0.30	1.38	0.2405	0.70	0.39	1.27	
Female	-0.05	0.13	0.13	0.7171	0.96	0.75	1.22	
Food Security								
High security	Reference							
Marginal security	0.49	0.17	8.31	0.0039	1.63	1.17	2.26	**
Low security	0.29	0.34	0.71	0.3994	1.33	0.68	2.60	
Very low security	0.45	0.14	10.54	0.0012	1.56	1.19	2.05	**
Have a Usual Place of Care	0.20	0.15	1.75	0.1854	1.22	0.91	1.65	
Health Insurance								
Public	-0.06	0.15	0.13	0.7170	0.95	0.70	1.28	
Private	Reference							
Uninsured	-0.10	0.19	0.25	0.6154	0.91	0.63	1.32	
Marriage								
Married or live w partner	Reference							
Widowed, divorced, separated	-0.11	0.15	0.51	0.4753	0.90	0.67	1.20	
Never married	0.06	0.14	0.18	0.6712	1.06	0.81	1.38	
Occupation								
White collar	Reference							
Service	0.00	0.13	0.00	0.9743	1.00	0.77	1.29	
Blue collar	0.32	0.16	4.12	0.0424	1.38	1.01	1.88	*
Other	-0.33	0.69	0.23	0.6298	0.72	0.19	2.76	
Speak English								
Very well	Reference							
Well	0.08	0.20	0.17	0.6810	1.09	0.73	1.61	
Not well or at all	0.44	0.26	2.88	0.0896	1.56	0.93	2.60	
Alcohol								
Lifetime abstainer	Reference							
Former drinker	-0.03	0.17	0.04	0.8506	0.97	0.70	1.35	
Current drinker	0.09	0.13	0.46	0.4970	1.09	0.84	1.42	
BMI								
< 18.5 (Underweight)	0.90	0.41	4.90	0.0269	2.46	1.11	5.46	*
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	0.24	0.13	3.11	0.0780	1.27	0.97	1.65	
30.0 – < 35.0 (Obesity I)	0.37	0.16	4.98	0.0256	1.44	1.05	1.99	*
35.0 – < 40.0 (Obesity II)	0.46	0.20	5.35	0.0208	1.58	1.07	2.33	*
40.0 + (Extreme Obesity III)	0.73	0.23	9.86	0.0017	2.07	1.31	3.25	**
Smoking								
Current smoker	0.42	0.13	9.96	0.0016	1.52	1.17	1.98	**
Former smoker	0.25	0.15	2.53	0.1116	1.28	0.95	1.73	
Never smoker	Reference							
Count of Medical Conditions (causing limitations)	0.09	0.05	2.82	0.0933	1.09	0.99	1.21	
Count of Medical Conditions (ever)	0.22	0.04	27.83	<.0001	1.24	1.15	1.35	***
Count of Medical Conditions (recent)	0.08	0.03	8.65	0.0033	1.09	1.03	1.15	**
Functional Limitation Score	0.06	0.01	52.23	<.0001	1.06	1.05	1.08	***
Kessler Score of Psychological Distress	0.06	0.01	22.47	<.0001	1.06	1.03	1.08	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table F-2

National Health Interview Survey (NHIS)			Self-Reported Health		Stratified: Low Income (1.00 – 1.99 FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.44	0.09	24.17	<.0001	0.64	0.54	0.77	***
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.13	0.10	1.60	0.2061	0.88	0.71	1.08	
Non-Hispanic Asian	-0.49	0.14	13.04	0.0003	0.61	0.47	0.80	***
Non-Hispanic all other race groups	0.46	0.24	3.66	0.0557	1.59	0.99	2.55	
Independent Variable		Adjusted Model						
Race/Ethnicity								
Hispanic	0.07	0.11	0.39	0.5348	1.07	0.86	1.34	
Non-Hispanic White	Reference							
Non-Hispanic Black	0.21	0.11	3.28	0.0701	1.23	0.98	1.54	
Non-Hispanic Asian	0.14	0.20	0.48	0.4865	1.15	0.78	1.69	
Non-Hispanic all other race groups	0.66	0.27	5.99	0.0144	1.94	1.14	3.28	*
Age	0.01	0.00	6.73	0.0095	1.01	1.00	1.01	**
Cost Prevented Care	0.31	0.1267	5.98	0.0144	1.36	1.06	1.75	*
Education								
Less than high school	Reference							
High school diploma/GED	-0.04	0.13	0.09	0.7631	0.96	0.75	1.23	
Associates degree	-0.10	0.16	0.34	0.5573	0.91	0.66	1.25	
Bachelors degree	-0.33	0.17	3.78	0.0519	0.72	0.52	1.00	
Masters, Doctorate degree	-0.22	0.21	1.07	0.3012	0.81	0.54	1.21	
Female	-0.10	0.09	1.13	0.2873	0.91	0.76	1.09	
Food Security								
High security	Reference							
Marginal security	0.19	0.13	2.07	0.1501	1.21	0.93	1.56	
Low security	0.69	0.26	7.09	0.0078	1.99	1.20	3.31	**
Very low security	0.61	0.14	19.22	<.0001	1.83	1.40	2.40	***
Have a Usual Place of Care	0.10	0.12	0.73	0.3926	1.11	0.88	1.39	
Health Insurance								
Public	0.03	0.10	0.08	0.7809	1.03	0.84	1.26	
Private	Reference							
Uninsured	0.03	0.13	0.06	0.8067	1.03	0.80	1.34	
Marriage								
Married or live w partner	Reference							
Widowed, divorced, separated	-0.16	0.10	2.39	0.1224	0.85	0.69	1.04	
Never married	-0.05	0.11	0.18	0.6755	0.96	0.78	1.18	
Occupation								
White collar	Reference							
Service	-0.03	0.10	0.11	0.7375	0.97	0.80	1.17	
Blue collar	0.26	0.11	5.48	0.0193	1.30	1.04	1.61	*
Other	0.95	1.02	0.87	0.3511	2.59	0.35	19.02	
Speak English								
Very well	Reference							
Well	0.18	0.13	1.92	0.1659	1.20	0.93	1.55	
Not well or at all	0.48	0.17	8.25	0.0041	1.61	1.16	2.23	**
Alcohol								
Lifetime abstainer	Reference							
Former drinker	0.14	0.14	0.95	0.3285	1.15	0.87	1.51	
Current drinker	-0.09	0.11	0.70	0.4029	0.91	0.74	1.13	
BMI								
< 18.5 (Underweight)	0.51	0.28	3.18	0.0748	1.66	0.95	2.89	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	0.09	0.10	0.79	0.3744	1.09	0.90	1.33	
30.0 – < 35.0 (Obesity I)	0.11	0.12	0.87	0.3517	1.12	0.89	1.41	
35.0 – < 40.0 (Obesity II)	0.54	0.16	11.89	0.0006	1.71	1.26	2.32	***
40.0 + (Extreme Obesity III)	0.82	0.18	19.78	<.0001	2.26	1.58	3.24	***
Smoking								
Current smoker	0.32	0.12	6.94	0.0084	1.37	1.09	1.74	**
Former smoker	0.11	0.10	1.15	0.2844	1.12	0.91	1.36	
Never smoker	Reference							
Count of Medical Conditions (causing limitations)	0.09	0.05	3.72	0.0539	1.09	1.00	1.19	
Count of Medical Conditions (ever)	0.22	0.03	47.93	<.0001	1.25	1.17	1.33	***
Count of Medical Conditions (recent)	0.15	0.02	35.44	<.0001	1.16	1.11	1.22	***
Functional Limitation Score	0.05	0.01	50.10	<.0001	1.05	1.04	1.07	***
Kessler Score of Psychological Distress	0.04	0.01	15.40	<.0001	1.04	1.02	1.07	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

	OR/IRR: between 1 and 1.25 (small effect size)
	OR/IRR: between 1.26 and 1.5 (medium effect size)
	OR/IRR: between 1.51 and 2 (large effect size)
	OR/IRR: > 2 (very large effect size)

	OR/IRR: between 0.75 and 1 (small effect size)
	OR/IRR: between 0.50 and 0.74 (medium effect size)
	OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table F-3

National Health Interview Survey (NHIS)		Self-Reported Health			Stratified: Medium Income (2.00 – 3.99 FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.20	0.09	4.48	0.0342	0.82	0.69	0.99	*
Non-Hispanic White	Reference							
Non-Hispanic Black	0.10	0.09	1.28	0.2578	1.11	0.93	1.32	
Non-Hispanic Asian	-0.26	0.13	3.87	0.0492	0.78	0.60	1.00	*
Non-Hispanic all other race groups	0.09	0.21	0.19	0.6596	1.10	0.72	1.67	
Independent Variable		Adjusted Model						
Race/Ethnicity								
Hispanic	0.10	0.11	0.80	0.3703	1.11	0.89	1.39	
Non-Hispanic White	Reference							
Non-Hispanic Black	0.28	0.11	6.93	0.0085	1.33	1.08	1.64	**
Non-Hispanic Asian	0.36	0.17	4.59	0.0321	1.43	1.03	1.98	*
Non-Hispanic all other race groups	-0.12	0.26	0.22	0.6426	0.89	0.54	1.46	
Age	0.01	0.00	29.04	<.0001	1.02	1.01	1.02	***
Cost Prevented Care	0.26	0.1216	4.70	0.0302	1.30	1.03	1.65	*
Education								
Less than high school	Reference							
High school diploma/GED	-0.38	0.12	10.14	0.0015	0.69	0.54	0.87	**
Associates degree	-0.30	0.14	4.68	0.0304	0.74	0.57	0.97	*
Bachelors degree	-0.43	0.14	9.73	0.0018	0.65	0.50	0.85	**
Masters, Doctorate degree	-0.45	0.16	8.47	0.0036	0.64	0.47	0.86	**
Female	-0.08	0.07	1.17	0.2797	0.93	0.81	1.06	
Food Security								
High security	Reference							
Marginal security	0.12	0.13	0.83	0.3611	1.12	0.88	1.44	
Low security	0.60	0.24	6.24	0.0125	1.83	1.14	2.94	*
Very low security	0.25	0.16	2.38	0.1229	1.29	0.93	1.77	
Have a Usual Place of Care	0.12	0.10	1.44	0.2300	1.13	0.93	1.37	
Health Insurance								
Public	-0.02	0.09	0.04	0.8477	0.98	0.83	1.16	
Private	Reference							
Uninsured	0.07	0.12	0.35	0.5537	1.07	0.85	1.36	
Marriage								
Married or live w partner	Reference							
Widowed, divorced, separated	-0.21	0.08	7.24	0.0071	0.81	0.70	0.95	**
Never married	0.11	0.09	1.54	0.2142	1.12	0.94	1.34	
Occupation								
White collar	Reference							
Service	0.33	0.10	11.69	0.0006	1.39	1.15	1.67	***
Blue collar	0.16	0.09	3.24	0.0718	1.17	0.99	1.39	
Other	0.44	0.36	1.53	0.2162	1.55	0.77	3.11	
Speak English								
Very well	Reference							
Well	0.36	0.13	7.47	0.0063	1.43	1.11	1.85	**
Not well or at all	0.50	0.21	5.74	0.0166	1.64	1.09	2.47	*
Alcohol								
Lifetime abstainer	Reference							
Former drinker	0.03	0.11	0.09	0.7583	1.03	0.84	1.28	
Current drinker	-0.07	0.09	0.56	0.4556	0.94	0.79	1.12	
BMI								
< 18.5 (Underweight)	0.51	0.25	4.16	0.0414	1.67	1.02	2.73	*
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	0.22	0.07	8.66	0.0032	1.24	1.08	1.44	**
30.0 – < 35.0 (Obesity I)	0.58	0.08	47.10	<.0001	1.79	1.52	2.11	***
35.0 – < 40.0 (Obesity II)	1.00	0.12	69.02	<.0001	2.72	2.15	3.45	***
40.0 + (Extreme Obesity III)	0.95	0.16	37.21	<.0001	2.59	1.91	3.51	***
Smoking								
Current smoker	0.50	0.09	30.70	<.0001	1.65	1.38	1.97	***
Former smoker	0.13	0.08	2.61	0.1060	1.14	0.97	1.33	
Never smoker	Reference							
Count of Medical Conditions (causing limitations)	0.18	0.04	15.78	<.0001	1.20	1.10	1.31	***
Count of Medical Conditions (ever)	0.17	0.02	49.24	<.0001	1.19	1.13	1.25	***
Count of Medical Conditions (recent)	0.09	0.02	23.03	<.0001	1.10	1.06	1.14	***
Functional Limitation Score	0.08	0.01	128.22	<.0001	1.08	1.07	1.10	***
Kessler Score of Psychological Distress	0.06	0.01	32.24	<.0001	1.06	1.04	1.09	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.



OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)



OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table F-4

National Health Interview Survey (NHIS)		Self-Reported Health			Stratified: High Income (4.00+ FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	0.01	0.08	0.03	0.8597	1.02	0.86	1.19	
Non-Hispanic White	Reference							
Non-Hispanic Black	0.26	0.10	7.16	0.0075	1.29	1.07	1.56	**
Non-Hispanic Asian	-0.15	0.09	2.64	0.1044	0.86	0.72	1.03	
Non-Hispanic all other race groups	0.56	0.35	2.59	0.1075	1.76	0.88	3.49	
Independent Variable		Adjusted Model						
Race/Ethnicity								
Hispanic	0.22	0.10	5.15	0.0232	1.25	1.03	1.51	*
Non-Hispanic White	Reference							
Non-Hispanic Black	0.37	0.11	11.17	0.0008	1.45	1.17	1.80	***
Non-Hispanic Asian	0.37	0.10	12.18	0.0005	1.44	1.17	1.77	***
Non-Hispanic all other race groups	0.33	0.32	1.11	0.2912	1.40	0.75	2.60	
Age	0.00	0.00	4.89	0.0270	1.01	1.00	1.01	*
Cost Prevented Care	0.40	0.1757	5.15	0.0232	1.49	1.06	2.10	*
Education								
Less than high school	Reference							
High school diploma/GED	-0.03	0.17	0.04	0.8439	0.97	0.69	1.35	
Associates degree	-0.20	0.18	1.24	0.2650	0.82	0.58	1.16	
Bachelors degree	-0.22	0.17	1.63	0.2011	0.80	0.58	1.12	
Masters, Doctorate degree	-0.47	0.17	7.39	0.0065	0.63	0.45	0.88	**
Female	-0.05	0.05	1.02	0.3130	0.95	0.86	1.05	
Food Security								
High security	Reference							
Marginal security	-0.07	0.16	0.17	0.6841	0.94	0.68	1.29	
Low security	-0.39	0.52	0.58	0.4449	0.67	0.25	1.86	
Very low security	0.88	0.26	11.22	0.0008	2.42	1.44	4.05	***
Have a Usual Place of Care	-0.09	0.10	0.71	0.3985	0.92	0.75	1.12	
Health Insurance								
Public	-0.01	0.07	0.02	0.8805	0.99	0.86	1.14	
Private	Reference							
Uninsured	-0.04	0.14	0.07	0.7916	0.96	0.73	1.27	
Marriage								
Married or live w partner	Reference							
Widowed, divorced, separated	-0.08	0.07	1.52	0.2175	0.92	0.81	1.05	
Never married	-0.25	0.09	8.70	0.0032	0.78	0.66	0.92	**
Occupation								
White collar	Reference							
Service	0.02	0.10	0.04	0.8445	1.02	0.84	1.23	
Blue collar	0.13	0.08	2.68	0.1019	1.14	0.97	1.33	
Other	0.19	0.31	0.38	0.5356	1.21	0.66	2.24	
Speak English								
Very well	Reference							
Well	0.43	0.16	6.90	0.0086	1.54	1.12	2.11	**
Not well or at all	0.61	0.42	2.12	0.1452	1.84	0.81	4.18	
Alcohol								
Lifetime abstainer	Reference							
Former drinker	0.06	0.11	0.26	0.6086	1.06	0.85	1.31	
Current drinker	-0.12	0.08	1.98	0.1597	0.89	0.76	1.05	
BMI								
< 18.5 (Underweight)	-0.41	0.21	3.76	0.0525	0.66	0.44	1.01	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	0.23	0.06	14.90	0.0001	1.26	1.12	1.42	***
30.0 – < 35.0 (Obesity I)	0.69	0.07	89.15	<.0001	2.00	1.73	2.31	***
35.0 – < 40.0 (Obesity II)	1.00	0.10	98.65	<.0001	2.72	2.23	3.31	***
40.0 + (Extreme Obesity III)	1.53	0.14	122.30	<.0001	4.62	3.52	6.06	***
Smoking								
Current smoker	0.54	0.09	36.19	<.0001	1.71	1.44	2.04	***
Former smoker	0.08	0.06	1.73	0.1889	1.08	0.96	1.21	
Never smoker	Reference							
Count of Medical Conditions (causing limitations)	0.13	0.04	8.37	0.0038	1.14	1.04	1.24	**
Count of Medical Conditions (ever)	0.23	0.02	111.61	<.0001	1.26	1.21	1.32	***
Count of Medical Conditions (recent)	0.10	0.02	43.09	<.0001	1.11	1.08	1.14	***
Functional Limitation Score	0.09	0.01	134.96	<.0001	1.10	1.08	1.11	***
Kessler Score of Psychological Distress	0.06	0.01	49.42	<.0001	1.07	1.05	1.09	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.  
 IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

## Regression Results

Table G

National Health Interview Survey (NHIS)			Work Days Lost		Unstratified			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.19	0.11	-1.71	0.0864	0.82	0.03	0.55	
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.21	0.11	-1.86	0.0631	0.81	0.65	1.01	
Non-Hispanic Asian	-0.62	0.18	-3.50	0.0005	0.54	0.43	0.67	***
Non-Hispanic all other race groups	-0.40	0.21	-1.89	0.0586	0.67	0.54	0.83	
Independent Variable		Adjusted Model						
Ratio of Income to Poverty Level								
< 1.00	-0.01	0.00	-7.30	<.0001	0.99	0.98	0.99	***
1.00 – 1.99	0.16	0.00	283.48	<.0001	1.18	1.18	1.18	***
2.00 – 3.99	0.15	0.00	148.80	<.0001	1.16	1.16	1.17	***
4.00 +	Reference							
Race/Ethnicity								
Hispanic	-0.02	0.00	-8.45	<.0001	0.98	0.97	0.98	***
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.29	0.00	-2283.20	<.0001	0.75	0.75	0.75	***
Non-Hispanic Asian	-0.28	0.00	-177.93	<.0001	0.75	0.75	0.76	***
Non-Hispanic all other race groups	-0.14	0.24	-0.57	0.5668	0.87	0.54	1.40	
Age	-0.01	0.00	-114.81	<.0001	0.99	0.99	0.99	***
Cost Prevented Care	0.06	0.00	65.90	<.0001	1.07	1.06	1.07	***
Education								
Less than high school	Reference							
High school diploma/GED	-0.18	0.00	-67.03	<.0001	0.84	0.83	0.84	***
Associates degree	-0.21	0.23	-0.91	0.3626	0.81	0.52	1.27	
Bachelors degree	-0.17	0.30	-0.55	0.5802	0.85	0.47	1.53	
Masters, Doctorate degree	-0.12	0.27	-0.46	0.6478	0.88	0.52	1.50	
Female	0.14	0.00	145.91	<.0001	1.15	1.15	1.15	***
Food Security								
High security	Reference							
Marginal security	-0.09	0.00	-49.45	<.0001	0.92	0.91	0.92	***
Low security	0.10	0.28	0.36	0.7178	1.11	0.64	1.92	
Very low security	0.07	0.00	29.62	<.0001	1.08	1.07	1.08	***
Have a Usual Place of Care	0.29	0.00	1671.72	<.0001	1.34	1.34	1.34	***
Health Insurance								
Public	-0.17	0.00	-567.16	<.0001	0.84	0.84	0.84	***
Private	Reference							
Uninsured	-0.04	0.00	-101.17	<.0001	0.96	0.96	0.96	***
Marriage								
Married or live w partner	Reference							
Widowed, divorced, separated	0.18	0.00	205.39	<.0001	1.20	1.19	1.20	***
Never married	0.00	0.00	-1.23	0.2181	1.00	1.00	1.00	
Occupation								
White collar	Reference							
Service	-0.04	0.00	-63.43	<.0001	0.96	0.96	0.96	***
Blue collar	0.32	0.00	280.71	<.0001	1.38	1.38	1.38	***
Other	1.62	1.18	1.37	0.1700	5.03	0.50	50.65	
Speak English								
Very well	Reference							
Well	-0.34	0.21	-1.63	0.1036	0.71	0.48	1.07	
Not well or at all	-0.48	0.26	-1.83	0.0667	0.62	0.37	1.03	
Alcohol								
Lifetime abstainer	Reference							
Former drinker	0.33	0.00	463.72	<.0001	1.40	1.39	1.40	***
Current drinker	0.14	0.00	434.50	<.0001	1.15	1.15	1.15	***
BMI								
< 18.5 (Underweight)	-0.31	0.20	-1.54	0.1248	0.73	0.50	1.09	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	-0.07	0.00	-252.94	<.0001	0.93	0.93	0.93	***
30.0 – < 35.0 (Obesity I)	0.09	0.00	Infnty	<.0001	1.09	1.09	1.09	***
35.0 – < 40.0 (Obesity II)	-0.18	0.00	-245.08	<.0001	0.84	0.84	0.84	***
40.0 + (Extreme Obesity III)	0.29	0.14	2.08	0.0376	1.34	1.02	1.77	***
Smoking								
Current smoker	0.19	0.00	347.20	<.0001	1.21	1.21	1.21	***
Former smoker	0.12	0.00	281.29	<.0001	1.13	1.13	1.13	***
Never smoker	Reference							
Count of Medical Conditions (causing limitations)	0.08	0.00	106.97	<.0001	1.09	1.09	1.09	***
Count of Medical Conditions (ever)	0.12	0.00	330.68	<.0001	1.13	1.13	1.13	***
Count of Medical Conditions (recent)	0.09	0.00	1366.11	<.0001	1.10	1.10	1.10	***
Functional Limitation Score	0.08	0.00	1899.01	<.0001	1.08	1.08	1.08	***
Kessler Score of Psychological Distress	0.03	0.00	470.11	<.0001	1.03	1.03	1.04	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table G-1

National Health Interview Survey (NHIS)			Work Days Lost		Stratified: Very Low Income (< 1.00 FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.91	0.32	-2.87	0.0042	0.40	0.22	0.75	**
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.81	0.31	-2.62	0.0089	0.45	0.24	0.82	**
Non-Hispanic Asian	-0.73	0.59	-1.24	0.2170	0.48	0.15	1.54	
Non-Hispanic all other race groups	-0.75	0.37	-2.01	0.0449	0.47	0.23	0.98	*
Independent Variable		Adjusted Model						
Race/Ethnicity								
Hispanic	-0.04	0.02	-2.05	0.0406	0.96	0.92	1.00	*
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.34	0.01	-55.51	<.0001	0.71	0.70	0.72	***
Non-Hispanic Asian	-0.08	0.49	-0.17	0.8656	0.92	0.35	2.40	
Non-Hispanic all other race groups	-0.14	0.40	-0.35	0.7232	0.87	0.40	1.90	
Age	0.00	0.00	-3.18	0.0015	1.00	1.00	1.00	**
Cost Prevented Care	0.16	0.02	6.69	<.0001	1.17	1.12	1.23	***
Education								
Less than high school	Reference							
High school diploma/GED	0.17	0.01	23.00	<.0001	1.19	1.17	1.21	***
Associates degree	0.43	0.51	0.84	0.4019	1.54	0.56	4.23	
Bachelors degree	-0.56	0.44	-1.27	0.2034	0.57	0.24	1.35	
Masters, Doctorate degree	0.78	0.59	1.33	0.1852	2.18	0.69	6.94	
Female	0.52	0.00	5150.09	<.0001	1.68	1.68	1.68	***
Food Security								
High security	Reference							
Marginal security	-0.03	0.01	-3.63	0.0003	0.97	0.95	0.99	***
Low security	-0.41	0.48	-0.85	0.3929	0.66	0.26	1.70	
Very low security	0.10	0.01	9.97	<.0001	1.10	1.08	1.12	***
Have a Usual Place of Care	0.19	0.01	17.98	<.0001	1.21	1.19	1.24	***
Health Insurance								
Public	-0.14	0.00	-28.49	<.0001	0.87	0.86	0.88	***
Private	Reference							
Uninsured	-0.16	0.01	-14.10	<.0001	0.85	0.83	0.87	***
Marriage								
Married or live w partner	Reference							
Widowed, divorced, separated	0.71	0.00	4046.86	<.0001	2.03	2.03	2.03	***
Never married	0.52	0.02	25.40	<.0001	1.68	1.62	1.75	***
Occupation								
White collar	Reference							
Service	0.12	0.00	145.87	<.0001	1.12	1.12	1.13	***
Blue collar	0.68	0.01	132.51	<.0001	1.97	1.95	1.99	***
Other	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Speak English								
Very well	Reference							
Well	-0.74	0.51	-1.45	0.1466	0.48	0.18	1.30	
Not well or at all	-1.09	0.58	-1.88	0.0609	0.34	0.11	1.05	
Alcohol								
Lifetime abstainer	Reference							
Former drinker	-0.55	0.48	-1.15	0.2488	0.58	0.23	1.47	
Current drinker	0.20	0.03	6.36	<.0001	1.22	1.15	1.30	***
BMI								
< 18.5 (Underweight)	1.23	1.33	0.92	0.3584	3.41	0.25	46.80	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	0.38	0.00	111.57	<.0001	1.46	1.45	1.47	***
30.0 – < 35.0 (Obesity I)	0.16	0.03	5.40	<.0001	1.17	1.11	1.24	***
35.0 – < 40.0 (Obesity II)	-0.22	0.35	-0.63	0.5296	0.80	0.41	1.59	
40.0 + (Extreme Obesity III)	0.51	0.60	0.84	0.3987	1.67	0.51	5.46	
Smoking								
Current smoker	0.08	0.01	5.42	<.0001	1.08	1.05	1.11	***
Former smoker	0.46	0.01	58.06	<.0001	1.59	1.56	1.61	***
Never smoker	Reference							
Count of Medical Conditions (causing limitations)	0.00	0.01	-0.35	0.7258	1.00	0.98	1.02	
Count of Medical Conditions (ever)	0.23	0.00	64.46	<.0001	1.26	1.25	1.27	***
Count of Medical Conditions (recent)	0.09	0.01	13.75	<.0001	1.09	1.08	1.11	***
Functional Limitation Score	0.06	0.00	87.26	<.0001	1.06	1.06	1.06	***
Kessler Score of Psychological Distress	0.05	0.00	62.31	<.0001	1.05	1.05	1.05	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

	OR/IRR: between 1 and 1.25 (small effect size)
	OR/IRR: between 1.26 and 1.5 (medium effect size)
	OR/IRR: between 1.51 and 2 (large effect size)
	OR/IRR: > 2 (very large effect size)

	OR/IRR: between 0.75 and 1 (small effect size)
	OR/IRR: between 0.50 and 0.74 (medium effect size)
	OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

Used for "Work Days Lost" and "Bed Days" analyses.



## Regression Results

Table G-2

National Health Interview Survey (NHIS)			Work Days Lost		Stratified: Low Income (1.00 – 1.99 FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.66	0.22	-2.99	0.0029	0.52	0.34	0.80	**
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.30	0.24	-1.27	0.2041	0.74	0.47	1.18	
Non-Hispanic Asian	-1.28	0.30	-4.23	<.0001	0.28	0.15	0.50	***
Non-Hispanic all other race groups	-0.99	0.23	-4.36	<.0001	0.37	0.24	0.58	***
Independent Variable		Adjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.33	0.17	-1.99	0.0467	0.72	0.52	1.00	*
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.27	0.22	-1.24	0.2165	0.76	0.50	1.17	
Non-Hispanic Asian	-0.34	0.33	-1.04	0.3002	0.71	0.38	1.35	
Non-Hispanic all other race groups	-0.71	0.27	-2.61	0.0092	0.49	0.29	0.84	**
Age	-0.02	0.00	-75.63	<.0001	0.98	0.98	0.99	***
Cost Prevented Care	0.04	0.2017	0.22	0.8251	1.05	0.70	1.55	
Education	Reference							
Less than high school	-0.34	0.22	-1.53	0.1272	0.71	0.46	1.10	
High school diploma/GED	-0.40	0.26	-1.54	0.1227	0.67	0.40	1.12	
Associates degree	-0.42	0.28	-1.47	0.1428	0.66	0.38	1.15	
Bachelors degree	-0.67	0.36	-1.89	0.0591	0.51	0.25	1.03	
Masters, Doctorate degree	0.11	0.16	0.69	0.4873	1.12	0.81	1.54	
Female	Reference							
Food Security	Reference							
High security	0.29	0.17	1.68	0.0940	1.33	0.95	1.87	
Marginal security	0.43	0.34	1.27	0.2055	1.53	0.79	2.97	
Low security	0.35	0.18	1.89	0.0591	1.41	0.99	2.03	
Very low security	0.30	0.19	1.60	0.1096	1.36	0.93	1.97	
Have a Usual Place of Care	0.30	0.19	1.60	0.1096	1.36	0.93	1.97	
Health Insurance	Reference							
Public	-0.21	0.18	-1.16	0.2442	0.81	0.56	1.16	
Private	-0.12	0.20	-0.58	0.5595	0.89	0.60	1.32	
Uninsured	Reference							
Marriage	Reference							
Married or live w partner	0.21	0.22	0.96	0.3364	1.23	0.80	1.89	
Widowed, divorced, separated	0.02	0.17	0.09	0.9270	1.02	0.72	1.42	
Never married	Reference							
Occupation	Reference							
White collar	-0.37	0.16	-2.37	0.0180	0.69	0.51	0.94	*
Service	0.12	0.18	0.68	0.4990	1.13	0.79	1.60	
Blue collar	-4.28	1.06	-4.02	<.0001	0.01	0.00	0.11	***
Other	Reference							
Speak English	Reference							
Very well	-0.33	0.21	-1.56	0.1186	0.72	0.47	1.09	
Well	-0.46	0.39	-1.18	0.2386	0.63	0.30	1.35	
Not well or at all	Reference							
Alcohol	Reference							
Lifetime abstainer	0.48	0.31	1.54	0.1232	1.62	0.88	3.00	
Former drinker	0.41	0.17	2.41	0.0159	1.50	1.08	2.09	*
Current drinker	Reference							
BMI	Reference							
< 18.5 (Underweight)	-0.37	0.46	-0.81	0.4152	0.69	0.28	1.69	
18.5 – < 25.0 (Normal)	-0.05	0.16	-0.33	0.7437	0.95	0.70	1.29	
25.0 – < 30.0 (Overweight)	0.31	0.23	1.37	0.1700	1.36	0.88	2.13	
30.0 – < 35.0 (Obesity I)	0.13	0.24	0.55	0.5851	1.14	0.71	1.85	
35.0 – < 40.0 (Obesity II)	-0.10	0.27	-0.39	0.6959	0.90	0.53	1.52	
40.0 + (Extreme Obesity III)	Reference							
Smoking	Reference							
Current smoker	0.16	0.22	0.74	0.4585	1.17	0.77	1.79	
Former smoker	0.21	0.22	0.94	0.3454	1.23	0.80	1.89	
Never smoker	Reference							
Count of Medical Conditions (causing limitations)	0.20	0.14	1.46	0.1448	1.22	0.93	1.60	
Count of Medical Conditions (ever)	0.04	0.00	46.74	<.0001	1.04	1.04	1.04	***
Count of Medical Conditions (recent)	0.07	0.00	684.54	<.0001	1.07	1.07	1.07	***
Functional Limitation Score	0.06	0.00	157.82	<.0001	1.06	1.06	1.07	***
Kessler Score of Psychological Distress	0.02	0.00	117.86	<.0001	1.02	1.02	1.02	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table G-3

National Health Interview Survey (NHIS)			Work Days Lost		Stratified: Medium Income (2.00 – 3.99 FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.31	0.19	-1.67	0.0945	0.73	0.51	1.06	
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.36	0.20	-1.83	0.0680	0.70	0.47	1.03	
Non-Hispanic Asian	-1.72	0.19	-9.10	<.0001	0.18	0.12	0.26	***
Non-Hispanic all other race groups	-0.51	0.44	-1.15	0.2513	0.60	0.25	1.43	
Independent Variable		Adjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.10	0.18	-0.52	0.6007	0.91	0.64	1.30	
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.55	0.14	-4.04	<.0001	0.58	0.44	0.75	***
Non-Hispanic Asian	-0.82	0.24	-3.42	0.0006	0.44	0.28	0.71	***
Non-Hispanic all other race groups	-0.12	0.41	-0.30	0.7642	0.88	0.39	1.98	
Age	0.00	0.00	-21.49	<.0001	1.00	1.00	1.00	***
Cost Prevented Care	0.39	0.1662	2.33	0.0197	1.47	1.06	2.04	*
Education								
Less than high school	Reference							
High school diploma/GED	0.00	0.18	0.03	0.9795	1.00	0.70	1.44	
Associates degree	0.04	0.22	0.17	0.8645	1.04	0.67	1.61	
Bachelors degree	0.07	0.22	0.31	0.7594	1.07	0.69	1.65	
Masters, Doctorate degree	0.02	0.25	0.07	0.9448	1.02	0.62	1.67	
Female	0.09	0.00	87.25	<.0001	1.10	1.10	1.10	***
Food Security								
High security	Reference							
Marginal security	-0.02	0.17	-0.12	0.9059	0.98	0.70	1.38	
Low security	0.16	0.33	0.49	0.6274	1.17	0.62	2.22	
Very low security	0.23	0.21	1.08	0.2781	1.26	0.83	1.91	
Have a Usual Place of Care	0.53	0.23	2.33	0.0199	1.70	1.09	2.66	*
Health Insurance								
Public	-0.21	0.16	-1.36	0.1725	0.81	0.60	1.10	
Private	Reference							
Uninsured	-0.08	0.19	-0.44	0.6587	0.92	0.64	1.33	
Marriage								
Married or live w partner	Reference							
Widowed, divorced, separated	0.36	0.14	2.49	0.0129	1.43	1.08	1.90	*
Never married	0.12	0.00	240.61	<.0001	1.13	1.13	1.13	***
Occupation								
White collar	Reference							
Service	0.06	0.15	0.43	0.6649	1.07	0.80	1.43	
Blue collar	0.27	0.18	1.49	0.1374	1.31	0.92	1.87	
Other	-0.14	1.44	-0.10	0.9206	0.87	0.05	14.63	
Speak English								
Very well	Reference							
Well	-0.86	0.22	-3.95	<.0001	0.42	0.28	0.65	***
Not well or at all	-0.16	0.39	-0.43	0.6707	0.85	0.40	1.81	
Alcohol								
Lifetime abstainer	Reference							
Former drinker	0.48	0.26	1.80	0.0723	1.61	0.96	2.70	
Current drinker	0.22	0.23	0.94	0.3461	1.24	0.79	1.96	
BMI								
< 18.5 (Underweight)	0.06	0.39	0.15	0.8796	1.06	0.49	2.30	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	-0.07	0.00	-133.96	<.0001	0.94	0.93	0.94	***
30.0 – < 35.0 (Obesity I)	0.08	0.17	0.47	0.6349	1.08	0.78	1.52	
35.0 – < 40.0 (Obesity II)	-0.35	0.17	-2.03	0.0426	0.71	0.50	0.99	*
40.0 + (Extreme Obesity III)	0.10	0.19	0.51	0.6106	1.10	0.76	1.60	
Smoking								
Current smoker	0.24	0.15	1.65	0.0996	1.27	0.95	1.70	
Former smoker	0.02	0.00	Infv	<.0001	1.02	1.02	1.02	***
Never smoker	Reference							
Count of Medical Conditions (causing limitations)	-0.02	0.00	-16.94	<.0001	0.98	0.98	0.98	***
Count of Medical Conditions (ever)	0.03	0.00	161.30	<.0001	1.03	1.03	1.03	***
Count of Medical Conditions (recent)	0.14	0.00	3543.26	<.0001	1.15	1.15	1.15	***
Functional Limitation Score	0.08	0.00	1468.00	<.0001	1.08	1.08	1.08	***
Kessler Score of Psychological Distress	0.03	0.00	198.72	<.0001	1.03	1.03	1.03	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.  
 IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.  
 Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table G-4

National Health Interview Survey (NHIS)		Work Days Lost			Stratified: High Income (4.00+ FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI	Sig	
Hispanic	-0.08	0.22	-0.38	0.7063	0.92	0.60	1.42	
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.05	0.20	-0.25	0.8052	0.95	0.64	1.42	
Non-Hispanic Asian	-0.05	0.26	-0.19	0.8509	0.95	0.57	1.60	
Non-Hispanic all other race groups	0.19	0.41	0.45	0.6498	1.20	0.54	2.68	
Independent Variable		Adjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI	Sig	
Hispanic	-0.05	0.13	-0.40	0.6862	0.95	0.73	1.23	
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.08	0.14	-0.60	0.5463	0.92	0.70	1.21	
Non-Hispanic Asian	-0.12	0.17	-0.69	0.4927	0.89	0.64	1.24	
Non-Hispanic all other race groups	0.07	0.30	0.24	0.8135	1.07	0.60	1.94	
Age	-0.01	0.00	-5.09	<.0001	0.99	0.98	0.99 ***	
Cost Prevented Care	-0.23	0.2296	-0.99	0.323	0.80	0.51	1.25	
Education		Estimate	SE	Chi-Square	P	OR	95% CI	Sig
Less than high school	Reference							
High school diploma/GED	-0.29	0.32	-0.89	0.3746	0.75	0.40	1.41	
Associates degree	-0.27	0.33	-0.81	0.4159	0.76	0.40	1.46	
Bachelors degree	-0.28	0.33	-0.87	0.3842	0.75	0.40	1.43	
Masters, Doctorate degree	-0.23	0.32	-0.71	0.4757	0.79	0.42	1.50	
Female	0.13	0.08	1.70	0.0892	1.14	0.98	1.32	
Food Security		Estimate	SE	Chi-Square	P	OR	95% CI	Sig
High security	Reference							
Marginal security	-0.17	0.25	-0.68	0.4989	0.84	0.51	1.38	
Low security	0.59	0.63	0.93	0.3514	1.80	0.52	6.24	
Very low security	-0.24	0.27	-0.88	0.3794	0.79	0.46	1.35	
Have a Usual Place of Care	0.32	0.11	2.89	0.0039	1.38	1.11	1.71 **	
Health Insurance		Estimate	SE	Chi-Square	P	OR	95% CI	Sig
Public	-0.19	0.12	-1.60	0.1097	0.83	0.66	1.04	
Private	Reference							
Uninsured	-0.10	0.23	-0.45	0.6517	0.90	0.58	1.41	
Marriage		Estimate	SE	Chi-Square	P	OR	95% CI	Sig
Married or live w partner	Reference							
Widowed, divorced, separated	0.11	0.11	1.08	0.2823	1.12	0.91	1.38	
Never married	-0.05	0.10	-0.44	0.6627	0.96	0.78	1.17	
Occupation		Estimate	SE	Chi-Square	P	OR	95% CI	Sig
White collar	Reference							
Service	0.02	0.15	0.17	0.8683	1.02	0.77	1.36	
Blue collar	0.22	0.13	1.66	0.0962	1.25	0.96	1.62	
Other	1.49	0.77	1.92	0.0545	4.42	0.97	20.11	
Speak English		Estimate	SE	Chi-Square	P	OR	95% CI	Sig
Very well	Reference							
Well	0.33	0.30	1.08	0.2817	1.38	0.77	2.50	
Not well or at all	-0.67	0.61	-1.09	0.2742	0.51	0.15	1.70	
Alcohol		Estimate	SE	Chi-Square	P	OR	95% CI	Sig
Lifetime abstainer	Reference							
Former drinker	0.11	0.17	0.65	0.5163	1.12	0.80	1.58	
Current drinker	0.01	0.13	0.09	0.9244	1.01	0.78	1.32	
BMI		Estimate	SE	Chi-Square	P	OR	95% CI	Sig
< 18.5 (Underweight)	-0.65	0.23	-2.79	0.0052	0.52	0.33	0.82 **	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	-0.05	0.09	-0.59	0.5545	0.95	0.79	1.13	
30.0 – < 35.0 (Obesity I)	0.01	0.11	0.14	0.8923	1.01	0.82	1.25	
35.0 – < 40.0 (Obesity II)	-0.03	0.16	-0.18	0.8560	0.97	0.71	1.33	
40.0+ (Extreme Obesity III)	0.33	0.18	1.77	0.0760	1.38	0.97	1.98	
Smoking		Estimate	SE	Chi-Square	P	OR	95% CI	Sig
Current smoker	0.13	0.11	1.18	0.2400	1.14	0.92	1.41	
Former smoker	0.11	0.09	1.21	0.2255	1.12	0.93	1.34	
Never smoker	Reference							
Count of Medical Conditions (causing limitations)	0.07	0.06	1.21	0.2263	1.07	0.96	1.21	
Count of Medical Conditions (ever)	0.11	0.04	2.87	0.0041	1.12	1.04	1.20 **	
Count of Medical Conditions (recent)	0.09	0.02	3.55	0.0004	1.09	1.04	1.14 ***	
Functional Limitation Score	0.10	0.01	7.56	<.0001	1.10	1.07	1.13 ***	
Kessler Score of Psychological Distress	0.04	0.01	3.42	0.0006	1.04	1.02	1.06 ***	

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table H

National Health Interview Survey (NHIS)			Bed Days		Unstratified		
Independent Variable		Unadjusted Model					
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI	Sig
Hispanic	-0.42	0.00	-3207.00	<.0001	0.66	0.66	0.66 ***
Non-Hispanic White	Reference						
Non-Hispanic Black	0.00	0.00	16.12	<.0001	1.00	1.00	1.01 ***
Non-Hispanic Asian	-0.54	0.18	-3.01	0.0026	0.58	0.41	0.83 ***
Non-Hispanic all other race groups	0.55	0.33	1.64	0.1008	1.73	0.90	3.31
Independent Variable		Adjusted Model					
Ratio of Income to Poverty Level							
< 1.00	0.17	0.12	1.38	0.17	1.19	0.93	1.52
1.00 – 1.99	0.12	0.11	1.12	0.26	1.13	0.91	1.40
2.00 – 3.99	0.05	0.07	0.69	0.49	1.05	0.91	1.21
4.00 +	Reference						
Race/Ethnicity							
Hispanic	-0.13	0.09	-1.48	0.1381	0.87	0.73	1.04
Non-Hispanic White	Reference						
Non-Hispanic Black	-0.11	0.09	-1.17	0.2410	0.90	0.74	1.08
Non-Hispanic Asian	-0.08	0.14	-0.55	0.5857	0.93	0.70	1.22
Non-Hispanic all other race groups	-0.03	0.34	-0.09	0.9303	0.97	0.49	1.91
Age	-0.02	0.00	-1023.00	<.0001	0.98	0.98	0.98 ***
Cost Prevented Care	0.36	0.10	3.68	0.0002	1.43	1.18	1.72 ***
Education							
Less than high school	Reference						
High school diploma/GED	-0.12	0.12	-0.93	0.3534	0.89	0.70	1.14
Associates degree	0.05	0.14	0.35	0.7266	1.05	0.79	1.40
Bachelors degree	-0.04	0.16	-0.28	0.7821	0.96	0.70	1.30
Masters, Doctorate degree	-0.19	0.17	-1.13	0.2585	0.83	0.60	1.15
Female	0.30	0.06	4.63	<.0001	1.35	1.19	1.53 ***
Food Security							
High security	Reference						
Marginal security	-0.06	0.11	-0.52	0.6015	0.95	0.76	1.17
Low security	0.16	0.16	1.03	0.3010	1.17	0.87	1.59
Very low security	0.18	0.11	1.58	0.1153	1.19	0.96	1.49
Have a Usual Place of Care	0.24	0.09	2.63	0.0086	1.27	1.06	1.51 **
Health Insurance							
Public	0.14	0.10	1.42	0.1550	1.15	0.95	1.40
Private	Reference						
Uninsured	-0.01	0.11	-0.12	0.9047	0.99	0.79	1.23
Marriage							
Married or live w partner	Reference						
Widowed, divorced, separated	0.07	0.08	0.88	0.3806	1.07	0.92	1.24
Never married	-0.10	0.08	-1.21	0.2251	0.90	0.77	1.06
Occupation							
White collar	Reference						
Service	-0.11	0.09	-1.21	0.2253	0.90	0.75	1.07
Blue collar	-0.08	0.10	-0.81	0.4160	0.93	0.77	1.12
Other	0.31	0.30	1.02	0.3068	1.36	0.75	2.45
Speak English							
Very well	Reference						
Well	0.04	0.16	0.25	0.7992	1.04	0.76	1.44
Not well or at all	-0.54	0.15	-3.50	0.0005	0.58	0.43	0.79 ***
Alcohol							
Lifetime abstainer	Reference						
Former drinker	0.24	0.11	2.23	0.0259	1.27	1.03	1.58 *
Current drinker	0.10	0.09	1.10	0.2732	1.10	0.93	1.32
BMI							
< 18.5 (Underweight)	-0.01	0.16	-0.09	0.9320	0.99	0.72	1.35
18.5 – < 25.0 (Normal)	Reference						
25.0 – < 30.0 (Overweight)	-0.12	0.08	-1.56	0.1177	0.89	0.76	1.03
30.0 – < 35.0 (Obesity I)	-0.12	0.09	-1.32	0.1865	0.89	0.75	1.06
35.0 – < 40.0 (Obesity II)	-0.22	0.10	-2.06	0.0390	0.81	0.66	0.99 *
40.0 + (Extreme Obesity III)	-0.08	0.12	-0.68	0.4972	0.92	0.72	1.17
Smoking							
Current smoker	0.06	0.08	0.77	0.4405	1.06	0.91	1.23
Former smoker	0.13	0.07	1.74	0.0827	1.14	0.98	1.31
Never smoker	Reference						
Count of Medical Conditions (causing limitations)	0.05	0.00	455.15	<.0001	1.05	1.05	1.05 ***
Count of Medical Conditions (ever)	0.10	0.00	Infnty	<.0001	1.10	1.10	1.10 ***
Count of Medical Conditions (recent)	0.12	0.00	786.33	<.0001	1.13	1.13	1.13 ***
Functional Limitation Score	0.08	0.00	6411.03	<.0001	1.09	1.09	1.09 ***
Kessler Score of Psychological Distress	0.06	0.00	882.04	<.0001	1.06	1.06	1.06 ***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table H-1

National Health Interview Survey (NHIS)			Bed Days		Stratified: Very Low Income (< 1.00 FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-1.23	0.02	-70.94	<.0001	0.29	0.28	0.30	***
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.39	0.00	-268.00	<.0001	0.67	0.67	0.68	***
Non-Hispanic Asian	-0.76	0.01	-81.24	<.0001	0.47	0.46	0.47	***
Non-Hispanic all other race groups	0.33	0.67	0.49	0.6246	1.39	0.37	5.16	
Independent Variable		Adjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.43	0.21	-2.01	0.0445	0.65	0.43	0.99	*
Non-Hispanic White	Reference							
Non-Hispanic Black	0.08	0.21	0.38	0.7030	1.08	0.72	1.62	
Non-Hispanic Asian	0.03	0.32	0.10	0.9212	1.03	0.56	1.92	
Non-Hispanic all other race groups	-0.30	0.32	-0.95	0.3436	0.74	0.40	1.38	
Age	-0.02	0.00	-219.39	<.0001	0.98	0.98	0.98	***
Cost Prevented Care	0.37	0.2008	1.87	0.0623	1.45	0.98	2.16	
Education								
Less than high school	Reference							
High school diploma/GED	0.13	0.18	0.70	0.4819	1.13	0.80	1.61	
Associates degree	0.89	0.28	3.19	0.0014	2.43	1.41	4.19	**
Bachelors degree	0.38	0.26	1.45	0.1462	1.47	0.87	2.47	
Masters, Doctorate degree	0.38	0.35	1.10	0.2713	1.47	0.74	2.91	
Female	0.05	0.16	0.34	0.7308	1.05	0.78	1.43	
Food Security								
High security	Reference							
Marginal security	0.09	0.21	0.42	0.6736	1.09	0.73	1.63	
Low security	0.32	0.27	1.19	0.2347	1.38	0.81	2.33	
Very low security	0.10	0.18	0.52	0.6027	1.10	0.77	1.58	
Have a Usual Place of Care	-0.08	0.23	-0.36	0.7205	0.92	0.59	1.44	
Health Insurance								
Public	0.31	0.26	1.18	0.2388	1.36	0.82	2.26	
Private	Reference							
Uninsured	-0.13	0.24	-0.54	0.5914	0.88	0.54	1.41	
Marriage								
Married or live w partner	Reference							
Widowed, divorced, separated	0.46	0.26	1.80	0.0721	1.59	0.96	2.64	
Never married	0.10	0.21	0.49	0.6213	1.11	0.73	1.68	
Occupation								
White collar	Reference							
Service	-0.02	0.18	-0.14	0.8899	0.98	0.69	1.38	
Blue collar	-0.18	0.18	-1.03	0.3044	0.83	0.59	1.18	
Other	2.98	1.51	1.97	0.0485	19.65	1.02	378.38	*
Speak English								
Very well	Reference							
Well	-0.05	0.25	-0.21	0.8374	0.95	0.58	1.55	
Not well or at all	-0.32	0.30	-1.06	0.2873	0.73	0.40	1.31	
Alcohol								
Lifetime abstainer	Reference							
Former drinker	0.30	0.21	1.41	0.1587	1.35	0.89	2.05	
Current drinker	0.40	0.22	1.87	0.0612	1.50	0.98	2.29	
BMI								
< 18.5 (Underweight)	0.57	0.38	1.48	0.1380	1.76	0.83	3.73	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	0.02	0.18	0.10	0.9202	1.02	0.72	1.44	
30.0 – < 35.0 (Obesity I)	-0.07	0.22	-0.32	0.7500	0.93	0.61	1.43	
35.0 – < 40.0 (Obesity II)	-0.24	0.24	-1.02	0.3076	0.78	0.49	1.25	
40.0 + (Extreme Obesity III)	0.12	0.29	0.42	0.6763	1.13	0.64	1.97	
Smoking								
Current smoker	0.05	0.18	0.30	0.7668	1.06	0.74	1.52	
Former smoker	0.19	0.24	0.80	0.4253	1.21	0.75	1.95	
Never smoker	Reference							
Count of Medical Conditions (causing limitations)	-0.01	0.00	-13.97	<.0001	0.99	0.99	0.99	***
Count of Medical Conditions (ever)	0.08	0.00	251.57	<.0001	1.08	1.08	1.08	***
Count of Medical Conditions (recent)	0.17	0.00	272.85	<.0001	1.18	1.18	1.18	***
Functional Limitation Score	0.08	0.00	213.95	<.0001	1.08	1.08	1.08	***
Kessler Score of Psychological Distress	0.04	0.00	298.61	<.0001	1.05	1.04	1.05	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.  
 IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.  
 Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table H-2

National Health Interview Survey (NHIS)			Bed Days		Stratified: Low Income (1.00 – 1.99 FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-1.05	0.19	-5.59	<.0001	0.35	0.24	0.51	***
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.62	0.20	-3.07	0.0022	0.54	0.36	0.80	**
Non-Hispanic Asian	-0.93	0.45	-2.04	0.0412	0.40	0.16	0.96	*
Non-Hispanic all other race groups	0.23	0.60	0.38	0.7016	1.26	0.39	4.07	
Independent Variable		Adjusted Model						
Race/Ethnicity								
Hispanic	-0.31	0.20	-1.56	0.1180	0.74	0.50	1.08	
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.37	0.18	-2.05	0.0404	0.69	0.48	0.98	*
Non-Hispanic Asian	-0.46	0.35	-1.31	0.1910	0.63	0.32	1.26	
Non-Hispanic all other race groups	0.08	0.52	0.15	0.8839	1.08	0.39	3.01	
Age	-0.03	0.00	-231.95	<.0001	0.97	0.97	0.97	***
Cost Prevented Care	0.29	0.1789	1.60	0.1091	1.33	0.94	1.89	
Education								
Less than high school	Reference							
High school diploma/GED	-0.05	0.19	-0.26	0.7916	0.95	0.66	1.37	
Associates degree	0.23	0.23	1.00	0.3192	1.26	0.80	2.00	
Bachelors degree	-0.14	0.27	-0.54	0.5896	0.87	0.51	1.46	
Masters, Doctorate degree	-0.57	0.32	-1.78	0.0753	0.56	0.30	1.06	
Female	0.33	0.17	1.93	0.0540	1.39	0.99	1.93	
Food Security								
High security	Reference							
Marginal security	0.06	0.18	0.34	0.7371	1.06	0.74	1.52	
Low security	0.44	0.26	1.72	0.0864	1.55	0.94	2.57	
Very low security	0.36	0.19	1.90	0.0573	1.43	0.99	2.07	
Have a Usual Place of Care	0.58	0.19	2.99	0.0028	1.78	1.22	2.59	**
Health Insurance								
Public	0.03	0.23	0.13	0.8964	1.03	0.66	1.60	
Private	Reference							
Uninsured	0.04	0.25	0.15	0.8790	1.04	0.63	1.71	
Marriage								
Married or live w partner	Reference							
Widowed, divorced, separated	0.06	0.17	0.37	0.7078	1.07	0.76	1.49	
Never married	-0.14	0.20	-0.70	0.4838	0.87	0.58	1.29	
Occupation								
White collar	Reference							
Service	-0.40	0.17	-2.35	0.0190	0.67	0.48	0.94	**
Blue collar	-0.08	0.20	-0.43	0.6671	0.92	0.62	1.35	
Other	1.34	0.86	1.55	0.1205	3.82	0.70	20.78	
Speak English								
Very well	Reference							
Well	-0.09	0.25	-0.36	0.7183	0.91	0.56	1.49	
Not well or at all	-0.26	0.27	-0.96	0.3395	0.77	0.45	1.31	
Alcohol								
Lifetime abstainer	Reference							
Former drinker	0.29	0.21	1.41	0.1574	1.34	0.89	2.02	
Current drinker	0.24	0.18	1.31	0.1901	1.27	0.89	1.81	
BMI								
< 18.5 (Underweight)	0.09	0.37	0.25	0.7998	1.10	0.53	2.27	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	-0.12	0.18	-0.67	0.5043	0.89	0.63	1.26	
30.0 – < 35.0 (Obesity I)	0.06	0.20	0.28	0.7779	1.06	0.72	1.55	
35.0 – < 40.0 (Obesity II)	0.03	0.24	0.11	0.9118	1.03	0.64	1.64	
40.0 + (Extreme Obesity III)	-0.02	0.32	-0.05	0.9618	0.98	0.53	1.84	
Smoking								
Current smoker	0.09	0.19	0.47	0.6370	1.10	0.75	1.60	
Former smoker	0.22	0.19	1.13	0.2580	1.24	0.85	1.81	
Never smoker	Reference							
Count of Medical Conditions (causing limitations)	0.07	0.00	118.98	<.0001	1.07	1.07	1.07	
Count of Medical Conditions (ever)	0.09	0.00	242.05	<.0001	1.09	1.09	1.10	***
Count of Medical Conditions (recent)	0.11	0.00	1155.58	<.0001	1.11	1.11	1.11	***
Functional Limitation Score	0.07	0.00	371.73	<.0001	1.08	1.07	1.08	***
Kessler Score of Psychological Distress	0.06	0.00	Infnty	<.0001	1.07	1.07	1.07	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.  
 IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.  
 Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table H-3

National Health Interview Survey (NHIS)			Bed Days		Stratified: Medium Income (2.00 – 3.99 FPL)		
Independent Variable		Unadjusted Model					
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI	Sig
Hispanic	-0.62	0.00	-6830.40	<.0001	0.54	0.54	0.54 ***
Non-Hispanic White	Reference						
Non-Hispanic Black	-0.31	0.00	-77.08	<.0001	0.73	0.73	0.74 ***
Non-Hispanic Asian	-0.98	0.00	-6160.30	<.0001	0.37	0.37	0.37 ***
Non-Hispanic all other race groups	-0.36	0.50	-0.73	0.4632	0.69	0.26	1.84
Independent Variable		Adjusted Model					
Race/Ethnicity							
Hispanic	-0.02	0.00	-6.31	<.0001	0.98	0.97	0.99 ***
Non-Hispanic White	Reference						
Non-Hispanic Black	-0.28	0.00	-547.49	<.0001	0.75	0.75	0.75 ***
Non-Hispanic Asian	-0.35	0.23	-1.51	0.1315	0.71	0.45	1.11
Non-Hispanic all other race groups	-0.21	0.51	-0.42	0.6721	0.81	0.30	2.17
Age	-0.02	0.00	-144.31	<.0001	0.98	0.98	0.98 ***
Cost Prevented Care	0.54	0.1453	3.73	0.0002	1.72	1.29	2.29 ***
Education							
Less than high school	Reference						
High school diploma/GED	-0.39	0.29	-1.36	0.1740	0.68	0.39	1.19
Associates degree	-0.22	0.38	-0.58	0.5634	0.80	0.38	1.70
Bachelors degree	-0.05	0.27	-0.17	0.8631	0.95	0.56	1.62
Masters, Doctorate degree	-0.32	0.26	-1.21	0.2258	0.73	0.43	1.22
Female	0.22	0.00	304.88	<.0001	1.25	1.24	1.25 ***
Food Security							
High security	Reference						
Marginal security	-0.09	0.17	-0.55	0.5857	0.91	0.66	1.26
Low security	0.14	0.18	0.80	0.4233	1.15	0.81	1.63
Very low security	0.34	0.17	1.97	0.0484	1.41	1.00	1.98 **
Have a Usual Place of Care	0.21	0.00	199.57	<.0001	1.24	1.23	1.24 ***
Health Insurance							
Public	0.02	0.00	22.28	<.0001	1.02	1.02	1.02 ***
Private	Reference						
Uninsured	-0.09	0.18	-0.51	0.6133	0.91	0.65	1.29
Marriage							
Married or live w partner	Reference						
Widowed, divorced, separated	0.15	0.00	83.20	<.0001	1.16	1.16	1.17 ***
Never married	0.09	0.00	486.35	<.0001	1.09	1.09	1.09 ***
Occupation							
White collar	Reference						
Service	0.04	0.00	17.33	<.0001	1.05	1.04	1.05 ***
Blue collar	-0.11	0.00	-56.99	<.0001	0.90	0.90	0.90 ***
Other	-0.09	0.46	-0.20	0.8450	0.91	0.37	2.26
Speak English							
Very well	Reference						
Well	-0.52	0.23	-2.25	0.0246	0.59	0.38	0.94 *
Not well or at all	-0.68	0.34	-1.98	0.0482	0.51	0.26	0.99 *
Alcohol							
Lifetime abstainer	Reference						
Former drinker	0.18	0.00	448.47	<.0001	1.20	1.20	1.20 ***
Current drinker	-0.02	0.00	-114.25	<.0001	0.98	0.98	0.98 ***
BMI							
< 18.5 (Underweight)	0.12	0.31	0.40	0.6900	1.13	0.62	2.07
18.5 – < 25.0 (Normal)	Reference						
25.0 – < 30.0 (Overweight)	-0.25	0.00	-247.97	<.0001	0.78	0.78	0.78 ***
30.0 – < 35.0 (Obesity I)	-0.29	0.00	-130.12	<.0001	0.75	0.75	0.75 *
35.0 – < 40.0 (Obesity II)	-0.33	0.17	-1.98	0.0476	0.72	0.52	1.00 *
40.0 + (Extreme Obesity III)	-0.33	0.19	-1.73	0.0846	0.72	0.50	1.05
Smoking							
Current smoker	0.06	0.00	1210.87	<.0001	1.07	1.07	1.07 ***
Former smoker	0.12	0.00	760.20	<.0001	1.12	1.12	1.12 ***
Never smoker	Reference						
Count of Medical Conditions (causing limitations)	0.02	0.00	33.40	<.0001	1.02	1.02	1.02 ***
Count of Medical Conditions (ever)	0.07	0.00	93.33	<.0001	1.08	1.07	1.08 ***
Count of Medical Conditions (recent)	0.16	0.00	369.60	<.0001	1.18	1.18	1.18 ***
Functional Limitation Score	0.09	0.00	571.20	<.0001	1.09	1.09	1.09 ***
Kessler Score of Psychological Distress	0.06	0.00	699.85	<.0001	1.06	1.06	1.06 ***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.  
 IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.  
 Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table H-4

National Health Interview Survey (NHIS)			Bed Days		Stratified: High Income (4.00+ FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.38	0.17	-2.25	0.0243	0.69	0.49	0.95	*
Non-Hispanic White	Reference							
Non-Hispanic Black	0.00	0.23	-0.02	0.9850	1.00	0.64	1.55	
Non-Hispanic Asian	-0.28	0.26	-1.08	0.2804	0.76	0.46	1.25	
Non-Hispanic all other race groups	-0.41	0.51	-0.81	0.4184	0.66	0.24	1.80	
Independent Variable		Adjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.01	0.00	-2.55	0.0109	0.99	0.98	1.00	*
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.25	0.00	-83.32	<.0001	0.78	0.77	0.78	***
Non-Hispanic Asian	-0.10	0.00	-36.16	<.0001	0.91	0.90	0.91	***
Non-Hispanic all other race groups	-0.32	0.46	-0.71	0.4767	0.72	0.30	1.77	
Age	-0.02	0.00	-106.55	<.0001	0.98	0.98	0.98	***
Cost Prevented Care	0.11	0.01	18.05	<.0001	1.12	1.10	1.13	***
Education								
Less than high school	Reference							
High school diploma/GED	-0.35	0.59	-0.60	0.5488	0.70	0.22	2.23	
Associates degree	-0.24	0.60	-0.39	0.6962	0.79	0.24	2.58	
Bachelors degree	-0.20	0.62	-0.32	0.7454	0.82	0.24	2.75	
Masters, Doctorate degree	-0.33	0.62	-0.53	0.5975	0.72	0.21	2.44	
Female	0.39	0.00	231.43	<.0001	1.48	1.47	1.48	***
Food Security								
High security	Reference							
Marginal security	0.25	0.33	0.75	0.4514	1.28	0.67	2.45	
Low security	-0.27	0.45	-0.60	0.5482	0.76	0.32	1.84	
Very low security	0.09	0.23	0.41	0.6789	1.10	0.70	1.72	
Have a Usual Place of Care	0.27	0.00	93.60	<.0001	1.32	1.31	1.32	***
Health Insurance								
Public	0.26	0.00	87.21	<.0001	1.30	1.29	1.30	***
Private	Reference							
Uninsured	-0.06	0.01	-10.96	<.0001	0.94	0.93	0.95	***
Marriage								
Married or live w partner	Reference							
Widowed, divorced, separated	0.06	0.00	82.29	<.0001	1.07	1.06	1.07	***
Never married	-0.04	0.00	-8.05	<.0001	0.97	0.96	0.97	***
Occupation								
White collar	Reference							
Service	-0.13	0.01	-22.83	<.0001	0.87	0.86	0.88	***
Blue collar	-0.14	0.00	-80.67	<.0001	0.87	0.86	0.87	***
Other	0.33	0.47	0.71	0.4798	1.39	0.56	3.46	
Speak English								
Very well	Reference							
Well	0.42	0.01	43.44	<.0001	1.52	1.49	1.55	***
Not well or at all	-0.40	0.37	-1.08	0.2799	0.67	0.32	1.39	
Alcohol								
Lifetime abstainer	Reference							
Former drinker	0.10	0.00	26.19	<.0001	1.11	1.10	1.12	***
Current drinker	-0.12	0.01	-14.45	<.0001	0.89	0.87	0.90	***
BMI								
-0.4975	0.29	-1.73	0.08	0.6080	0.35	1.07	1.17	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	-0.08	0.00	-39.01	<.0001	0.92	0.92	0.92	***
30.0 – < 35.0 (Obesity I)	-0.06	0.00	-15.98	<.0001	0.94	0.93	0.95	***
35.0 – < 40.0 (Obesity II)	-0.10	0.00	-48.95	<.0001	0.90	0.90	0.90	***
40.0 + (Extreme Obesity III)	0.19	0.01	20.56	<.0001	1.21	1.19	1.23	***
Smoking								
Current smoker	0.09	0.00	19.88	<.0001	1.10	1.09	1.11	***
Former smoker	0.11	0.00	59.82	<.0001	1.11	1.11	1.12	***
Never smoker	Reference							
Count of Medical Conditions (causing limitations)	0.05	0.00	20.96	<.0001	1.06	1.05	1.06	***
Count of Medical Conditions (ever)	0.12	0.00	61.42	<.0001	1.12	1.12	1.13	***
Count of Medical Conditions (recent)	0.12	0.00	66.41	<.0001	1.12	1.12	1.13	***
Functional Limitation Score	0.10	0.00	Infnty	<.0001	1.11	1.11	1.11	***
Kessler Score of Psychological Distress	0.09	0.00	92.16	<.0001	1.09	1.09	1.09	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

Used for "Work Days Lost" and "Bed Days" analyses.



## Regression Results

Table J

Medical Expenditure Panel Survey (MEPS)				Self-Reported Health		Unstratified		
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	0.01	0.05	0.04	0.8461	1.01	0.92	1.11	
Non-Hispanic White	Reference							
Non-Hispanic Black	0.06	0.06	1.11	0.2915	1.07	0.95	1.20	
Non-Hispanic Asian	-0.17	0.07	5.96	0.0146	0.84	0.73	0.97	*
Non-Hispanic all other race groups	0.29	0.16	3.37	0.0666	1.34	0.98	1.83	
Non-Hispanic Multiple Race	-0.06	0.08	0.55	0.4578	0.94	0.80	1.107	
Independent Variable		Adjusted Model						
Ratio of Income to Poverty Level								
< 1.00	0.31	0.08	14.78	0.0001	1.37	1.17	1.60	***
1.00 – 1.99	0.20	0.07	9.49	0.0021	1.23	1.08	1.40	**
2.00 – 3.99	0.15	0.05	9.28	0.0023	1.16	1.06	1.28	**
4.00 +	Reference							
Race/Ethnicity								
Hispanic	0.31	0.08	14.61	0.0001	1.37	1.16	1.60	***
Non-Hispanic White	Reference							
Non-Hispanic Black	0.17	0.06	8.83	0.0030	1.19	1.06	1.34	**
Non-Hispanic Asian	0.28	0.10	7.84	0.0051	1.32	1.09	1.61	**
Non-Hispanic all other race groups	0.07	0.21	0.12	0.7313	1.08	0.71	1.63	
Non-Hispanic Multiple Race	0.15	0.13	1.42	0.2336	1.16	0.91	1.49	
Age	0.00	0.00	5.66	0.02	1.00	0.99	1.00	*
Cost Prevented Care (Dental)	0.11	0.0603	3.44	0.0638	1.12	0.99	1.26	
Cost Prevented Care (Medical)	0.30	0.0945	9.90	0.0017	1.35	1.12	1.62	**
Cost Prevented Care (Prescriptions)	0.12	0.1072	1.22	0.2702	1.13	0.91	1.39	
Education								
Less than high school	Reference							
High school diploma/GED	-0.10	0.06	2.70	0.1005	0.90	0.80	1.02	
Associates degree	-0.20	0.08	6.80	0.0091	0.82	0.70	0.95	**
Bachelors degree	-0.23	0.08	9.33	0.0023	0.80	0.69	0.92	**
Masters, Doctorate degree	-0.19	0.09	4.26	0.0391	0.83	0.69	0.99	*
Female	-0.03	0.03	0.65	0.4195	0.97	0.91	1.04	
Food Stamps	-0.01	0.07	0.02	0.8875	0.99	0.87	1.13	
Have a Usual Place of Care	0.05	0.04	1.24	0.2647	1.05	0.96	1.14	
Health Insurance								
Public	-0.15	0.05	7.06	0.0079	0.87	0.78	0.96	**
Private	Reference							
Uninsured	0.05	0.07	0.51	0.4752	1.05	0.91	1.22	
Marriage								
Married (pre-existing)	Reference							
Widowed, divorced, separated (pre-existing)	-0.13	0.05	6.94	0.0084	0.87	0.79	0.97	**
Never married	-0.11	0.05	5.79	0.0161	0.89	0.81	0.98	*
Married (new)	0.06	0.17	0.14	0.7095	1.07	0.76	1.50	
Widowed, divorced, separated (new)	-0.13	0.20	0.40	0.5291	0.88	0.59	1.31	
Occupation								
White collar	Reference							
Service	0.03	0.06	0.21	0.6476	1.03	0.92	1.15	
Blue collar	0.08	0.06	2.14	0.1435	1.09	0.97	1.21	
Other	0.17	0.45	0.15	0.6995	1.19	0.49	2.87	
Not working	-0.17	0.05	12.42	0.0004	0.84	0.76	0.93	***
Unclassifiable	0.10	0.19	0.29	0.5930	1.11	0.76	1.62	
Speak English								
English	Reference							
Non-English very well	-0.04	0.07	0.25	0.6158	0.96	0.83	1.11	
Non-English well	0.36	0.13	7.02	0.0081	1.43	1.10	1.86	**
Non-English not well or at all	0.56	0.11	24.46	<.0001	1.75	1.40	2.18	***
Total Expenditures	6.81E-06	1.33E-06	26.1588	<.0001	1.00	1.00	1.00	***
Alcohol								
Non-heavy drinker	Reference							
Heavy drinker	0.08	0.04	3.04	0.0813	1.08	0.99	1.18	
Did not report	-0.04	0.08	0.22	0.6371	0.96	0.82	1.13	
BMI								
< 18.5 (Underweight)	0.14	0.10	2.13	0.1445	1.16	0.95	1.40	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	0.23	0.05	25.34	<.0001	1.26	1.15	1.38	***
30.0 – < 35.0 (Obesity I)	0.46	0.06	66.89	<.0001	1.58	1.42	1.77	***
35.0 – < 40.0 (Obesity II)	0.71	0.07	108.01	<.0001	2.03	1.78	2.32	***
40.0 + (Extreme Obesity III)	0.86	0.07	140.30	<.0001	2.35	2.04	2.71	***
Did not report	0.23	0.09	6.81	0.0091	1.26	1.06	1.49	**
Smoking								
Smoker	0.52	0.05	92.78	<.0001	1.68	1.51	1.87	***
Non-smoker	Reference							
Count of Medical Conditions (ever)	0.15	0.01	113.96	<.0001	1.16	1.13	1.20	***
Count of Medical Conditions (recent)	0.15	0.03	24.40	<.0001	1.16	1.09	1.23	***
VR-12 MCS	-0.08	0.00	1151.91	<.0001	0.93	0.92	0.93	***
VR-12 PCS	-0.12	0.00	2302.72	<.0001	0.89	0.88	0.89	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.  
 IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.  
 Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table J-1

Medical Expenditure Panel Survey (MEPS)			Self-Reported Health		Stratified: Very Low Income (< 1.00 FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.33	0.09	13.56	0.0002	0.72	0.60	0.86	***
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.36	0.12	9.66	0.0019	0.70	0.56	0.88	**
Non-Hispanic Asian	-0.22	0.17	1.72	0.1900	0.80	0.57	1.12	
Non-Hispanic all other race groups	-0.76	0.45	2.95	0.0860	0.47	0.20	1.11	
Non-Hispanic Multiple Race	-0.06	0.19	0.10	0.7541	0.94	0.64	1.375	
Independent Variable		Adjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	0.57	0.18	9.63	0.0019	1.76	1.23	2.52	**
Non-Hispanic White	Reference							
Non-Hispanic Black	0.00	0.13	0.00	0.9994	1.00	0.77	1.29	
Non-Hispanic Asian	0.44	0.26	2.98	0.0841	1.55	0.94	2.56	
Non-Hispanic all other race groups	0.04	0.65	0.00	0.9471	1.04	0.29	3.77	
Non-Hispanic Multiple Race	0.44	0.28	2.36	0.1245	1.55	0.89	2.70	
Age	0.00	0.00	0.00	0.9751	1.00	0.99	1.01	
Cost Prevented Care (Dental)	0.11	0.0603	3.44	0.0638	1.12	0.99	1.26	
Cost Prevented Care (Medical)	0.30	0.0945	9.90	0.0017	1.35	1.12	1.62	**
Cost Prevented Care (Prescriptions)	0.12	0.1072	1.22	0.2702	1.13	0.91	1.39	
Education								
Less than high school	Reference							
High school diploma/GED	-0.12	0.11	1.03	0.3111	0.89	0.71	1.11	
Associates degree	-0.23	0.23	0.93	0.3339	0.80	0.50	1.26	
Bachelors degree	-0.31	0.20	2.55	0.1105	0.73	0.50	1.07	
Masters, Doctorate degree	-0.64	0.25	6.56	0.0104	0.53	0.32	0.86	*
Female	-0.03	0.03	0.65	0.4195	0.97	0.91	1.04	
Food Stamps	-0.03	0.11	0.07	0.7845	0.97	0.79	1.20	
Have a Usual Place of Care	0.05	0.04	1.24	0.2647	1.05	0.96	1.14	
Health Insurance								
Public	0.27	0.18	2.21	0.1370	1.31	0.92	1.85	
Private	Reference							
Uninsured	0.32	0.19	3.01	0.0826	1.38	0.96	1.99	
Marriage								
Married (pre-existing)	Reference							
Widowed, divorced, separated (pre-existing)	0.04	0.15	0.08	0.7828	1.04	0.78	1.39	
Never married	0.08	0.14	0.33	0.5661	1.08	0.83	1.41	
Married (new)	0.25	0.45	0.32	0.5719	1.29	0.53	3.11	
Widowed, divorced, separated (new)	-0.21	0.31	0.47	0.4922	0.81	0.44	1.49	
Occupation								
White collar	Reference							
Service	-0.08	0.18	0.21	0.6491	0.92	0.64	1.32	
Blue collar	0.01	0.22	0.00	0.9673	1.01	0.66	1.54	
Other	-10.69	1.01	113.09	<0.0001	<0.0001	<0.0001	<0.0001	***
Not working	-0.09	0.18	0.25	0.6163	0.92	0.65	1.29	
Unclassifiable	0.01	0.52	0.00	0.9901	1.01	0.37	2.77	
Speak English								
English	Reference							
Non-English very well	-0.26	0.18	2.05	0.1520	0.77	0.54	1.10	
Non-English well	-0.17	0.25	0.46	0.4968	0.85	0.52	1.37	
Non-English not well or at all	0.09	0.23	0.14	0.7097	1.09	0.69	1.71	
Total Expenditures	2.23E-06	3.14E-06	0.50	0.4778	1.00	1.00	1.00	
Alcohol								
Non-heavy drinker	Reference							
Heavy drinker	0.11	0.14	0.54	0.4604	1.11	0.84	1.48	
Did not report	-0.51	0.22	5.40	0.0201	0.60	0.39	0.92	*
BMI								
< 18.5 (Underweight)	0.13	0.19	0.46	0.4955	1.14	0.79	1.64	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	0.18	0.13	2.07	0.1500	1.20	0.94	1.53	
30.0 – < 35.0 (Obesity I)	0.21	0.14	2.30	0.1292	1.23	0.94	1.60	
35.0 – < 40.0 (Obesity II)	0.46	0.19	6.03	0.0141	1.58	1.10	2.29	*
40.0 + (Extreme Obesity III)	0.89	0.17	26.48	<0.0001	2.44	1.74	3.43	***
Did not report	0.25	0.17	2.15	0.1428	1.29	0.92	1.80	
Smoking								
Smoker	0.56	0.11	26.55	<0.0001	1.75	1.42	2.17	***
Non-smoker	Reference							
Count of Medical Conditions (ever)	0.08	0.03	6.48	0.0109	1.09	1.02	1.16	*
Count of Medical Conditions (recent)	0.19	0.07	6.20	0.0128	1.20	1.04	1.39	*
VR-12 MCS	-0.05	0.01	90.48	<0.0001	0.95	0.94	0.96	***
VR-12 PCS	-0.09	0.01	216.24	<0.0001	0.91	0.90	0.92	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

	OR/IRR: between 1 and 1.25 (small effect size)
	OR/IRR: between 1.26 and 1.5 (medium effect size)
	OR/IRR: between 1.51 and 2 (large effect size)
	OR/IRR: > 2 (very large effect size)

	OR/IRR: between 0.75 and 1 (small effect size)
	OR/IRR: between 0.50 and 0.74 (medium effect size)
	OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table J-2

Medical Expenditure Panel Survey (MEPS)			Self-Reported Health		Stratified: Low Income (1.00 – 1.99 FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.25	0.08	8.75	0.0031	0.78	0.66	0.92	**
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.17	0.11	2.40	0.1216	0.84	0.67	1.05	
Non-Hispanic Asian	-0.34	0.22	2.43	0.1189	0.71	0.47	1.09	
Non-Hispanic all other race groups	0.08	0.32	0.07	0.7971	1.09	0.58	2.03	
Non-Hispanic Multiple Race	-0.47	0.23	4.11	0.0427	0.63	0.40	0.99	*
Independent Variable		Adjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	0.45	0.19	5.80	0.0160	1.57	1.09	2.28	*
Non-Hispanic White	Reference							
Non-Hispanic Black	0.24	0.13	3.42	0.0643	1.27	0.99	1.65	
Non-Hispanic Asian	0.01	0.28	0.00	0.9593	1.01	0.59	1.75	
Non-Hispanic all other race groups	0.03	0.36	0.01	0.9263	1.03	0.51	2.09	
Non-Hispanic Multiple Race	0.08	0.27	0.09	0.7595	1.09	0.64	1.84	
Age	0.00	0.00	0.32	0.5736	1.00	0.99	1.01	
Cost Prevented Care (Dental)	0.29	0.1129	6.80	0.0091	1.34	1.08	1.67	**
Cost Prevented Care (Medical)	0.39	0.1639	5.61	0.0178	1.48	1.07	2.03	*
Cost Prevented Care (Prescriptions)	-0.10	0.1831	0.30	0.5837	0.91	0.63	1.30	
Education								
Less than high school	Reference							
High school diploma/GED	-0.11	0.12	0.82	0.3652	0.90	0.71	1.14	
Associates degree	-0.22	0.18	1.42	0.2340	0.80	0.56	1.15	
Bachelors degree	-0.41	0.15	7.37	0.0066	0.66	0.49	0.89	**
Masters, Doctorate degree	-0.08	0.24	0.11	0.7404	0.93	0.58	1.47	
Female	-0.12	0.08	2.10	0.1473	0.89	0.76	1.04	
Food Stamps	0.08	0.10	0.53	0.4665	1.08	0.88	1.32	
Have a Usual Place of Care	-0.08	0.10	0.74	0.3888	0.92	0.76	1.11	
Health Insurance								
Public	-0.20	0.12	2.88	0.0896	0.82	0.66	1.03	
Private	Reference							
Uninsured	-0.21	0.13	2.49	0.1148	0.81	0.63	1.05	
Marriage								
Married (pre-existing)	Reference							
Widowed, divorced, separated (pre-existing)	-0.22	0.11	3.96	0.0467	0.80	0.64	1.00	*
Never married	-0.10	0.11	0.93	0.3347	0.90	0.73	1.11	
Married (new)	0.33	0.26	1.59	0.2080	1.39	0.83	2.31	
Widowed, divorced, separated (new)	0.04	0.43	0.01	0.9268	1.04	0.45	2.43	
Occupation								
White collar	Reference							
Service	0.06	0.12	0.21	0.6457	1.06	0.83	1.35	
Blue collar	0.00	0.14	0.00	0.9862	1.00	0.76	1.33	
Other	-0.25	0.49	0.26	0.6121	0.78	0.30	2.03	
Not working	-0.20	0.12	3.02	0.0824	0.82	0.65	1.03	
Unclassifiable	0.35	0.38	0.83	0.3614	1.42	0.67	2.99	
Speak English								
English	Reference							
Non-English very well	-0.11	0.18	0.37	0.5417	0.89	0.62	1.28	
Non-English well	0.13	0.20	0.43	0.5102	1.14	0.77	1.71	
Non-English not well or at all	0.54	0.21	6.93	0.0085	1.72	1.15	2.58	**
Total Expenditures	3.48E-06	3.55E-06	0.96	0.3272	1.00	1.00	1.00	
Alcohol								
Non-heavy drinker	Reference							
Heavy drinker	-0.17	0.10	2.84	0.0919	0.85	0.70	1.03	
Did not report	-0.12	0.20	0.37	0.5412	0.88	0.60	1.31	
BMI								
< 18.5 (Underweight)	0.06	0.19	0.09	0.7590	1.06	0.73	1.53	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	0.09	0.11	0.63	0.4281	1.09	0.88	1.36	
30.0 – < 35.0 (Obesity I)	0.29	0.13	4.63	0.0314	1.33	1.03	1.73	*
35.0 – < 40.0 (Obesity II)	0.40	0.15	6.80	0.0091	1.49	1.10	2.01	**
40.0 + (Extreme Obesity III)	0.62	0.18	12.50	0.0004	1.86	1.32	2.63	***
Did not report	0.19	0.18	1.13	0.2887	1.21	0.85	1.72	
Smoking								
Smoker	0.49	0.10	26.71	<.0001	1.63	1.36	1.97	***
Non-smoker	Reference							
Count of Medical Conditions (ever)	0.11	0.03	10.49	0.0012	1.12	1.05	1.19	**
Count of Medical Conditions (recent)	0.13	0.07	3.64	0.0563	1.14	1.00	1.29	
VR-12 MCS	-0.07	0.00	224.08	<.0001	0.93	0.92	0.94	***
VR-12 PCS	-0.12	0.00	674.66	<.0001	0.89	0.88	0.90	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.  
 IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.  
 Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table J-3

Medical Expenditure Panel Survey (MEPS)		Self-Reported Health			Stratified: Medium Income (2.00 – 3.99 FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI	Sig	
Hispanic	-0.23	0.08	7.77	0.0053	0.79	0.68	0.93	**
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.17	0.10	2.59	0.1075	0.85	0.69	1.04	
Non-Hispanic Asian	-0.33	0.13	6.89	0.0087	0.72	0.56	0.92	**
Non-Hispanic all other race groups	0.51	0.23	4.81	0.0283	1.67	1.06	2.64	*
Non-Hispanic Multiple Race	-0.32	0.14	5.30	0.0214	0.73	0.56	0.95	*
Independent Variable		Adjusted Model						
Race/Ethnicity								
Hispanic	0.26	0.17	2.40	0.1212	1.29	0.93	1.79	
Non-Hispanic White	Reference							
Non-Hispanic Black	0.10	0.12	0.76	0.3836	1.11	0.88	1.39	
Non-Hispanic Asian	0.66	0.20	11.23	0.0008	1.93	1.32	2.84	***
Non-Hispanic all other race groups	0.05	0.34	0.03	0.8737	1.06	0.55	2.04	
Non-Hispanic Multiple Race	0.02	0.19	0.01	0.9147	1.02	0.71	1.47	
Age	-0.01	0.00	3.43	0.0639	1.00	0.99	1.00	
Cost Prevented Care (Dental)	0.19	0.0992	3.64	0.0563	1.21	1.00	1.47	
Cost Prevented Care (Medical)	0.19	0.1474	1.67	0.1960	1.21	0.91	1.62	
Cost Prevented Care (Prescriptions)	0.21	0.1505	2.02	0.1548	1.24	0.92	1.66	
Education								
Less than high school	Reference							
High school diploma/GED	-0.04	0.12	0.11	0.7382	0.96	0.76	1.21	
Associates degree	-0.12	0.14	0.68	0.4079	0.89	0.67	1.18	
Bachelors degree	-0.07	0.14	0.24	0.6238	0.93	0.71	1.23	
Masters, Doctorate degree	-0.17	0.18	0.95	0.3303	0.84	0.60	1.19	
Female	0.02	0.06	0.10	0.7479	1.02	0.90	1.16	
Food Stamps	-0.19	0.14	1.7946	0.1804	0.83	0.63	1.09	
Have a Usual Place of Care	0.21	0.10	4.73	0.0297	1.23	1.02	1.49	*
Health Insurance								
Public	-0.24	0.09	6.63	0.0100	0.79	0.66	0.95	*
Private	Reference							
Uninsured	0.13	0.12	1.14	0.2847	1.14	0.90	1.45	
Marriage								
Married (pre-existing)	Reference							
Widowed, divorced, separated (pre-existing)	-0.04	0.09	0.14	0.7047	0.97	0.81	1.16	
Never married	-0.05	0.09	0.32	0.5739	0.95	0.80	1.13	
Married (new)	0.32	0.30	1.13	0.2878	1.38	0.76	2.48	
Widowed, divorced, separated (new)	-0.24	0.31	0.59	0.4419	0.79	0.43	1.44	
Occupation								
White collar	Reference							
Service	0.06	0.12	0.23	0.6346	1.06	0.83	1.35	
Blue collar	0.20	0.11	3.33	0.0678	1.22	0.99	1.52	
Other	-0.17	0.16	1.13	0.2878	0.84	0.61	1.16	
Not working	-0.22	0.10	5.05	0.0246	0.80	0.66	0.97	*
Unclassifiable	0.36	0.24	2.28	0.1314	1.43	0.90	2.29	
Speak English								
English	Reference							
Non-English very well	-0.07	0.14	0.24	0.6225	0.93	0.70	1.24	
Non-English well	0.24	0.22	1.18	0.2777	1.27	0.83	1.94	
Non-English not well or at all	0.48	0.22	4.94	0.0263	1.62	1.06	2.47	*
Total Expenditures	7.55E-06	2.15E-06	12.40	0.0004	1.00	1.00	1.00	***
Alcohol								
Non-heavy drinker	Reference							
Heavy drinker	0.13	0.08	2.65	0.1038	1.14	0.97	1.33	
Did not report	0.16	0.17	0.81	0.3694	1.17	0.83	1.65	
BMI								
< 18.5 (Underweight)	-0.01	0.17	0.00	0.9686	0.99	0.71	1.40	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	0.14	0.08	2.83	0.0927	1.15	0.98	1.34	
30.0 – < 35.0 (Obesity I)	0.43	0.10	17.73	<.0001	1.53	1.26	1.87	***
35.0 – < 40.0 (Obesity II)	0.67	0.16	18.60	<.0001	1.96	1.45	2.67	***
40.0+ (Extreme Obesity III)	0.76	0.15	27.47	<.0001	2.15	1.61	2.86	***
Did not report	0.18	0.16	1.26	0.2612	1.20	0.87	1.64	
Smoking								
Smoker	0.38	0.09	17.67	<.0001	1.46	1.22	1.73	***
Non-smoker	Reference							
Count of Medical Conditions (ever)	0.16	0.03	32.41	<.0001	1.17	1.11	1.23	***
Count of Medical Conditions (recent)	0.19	0.05	15.04	0.0001	1.21	1.10	1.33	***
VR-12 MCS	-0.08	0.00	273.71	<.0001	0.93	0.92	0.93	***
VR-12 PCS	-0.12	0.01	549.68	<.0001	0.89	0.88	0.90	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

	OR/IRR: between 1 and 1.25 (small effect size)
	OR/IRR: between 1.26 and 1.5 (medium effect size)
	OR/IRR: between 1.51 and 2 (large effect size)
	OR/IRR: > 2 (very large effect size)

	OR/IRR: between 0.75 and 1 (small effect size)
	OR/IRR: between 0.50 and 0.74 (medium effect size)
	OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.  
 IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.  
 Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table J-4

Medical Expenditure Panel Survey (MEPS)	Self-Reported Health				Stratified: High Income (4.00+ FPL)		
Independent Variable	Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI	Sig
Hispanic	0.10	0.08	1.36	0.2434	1.10	0.94	1.30
Non-Hispanic White	Reference						
Non-Hispanic Black	0.19	0.12	2.56	0.1095	1.21	0.96	1.54
Non-Hispanic Asian	-0.07	0.09	0.55	0.4595	0.93	0.77	1.12
Non-Hispanic all other race groups	-0.10	0.32	0.10	0.7557	0.90	0.48	1.71
Non-Hispanic Multiple Race	0.04	0.14	0.08	0.7812	1.04	0.79	1.371
Independent Variable	Adjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI	Sig
Hispanic	0.23	0.11	4.90	0.0269	1.26	1.03	1.56 *
Non-Hispanic White	Reference						
Non-Hispanic Black	0.31	0.12	6.19	0.0128	1.36	1.07	1.74 *
Non-Hispanic Asian	0.20	0.14	2.13	0.1448	1.22	0.93	1.60
Non-Hispanic all other race groups	0.23	0.38	0.38	0.5395	1.26	0.60	2.67
Non-Hispanic Multiple Race	0.17	0.18	0.90	0.3429	1.19	0.83	1.69
Age	0.00	0.00	2.33	0.1270	1.00	0.99	1.00
Cost Prevented Care (Dental)	-0.19	0.1224	2.49	0.1148	0.82	0.65	1.05
Cost Prevented Care (Medical)	0.39	0.1811	4.57	0.0326	1.47	1.03	2.10 *
Cost Prevented Care (Prescriptions)	0.37	0.2525	2.20	0.1381	1.45	0.89	2.39
Education	Estimate	SE	Chi-Square	P	OR	95% CI	Sig
Less than high school	Reference						
High school diploma/GED	-0.12	0.16	0.59	0.4441	0.89	0.65	1.21
Associates degree	-0.23	0.16	2.02	0.1553	0.80	0.59	1.09
Bachelors degree	-0.27	0.16	2.81	0.0937	0.76	0.56	1.05
Masters, Doctorate degree	-0.21	0.18	1.45	0.2277	0.81	0.57	1.14
Female	-0.02	0.05	0.15	0.7018	0.98	0.89	1.08
Food Stamps	-0.14	0.22	0.4231	0.5154	0.87	0.56	1.34
Have a Usual Place of Care	-0.05	0.08	0.48	0.4882	0.95	0.82	1.10
Health Insurance	Estimate	SE	Chi-Square	P	OR	95% CI	Sig
Public	-0.19	0.10	3.89	0.0486	0.82	0.68	1.00 *
Private	Reference						
Uninsured	0.09	0.17	0.27	0.6045	1.09	0.79	1.51
Marriage	Estimate	SE	Chi-Square	P	OR	95% CI	Sig
Married (pre-existing)	Reference						
Widowed, divorced, separated (pre-existing)	-0.17	0.08	4.35	0.0370	0.84	0.72	0.99 *
Never married	-0.21	0.10	4.76	0.0292	0.81	0.67	0.98 *
Married (new)	-0.20	0.26	0.55	0.4586	0.82	0.49	1.38
Widowed, divorced, separated (new)	0.07	0.45	0.02	0.8838	1.07	0.44	2.59
Occupation	Estimate	SE	Chi-Square	P	OR	95% CI	Sig
White collar	Reference						
Service	0.03	0.11	0.07	0.7952	1.03	0.84	1.26
Blue collar	0.05	0.09	0.24	0.6254	1.05	0.87	1.26
Other	0.67	0.54	1.52	0.2175	1.95	0.68	5.60
Not working	-0.10	0.07	2.06	0.1513	0.90	0.78	1.04
Unclassifiable	-0.28	0.37	0.57	0.4484	0.76	0.37	1.56
Speak English	Estimate	SE	Chi-Square	P	OR	95% CI	Sig
English	Reference						
Non-English very well	0.06	0.11	0.32	0.5740	1.06	0.86	1.31
Non-English well	0.82	0.22	13.81	0.0002	2.26	1.47	3.48 ***
Non-English not well or at all	0.81	0.30	7.30	0.0069	2.24	1.25	4.02 **
Total Expenditures	8.86E-06	2.13E-06	17.32	<.0001	1.00	1.00	1.00 ***
Alcohol	Estimate	SE	Chi-Square	P	OR	95% CI	Sig
Non-heavy drinker	Reference						
Heavy drinker	0.11	0.07	2.49	0.1144	1.12	0.97	1.28
Did not report	-0.04	0.14	0.08	0.7792	0.96	0.74	1.26
BMI	Estimate	SE	Chi-Square	P	OR	95% CI	Sig
< 18.5 (Underweight)	0.27	0.19	2.07	0.1504	1.31	0.91	1.91
18.5 - < 25.0 (Normal)	Reference						
25.0 - < 30.0 (Overweight)	0.34	0.07	26.76	<.0001	1.41	1.24	1.60 ***
30.0 - < 35.0 (Obesity I)	0.59	0.09	42.63	<.0001	1.81	1.51	2.16 ***
35.0 - < 40.0 (Obesity II)	0.92	0.12	54.87	<.0001	2.50	1.96	3.18 ***
40.0 + (Extreme Obesity III)	0.99	0.13	60.93	<.0001	2.70	2.11	3.47 ***
Did not report	0.25	0.16	2.45	0.1172	1.29	0.94	1.76
Smoking	Estimate	SE	Chi-Square	P	OR	95% CI	Sig
Smoker	0.58	0.11	29.64	<.0001	1.79	1.45	2.21 ***
Non-smoker	Reference						
Count of Medical Conditions (ever)	0.19	0.02	67.50	<.0001	1.21	1.16	1.27 ***
Count of Medical Conditions (recent)	0.13	0.05	6.15	0.0132	1.14	1.03	1.27 *
VR-12 MCS	-0.09	0.00	424.52	<.0001	0.92	0.91	0.92 ***
VR-12 PCS	-0.13	0.00	759.77	<.0001	0.88	0.87	0.88 ***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.  
 IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.  
 Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table K

Medical Expenditure Panel Survey (MEPS)				Work Days Lost		Unstratified			
Independent Variable		Unadjusted Model							
Race/Ethnicity		Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic		-0.08	0.00	-147.97	<.0001	0.92	0.92	0.93	***
Non-Hispanic White		Reference							
Non-Hispanic Black		0.05	0.00	12.48	<.0001	1.05	1.04	1.06	***
Non-Hispanic Asian		-0.44	0.00	-210.79	<.0001	0.64	0.64	0.64	***
Non-Hispanic all other race groups		-0.20	0.46	-0.44	0.6576	0.82	0.33	2.00	
Non-Hispanic Multiple Race		0.42	0.00	180.80	<.0001	1.52	1.51	1.53	***
Independent Variable		Adjusted Model							
Ratio of Income to Poverty Level									
< 1.00		0.22	0.13	1.74	0.0824	1.24	0.97	1.59	
1.00 – 1.99		0.01	0.08	0.15	0.8832	1.01	0.86	1.19	
2.00 – 3.99		-0.02	0.06	-0.34	0.7332	0.98	0.87	1.10	
4.00 +		Reference							
Race/Ethnicity									
Hispanic		0.10	0.10	1.00	0.3166	1.11	0.91	1.35	
Non-Hispanic White		Reference							
Non-Hispanic Black		0.01	0.08	0.14	0.8885	1.01	0.87	1.18	
Non-Hispanic Asian		-0.08	0.17	-0.46	0.6488	0.93	0.67	1.29	
Non-Hispanic all other race groups		-1.12	0.25	-4.54	<.0001	0.33	0.20	0.53	***
Non-Hispanic Multiple Race		0.21	0.18	1.21	0.2254	1.24	0.88	1.75	
Age		-0.01	0.00	-7.60	<.0001	0.99	0.99	0.99	***
Cost Prevented Care (Dental)		0.06	0.08	0.74	0.4586	1.06	0.91	1.23	
Cost Prevented Care (Medical)		0.22	0.09	2.40	0.0163	1.24	1.04	1.48	*
Cost Prevented Care (Prescriptions)		0.11	0.13	0.87	0.3850	1.12	0.87	1.43	
Education									
Less than high school		Reference							
High school diploma/GED		0.12	0.09	1.30	0.1943	1.13	0.94	1.35	
Associates degree		0.09	0.12	0.81	0.4172	1.10	0.87	1.38	
Bachelors degree		0.05	0.11	0.45	0.6557	1.05	0.85	1.30	
Masters, Doctorate degree		0.03	0.13	0.23	0.8201	1.03	0.80	1.33	
Female		0.30	0.05	5.66	<.0001	1.35	1.22	1.50	***
Food Stamps		0.15	0.09	1.62	0.1052	1.17	0.97	1.40	
Have a Usual Place of Care		0.11	0.06	1.83	0.0678	1.12	0.99	1.27	
Health Insurance									
Public		0.03	0.08	0.35	0.7235	1.03	0.89	1.19	
Private		Reference							
Uninsured		-0.16	0.09	-1.93	0.0541	0.85	0.72	1.00	
Marriage									
Married (pre-existing)		Reference							
Widowed, divorced, separated (pre-existing)		0.07	0.07	1.06	0.2910	1.07	0.94	1.22	
Never married		-0.03	0.06	-0.46	0.6464	0.97	0.86	1.10	
Married (new)		0.45	0.21	2.12	0.0344	1.56	1.03	2.37	*
Widowed, divorced, separated (new)		-0.58	0.32	-1.79	0.0735	0.56	0.30	1.06	
Occupation									
White collar		Reference							
Service		-0.01	0.08	-0.10	0.9194	0.99	0.85	1.16	
Blue collar		0.22	0.07	2.99	0.0028	1.24	1.08	1.43	**
Other		-0.63	0.84	-0.75	0.4524	0.53	0.10	2.76	
Not working		-0.03	0.12	-0.22	0.8251	0.97	0.77	1.23	
Unclassifiable		0.04	0.27	0.13	0.8934	1.04	0.61	1.75	
Speak English									
English		Reference							
Non-English very well		0.07	0.10	0.74	0.4597	1.08	0.88	1.31	
Non-English well		-0.11	0.17	-0.65	0.5165	0.90	0.64	1.25	
Non-English not well or at all		-0.08	0.17	-0.44	0.6585	0.93	0.66	1.30	
Total Expenditures		2.40E-05	0.00	Inf	<.0001	1.00	1.00	1.00	***
Alcohol									
Non-heavy drinker		Reference							
Heavy drinker		-0.01	0.06	-0.14	0.8867	0.99	0.89	1.11	
Did not report		0.14	0.15	0.95	0.3398	1.15	0.86	1.55	
BMI									
< 18.5 (Underweight)		-0.02	0.13	-0.13	0.8952	0.98	0.77	1.26	
18.5 – < 25.0 (Normal)		Reference							
25.0 – < 30.0 (Overweight)		0.04	0.07	0.61	0.5404	1.04	0.91	1.19	
30.0 – < 35.0 (Obesity I)		0.10	0.08	1.35	0.1777	1.11	0.95	1.28	
35.0 – < 40.0 (Obesity II)		0.05	0.09	0.62	0.5338	1.06	0.89	1.25	
40.0 + (Extreme Obesity III)		0.02	0.11	0.17	0.8670	1.02	0.82	1.26	
Did not report		-0.04	0.14	-0.32	0.7467	0.96	0.73	1.25	
Smoking									
Smoker		0.21	0.07	2.85	0.0044	1.24	1.07	1.43	**
Non-smoker		Reference							
Count of Medical Conditions (ever)		0.08	0.02	3.18	0.0015	1.08	1.03	1.14	**
Count of Medical Conditions (recent)		0.18	0.04	4.68	<.0001	1.20	1.11	1.29	***
VR-12 MCS		-0.02	0.00	-15.90	<.0001	0.98	0.97	0.98	***
VR-12 PCS		-0.04	0.00	-20.26	<.0001	0.96	0.95	0.96	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table K-1

Medical Expenditure Panel Survey (MEPS)			Work Days Lost		Stratified: Very Low Income (< 1.00 FPL)				
Independent Variable		Unadjusted Model							
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig	
Hispanic	-0.39	0.03	-11.19	<.0001	0.68	0.63	0.73	***	
Non-Hispanic White	Reference								
Non-Hispanic Black	-0.14	0.01	-25.20	<.0001	0.87	0.86	0.88	***	
Non-Hispanic Asian	-1.35	0.02	-76.65	<.0001	0.26	0.25	0.27	***	
Non-Hispanic all other race groups	-0.36	0.90	-0.41	0.6851	0.70	0.12	4.04		
Non-Hispanic Multiple Race	-0.10	0.32	-0.31	0.7557	0.91	0.49	1.69		
Independent Variable		Adjusted Model							
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig	
Hispanic	-0.22	0.30	-0.74	0.4611	0.80	0.44	1.45		
Non-Hispanic White	Reference								
Non-Hispanic Black	0.07	0.23	0.31	0.7585	1.07	0.68	1.69		
Non-Hispanic Asian	-1.27	0.60	-2.12	0.0343	0.28	0.09	0.91	*	
Non-Hispanic all other race groups	-1.03	1.36	-0.76	0.4498	0.36	0.03	5.15		
Non-Hispanic Multiple Race	0.27	0.39	0.68	0.4964	1.30	0.61	2.81		
Age	0.00	0.00	-394.66	<.0001	1.00	1.00	1.00	***	
Cost Prevented Care (Dental)	0.28	0.2999	0.94	0.3484	1.33	0.74	2.39		
Cost Prevented Care (Medical)	0.42	0.2816	1.51	0.1319	1.53	0.88	2.66		
Cost Prevented Care (Prescriptions)	-0.26	0.3231	-0.80	0.4258	0.77	0.41	1.46		
Education		Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Less than high school	Reference								
High school diploma/GED	-0.17	0.23	-0.74	0.4579	0.84	0.53	1.33		
Associates degree	-0.05	0.35	-0.13	0.8951	0.95	0.48	1.90		
Bachelors degree	-0.30	0.35	-0.86	0.3914	0.74	0.37	1.48		
Masters, Doctorate degree	1.68	0.76	2.21	0.0276	5.38	1.20	24.00	*	
Female	0.09	0.24	0.36	0.7181	1.09	0.68	1.73		
Food Stamps	0.41	0.17	2.39	0.0172	1.51	1.08	2.11	*	
Have a Usual Place of Care	-0.24	0.22	-1.09	0.2753	0.79	0.52	1.21		
Health Insurance		Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Public	0.06	0.25	0.25	0.8044	1.06	0.65	1.74		
Private	Reference								
Uninsured	-0.34	0.27	-1.25	0.2111	0.71	0.41	1.22		
Marriage		Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Married (pre-existing)	Reference								
Widowed, divorced, separated (pre-existing)	0.26	0.36	0.73	0.4635	1.30	0.64	2.63		
Never married	0.32	0.29	1.10	0.2724	1.38	0.78	2.45		
Married (new)	0.60	0.97	0.62	0.5344	1.82	0.27	12.19		
Widowed, divorced, separated (new)	0.17	0.40	0.43	0.6657	1.19	0.54	2.59		
Occupation		Estimate	SE	Chi-Square	P	OR	95% CI		Sig
White collar	Reference								
Service	0.19	0.23	0.84	0.4037	1.21	0.77	1.89		
Blue collar	0.23	0.32	0.73	0.4650	1.26	0.68	2.35		
Other	-2.82	1.09	-2.59	0.0100	0.06	0.01	0.51	*	
Not working	0.16	0.26	0.62	0.5353	1.17	0.71	1.96		
Unclassifiable	0.38	0.54	0.71	0.4803	1.46	0.51	4.22		
Speak English		Estimate	SE	Chi-Square	P	OR	95% CI		Sig
English	Reference								
Non-English very well	0.65	0.33	1.96	0.0500	1.92	1.00	3.69		
Non-English well	-0.38	0.41	-0.92	0.3600	0.69	0.31	1.54		
Non-English not well or at all	0.04	0.50	0.08	0.9358	1.04	0.39	2.76		
Total Expenditures	3.60E-05	0.00	Infnty	<.0001	1.00	1.00	1.00	***	
Alcohol		Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Non-heavy drinker	Reference								
Heavy drinker	0.53	0.24	2.16	0.0310	1.69	1.05	2.73	*	
Did not report	-1.01	0.45	-2.23	0.0262	0.36	0.15	0.89	*	
BMI		Estimate	SE	Chi-Square	P	OR	95% CI		Sig
< 18.5 (Underweight)	0.21	0.39	0.55	0.5858	1.24	0.58	2.66		
18.5 - < 25.0 (Normal)	Reference								
25.0 - < 30.0 (Overweight)	0.19	0.26	0.73	0.4682	1.21	0.72	2.03		
30.0 - < 35.0 (Obesity I)	0.21	0.28	0.74	0.4598	1.23	0.71	2.15		
35.0 - < 40.0 (Obesity II)	-0.01	0.37	-0.02	0.9809	0.99	0.48	2.05		
40.0 + (Extreme Obesity III)	0.15	0.42	0.35	0.7270	1.16	0.51	2.64		
Did not report	-0.23	0.43	-0.55	0.5822	0.79	0.34	1.83		
Smoking		Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Smoker	0.19	0.21	0.88	0.3773	1.20	0.80	1.82		
Non-smoker	Reference								
Count of Medical Conditions (ever)	0.18	0.11	1.67	0.0946	1.20	0.97	1.48		
Count of Medical Conditions (recent)	-0.05	0.19	-0.29	0.7741	0.95	0.65	1.37		
VR-12 MCS	-0.03	0.00	-101.56	<.0001	0.97	0.97	0.97	***	
VR-12 PCS	-0.05	0.06	-0.77	0.4435	0.96	0.85	1.07		

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
 OR/IRR: between 1.26 and 1.5 (medium effect size)  
 OR/IRR: between 1.51 and 2 (large effect size)  
 OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
 OR/IRR: between 0.50 and 0.74 (medium effect size)  
 OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table K-2

Medical Expenditure Panel Survey (MEPS)			Work Days Lost		Stratified: Low Income (1.00 – 1.99 FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.29	0.00	-86.28	<.0001	0.75	0.74	0.75	***
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.02	0.04	-0.40	0.6856	0.98	0.91	1.06	
Non-Hispanic Asian	-0.82	0.00	-397.53	<.0001	0.44	0.44	0.44	***
Non-Hispanic all other race groups	-1.02	0.31	-3.31	0.0009	0.36	0.20	0.66	***
Non-Hispanic Multiple Race	0.82	0.04	21.26	<.0001	2.27	2.10	2.44	***
Independent Variable		Adjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.19	0.23	-0.83	0.4047	0.83	0.52	1.30	
Non-Hispanic White	Reference							
Non-Hispanic Black	0.22	0.23	0.94	0.3477	1.24	0.79	1.95	
Non-Hispanic Asian	0.14	0.46	0.30	0.7640	1.15	0.46	2.86	
Non-Hispanic all other race groups	-1.24	0.50	-2.49	0.0129	0.29	0.11	0.77	*
Non-Hispanic Multiple Race	0.91	0.38	2.41	0.0159	2.49	1.19	5.22	*
Age	-0.01	0.00	-Infty	<.0001	0.99	0.99	0.99	***
Cost Prevented Care (Dental)	0.27	0.1852	1.48	0.1393	1.32	0.91	1.89	
Cost Prevented Care (Medical)	0.08	0.2576	0.30	0.7664	1.08	0.65	1.79	
Cost Prevented Care (Prescriptions)	0.48	0.3133	1.53	0.1267	1.61	0.87	2.98	
Education								
Less than high school	Reference							
High school diploma/GED	0.06	0.22	0.26	0.7925	1.06	0.69	1.63	
Associates degree	0.23	0.27	0.85	0.3965	1.25	0.74	2.11	
Bachelors degree	0.39	0.30	1.28	0.1999	1.47	0.81	2.67	
Masters, Doctorate degree	-0.28	0.36	-0.79	0.4308	0.75	0.37	1.52	
Female	0.19	0.17	1.09	0.2755	1.21	0.86	1.69	
Food Stamps	0.50	0.17	2.87	0.0042	1.65	1.17	2.32	**
Have a Usual Place of Care	0.33	0.16	2.05	0.0410	1.39	1.01	1.91	*
Health Insurance								
Public	-0.05	0.19	-0.28	0.7830	0.95	0.66	1.37	
Private	Reference							
Uninsured	-0.17	0.21	-0.77	0.4402	0.85	0.56	1.29	
Marriage								
Married (pre-existing)	Reference							
Widowed, divorced, separated (pre-existing)	0.45	0.22	2.02	0.0438	1.57	1.01	2.42	*
Never married	0.20	0.25	0.80	0.4259	1.22	0.75	2.00	
Married (new)	0.29	0.42	0.68	0.4935	1.33	0.59	3.01	
Widowed, divorced, separated (new)	0.92	0.98	0.94	0.3483	2.51	0.37	17.14	
Occupation								
White collar	Reference							
Service	-0.22	0.17	-1.27	0.2055	0.81	0.58	1.13	
Blue collar	0.24	0.18	1.35	0.1788	1.28	0.89	1.82	
Other	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Not working	-0.02	0.28	-0.07	0.9476	0.98	0.57	1.69	
Unclassifiable	0.50	0.61	0.82	0.4121	1.64	0.50	5.41	
Speak English								
English	Reference							
Non-English very well	0.20	0.25	0.78	0.4327	1.22	0.74	2.01	
Non-English well	-0.20	0.36	-0.55	0.5801	0.82	0.41	1.66	
Non-English not well or at all	0.13	0.34	0.39	0.6978	1.14	0.59	2.22	
Total Expenditures	4.10E-05	0.00	Infty	<.0001	1.00	1.00	1.00	***
Alcohol								
Non-heavy drinker	Reference							
Heavy drinker	0.02	0.18	0.13	0.8975	1.02	0.71	1.47	
Did not report	1.02	0.42	2.41	0.0161	2.77	1.21	6.33	*
BMI								
< 18.5 (Underweight)	0.43	0.46	0.95	0.3443	1.54	0.63	3.81	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	-0.07	0.19	-0.34	0.7351	0.94	0.64	1.37	
30.0 – < 35.0 (Obesity I)	0.20	0.22	0.91	0.3618	1.22	0.80	1.86	
35.0 – < 40.0 (Obesity II)	-0.20	0.27	-0.74	0.4603	0.82	0.49	1.39	
40.0 + (Extreme Obesity III)	0.34	0.34	0.98	0.3257	1.40	0.72	2.73	
Did not report	-0.23	0.33	-0.70	0.4852	0.79	0.41	1.52	
Smoking								
Smoker	0.35	0.19	1.91	0.0567	1.43	0.99	2.05	
Non-smoker	Reference							
Count of Medical Conditions (ever)	0.01	0.00	15.06	<.0001	1.01	1.01	1.01	***
Count of Medical Conditions (recent)	0.12	0.11	1.10	0.2711	1.13	0.91	1.40	
VR-12 MCS	-0.02	0.00	-65.02	<.0001	0.98	0.98	0.98	***
VR-12 PCS	-0.04	0.00	-80.25	<.0001	0.96	0.96	0.96	***

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)	OR/IRR: between 0.75 and 1 (small effect size)
OR/IRR: between 1.26 and 1.5 (medium effect size)	OR/IRR: between 0.50 and 0.74 (medium effect size)
OR/IRR: between 1.51 and 2 (large effect size)	OR/IRR: < 0.5 (large effect size)
OR/IRR: > 2 (very large effect size)	

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.  
IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.  
Used for "Work Days Lost" and "Bed Days" analyses.



## Regression Results

Table K-3

Medical Expenditure Panel Survey (MEPS)			Work Days Lost		Stratified: Medium Income (2.00 – 3.99 FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	-0.40	0.00	-115.30	<.0001	0.67	0.66	0.67	***
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.22	0.00	-46.67	<.0001	0.80	0.80	0.81	***
Non-Hispanic Asian	-0.50	0.01	-54.79	<.0001	0.61	0.60	0.62	***
Non-Hispanic all other race groups	0.21	0.83	0.25	0.8026	1.23	0.24	6.27	
Non-Hispanic Multiple Race	0.27	0.00	170.37	<.0001	1.31	1.31	1.32	***
Independent Variable		Adjusted Model						
Race/Ethnicity								
Hispanic	-0.10	0.15	-0.67	0.5024	0.90	0.67	1.22	
Non-Hispanic White	Reference							
Non-Hispanic Black	-0.14	0.12	-1.15	0.2494	0.87	0.68	1.10	
Non-Hispanic Asian	0.05	0.27	0.17	0.8630	1.05	0.62	1.77	
Non-Hispanic all other race groups	-0.93	0.34	-2.78	0.0054	0.39	0.20	0.76	**
Non-Hispanic Multiple Race	-0.33	0.30	-1.10	0.2727	0.72	0.40	1.30	
Age	-0.02	0.00	-Infty	<.0001	0.98	0.98	0.98	***
Cost Prevented Care (Dental)	0.13	0.1235	1.05	0.2918	1.14	0.89	1.45	
Cost Prevented Care (Medical)	0.11	0.1425	0.78	0.4364	1.12	0.84	1.48	
Cost Prevented Care (Prescriptions)	0.28	0.1816	1.55	0.1210	1.33	0.93	1.89	
Education								
Less than high school	Reference							
High school diploma/GED	-0.01	0.15	-0.05	0.9574	0.99	0.73	1.34	
Associates degree	0.15	0.19	0.78	0.4346	1.16	0.80	1.66	
Bachelors degree	-0.12	0.18	-0.68	0.4980	0.89	0.63	1.25	
Masters, Doctorate degree	-0.27	0.19	-1.42	0.1550	0.77	0.53	1.11	
Female	0.31	0.09	3.43	0.0006	1.36	1.14	1.62	***
Food Stamps	0.00	0.18	0.02	0.9867	1.00	0.70	1.43	
Have a Usual Place of Care	0.16	0.10	1.57	0.1157	1.18	0.96	1.44	
Health Insurance								
Public	0.08	0.14	0.56	0.5759	1.08	0.82	1.42	
Private	Reference							
Uninsured	-0.21	0.14	-1.53	0.1257	0.81	0.62	1.06	
Marriage								
Married (pre-existing)	Reference							
Widowed, divorced, separated (pre-existing)	0.17	0.11	1.57	0.1156	1.18	0.96	1.45	
Never married	-0.06	0.13	-0.45	0.6555	0.94	0.73	1.22	
Married (new)	-0.05	0.41	-0.13	0.8973	0.95	0.43	2.11	
Widowed, divorced, separated (new)	-0.78	0.27	-2.85	0.0044	0.46	0.27	0.78	**
Occupation								
White collar	Reference							
Service	-0.04	0.13	-0.33	0.7415	0.96	0.75	1.23	
Blue collar	0.16	0.12	1.30	0.1930	1.18	0.92	1.50	
Other	-0.17	1.01	-0.17	0.8671	0.84	0.12	6.17	
Not working	-0.05	0.19	-0.26	0.7928	0.95	0.66	1.38	
Unclassifiable	-0.49	0.37	-1.31	0.1888	0.62	0.30	1.27	
Speak English								
English	Reference							
Non-English very well	-0.02	0.14	-0.16	0.8744	0.98	0.75	1.28	
Non-English well	-0.21	0.26	-0.79	0.4285	0.81	0.49	1.36	
Non-English not well or at all	-0.07	0.29	-0.26	0.7942	0.93	0.53	1.62	
Total Expenditures	3.20E-05	0.00	Infty	<.0001	1.00	1.00	1.00	***
Alcohol								
Non-heavy drinker	Reference							
Heavy drinker	0.03	0.11	0.25	0.7998	1.03	0.84	1.26	
Did not report	0.02	0.22	0.11	0.9105	1.02	0.67	1.57	
BMI								
< 18.5 (Underweight)	-0.04	0.24	-0.15	0.8845	0.97	0.60	1.55	
18.5 – < 25.0 (Normal)	Reference							
25.0 – < 30.0 (Overweight)	-0.04	0.11	-0.36	0.7195	0.96	0.77	1.20	
30.0 – < 35.0 (Obesity I)	0.05	0.13	0.39	0.6933	1.05	0.81	1.36	
35.0 – < 40.0 (Obesity II)	0.11	0.17	0.66	0.5114	1.11	0.81	1.54	
40.0 + (Extreme Obesity III)	0.16	0.18	0.86	0.3874	1.17	0.82	1.67	
Did not report	0.01	0.22	0.02	0.9811	1.01	0.65	1.55	
Smoking								
Smoker	0.10	0.11	0.92	0.3561	1.11	0.89	1.38	
Non-smoker	Reference							
Count of Medical Conditions (ever)	0.11	0.00	213.01	<.0001	1.11	1.11	1.11	***
Count of Medical Conditions (recent)	0.34	0.07	4.54	<.0001	1.40	1.21	1.62	***
VR-12 MCS	-0.03	0.00	-195.18	<.0001	0.97	0.97	0.97	***
VR-12 PCS	-0.05	0.00	-704.62	<.0001	0.96	0.96	0.96	***

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)	OR/IRR: between 0.75 and 1 (small effect size)
OR/IRR: between 1.26 and 1.5 (medium effect size)	OR/IRR: between 0.50 and 0.74 (medium effect size)
OR/IRR: between 1.51 and 2 (large effect size)	OR/IRR: < 0.5 (large effect size)
OR/IRR: > 2 (very large effect size)	

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

Used for "Work Days Lost" and "Bed Days" analyses.

## Regression Results

Table K-4

Medical Expenditure Panel Survey (MEPS)			Work Days Lost		Stratified: High Income (4.00+ FPL)			
Independent Variable		Unadjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	0.18	0.00	585.55	<.0001	1.20	1.20	1.20	***
Non-Hispanic White	Reference							
Non-Hispanic Black	0.14	0.00	517.01	<.0001	1.15	1.15	1.15	***
Non-Hispanic Asian	-0.31	0.00	-741.28	<.0001	0.73	0.73	0.74	***
Non-Hispanic all other race groups	-0.58	0.42	-1.38	0.1684	0.56	0.24	1.28	
Non-Hispanic Multiple Race	0.34	0.27	1.25	0.2106	1.40	0.83	2.374769	
Independent Variable		Adjusted Model						
Race/Ethnicity	Estimate	SE	Chi-Square	P	OR	95% CI		Sig
Hispanic	0.23	0.17	1.38	0.1673	1.26	0.91	1.75	
Non-Hispanic White	Reference							
Non-Hispanic Black	0.04	0.13	0.29	0.7681	1.04	0.80	1.35	
Non-Hispanic Asian	0.09	0.23	0.40	0.6890	1.10	0.70	1.71	
Non-Hispanic all other race groups	-1.32	0.81	-1.63	0.1032	0.27	0.05	1.31	
Non-Hispanic Multiple Race	0.24	0.28	0.88	0.3807	1.27	0.74	2.19	
Age	-0.01	0.00	-416.41	<.0001	0.99	0.99	0.99	***
Cost Prevented Care (Dental)	0.12	0.1846	0.64	0.5222	1.13	0.78	1.62	
Cost Prevented Care (Medical)	0.28	0.2656	1.05	0.2954	1.32	0.78	2.22	
Cost Prevented Care (Prescriptions)	0.44	0.3426	1.30	0.1947	1.56	0.80	3.05	
Education		Reference						
Less than high school	Reference							
High school diploma/GED	0.29	0.21	1.37	0.1698	1.33	0.88	2.01	
Associates degree	0.10	0.23	0.45	0.6554	1.11	0.70	1.76	
Bachelors degree	0.18	0.22	0.81	0.4163	1.20	0.78	1.85	
Masters, Doctorate degree	0.19	0.23	0.84	0.3996	1.21	0.77	1.90	
Female	0.26	0.00	255.98	<.0001	1.29	1.29	1.30	***
Food Stamps	0.06	0.27	0.24	0.8137	1.07	0.63	1.81	
Have a Usual Place of Care	0.09	0.13	0.72	0.4734	1.10	0.85	1.42	
Health Insurance		Reference						
Public	Reference							
Private	0.02	0.12	0.19	0.8497	1.02	0.81	1.30	
Uninsured	-0.18	0.24	-0.73	0.4664	0.84	0.52	1.35	
Marriage		Reference						
Married (pre-existing)	Reference							
Widowed, divorced, separated (pre-existing)	-0.05	0.13	-0.42	0.6743	0.95	0.73	1.22	
Never married	-0.02	0.16	-0.12	0.9077	0.98	0.72	1.34	
Married (new)	0.61	0.35	1.73	0.0840	1.83	0.92	3.64	
Widowed, divorced, separated (new)	-1.49	0.62	-2.41	0.0161	0.22	0.07	0.76	*
Occupation		Reference						
White collar	Reference							
Service	0.05	0.12	0.41	0.6809	1.05	0.83	1.34	
Blue collar	0.24	0.15	1.60	0.1086	1.27	0.95	1.71	
Other	-0.70	0.88	-0.80	0.4226	0.50	0.09	2.76	
Not working	0.01	0.28	0.04	0.9651	1.01	0.58	1.75	
Unclassifiable	0.13	0.58	0.23	0.8165	1.14	0.37	3.57	
Speak English		Reference						
English	Reference							
Non-English very well	0.08	0.17	0.46	0.6439	1.08	0.78	1.49	
Non-English well	0.25	0.34	0.73	0.4646	1.28	0.66	2.49	
Non-English not well or at all	-0.62	0.50	-1.25	0.2103	0.54	0.20	1.42	
Total Expenditures	4.20E-05	0.00	Infity	<.0001	1.00	1.00	1.00	***
Alcohol		Reference						
Non-heavy drinker	Reference							
Heavy drinker	-0.05	0.11	-0.48	0.6286	0.95	0.77	1.17	
Did not report	0.13	0.19	0.67	0.5045	1.13	0.78	1.64	
BMI		Reference						
< 18.5 (Underweight)	Reference							
18.5 – < 25.0 (Normal)	0.03	0.27	0.12	0.9017	1.03	0.61	1.74	
25.0 – < 30.0 (Overweight)	0.07	0.12	0.53	0.5979	1.07	0.84	1.36	
30.0 – < 35.0 (Obesity I)	0.16	0.14	1.09	0.2737	1.17	0.88	1.56	
35.0 – < 40.0 (Obesity II)	0.03	0.16	0.16	0.8726	1.03	0.75	1.41	
40.0 + (Extreme Obesity III)	-0.07	0.24	-0.30	0.7609	0.93	0.58	1.48	
Did not report	-0.01	0.23	-0.02	0.9824	1.00	0.64	1.55	
Smoking		Reference						
Smoker	Reference							
Non-smoker	0.18	0.14	1.33	0.1820	1.20	0.92	1.57	
Count of Medical Conditions (ever)	0.10	0.00	242.38	<.0001	1.11	1.11	1.11	***
Count of Medical Conditions (recent)	0.22	0.00	308.37	<.0001	1.25	1.25	1.25	***
VR-12 MCS	-0.03	0.00	-360.72	<.0001	0.97	0.97	0.97	***
VR-12 PCS	-0.05	0.00	-990.13	<.0001	0.95	0.95	0.95	***

\* p < 0.05

\*\* p < 0.01

\*\*\* p < 0.001

"Blue" indicates worse outcomes relative to the reference group.

"Red" indicates better outcomes relative to the reference group.

OR/IRR: between 1 and 1.25 (small effect size)  
OR/IRR: between 1.26 and 1.5 (medium effect size)  
OR/IRR: between 1.51 and 2 (large effect size)  
OR/IRR: > 2 (very large effect size)

OR/IRR: between 0.75 and 1 (small effect size)  
OR/IRR: between 0.50 and 0.74 (medium effect size)  
OR/IRR: < 0.5 (large effect size)

OR = "Odds Ratio." The odds (or risk) of worse health changes with changes in the independent variables. Used for "Self-Reported Health" analysis.

IRR = "Incidence Rate Ratio." The incident rate (or risk) of more work days lost/bed days changes with changes in the independent variables.

Used for "Work Days Lost" and "Bed Days" analyses.

NAHDO 2021  
36<sup>th</sup> Annual Conference  
Virtual

Spotlight Session  
September 28 – 30, 2021

***Drivers of Health Status Disparities:  
An Examination of Variation Using Population-Based Surveys***

Executive Summary

Sample Characteristics

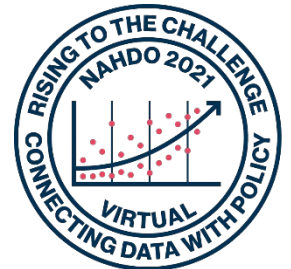
Regression Summary

Regression Analysis

**Presentation Slides**

Brian Williams, MBA; Janine Molino, MS, PhD; and David Stern, MBA

[www.sternconsulting.com](http://www.sternconsulting.com)

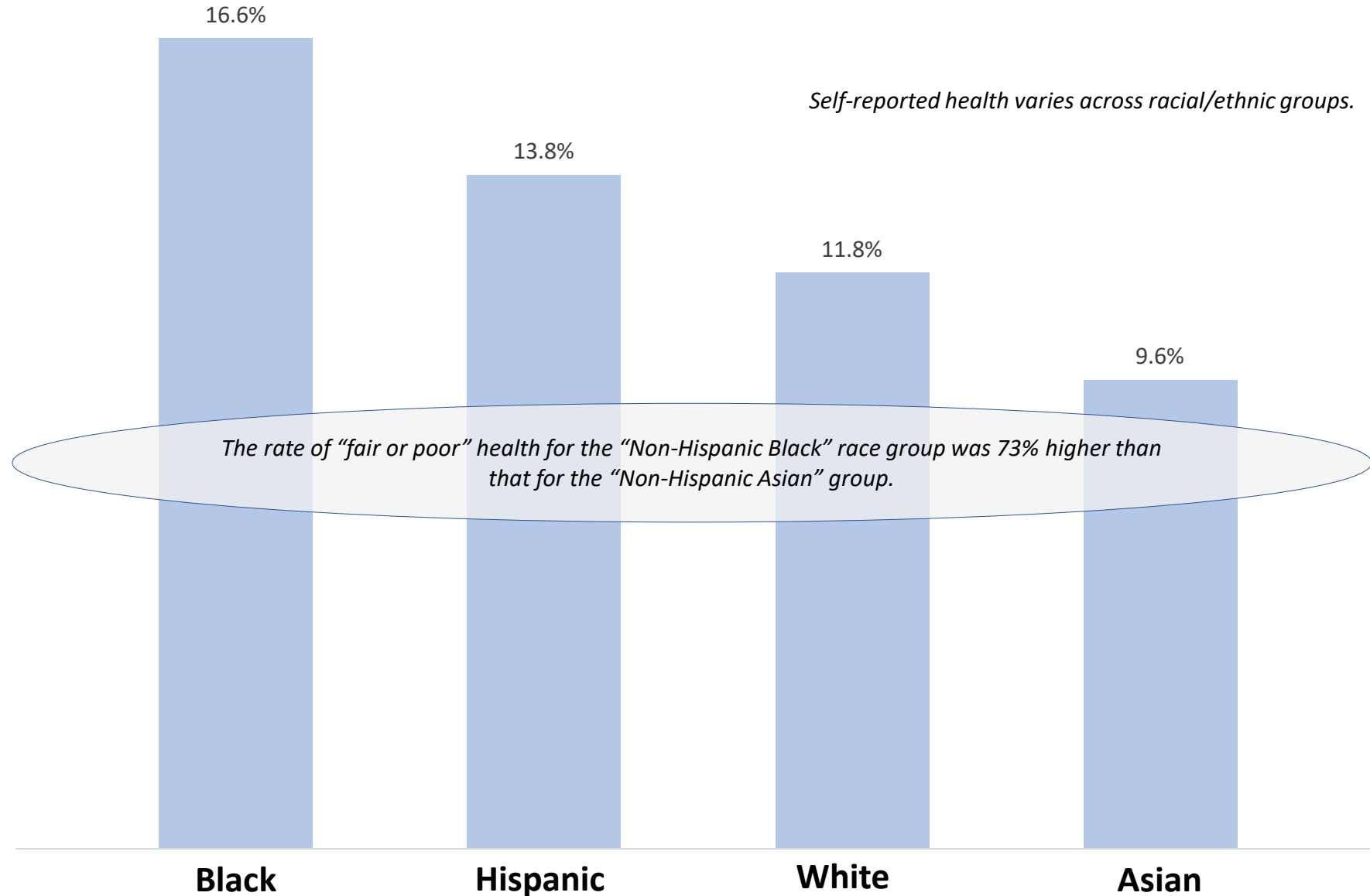


# Self-Reported Health – Percent “Fair or Poor”

By Race/Ethnicity (All race categories are “non-Hispanic” except for the designated “Hispanic” group)\*

National Health Interview Survey (NHIS), 2018

Ages 18+



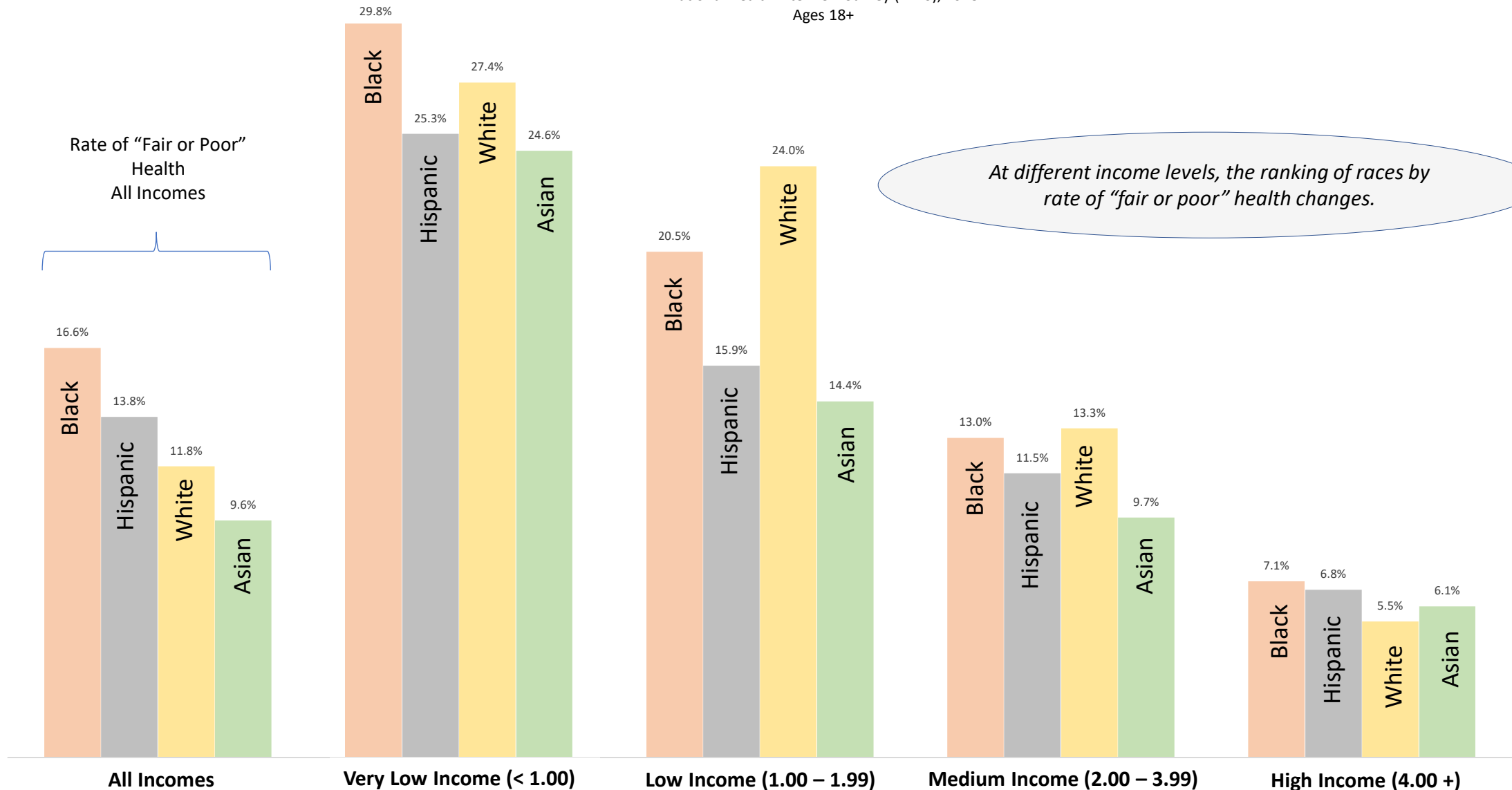
# Self-Reported Health – Percent “Fair or Poor”

By Race/Ethnicity (All race categories are “non-Hispanic” except for the designated “Hispanic” group)\*

By Ratio of Income to Poverty Level

National Health Interview Survey (NHIS), 2018

Ages 18+



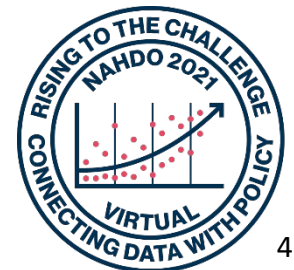
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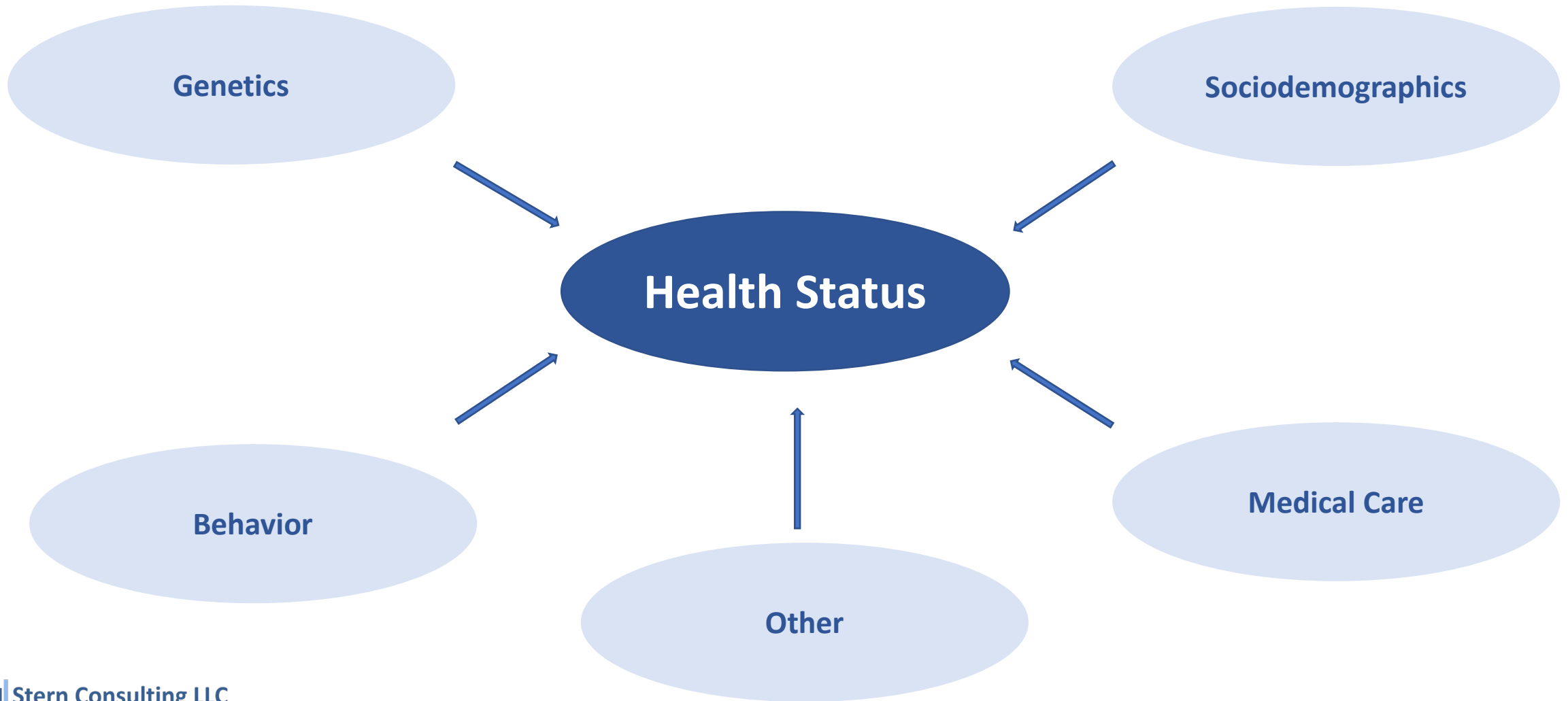
Brian Williams, MBA; Janine Molino, MS, PhD; and David Stern, MBA  
[www.sternconsulting.com](http://www.sternconsulting.com)

September 28 – 30, 2021



# Complexity of Health Status

*Our well-being is influenced by many factors.*



## Drivers of Health Status (Independent Variables)

*We cast a broad net to capture the determinants of health status.*

Our independent variables include:

Sociodemographic	Behavior/BMI	Medical
Age	Alcohol	Condition Counts
Cost/Expenditures	Body Mass Index (BMI)	Functional Limitations
Education	Smoking	Physical Status Scores
Food Security		Mental Status Scores
Health Insurance		
Marriage		
Occupation		
Race/Ethnicity		
Ratio of Income to Poverty Level		
Sex		
Speak English		
Usual Place of Care		



# Data Sources

*Population-based surveys provide a wealth of information relevant to health status.*

Our data sources include:

- National Health Interview Survey (NHIS)
- Medical Expenditure Panel Survey (MEPS)

## Outcome Measures (Dependent Variables)

*NHIS and MEPS surveys include objective and subjective measures of health and reflect a personal interpretation of status.*

Our outcome measures include:

- Self-reported health
- Work days lost to illness or injury
- Bed days

# Regression Analysis: Interaction of Race and Income

*We found a statistically significant relationship between race and income for each of the three outcome measures.*

## Interaction Term: Income By Race

“Ratio of Family Income to Federal Poverty Level” x “Race/Ethnicity”

	Self-Reported Health	Work Days Lost	Bed Days
National Health Interview Survey (NHIS)	**	***	***
Medical Expenditure Panel Survey (MEPS)	***	***	[MEPS does not include “Bed Days”]

Statistical significance      \* p < 0.05      \*\* p < 0.01      \*\*\* p < 0.001

## Regression Analysis: Key Points

- In our unadjusted models, health status varies by race
- There is an interaction effect between race and income indicating that the effect of race on health differs across income levels
- In our income-stratified models, otherwise unadjusted, most racial groups tend to have worse health compared to Non-Hispanic Whites at all but the highest income levels
- In our income-stratified models, adjusted for socio-demographics, behaviors, and medical conditions, medical conditions tend to drive differences in health outcomes, particularly at lower income levels.
- At higher income levels, socio-demographic factors become more prominent. (Although at this level most are reporting good health.)
- The population overall seems to be reporting very good health. This may be inconsistent with what we know about disease prevalence in the U.S. and requires further investigation.

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## “Meet the Experts”

DATE	TIME
September 24, 2021	4:00 PM
September 28, 2021	11:00 AM
September 29, 2021	5:30 PM

Thank you!

