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***JEL Consulting, Inc.***

**Brief Report:**

**Selected Health Conditions and Preventive  
Care Measures of Puerto Rican Adults,**

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## **Overview**

There exists a substantial amount of uncertainty on the effects of the implementation of the *Patient Protection and Affordable Care Act* and the *Health Care and Education Reconciliation Act* (ACA) of 2010 in mainland US and Puerto Rico. One of the aspects that provides the most uncertainty is the access guarantee issue in the ACA, which prohibits insurance companies from discriminating or even consider health status and pre-existing conditions when offering their products. This would suggest that an influx of unhealthy individuals would enter into the health insurance market. Perhaps the most controversial aspects of the ACA are the individual and employer mandates which require most<sup>1</sup> Americans<sup>2</sup> have health insurance through their employer, the government or as individuals. This, in theory, would also require individuals who are currently healthy and choose not to have insurance to enter the risk pool which would reduce premiums. These two population groups will have countervailing effects on the insurance premiums in this market. In order to predict which of these effects will be stronger it is important to evaluate the health of the uninsured in the region which will enter the market.

This report utilizes the *Behavioral Risk Factor Surveillance System* (BRFSS) to examine the health status and utilization of preventive care services of uninsured people in Puerto Rico. The report considers several patient history variables as well as preventive tests and services. An empirical comparative analysis was performed and the results were quite consistent. Uninsured Puerto Ricans are as healthy as or healthier than the insured in most physical conditions but show a significant lack of preventive care and testing which are extremely important in the treatment of serious and costly diseases such as diabetes, cancer and others.

## **Data and Methodology**

The sample for this study consists of over 16,000 adults who live in Puerto Rico, all of whom participated in the BRFSS<sup>3</sup>. The BRFSS is a telephone survey created by the Centers for Disease Control (CDC) that includes all 50 states, the District of Columbia, Puerto Rico, the US Virgin islands, and Guam. It is a yearly survey, although not all of the questionnaires' modules are included each year. For this study the 2010 through 2012 waves were utilized to increase robustness of the results. The intra-year statistics showed results did not present much difference between periods. The appended data set was then segmented into 2 distinct groups; the insured and the uninsured. The survey does not include a question of the type of insurance the person possesses but does have one that inquires if the person is insured or not<sup>4</sup>. Comparative analysis

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<sup>1</sup> Some individuals are exempt for reasons like religion and others and some businesses are exempt as well especially those which have less than 25 employees.

<sup>2</sup> The mandates do not apply to Puerto Rico.

<sup>3</sup> available at <http://www.cdc.gov/brfss/>

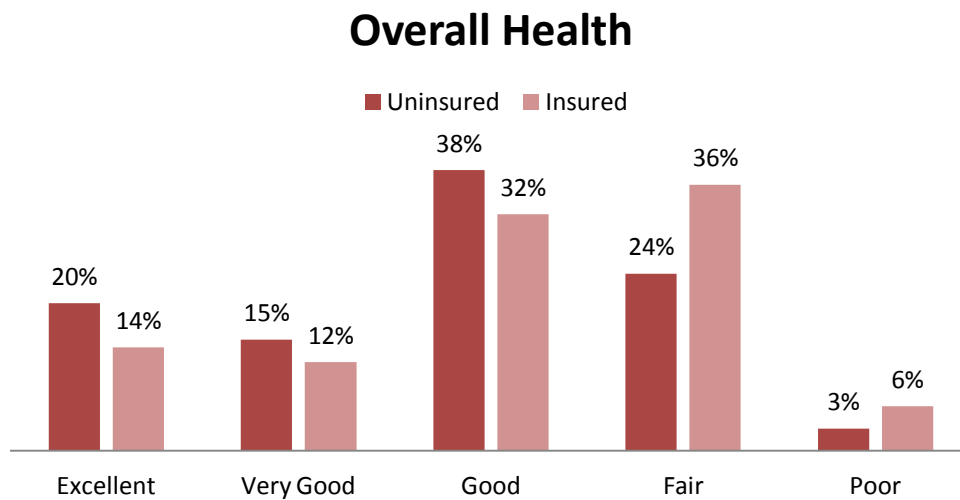
<sup>4</sup> available <http://www.cdc.gov/brfss/questionnaires/questionnaires.htm>

was performed between these groups for several diagnoses, preventive tests and other variables of interest. The results are shown in the next sections.

### **Overall Health**

For this section three variables were utilized to describe the overall health of these individuals. These were; a self report of a person's overall health and a question each on the number of days that a person felt that their physical and mental health was not good in the last 30 day period preceding the answering of the telephone survey. The first variable had the following distribution:

Figure 1



This variable suggests that the uninsured consistently feel in better health than the insured in this sample. The next variable illustrates how many days in the last month the person felt their health was not good.

Figure 2

<b>Days physical health not good in last month</b>		
<b># of days</b>	<b>Insured</b>	<b>Uninsured</b>
<b>no days</b>	66%	76%
<b>1-9 days</b>	17%	15%
<b>10-19 days</b>	6%	4%
<b>20-30 days</b>	11%	5%

Again the variable shows that the uninsured felt better in this period than their insured counterparts. The next variable asked the same question for mental health.

Figure 3

<b>Days mental health not good last month</b>		
<b># of days</b>	<b>Insured</b>	<b>Uninsured</b>
<b>no days</b>	78%	78%
<b>1-9 days</b>	10%	12%
<b>10-19 days</b>	4%	3%
<b>20-30 days</b>	8%	7%

It is important to notice that mental health did not present many differences in the perception of the patients,

**Health Conditions**

In this section results are presented that measure the prevalence and diagnosis<sup>5</sup> of several high cost and/or chronic conditions in Puerto Rico.

Figure 4

**Ever diagnosed with Asthma?**

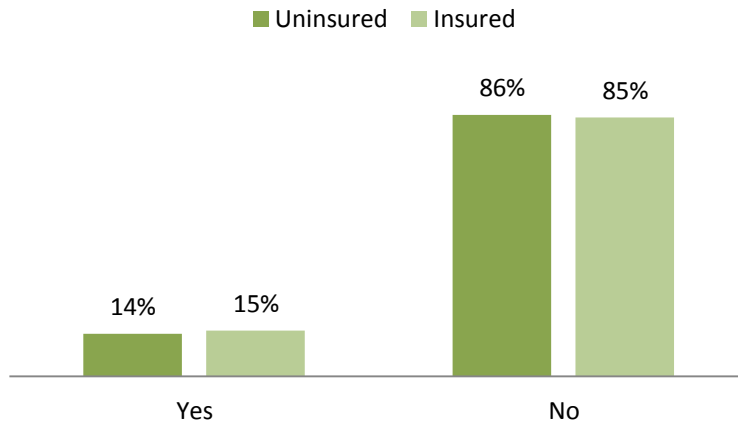
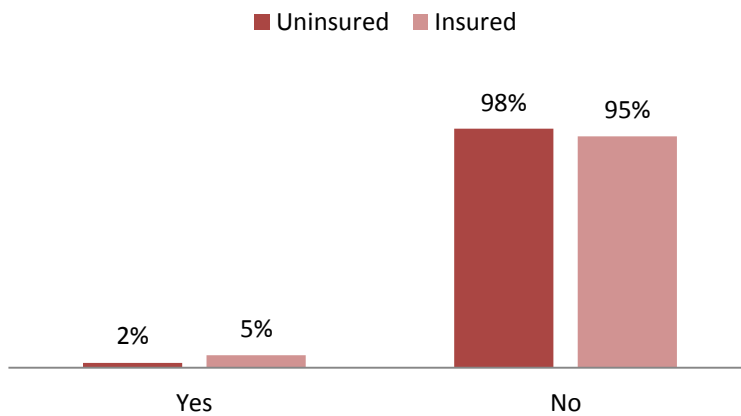


Figure 5

**Ever been diagnosed with cancer (non skin)?**



<sup>5</sup> It is important to note that a lack of insurance could lead to a lack of diagnosis. If people do not go to a doctor they may not find out they have a disease. This is a limitation of this data set because of the self reporting nature of it. It is also important to note that the general health questions, which are not based on a provider’s diagnoses, are consistent with the other results.

Asthma and cancer both show a similar distribution between the insured and the uninsured.

Figure 6

### Ever had a Heart Attack?

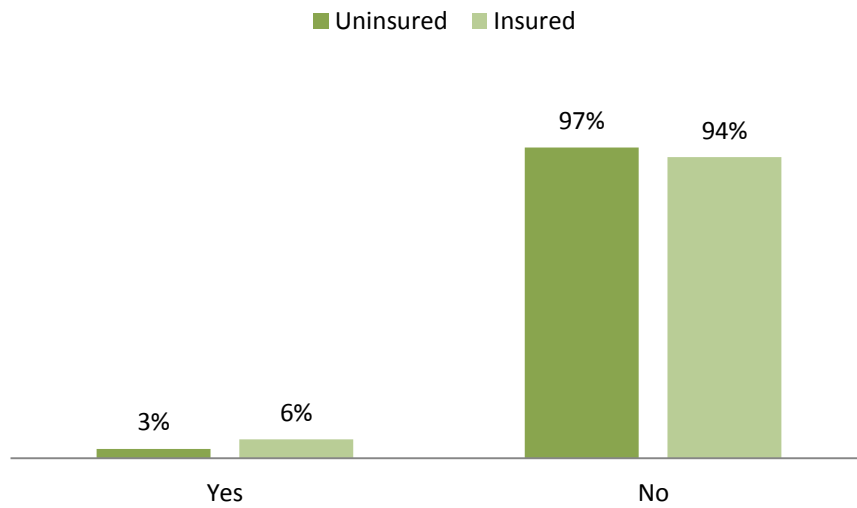
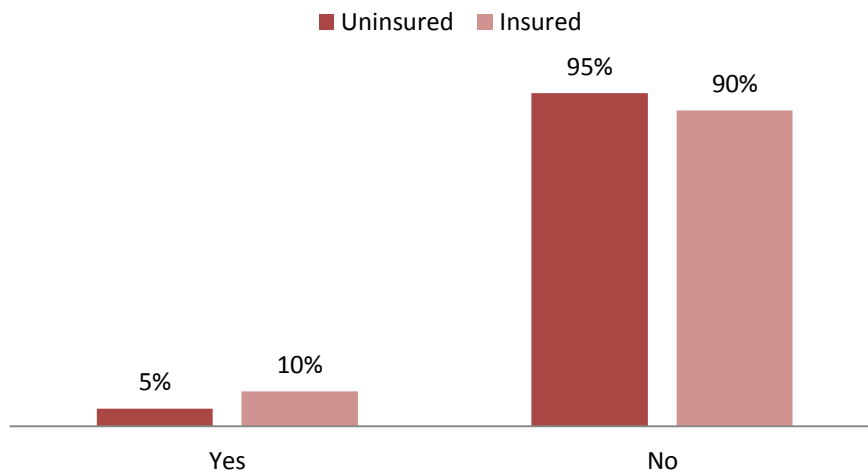


Figure 7

### Coronary Heart Disease



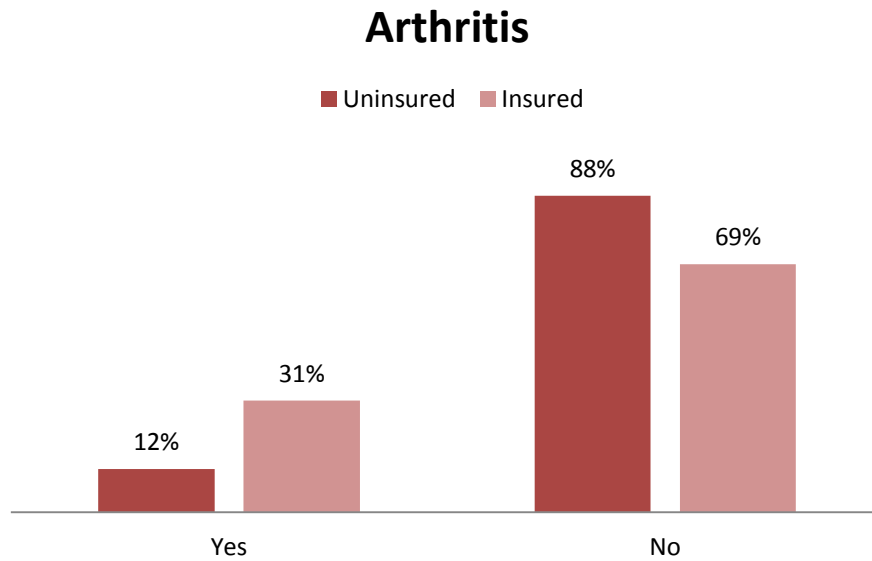
Uninsured individuals have lower diagnosis of cardio-vascular conditions in the sample.

Figure 8

<b>Diabetes</b>		
	Uninsured	Insured
<b>Yes</b>	9%	19%
<b>During Pregnancy</b>	1%	1%
<b>No</b>	89%	78%
<b>Borderline</b>	1%	2%
<b>Total</b>	<b>100%</b>	<b>100%</b>

The results for diabetes and arthritis show a dramatic difference in the prevalence compared to the uninsured.

Figure 9



Obesity, one of the most challenging health problems in the United States and Puerto Rico, seemed to have spread similarly in both the insured and uninsured. With an alarming 65% of Puerto Ricans being overweight or obese.

Figure 10

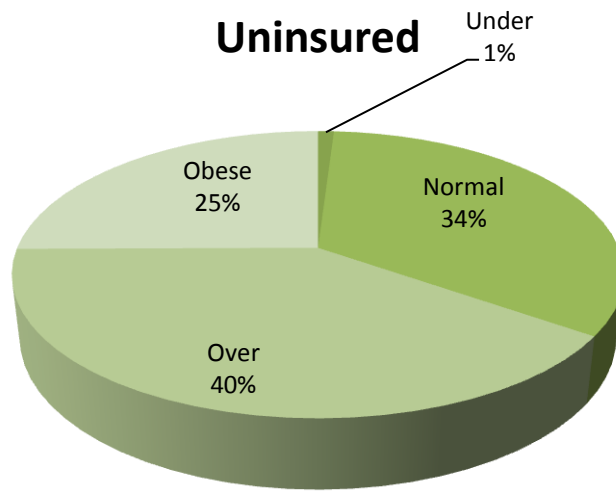
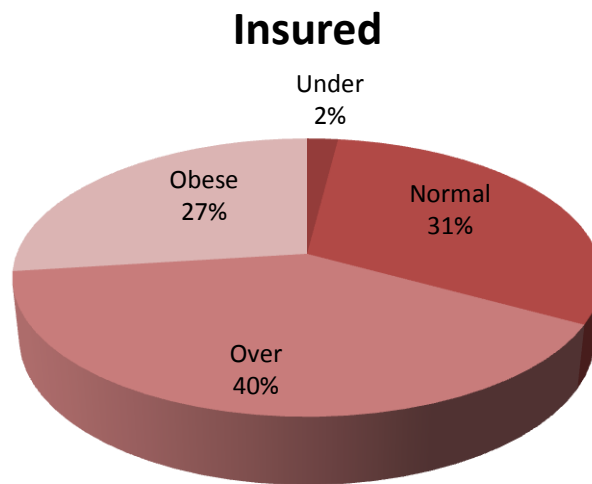


Figure 11

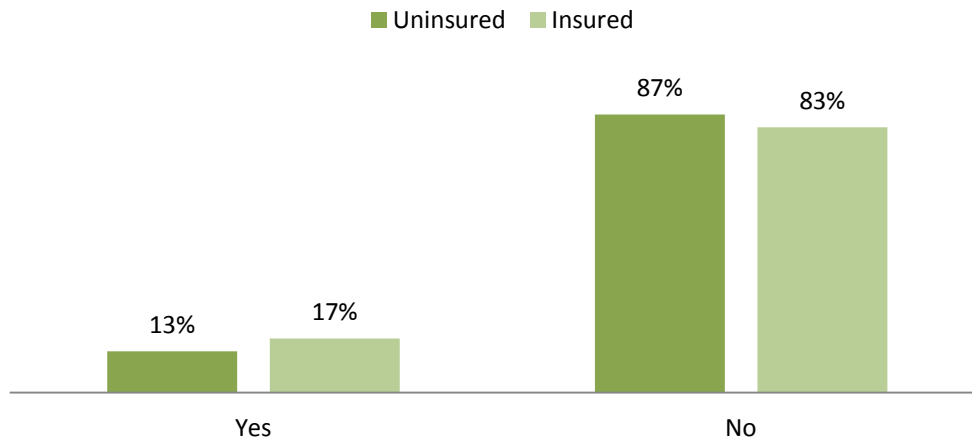




The survey also includes a question on the presence of a diagnosis of depression in the patient’s history.

Figure 12

### Depressive Disorder



These results show that this specific mental health status indicator is slightly worse for the insured population.

### Preventive care measures and testing

In this section results will be presented for preventive care visits to physicians and dentists as well as various screening tests for Cancer and HIV.

Figure 13

### Last time you went for a check up.

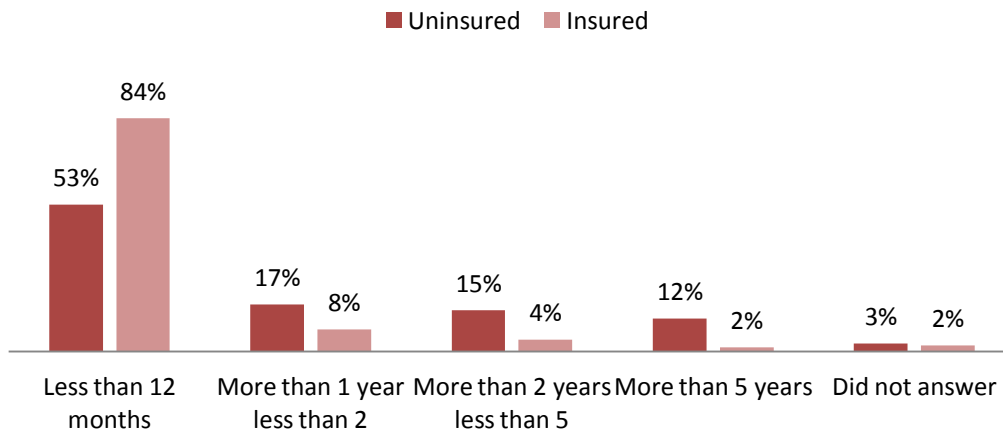
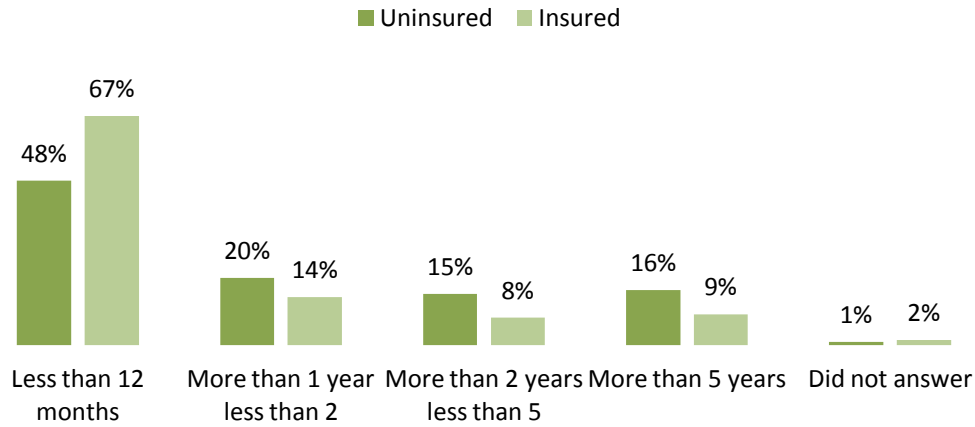


Figure 14

### Last visit to a Dentist



Both of these results are extremely alarming. Forty seven percent (47%) of the uninsured population have not visited a physician in over a year. More than half (52%) of the uninsured have not visited a dentist in over a year. 27% of the uninsured have not visited a physician in over 2 years whole 31% have not visited a dentist.

Figure 15

### Mammogram

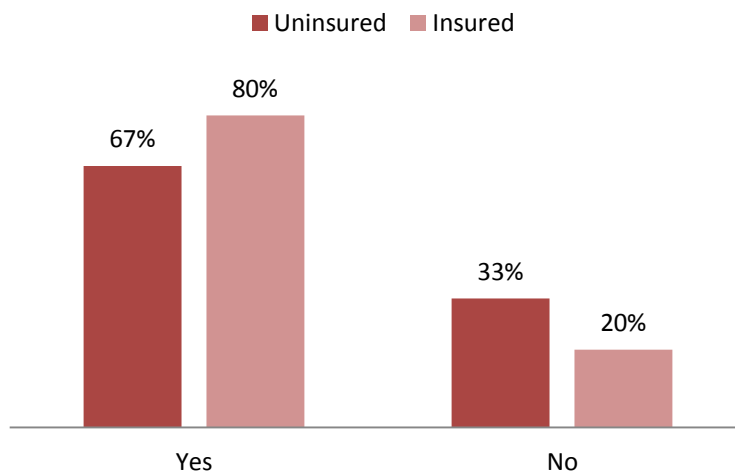


Figure 16

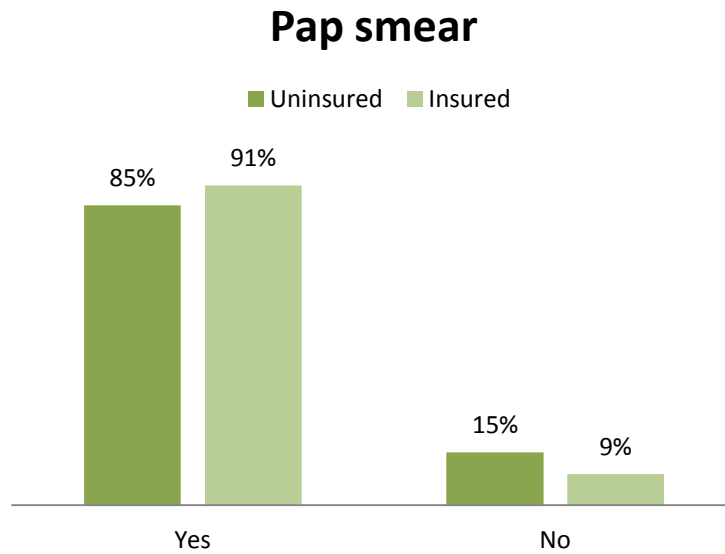


Figure 17

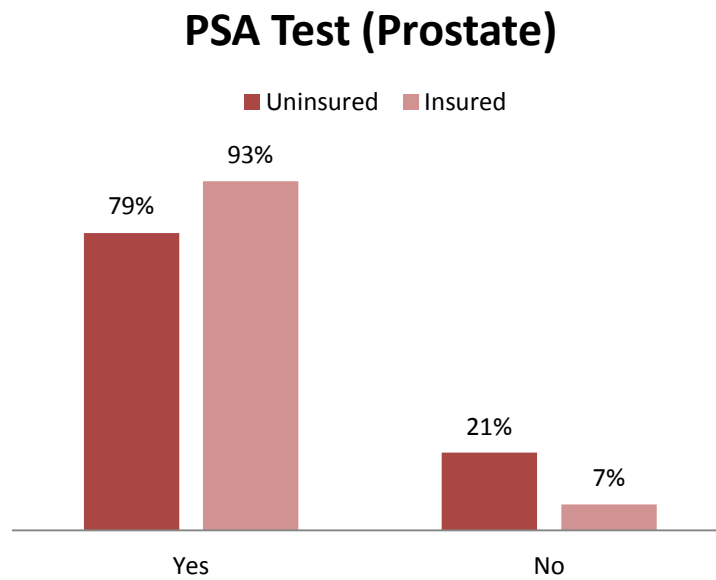


Figure 18

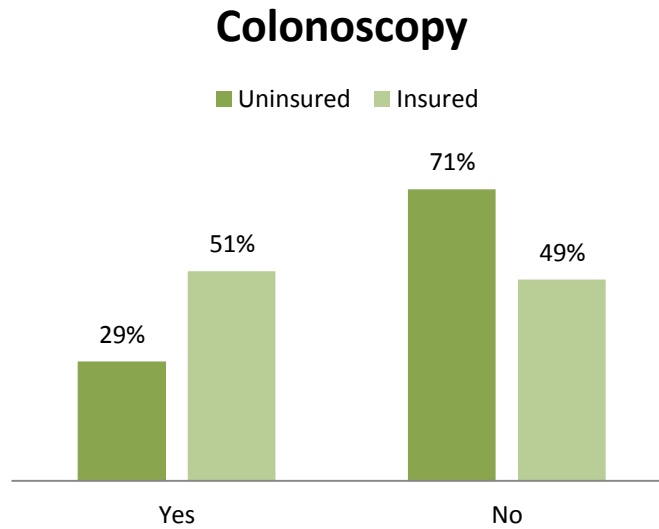


Figure 19

<b>Ever tested for HIV?</b>		
	Uninsured	Insured
<b>Yes</b>	43%	39%
<b>No</b>	56%	59%
<b>Refused/Blank/Missing</b>	1%	2%

In all of the preventive care measures, except HIV testing, there were dramatic differences in the performing of test for breast, colorectal, prostate and cervical cancer screening. This poses a significant public health problem as early detection is one of the most influential factors in the successful treatment of these diseases<sup>6</sup>.

HIV testing was performed at a higher rate for the uninsured but this is probably because of age patterns and risky behavior.

<sup>6</sup> <http://onlinelibrary.wiley.com/doi/10.3322/canjclin.52.1.8/full>

## **Conclusions**

The findings of this report suggest that Puerto Rico's uninsured are as healthy as or healthier than the uninsured when considering physical conditions. Mental health showed similar results but there is not sufficient evidence to categorically state that the groups are different. While it is likely that there is under diagnosing in this uninsured group, supporting data suggests that these individuals are not that different.

There is a stark difference in preventive care and cancer screening tests. This is an important result from this study as it shows that the uninsured individuals are at risk of deadly and costly diseases and do not know what their status is. A lack of preventive care poses several problems for our society because of the high prevalence of chronic disease. This implies that individuals might develop these life threatening conditions and not be informed that they do. It also implies that they might receive treatment when it has a reduced effect and is more costly.

The uninsured group in Puerto Rico will benefit greatly from health insurance coverage because they can:

1. Obtain preventive care including testing and screening.
2. Obtain diagnoses to health conditions.
3. Perform a more cost-efficient cause of treatment.
4. Reduce problems like obesity, diabetes, cancer, and others.