

District of Columbia Communities Putting Prevention to Work

Obesity



NOTICE OF NON-DISCRIMINATION

In accordance with the D.C. Human Rights Act of 1977, as amended, D. C. Code section 2.1401.01 et seq., ("the Act") the District of Columbia does not discriminate on the basis of race, color, religion, national origin, sex, age, marital status, personal appearance, sexual orientation, familial status, family responsibilities, matriculation, political affiliation, disability, source of income, or place of residence or business. Discrimination in violation of the Act will not be tolerated. Violators will be subject to disciplinary action.

Acknowledgments

GOVERNMENT OF THE DISTRICT OF COLUMBIA

Vincent C. Gray, Mayor

DEPARTMENT OF HEALTH

Saul M. Levin, MD., MPA, Interim Director

CENTER FOR POLICY, PLANNING AND EVALUATION

Fern Johnson-Clarke, PhD, Senior Deputy Director John Davies-Cole, PhD, MPH, State Epidemiologist

BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

Tracy Garner, Program Coordinator

PUBLIC INFORMATION OFFICER

Najma Roberts

AUTHORS

Tracy Garner, BRFSS Program Coordinator Tilahun Kassaye, MPH Candidate Tasha Lewis, Data Analyst

EDITORS

Fern Johnson-Clarke, PhD John O. Davies-Cole, PhD, MPH Najma Roberts

SPECIAL THANKS

Wellness Program Community Health Administration

Robert Sudler MS, Program Manager Food Safety and Hygiene Inspection Services Division (FSHISD) Health Regulation and Licensing Administration (HRLA)

ICF Macro International Behavioral Risk Factor Surveillance System Contractor Data Collection, Communities Putting Prevention to Work (CPPW) survey

Table of Contents

	Page
EXECUTIVE SUMMARY	i
METHODOLOGY	 11
INTRODUCTION	13
OBESITY	15
Global Trend of Obesity	15
Obesity in the United States	15
Obesity in the District of Columbia	16
Adult Overweight and Obesity in the District of Columbia	16
Youth Overweight and Obesity Trend in the District of Columbia	22
HEALTH BURDEN OF OBESITY	30
ECONOMIC BURDEN OF OBESITY	31
COMMUNITIES PUTTING PREVENTION TO WORK (CPPW)	32
Adult Obesity, Diabetes and Cardiovascular Diseases	34
Adult Diet and Nutrition	36
Fruit and Vegetable Consumption	42
Soda and Sugar Sweetened Beverages	43
Youth and Nutrition	45
Obesity and Tobacco Use	57
Adult Obesity and Physical Activity	58
Youth and Physical Activity	60
Obesity and Social and Emotional Support	68
Obesity and Mental Illness and Stigma	68
Obesity and Disability	70
ACCESS TO HEALTHY FOOD AND GROCERY STORES	72
OBESITY PREVENTION AND REDUCTION POLICIES AND	
PROGRAMS	74
DISTRICT OF COLUMBIA AND NATIONAL OBESITY INITIATIVES	76
THE DISTRICT OF COLUMBIA'S OVERWEIGHT AND OBESITY	
ACTION PLAN 2010 – 2015	77
REFERENCES	79

List of Tables

Table 1: Categories of BMI	33
Table 2: Respondents Diagnosed with Diabetes 3	34
Table 3: Respondents Diagnosed with having a Heart Attack	34
Table 4: Respondents Diagnosed with Angina or Coronary Heart Disease	35
Table 5: Respondents Diagnosed with a Stroke 3	35
Table 6: Fruits and Vegetable Consumption	40
Table 7: Total Fruits Consumed Per Day 4	41
Table 8: Total Vegetables Consumed Per Day 4	12
Table 9: Obesity and Fruit and Vegetable Consumption Per Day	41
Table 10: Four Levels of Smoking 5	57
Table 11: Obesity among Current Adult Smokers 5	57
Table 12: Categories of BMI and Exercise in the Past 30 Days 5	58
Table 13: Categories of BMI and Physical Activity Categories 5	58
Table 14: Categories of BMI and Physical Activity Index 5	8
Table 15: Ward by Physical Activity or Exercise During the Past 30 Days	59
Table 16: Categories of BMI and Social and Emotional Support 6	58
Table 17: Categories of BMI and Mental Illness and Stigma 6	59
Table 18: Categories of BMI and Disability 7	0'

List of Figures

Figure 1: Obesity Nationwide and in the District of Columbia, 1996 – 2010 16
Figure 2: Overweight and obesity by Gender in 2010 17
Figure 3: Obesity by Race in the District of Columbia in 2010 18
Figure 4: Overweight and Obesity by Income in the District of Columbia in 2010 18
Figure 5: Overweight and Obesity by Education in the District of Columbia in 2010 19
Figure 6: Overweight and Obesity by Age in the District of Columbia in 2010 19
Figure 7: Trends in obesity and Diabetes in the District of Columbia 20
Figure 8: Adults with 30+ minutes of moderate physical activity for five or more days
per week, or vigorous physical activity for 20+ minutes for three or more days per week 20
Figure 9: Adults who have consumed fruits and vegetables five or more times per day
in the District of Columbia
Figure 10: Students who are Overweight 23
Figure 11: Students who are obese 23
Figure 12: Students who described themselves as slightly or very overweight by gender 24
Figure 13: Students Who Are Overweight 24
Figure 14: Students who are Obese by Gender and Grade 25
Figure 15: Students who described themselves as slightly or very overweight by gender 25
Figure 16: Students who Were Trying to Lose Weight by Gender 26
Figure 17: Students who were Trying to Lose Weight by Gender and Grade 26
Figure 18: Students who went Without Eating for 25 or more to Lose Weight 27
Figure 19: Students who went without eating for 24 hours or more to lose weight 27
Figure 20: Students who took diet pills, powders or liquids without a doctor's advice 28
Figure 21: Students who took Diet Pill, Powers or Liquids without a Doctors Advice 28
Figure 22: Students who Vomited or Took Laxative to Lose Weight
Figure 23: Students who Vomited or Took Laxative to Lose Weight by Grade and Gender29
Figure 24: Respondents that Drank Regular Soda and Sugar Drink Servings Per Day 43
Figure 25: Students who Drank a Can, Bottle, or Glass of Soda or Pop During Past

Seven Days	44
Figure 26: Students who Drank a Can, Bottle, or Glass of Soda or Pop During Past	
Seven Days by Grade and Gender	. 44
Figure 27: Students who Drank 100% Fruit Juices One or More Times During the	
Past Seven Days	46
Figure 28: Students who Drank 100% Fruit Juices One or More Times During the	
Past Seven (7) Days	47
Figure 29: Students who Ate Vegetables One or More Times During the Past	
Seven Days	47
Figure 30: Students who Ate Fruits and Vegetables Five or More Times Per Day	
During the Past Seven (7) Days by Gender	48
Figure 31: Students who Ate Green Salad One or More Times During the Past	
Seven (7) Days by Grade and Gender	48
Figure 32: Students who Ate Potatoes One or More Times During the Past Seven	
Days by Gender	49
Figure 33: Students who Ate Potatoes One or More Times During the Past Seven	
Days by Grade and Gender	49
Figure 34: Students who Ate Fruit One or More Time During the Past Seven	-
Days by Gender	50
Figure 35: Students who Ate Carrots One or More Times During the Past Seven	-
Days by Gender	50
Figure 36: Students who Ate Vegetables Three or More Times Per Day During the	
Past Seven Days by Grade and Gender	51
Figure 37: Students who Are Fruit One or More Times During the Past Seven	- 4
Days by Grade and Gender	51
Figure 38: Students who Ate Carrot One or More Times During the Past Seven	50
Days by Grade and Gender	52
Figure 39: Students who Ate Green Salad One or More Times During the Past	50
Seven Days by Gender	52
Figure 40: Students Who Ate Fruit Two or More Times Per Day and Ate	
Vegetables Three or More Times Per Day During the Past Seven	F 2
\mathbf{D} as by Gender	
Figure 41: Students who Ate vegetables One or More Times During the Past	F 2
Eigen Days by Grade and Gender	55
Figure 42: Students who Ate Fruits and vegetables Five or More Times Per Day	E 4
Eigure 42: Studente Who A to Vegetables Three of More Times Der Der by Conder	54
Figure 43. Students who Ate Ervit Two or More Times Der Day by Gender	54
Figure 44. Students who Ate Fruit Two or More Times Per Day by Gender	55
Figure 46: Students Who Ate Fruits Two or More Times Per Day by Grade and Gender	55
Figure 47: Students Who Were Physically Active for at Least 60 Minutes Per Day on	50
Five or More of the Seven Days	61
Figure 48: Students Who Were Physically Active for at Least 60 Migutes Der Day	01
on Five or More of the Seven Days by Grade and Gender	61
Figure 49. Students Who Were Physically Active for at Least 60 Minutes Per Day	01
on Five or More of the Seven Davs by Gender	62
Figure 50: Students Who Watched Three or More Hours Per Day of TV on an	02
Average School Day by Gender	

Figure 51: Students Who Were Physically Active for a Total of at Least 60 Minutes
Per Day on Seven of the Past Seven Days by Grade and Gender
Figure 52: Students Who Watched Three or More Hours Per Day of TV on an
Average School Day by Grade and Gender
Figure 53: Students Who Played on One or More Sports Teams During the
Past 12 Months by Grade and Gender64
Figure 54: Students Who Played on One or More Sports Teams During the Past
12 Months by Gender
Figure 55: Students Who played video or computer games or used a computer
for something that was not schoolwork related three or more hours per
day on an average school day by gender65
Figure 56: Students Who played video or computer games or used a computer
for something that was not schoolwork related three or more hours per day
on an average school day by grade and gender65
Figure 57: Students who attended physical education classes on one or more days in
an average week when they were in school by gender
Figure 58: Students who attended physical education classes daily in an average week
when they were in school by gender 66
Figure 59: Students who attended physical education classes on one or more days in
an average week when they were in school by grade or gender
Figure 60: Students who attended physical education classes daily in an average
week when they were in school by grade or gender
Figure 61: Type and number of fast food restaurants in the District 2009-201072
Figure 62: Type and number of healthier fast food restaurants in the District, 2009-2010 72
Figure 63: Convenience stores in the District of Columbia (7 Eleven and CVS), 2009-201073
Figure 64: Type and number of grocery stores in the District of Columbia, 2009-2010

Executive Summary

The Communities Putting Prevention to Work (CPPW) is an initiative under the American Recovery and Reinvestment Act, headed under the Department of Health and Human Services, Centers for Disease Control and Prevention to tackle the two leading preventable causes of death and disability; obesity and tobacco. The CPPW Behavioral Risk Factor Surveillance System (BRFSS) and Youth Risk Behavioral Surveillance System (YRBSS) survey tools were utilized to collect data targeting individual behaviors that result in poor health outcomes interrelated to social determinants of health, including physical environment that is directly related to an individual's capacity to make healthy and informed choices. Also, through evidence-based community approaches to chronic disease prevention and control in the District, the CPPW focuses on the following:

- Increasing levels of physical activity;
- Improving nutrition;
- Decreasing overweight/obesity prevalence;
- Decreasing tobacco use; and
- Decreasing exposure to second-hand smoke.

According to the 2011 BRFSS, District of Columbia adults ranked 47th in obesity which is among the lowest in the nation.¹ However, District youth ages 10-17 years old ranked 9th in obesity, one of the highest in the nation.² Despite the positive static adult obesity rates, when compared nationally to the District's eight (8) wards, those positive rates tell an opposing story. When observed, five of the Districts eight (8) wards have obesity rates higher than 20%.

Obesity plays an integral role in high rates of diabetes and hypertension. The cost to the health care system related to obesity and related chronic conditions if no changes occur will increase by 18.8% by 2030. ³ Addressing the obesity epidemic is a long-term effort that no one strategic action will be able to solve. It will take a multifaceted approach to change behaviors and create an environment that looks upon eating healthy and exercising as a lifetime investment as communities embrace health and begin to revert this crisis.

In the District, many initiatives have begun to make the city greener and healthier such as Sustainable DC, Live Well DC and embracing the First Lady Michelle Obama's "Let's Move" campaign. All of these efforts are designed to make the District's communities healthier while improving the quality of life of its residents. The District has made great strides in increasing physical activity by creating bike paths, sidewalks, revitalized parks and recreation facilities and implementing physical activity in schools.

Current findings in this report include the following:

- Estimated 2.8 million adult deaths each year as a result of overweight or obesity.
- One-third of adults and 16.9% of US children and adults are obese.
- In 2008, medical cost associated with obesity estimated at 147 billion.
- Residents who resided in Wards 1, 2 and 3 were more likely to exercise than the residents from all other wards.
- Male students were more likely to be physically active at least 60 minutes per day.
- Obese adults were more likely to experience depression.

Methodology

Behavioral Risk Factor Surveillance System (BRFSS)

The BRFSS is a telephone survey that uses random dialing and is conducted with adults within households containing telephones in the District of Columbia. This methodology for conducting BRFSS surveys is standardized by the CDC and is described in the BRFSS User's Guide and related policy memos. (See CDC website at www.cdc.gov/brfss. ICF Macro, an independent survey research company, collected survey data for the 2010 District of Columbia BRFSS following this methodology summarized below).

Survey Sample

BRFSS protocol calls for a probability sample of all households with telephones within each participating state or territory. With this method, each household with a telephone in the survey area has a known chance of selection for the study. The 2010 District of Columbia BRFSS accomplished this with a disproportionate stratified random digit dial (RDD) sample based on a list-assisted frame. Marketing Systems Group (MSG), using their proprietary Genesys sampling software, generated the sample for the District of Columbia BRFSS, as they do for all states participating in the BRFSS. The Genesys sample was drawn quarterly from all working banks of District of Columbia telephone numbers, and provided to Macro each month. The sample included both listed and unlisted numbers. The sample was pre-screened for non-working and business numbers.

Behavioral Risk Factor Surveillance System, Communities Putting Prevention to Work Survey Questionnaire

The "core" questionnaire consists of a standard set of questions, designed by the CDC, that are included in the survey for every state. Core modules administered for the 2010 District of Columbia BRFSS, Communities Putting Prevention to Work (CPPW) were:

- Tobacco Use
- Water Consumption
- Secondhand Smoke
- Food Assistance
- Emotional Support
- Fruits and Vegetables
- Diabetes
- Demographics
- Sugar Sweet Beverages and Menu Labeling

Interviewing Protocol

Experienced, supervised personnel conducted the surveys using CfMC's Survent software. A total of 1500 completed interviews were obtained during a three (3) month calling period beginning October 1, 2010 and ending December 31, 2010. Interviewers adhered to the following procedures when contacting households for interviews:

Random Respondent Selection: For each household contacted, one adult was selected for an interview using a household roster and automated random selection process. If that adult was unavailable during the survey period, unable or unwilling to participate, or did not speak English well enough to be interviewed, no survey was conducted.

Contact Attempts: Up to 15 attempts, over a minimum five-day period (typically 15 days), were made to reach each sampled telephone number. Once contact was made at a residence, as many calls as necessary were made to reach the randomly selected adult (within the permitted time schedule). Attempts were made on different days of the week and at different times of day, in a pattern chosen to maximize the likelihood of

- Mental Illness and Stigma
- Physical Activity
- Neighborhood Perception and Environment
- Smoking Cessation
- Disability
- Cardiovascular Disease Prevalence
- Health Care Access
- Health Status

contact with the minimum number of calls.

Non-English Households: The 2010 District of Columbia CPPW/BRFSS survey was conducted in English only.

No attempts were made to conduct an interview in a household where the randomly selected adult could not be interviewed in English. When a Spanish-speaking individual was contacted, a bilingual interviewer attempted to determine if the selected person was capable of completing the survey in English.

Converting Initial Refusals: Specially trained interviewers re-contacted households that initially refused, at least three days later, to persuade respondents to participate in the survey.

Quality Control Measures: Supervisors monitored 10% of interviews using a remote monitoring feature of the CATI software. During these sessions, the supervisor simultaneously monitored both the interviewer-respondent interaction on the telephone and the data entered by the interviewer into the CATI system; scoring the interviewer on a variety of performance measures. Neither interviewers nor respondents were aware when calls were monitored.

Data Analyses

Data for the 2010 DC CPPW/BRFSS survey were delivered to the CDC each month; the data were then aggregated and weighted after interviewing was completed. Data were weighted to adjust for differences in the probabilities of selection of each respondent. This weight accounted for the probability of selection of a telephone number, the number of adults in a household, and the number of telephones in a household. In this report, all data are weighted unless otherwise noted.

Limitations of the Data

As with any sample survey, depending on the confidence limit selected, the results of the District of Columbia BRFSS can vary from those that would have been obtained with a census of all adults living in telephone-equipped households. The results of this sample survey could differ from the "true" figures because some households cannot be reached at all and others refused to participate. These non-responding households may differ from respondents (those who actually participate in the survey) in terms of attributes relevant to the study.

The sample-design used in the District of Columbia BRFSS results in a 95% confidence interval. In other words, 95 times out of 100, the BRFSS results will vary no more than a given number of percentage points from the figure that would have been obtained if data had been collected for all adults in District of Columbia households with telephones.

Small Numbers

Small numbers of respondents are also an issue when analyzing data. A difference in the responses of only a few individuals can result in a large difference in percentage of the total for that group. Small numbers of respondents in a group generally occur in one of two ways. First, very few respondents in the total sample have a particular characteristic under analysis. Second, the survey logic limits the number of respondents receiving a particular question, thereby reducing the number of respondents in each analytical unit from that item. Where counts are less than 50 respondents per subgroup, caution should be used in drawing conclusions from the data.

The survey population excludes adults:

- In penal, mental, or other institutions
- Living in group quarters such as dormitories, barracks, convents, or boarding houses
- Contacted at a second home during a stay of less than 30 days
- Who do not speak English well enough to be interviewed
- Living in households without telephones

Youth Risk Behavioral Surveillance System (YRBSS)

YRBSS is a data tool designed to determine the prevalence of health-risk behaviors among high school students; assess the increase or decrease of behaviors over time, in addition to examining the co-occurrence of health-risk behaviors. Rather than focusing on the determinants of behaviors, the YRBSS focuses on health behaviors(e.g., alcohol and other drug use and sexual behaviors) that are associated with educational and social outcomes, including absenteeism, poor school achievement, and dropping out of school.

Operational Procedures

The DC YRBSS is primarily collected during the fall or spring of each odd-number years. Separate samples and operational procedures are used in the national survey and state and local surveys. The national sample is not an aggregation of the state and local survey, and state or local estimates cannot be obtained from the national survey. All regular public schools containing 9, 10, 11, and 12 grades were included in the sample. One school was ineligible. Systematic equal probability sampling with a random start was used to select classes from each school that participated in the survey.

Survey Questionnaire Topics:

- Safety
- Bullying
- Tobacco Use
- Marijuana
- Sexual Behaviors
- Food and Drinks
- HIV Education

- Violence Related Behaviors
- Suicide
- Alcohol Use
- Other Illicit Drugs
- Body Weight
- Physical Activity
- Asthma

Sampling and Weighting

Response Rates

Schools - 100% - 19 of the 19 sampled eligible schools participated Students - 74% - 1,432 of the 1,879 sampled students submitted questionnaires 1,396 questionnaire were usable after data editing. Overall response rate - 100% * 74% = 74%

Weighting

W1= the inverse of the probability of selecting the classroom within the school

f1= a student -level nonresponse adjustment factor calculated by class

f2= a post-stratification adjustment factor calculated by gender and by race/ethnicity

$$W = W1 * f1 * f2$$

Data Limitations

The YRBSS has multiple limitations:

- Self report
- Underreporting and over-reporting of behaviors cannot be determined

- Not collected by ward and zip code
- Data only applies to youth who attend school
- Survey addresses behaviors that contribute to the leading causes of morbidity and mortality among youth and adults
- Data are not available among all 50 states

The YRBSS data in this report are of acceptable quality.

Introduction

Combating the obesity epidemic continues to be a challenge that puts the health of District residents and the nation at a crossroads. With the majority of the calorie intake that individuals consumed being obtained outside of their homes, the battle to change this dynamic increases. There have been several new initiatives and increased efforts over the years to improve the cities health with the implementation of the bike sharing programs, bike paths and the revitalization of parks and recreation centers throughout the city. In addition, new restaurants that specialize in healthy and nutritious foods have emerged into the city. However, with all of these great efforts some of the District's poorer communities continue to see an increase in obesity rates. Trying to prove to individuals that convenience and quantity cannot counter quality has been a tough alternative to promote and stick. Local commitment and engagement from communities, parents, schools and government officials are required if we are to sustain the progress put forth thus far to revitalize the health of District residents.

More than one-third⁴ of the United States adult population is obese and approximately 17% of children⁴ and adolescents aged 2-19 years old are obese. In 2008, 147 billion in medical cost was associated with obesity. ⁵ Each year, adults who are obese cost U.S. employers \$73 billion in lost productivity.⁵ Obesity comorbidities include coronary heart disease, hypertension and stroke, certain types of cancer, non-insulin-dependent diabetes mellitus, gallbladder disease, dyslipidaemia, osteoarthritis and gout, and pulmonary diseases, including sleep apnea. ⁵

In 2009, the fast food industry spent \$4.2 billion on TV advertising, radio, magazine, outdoor advertising and other media campaigns. ⁶ Convenience and marketing are the driving forces of the fast food industries strategy to get more consumers to purchase their products. Individual's daily consumption of unhealthy fast foods have a negative impact on a community's health. As a city, the major impact is being seen among the District's young population. Youth in the District aged 10-17 years old rank 9th nationally² in obesity, with no clear decline in sight. In some areas of the city there are fast food restaurants, markets and carryout's on every corner. Although there has been an increase in promoting healthy options much of the advertising is geared toward individuals purchasing unhealthy foods. Consider many of the fast food restaurants that promote \$1 menus and display salads as a healthier alternative for \$6 or \$7 dollars. For many purchasing a salad does not add up financially when they can purchase a variety of food items for \$1. Healthy options should be accessible, affordable and of quality.

Parents concerns over their child(ren) health and weight while preserving their self-image can also become a challenging task; however, parents can lead by example. Parents who exhibit a positive attitude and action in behavior towards eating healthy and exercising can be modeled by their child; this demonstrates a positive image and begins to change the trajectory of health in the home. Also, parents can go a step further by making some immediate changes by not purchasing sugar drinks, snacks and fast food for meals but making fruits, vegetables and water available and preparing home cook meals that provide the nutrients that children need to grow healthy and strong. Furthermore, educating children in their early stages in life that eating right and exercising is an enjoyable investment, children can communicate what they have learned to their parents and as a family they begin to change their eating patterns.

As the city progresses forward in its effort to change the upward obesity pattern, communities must recognize that they hold the power of change. Communities who unite and demand that businesses participate in the transformation of their neighborhoods are on their way to create change and begin to take back control over their health. Engaging markets and grocery store owners to place healthy options such as bright colored fruits and vegetables at the entrance of the store provides an immediate visual which could change the consumers eating choices.

There is no single effort that can revert the obesity epidemic, it will take a multifaceted approach. As with the tobacco industry the health community stood up to fight for the millions of individuals whose health has and will be compromised from cigarette smoking; in addition, to the impact smoking has on the healthcare system. The ban on smoking in bars, restaurants, clubs and in other areas, not to mention the ban on advertising, has made a major impact on decreasing smoking around the nation. Some of the ways states can begin to decrease obesity rates could be to impose a snack (i.e., potato chips, pretzels) and soda (i.e., canned and bottled juice and soda) tax. Tax breaks should be considered for businesses that sell healthy foods in areas established as food desserts. Also, the city can implement zoning restrictions on areas that currently have a high volume of unhealthy food establishments (e.g., fast food restaurants and carry-outs). Aggressive steps are the only way to change the upward obesity spiral in many poor communities. It is vital that communities begin to see health as an investment to increasing their life span while sustaining their quality of life.

Utilizing data from the 2010 Communities Putting Prevention to Work (CPPW), Behavioral Risk Factor Surveillance System (BRFSS) and the Youth Risk Behavioral Surveillance System (YRBSS) in this report will examine the following:

- Current obesity status among the District of Columbia's eight (8) wards
- Current nutrition and physical activity initiatives
- Current fast food and healthy food options
- Review of the District's Obesity 2010 2015 Action Plan goals and objectives

Obesity

According to the National Institute of Health (NIH), obesity means having too much body fat. In numeric terms, obesity refers to a body weight that is at least 30 percent over the ideal weight for a specified height.⁷

Body Mass Index (BMI) is often used not only as an estimate of body fat but also as a gauge of the risk of onset for certain diseases such as diabetes and cardiovascular disease. BMI is calculated as follows:⁸

BMI= (Weight (in Kg))

(Height in meters)2

According to the United States Surgeon General, overweight and obesity result from an imbalance involving excessive calorie consumption and/or inadequate physical activity and a combination of genetic, metabolic, behavioral, environmental, cultural, and socioeconomic influences. Behavioral and environmental factors are large contributors to overweight and obesity. Hence they are the primary targets to address the problem.⁹

Global Trend

Obesity is on the rise throughout the world. It has more than doubled since 2008 and is the fifth leading risk for global deaths. The World Health Organization (WHO) estimates at least 2.8 million adult deaths each year as a result of being overweight or obese. An estimated 44% of the diabetes burden, 23% of the ischemic heart disease burden, and 7% - 41% of certain cancer burdens are attributable to overweight and obesity.¹⁰

Obesity in the US

According to the U.S. National Health and Nutrition Examination Survey of 2009 – 2010,¹¹

- More than one-third of adults (35.7% of U.S. adults) and 16.9% of U.S. children and adolescents were obese;
- Over 78 million adults and about 12.5 million children and adolescents were obese. Almost 41 million women and more than 37 million men aged 20 and over were obese;
- According to the national 2011 Youth Risk Behavior Survey (YRBS), overweight and obesity accounted for 28.2% (13.0% obese and 15.2% overweight) of the youth.¹²

In 1990, among states participating in the Behavioral Risk Factor Surveillance System (BRFSS), 10 states had a prevalence of obesity less than 10% and no state had prevalence equal to or greater than 15%.¹³

On the contrary, no state had a prevalence of obesity less than 20% in the year 2010. Thirty-six states had a prevalence equal to or greater than 25%; 12 of these states (Alabama, Arkansas, Kentucky, Louisiana, Michigan, Mississippi, Missouri, Oklahoma, South Carolina, Tennessee, Texas, and West Virginia) had a prevalence equal to or greater than 30%.¹³

Obesity in the District of Columbia

Findings from the 2007 BRFSS and YRBSS showed that:14

- More than half (55%) of the adults in the District of Columbia were overweight and obese and 18% of high school students were overweight. According to the 2010 BRFSS, 56.2% of the adults were either overweight (33.8%) or obese (22.4%), with a slight increase from 2007.¹⁵
- 68% of adults and 81% of high school students in the District consumed fewer than 5 fruits and vegetables per day. Fifty-five percent of high school students in the District did not attend physical education classes.

Adult Overweight and Obesity in the District of Columbia

The rate of obesity has been increasing over a period of time as indicated in Figure 1.¹⁵ Obesity in the District of Columbia has increased from 16.8% in 1996 to 22.4% in 2010. This is an increase by 25% in 14 years. The national prevalence rate of obesity in 2010 was 27.6%.¹⁶



Source: 2010, District of Columbia Department of Health, Center for Policy, Planning and Evaluation, Behavioral Risk Factor Surveillance System (BRFSS) survey

According to the 2010 BRFSS survey data, obesity varied by gender, race, age, income and level of education.

- Females were more likely than males to be obese at 26% (Figure 2).
- The rate of overweight was considerably higher among the males (42.2%) compared to the females (26.3%) (Figure 2).
- African Americans were more likely than all other race/ethnic groups to be obese (Figure 3).
- Obesity was also high among respondents whose household income is (<\$15,000) accounting for 37.2% and 16.5% among respondents who household income was greater than \$50,000 (Figure 4).
- The rate of obesity among respondents with less than high school level of education was 39.6% compared to the 14.4% among college graduates (Figure 5).
- Overall, obesity varied from 17.3% 25.5%, with the highest rate observed among people ages 45 54 years (Figure 6).
- Figure 7 displays obesity and diabetes tends over the past several years with rates of diabetes being steady over the past five (5) years.
- The number of adults with 30+ minutes of moderate physical activity for five or more days per week, or vigorous physical activity for 20+ minutes for three or more days per week has been increasing over a course of time as shown in (Figure 8).
- According to the BRFSS survey, the prevalence increased from 49.9% in 2001 to 54.5 in 2009. Adults who consumed fruits and vegetables five or more times per day rates were close to or slightly higher than 30% (Figure 9).



Source: 2010, District of Columbia Department of Health, Center for Policy, Planning and Evaluation, Behavioral Risk Factor Surveillance System (BRFSS) survey



Source: 2010, District of Columbia Department of Health, Center for Policy, Planning and Evaluation, Behavioral Risk Factor Surveillance System (BRFSS) survey



Source: 2010, District of Columbia Department of Health, Center for Policy, Planning and Evaluation, Behavioral Risk Factor Surveillance System (BRFSS) survey



Source: 2010, District of Columbia Department of Health, Center for Policy, Planning and Evaluation, Behavioral Risk Factor Surveillance System (BRFSS) survey



Source: 2010, District of Columbia Department of Health, Center for Policy, Planning and Evaluation, Behavioral Risk Factor Surveillance System (BRFSS) survey



Source: 1996 - 2010, District of Columbia Behavioral Risk Factor Surveillance System (BRFSS) survey



Source: 2010, District of Columbia Behavioral Risk Factor Surveillance System (BRFSS) survey



Source: 1996 - 2009 - District of Columbia Behavioral Risk Factor Surveillance System (BRFSS) survey

Youth Overweight and Obesity

- Females were more likely than males to be overweight, at 19.5% (Figure 10)
- Females students were also more likely than males to be obese, at 15% versus 13% (Figure 11).
- Females were more likely than males to describe themselves as slightly or very overweight, at 30% (Figure 12)
- Eleventh grade females were more likely than all other grade levels to be overweight, at 20% (Figure 13).
- Overall 12th graders were more likely than all other grade levels to be obese, at 18% (Figure 14).
- Tenth and 12th grade females were more likely than all other grade levels and males to describe themselves as slightly or very overweight, at 28% (Figure 15).
- Females were more likely than males to indicate they were trying to lose weight, at 49% (Figure 16).
- Tenth and 12th grade females were more likely than males and all other grade levels to indicate they were trying to lose weight, at 46% (Figure 17).
- There were no differences among gender in reporting going without eating for 24 hours or more to lose weight or to keep from gaining weight during the past 30 days, at 14% (Figure 18).
- Tenth grade males were more likely than females and all other grade levels to go without eating for 24 hours or more to lose weight or to keep from gaining weight during the past 30 days, at 16% (Figure 19).
- Males were more likely than females to take diet pills, powders, or liquids without a doctor's advice to lose weight or keep from gaining weight during the past 30 days (Figure 20).
- Ninth grade males were more likely than females and all other grade levels to indicate they took any diet pills, powders, or liquids without a doctor's advice to lose weight or keep from gaining weight during the past 30 days, at 6% (Figure 21).
- There were no differences among gender in indicating whether they had vomited or taken laxatives to lose weight or to keep from gaining weight during the past 30 days, 5% (Figure 22).
- Tenth grade females were more likely than males and all other grade levels to indicate that they vomited or took laxatives to lose weight or to keep from gaining weight during the past 30 days, at 8% (Figure 23).



Source: 2010 District of Columbia, Youth Risk Behavioral Surveillance System/Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavioral Surveillance System/Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavioral Surveillance System/Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavioral Surveillance System/Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavioral Surveillance System/Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavioral Surveillance System/Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavioral Surveillance System/Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavioral Surveillance System/Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavioral Surveillance System/Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavioral Surveillance System/Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavioral Surveillance System/Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavioral Surveillance System/Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavioral Surveillance System/Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavioral Surveillance System/Communities Putting Prevention to Work (CPPW)

Health Burden of Obesity

According to the CDC, weight gain to the level of overweight and obesity increases the risk for coronary heart disease, type 2 diabetes, cancers (endometrial, breast, and colon), hypertension, dyslipidemia, stroke, liver and gallbladder disease, sleep apnea and respiratory problems, osteoarthritis, and gynecological problems such as abnormal menses and infertility.¹⁴

The health consequences associated with overweight and obesity are diverse and serious. According to the U.S. Surgeon General: ¹⁵

- An estimated 300,000 deaths per year may be attributable to obesity. Individuals who are obese (BMI > 30) have a 50 to 100% increased risk of premature death from all causes, compared to individuals with a healthy weight.
- High blood pressure is twice as common in adults who are obese than in those who are at a healthy weight.
- A weight gain of 11 to 18 pounds increases a person's risk of developing type 2 diabetes to twice that of individuals who have not gained weight. Over 80% of people with diabetes are overweight or obese.
- Women gaining more than 20 pounds from age 18 to midlife double their risk of postmenopausal breast cancer, compared to women whose weight remains stable.
- Sleep apnea (interrupted breathing while sleeping) is more common in obese persons.
- For every 2 pound increase in weight, the risk of developing arthritis is increased by 9 13%.
- Obesity during pregnancy is associated with increased risk of death in both the baby and the mother and increases the risk of maternal high blood pressure by 10 times.
- Type 2 diabetes, previously considered an adult disease, has increased dramatically in children and adolescents and overweight and obesity are closely linked to type 2 diabetes.
- Overweight adolescents have a 70% chance of becoming overweight or obese adults. This increases to 80% if one or more parent is overweight or obese.
- The most immediate consequence of overweight, as perceived by children themselves, is social discrimination.

Economic Burden of Obesity

Overweight and obesity and their associated health problems have a significant direct or indirect economic impact on individuals, families, and the U.S. health care system. The direct costs are preventive, diagnostic, and treatment services related to obesity. The indirect costs include the costs of morbidity and mortality inflicted by obesity.¹⁶

In 2008, medical costs associated with obesity were estimated at \$147 billion and the medical costs paid by third-party payers were \$1,429 higher than those of normal weight.¹⁶

According to a projection by Wang et al, there will be 65 million more obese adults in the US and the UK by 2030, respectively. This increase in obesity is projected to cause an additional 6 - 8 \cdot 5 million cases of diabetes, 5 \cdot 7 - 7 \cdot 3 million cases of heart disease and stroke, 492 000 - 669 000 additional cases of cancer, and 26 - 55 million quality-adjusted life years forgone for both countries combined. The projection estimated that the medical costs associated with treatment of these preventable diseases are estimated to increase by \$48 - 66 billion/year in the US.¹⁶

Communities Putting Prevention to Work (CPPW)

According to the BRFSS/CPPW survey of 2010, 61% of the residents of the District of Columbia were either overweight or obese (Table 1).

- Males were more likely than females to be overweight and obese.
- Adults aged 45-54 years old were more likely than all other age groups be obese; however, adults 65 years or older were more likely to be overweight.
- African Americans were more likely than all other race/ethnic groups to be obese; however, race/ethnic group Other were more likely than all other race/ethnic groups to be overweight.
- Respondents with less than a high school education were more likely than all other education subgroups to be obese, where as college graduates were more likely to be overweight.
- Respondents whose household income is less than \$15,000 were more likely than all other income subgroups to be obese, whereas respondents whose household income is \$15,000-\$24,999 were more likely to be overweight.
- Respondents whose household income is \$75,000 or more were more likely than all other income subgroups to be of healthy weight.
- Respondents who resided in Ward 7 were more likely than respondents from all other wards to be obese, where as respondents who reside in Ward 1 were more likely to be overweight.

TABLE 1 - Categories of BMI by Demographics and Ward District of Columbia, 2010				
GENDER	N	Neither Overweight nor Obese	Overweight	Obese
Total	1417	39.0%	30.1%	30.9%
Male	532	31.3%	36.2%	32.5%
Female	885	46.1%	24.5%	29.3%
Age				
18.34	170	49.9%	22.8%	27.3%
35-44	190	39.8%	28.5%	31.8%
45-54	234	29.4%	34.7%	35.9%
55-64	328	27.5%	37.9%	34.6%
65 or older	470	31.1%	38.8%	30.2%
Race/Ethnicity	•	•		
Caucasian	692	57.5%	28.8%	13.7%
African American	571	26.6%	29.9%	43.5%
Other	77	27.6%	48.2%	24.3%
Hispanic	60	48.0%	26.5%	25.5%
Education Level				
Less than high school	78	25.4%	19.5%	55.1%
High school graduate	213	27.7%	30.9%	41.4%
Some college	231	37.7%	28.0%	34.3%
College graduate	889	49.2%	34.2%	16.6%
Income				
Less than \$15,000	115	22.2%	23.5%	54.3%
\$15,000-\$24,999	129	20.0%	49.8%	30.2%
\$25,000-\$34,999	76	39.6%	28.7%	31.6%
\$35,000-\$49,999	124	37.2%	22.6%	40.1%
\$50,000-\$74,999	175	38.1%	28.8%	33.1%
\$75,000 or older	613	49.1%	33.0%	18.0%
Ward				
Ward 1	126	38.5%	46.8%	14.7%
Ward 2	115	48.5%	23.3%	28.2%
Ward 3	276	55.8%	34.4%	9.8%
Ward 4	175	34.4%	43.3%	22.2%
Ward 5	151	31.1%	31.1%	37.7%
Ward 6	167	57.0%	19.3%	23.7%
Ward 7	144	14.3%	30.2%	55.5%
Ward 8	96	23.5%	28.7%	47.7%
N = Unweighted Count				

% = Weighted Percentage

* = Cell Sizes less than 50 or cell width greater than 10 are suppressed

Race Category Other = Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native

N/A = Not available

Source: 2010 District of Columbia Behavioral Risk Factor Surveillance System (BRFSS), Communities Putting Prevention to Work (CPPW) survey

Adult Obesity, Diabetes and Cardiovascular Diseases

As shown under Table 2, the rate of obesity among adults with diabetes was 21.2%. The rate of obesity among adults with the history of myocardial infarction, angina/coronary heart disease, and stroke was 4.7%, 5%, and 6.9%, respectively (Tables 3, 4 and 5).

- Adults who are obese were more likely to have diabetes, at 21.2%, compared to individuals who were neither overweight nor obese and had diabetes, at 3.3%.
- Adults who suffered from a heart condition were more likely to be neither overweight or obese at 3.6% compared to adults who were overweight, at 2.3%.
- Adults who were obese were more likely to be diagnosed with angina or coronary heart disease at 5%, compared to adults who were neither overweight nor obese who were diagnosed with angina or coronary heart disease, at 1.9%.
- Adults who are obese were more likely to be diagnosed with having a stroke, at 6.9% compared to adults who were neither overweight nor obese, at 0.9%.

TABLE 2 - Respondents Diagnosed with DiabetesDistrict of Columbia, 2010						
Categories of BMINYesYes, but female toldNoNo, pre-diabetes oronly during pregnancyonly during pregnancyborderline diabetes						
Neither Overweight or Obese	607	3.3%	*	95.8%	*	
Overweight	508	10.7%	*	88.4%	*	
Obese	297	21.2%	*	77.0%	*	
Total	1412	11.0%	*	87.8%	*	

N = Unweighted Count

% = Weighted Percentage

* = Cell Sizes less than 50 or cell width greater than 10 are suppressed

Race Category Other = Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native

Source: 2010 District of Columbia Behavioral Risk Factor Surveillance System (BRFSS), Communities Putting Prevention to Work (CPPW) survey

TABLE 3 - Respondents Diagnosed with having a Heart Attack District of Columbia 2010							
	District of Colui	11D1a, 2010					
Categories of BMI N Yes No							
Neither Overweight or Obese	606	3.6%	96.4%				
Overweight	508	2.3%	97.7%				
Obese	296	2.2%	95.3%				
Total	1410	3.5%	96.5%				

N = Unweighted Count

% = Weighted Percentage

* = Cell Sizes less than 50 or cell width greater than 10 are suppressed

Race Category Other = Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native

Source: 2010 District of Columbia Behavioral Risk Factor Surveillance System (BRFSS), Communities Putting Prevention to Work (CPPW) survey

TABLE 4 - Respondents Diagnosed with Angina or Coronary Heart Disease							
District of Columbia, 2010							
Categories of BMI N Yes No							
Neither Overweight or Obese	603	1.9%	98.1%				
Overweight	504	3.0%	97.0%				
Obese	298	5.0%	95.0%				
Total	1405	3.2%	96.8%				

N = Unweighted Count

% = Weighted Percentage

* = Cell Sizes less than 50 or cell width greater than 10 are suppressed

Race Category Other = Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native

Source: 2010 District of Columbia Behavioral Risk Factor Surveillance System (BRFSS), Communities Putting Prevention to Work (CPPW) survey

TABLE 5 - Respondents Diagnosed with a StrokeDistrict of Columbia, 2010							
Categories of BMI N Yes No							
Neither Overweight or Obese	607	0.9%	99.1%				
Overweight	506	2.4%	97.6%				
Obese	298	6.9%	93.1%				
Total 1411 3.2% 96.8%							

N = Unweighted Count

% = Weighted Percentage

* = Cell Sizes less than 50 or cell width greater than 10 are suppressed

Race Category Other = Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native

Source: 2010 District of Columbia Behavioral Risk Factor Surveillance System (BRFSS), Communities Putting Prevention to Work (CPPW) survey

Adult Diet and Nutrition

According to the CDC, a diet that includes a colorful variety of fruits and vegetables helps individual people stay healthy and reduce their risk for many chronic diseases.¹⁷ This requires eating 5 - 9 servings of fruits and vegetables every day (Tables 6 and 7).

- District respondents were more likely to consume fruit juice less than once per day or never.
- Adult respondents were more likely to consume fruits once but less than 3 times per day.
- Respondents were more likely to consume beans less than once per day or never.
- Respondents were more likely to consume dark green vegetables less than once per day or never, at 63.9%.
- Respondents were more likely to consume orange-colored vegetables less than once per day or never, at 86.6%.
- Respondents were more likely to consume other vegetables less than once per day or never, at 60.4%.
- Overall, respondents were more likely to consume fruits once but less than 3 times per day, at 47.5%.

Overall fruits consumed by demographics and ward (Table 7):

- Females were more likely to consume fruits 3 but less than 5 times per day, at 17.9%.
- Caucasians were more likely than African Americans to consume fruits 3 but less than 5 times per day, at 16.6%.
- Respondents aged 35-44 years old were more likely than all other race/ethnic groups to consume fruits 3 but less than 5 times per day.
- Respondents whose household income is \$35,000-\$49,000 were more likely than all other income subgroups to consume fruits 3 but less than 5 times per day.
- Respondents who resided in Ward 2 were more likely than all other wards to consume fruits 3 but less than 5 times per day.

Overall vegetables consumed by demographics and ward (Table 8):

- There were no differences among gender in consuming vegetables 3 but less than 5 times per day, at 18%.
- Caucasians were more likely than African Americans to consume vegetables 3 but less than 5 times per day, at 16.8%.
- Respondents who had some college education were more likely than all other education subgroups to consume vegetables 3 but less than 5 times per day, at 23.1%
- Respondents whose household income is \$35,000-\$49,999 were more likely than all other income subgroups to consume vegetables 3 but less than 5 times per day, at 35.1%.
- Adults aged 35-44 and 45-54 years were more likely than all age groups to consume vegetables 3 but less than 5 times per day, at 24%.
- Respondents who reside in Ward 4 were more likely than all other wards to consume vegetables 3 but less than 5 times per day, at 30.5%.

TABLE 6 - Fruit and Vegetable Consumption District of Columbia, 2010					
Fruit Juice Servings	Estimate	Ν			
Less than once per day or never	67.6%	948			
One but less than 3 times per day	29.5%	467			
3 but less than 5 times per day	2.5%	39			
5 or more times a day	*	*			
Total	100.0%	1463			
Adult fruit servings per day	Estimate	Ν			
Less than once per day or never	43.9%	568			
One but less than 3 times per day	44.1%	765			
3 but less than 5 times per day	8.8%	127			
5 or more times a day	3.2%	28			
Total	100.0%	1488			
Bean servings per day	Estimate	Ν			
Less than once per day or never	87.3%	1333			
One but less than 3 times per day	10.1%	128			
3 but less than 5 times per day	2.6%	13			
5 or more times a day	*	*			
Total	100.0%	1475			
Dark green vegetable servings per day	Estimate	Ν			
Less than once per day or never	63.9%	948			
One but less than 3 times per day	31.5%	497			
3 but less than 5 times per day	3.6%	29			
5 or more times a day	1.0%	11			
Total	100.0%	1485			
Orange-colored vegetable servings per day	Estimate	Ν			
Less than once per day or never	86.6%	1299			
One but less than 3 times per day	12.1%	171			
3 but less than 5 times per day	1.3%	13			
5 or more times a day	*	*			
Total	100.0%	1486			
Other vegetable servings per day	Estimate	Ν			
Less than once per day or never	60.4%	819			
One but less than 3 times per day	36.3%	600			
3 but less than 5 times per day	2.7%	44			
5 or more times a day	0.6%	16			
Total	100.0%	1479			

TABLE 6 continued - Fruit and Vegetable Consumption					
Total fruits consumed per day	Estimate	N			
Less than once per day or never	30.4%	354			
One but less than 3 times per day	47.5%	833			
3 but less than 5 times per day	16.8%	247			
5 or more times a day	5.3%	54			
Total	100.0%	1488			
Total vegetables consumed per day	Estimate	N			
Less than once per day or never	20.4%	233			
One but less than 3 times per day	54.8%	892			
3 but less than 5 times per day	18.3%	271			
5 or more times a day	6.5%	79			
Total	100.0%	1475			

% = Weighted Percentage

* = Cell Sizes less than 50 or cell width greater than 10 are suppressed

Race Category Other = Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native

TABLE 7 - Total fruits consumed per day District of Columbia 2010							
		District of Co	1000000000000000000000000000000000000		-		
Gender	N	Less than once per	One but less than	5 but less than	5 or more		
Tatal	1/00	20.4%	3 times per day				
Total	1488	30.4%	4/.3%	10.8%	5.3%		
	541	35.1%	44.4%	15.5%	T (0/		
Female	947	26.4%	50.1%	17.9%	5.6%		
Age	1 4 7 7	24.00/	4.4. 60 (45 40/			
18-34	177	31.0%	44.6%	15.1%	*		
35-44	199	30.0%	43.1%	23.2%	*		
45-54	243	45.8%	39.1%	12.9%	*		
55-64	343	24.3%	54.2%	20.7%	*		
65 or older	487	18.9%	62.0%	15.4%	*		
Race/Ethnicity					v		
Caucasian	708	30.6%	50.6%	16.6%	2.2%		
African American	604	33.2%	43.9%	14.4%	8.5%		
Other	81	17.5%	68.9%	*	*		
Hispanic	66	*	42.4%	*	*		
Income		•	°				
Less than \$15,000	121	49.5%	38.0%	*	*		
\$15,000-\$24,999	137	29.5%	47.9%	18.3%	*		
\$25,000-\$34,999	83	28.2%	50.2%	*	*		
\$35,000-\$49,999	126	36.4%	37.4%	25.6%	*		
\$50,000-\$74,999	180	35.2%	45.2%	18.6%	*		
\$75,000 or older	621	22.3%	51.0%	18.9%	*		
Ward	•		•		•		
Ward 1	126	32.9%	42.1%	24.3%	*		
Ward 2	119	30.3%	37.8%	30.0%	*		
Ward 3	280	20.6%	58.2%	18.0%	*		
Ward 4	182	18.3%	56.5%	15.2%	*		
Ward 5	157	44.2%	45.5%	7.7%	*		
Ward 6	168	20.0%	59.4%	18.9%	*		
Ward 7	121	46.8%	33.4%	*	*		
Ward 8	107	27.4%	45.2%	*	*		

% = Weighted Percentage

* = Cell Sizes less than 50 or cell width greater than 10 are suppressed

Race Category Other = Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native

TABLE 8 - Total vegetables consumed per day								
District of Columbia, 2010								
Gender	N	Less than once	One but less than 3	3 but less than 5	5 or more			
		per day or never	times per day	times per day	times a day			
Total	1475	20.4%	54.8%	18.3%	6.5%			
Male	535	19.7%	53.5%	18.4%	8.3%			
Female	940	20.9%	56.0%	18.3%	4.9%			
Age								
18-34	174	16.6%	60.1%	14.9%	*			
35-44	195	13.2%	53.8%	23.5%	9.6%			
45-54	242	32.8%	41.5%	23.9%	*			
55-64	342	21.6%	56.5%	14.9%	*			
65 or older	485	23.2%	56.6%	17.0%	3.2%			
Race/Ethnicity		A						
Caucasian	706	14.0%	64.3%	16.8%	4.9%			
African American	596	26.8%	51.1%	16.1%	6.1%			
Other	79	*	47.2%	*	*			
Hispanic	65	*	52.0%	*	*			
Education	•			-				
Less than High School	89	27.6%	44.0%	*	*			
High school graduate	219	28.6%	53.7%	16.6%	*			
Some college	240	19.9%	50.2%	23.1%	*			
College graduate	917	14.2%	61.4%	17.2%	7.2%			
Income Level		A						
Less than \$15,000	118	37.1%	40.6%	*	*			
\$15,000-\$24,999	131	26.1%	48.4%	24.7%	*			
\$25,000-\$34,999	83	22.5%	51.3%	*	*			
\$35,000-\$49,999	127	29.7%	32.3%	35.1%	*			
\$50,000-\$74,999	178	17.3%	61.3%	13.1%	*			
75,000 or older	618	9.3%	62.8%	16.7%	11.2%			
Ward	•		•					
Ward 1	124	19.1%	48.9%	23.4%	*			
Ward 2	119	*	72.8%	13.6%	*			
Ward 3	283	*	65.0%	20.1%	*			
Ward 4	177	14.1%	55.4%	30.5%	*			
Ward 5	156	31.4%	50.7%	11.6%	*			
Ward 6	168	6.9%	61.2%	29.1%	*			
Ward 7	120	37.4%	30.5%	*	*			
Ward 8	104	26.4%	59.0%	*	*			
N = Unweighted Count			•					

% = Weighted Percentage * = Cell Sizes less than 50 or cell width greater than 10 are suppressed

Race Category Other = Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native

Overweight and Obesity by Fruit and Vegetable Consumption

Adults who consumed fruits 5 or more times a day were less likely to be obese (13.1%) compared to those who consumed less than once or none (35.2%) and 3 but less than 5 times per day (43.4%) (Table 9).

- Respondents who were overweight and obese were more likely to consume fruits once but less than 3 times per day.
- Respondents who were overweight and obese were more likely to consume vegetables once but less than 3 times per day.

TABLE 9: Disparity in weight with total fruit and vegetable consumption per day								
District of Columbia, 2010								
Total Fruits Consumed Per Day	Ν	Neither overweight	Overweight	Obese	Total			
		nor obese						
Less than once per day or never	335	29.7%	27.3%	35.2%	30.6%			
One but less than 3 times per day	787	47.9%	50.6%	43.4%	47.3%			
3 but less than 5 times per day	237	17.7%	18.5%	13.1%	16.5%			
5 or more times a day	*	*	*	*	*			
Total	1408	100.0%	100.0%	100.0%	100.0%			
Total vegetables consumed per day	7							
Less than once per day or never	218	11.3%	17.2%	30.2%	18.9%			
One but less than 3 times per day	852	66.7%	56.2%	42.9%	56.2%			
3 but less than 5 times per day	253	16.8%	20.9%	17.3%	18.2%			
5 or more times a day	76	5.2%	5.7%	9.6%	6.7%			
Total	1399	100.0%	100.0%	100.0%	100.0%			

N = Unweighted Count

% = Weighted Percentage

* = Cell Sizes less than 50 or cell width greater than 10 are suppressed

Race Category Other = Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native

Soda and Sugar Sweetened Beverages (Adult and Youth)

The rate of obesity is likely higher among adults who consumed between zero and one half servings per day of regular soda (34.7%) and sugar drinks (37.9%) followed by adults who consumed zero servings a day (Figure 24).

- There were no differences among adults who consumed regular soda or pop and sugar drinks zero times per day.
- Adults were more likely to consume sugar drinks between zero and one half per day compared to adults who drank regular soda; and adults were more likely to consume sugar drinks between one-half and one per day compared to adults who consumed regular soda.
- Female students were slightly more likely than males students to drink a can, bottle or glass of soda or pop one or more times per day during the past seven (7) days (Figure 25).
- Eleventh grade females were more likely than males and all other grade levels to drink a can, bottle, or glass of soda or pop one or more times per day during the past seven (7) days (Figure 26).
- There were no differences among 12th graders who drank a can, bottle, or glass of soda or pop or more times per day during the past seven (7) days.



Source: 2010 District of Columbia, Behavioral Risk Factor Surveillance System/Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Behavioral Risk Factor Surveillance System/Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavioral Surveillance System (YRBSS), Communities Putting Prevention to Work (CPPW)

Youth and Nutrition

Good nutrition is essential to a healthy quality of life. Educating youth regarding the benefits play an integral role in their eating habits as they get older. It is important for the youth to have the proper nutrition to absorb the necessary vitamins and minerals that are obtained from healthy foods. Eating appropriate foods and exercising can limit the chances of diseases and health disparities

- There was no difference between gender in students drinking 100% fruit juice one or more times during the past seven (7) days, at 80% (Figure 27).
- Differences among students who drank 100% fruit juices one or more times during the past seven (7) days were seen among 11th grade males compared to all other grade levels (Figure 28).
- Females were slightly more likely than males to consume vegetables one or more times during the past seven (7) days (Figure 29).
- Males were more likely than females to eat fruits and vegetables five or more times per day during the past seven (7) days (Figure 30).
- Overall, females were more likely to eat green salad one or more times during the past seven (7) days (Figure 31).
- There was no difference between gender in eating potatoes one or more times during the past seven (7)

days (Figure 32).

- Eleventh grade males and females were more likely to indicate they ate potatoes one or more times during the past seven (7) days, at 66% (Figure 33).
- Females were more likely than males to indicate that they ate fruit one or more times during the past seven (7) days, at 85% (Figure 34).
- Males were more likely than females to indicate that they ate carrots one or more times during the past seven (7) days, at 42% (Figure 35).
- Ninth and 10th graders were more likely to eat vegetables three or more times per day during the past seven (7) days (Figure 36).
- Ninth grade females were slightly more likely than males and all other grade levels to indicate that they ate fruit one or more times during the past seven days (Figure 37).
- Eleventh grade males were more likely than females and all other grade levels to indicate that they ate carrots one or more times during the past seven days, at 46% (Figure 38).
- Females were slightly more likely than males to indicate they ate green salad one or more times during the past seven days, at 62% (Figure 39).
- Males were more likely than females to eat fruits two or more times per day and eat

vegetables three or more times per day during the past seven days, 12% (Figure 40).

- Females were more likely than males to eat vegetables one or more times during the past seven days (Figure 41).
- Tenth grade males were more likely than females to eat fruits and vegetables five or more times per day, at 28% (Figure 42).
- There were no differences among gender in eating vegetables three or more times per day during the past seven (7) days (Figure 43).
- Males were slightly more likely than females to eat fruits two or more times per day during the past seven (7) days (Figure 44).
- Ninth grade males were more likely than females to eat fruits two or more times per day and eat vegetables three or more times per day during the past seven days, at 14% (Figure 45).
- Eleventh grade females were more likely males to eat fruits two or more times per day during the past seven days, at 39% (Figure 46).



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia, Youth Risk Behavior Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)

Adult Obesity and Tobacco Use

- Overall, adults who were current smokers were more likely to be obese compared to adults who were neither overweight nor obese or overweight (Table 10).
- Respondents who smoked cigarettes everyday and some days were more likely to be obese (Table 11).

TABLE 10: Obesity Among Current Adult SmokersDistrict of Columbia, 2010							
Categories of BMI No Yes							
Neither overweight nor obese	607	82.0%	18%				
Overweight	506	82.7%	17.3%				
Obese	294	72.5%	27.5%				
Total	1407	79.3%	20.7%				

N = Unweighted Count

% = Weighted Percentage

* = Cell Sizes less than 50 or cell width greater than 10 are suppressed

Race Category Other = Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native

Source: 2010 District of Columbia Behavioral Risk Factor Surveillance System (BRFSS), Communities Putting Prevention to Work (CPPW) survey

TABLE 11: Four Levels of SmokingDistrict of Columbia, 2010							
Categories of BMI N Every Day Some Days Former Never Smoker Smoker Smoker							
Neither overweight nor obese	607	12.1%	5.9%	20.2%	61.8%		
Overweight	506	10.8%	6.5%	26.0%	56.7%		
Obese	294	19.1%	8.4%	21.6%	50.9%		
Total	1407	13.8%	6.8%	22.4%	56.9%		

N = Unweighted Count

% = Weighted Percentage

* = Cell Sizes less than 50 or cell width greater than 10 are suppressed

Race Category Other = Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native

Adult Obesity and Physical Activity

- Obese adults were less likely to exercise (66%) compared to the overweight (88.8%) and adults who are neither overweight nor obese adults (82.4%) (Table 12).
- Obese adults were more likely to be inactive (35.0%), compared to respondents who were neither overweight nor obese (18%) and overweight, at 11.7% (Table 13).
- Obese adults were less likely to meet physical activity recommendations (58.3%); however, adults who were overweight were more likely to meet the physical activity recommendation, at 67.6% (Table 14).
- Residents who resided in Ward 2 were more likely than all other wards to exercise within the past 30 days, at 95.1% (Table 15).
- The least likely residents to exercise were from Ward 7, at (56.2%) (Table 15).

TABLE 12: Exercise in Past 30 Days District of Columbia									
Categories of BMI N Yes No									
Neither Overweight or Obese 603 82.4% 17.6%									
Overweight	507	88.8%	11.2%						
Obese	297	66.0%	34.0%						
Total	1407	79.3%	20.7%						

N = Unweighted Count % = Weighted Percentage

Source: 2010 District of Columbia Behavioral Risk Factor Surveillance System (BRFSS), Communities Putting Prevention to Work (CPPW) survey

TABLE 13: Physical Activity Categories								
	District of Columbia, 2010							
Categories of BMI N Highly Active Insufficiently Active Inactive								
Neither Overweight or Obese	595	35.3%	23.2%	23.5%	18.0%			
Overweight	500	43.1%	24.5%	20.7%	11.7%			
Obese	293	28.6%	13.2%	23.3%	35.0%			
Total	1388	35.5%	20.5%	22.6%	21.4%			

N = Unweighted Count % = Weighted Percentage

Source: 2010 District of Columbia Behavioral Risk Factor Surveillance System (BRFSS), Communities Putting Prevention to Work (CPPW) survey

TABLE 14: Physical Activity Index							
District of Columbia, 2010							
Categories of BMI N Meet Recommendation Did Not Meet Recommendation							
Neither Overweight or Obese59558.5%41.5%							
Overweight	500	67.6%	32.4%				
Obese	293	41.7%	58.3%				
Total 1388 56.0% 44.0%							

N = Unweighted Count

% = Weighted Percentage

TABLE 15: Physical activity or exercise during the past 30 daysDistrict of Columbia, 2010									
WARD N Yes No									
Ward 1	127	89.5%	10.5%						
Ward 2	118	95.1%	4.9%						
Ward 3	282	89.7%	10.3%						
Ward 4	181	79.9%	20.1%						
Ward 5	154	79.0%	21.0%						
Ward 6	170	75.6%	24.4%						
Ward 7	120	56.2%	43.8%						
Ward 8	106	72.9%	27.1%						
Total	1258	78.4%	21.6%						

% = Weighted Percentage

* = Cell Sizes less than 50 or cell width greater than 10 are suppressed

Race Category Other = Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native

Youth and Physical Activity

Eating balanced meals and exercising regularly can play a major role in encouraging a healthy lifestyle. Moderate – vigorous activity can promote muscle and bone strength, decreasing the chances of heart disease and diabetes.

- Male students were more likely than females to be physically active for at least 60 minutes per day on five or more of the seven days, at 33% (Figure 47).
- Eleventh grade males were more likely than females and all other grade levels to be physically active at least 60 minutes per day on five or more of the seven days, at 36% (Figure 48).
- Males were more likely than females to be physically active at least 60 minutes per day on seven (7) of the past seven days, 21% versus 13% (Figure 49).
- Females were more likely than males to watch three (3) or more hours of TV per day on an average school day, at 40% (Figure 50).
- Eleventh grade males were more likely than females and all other grade levels to indicate they were physically active for at least 60 minutes per day on seven (7) of the past seven days, at 25% (Figure 51).
- Eleventh grade females were more likely than males and all grade levels to watch three (3) or more hours of TV per day on an average school day, at 46% (Figure 52).
- Ninth grade males were more likely than females and all other grade levels to play on one or more sports teams during the past 12 months, at 65% (Figure 53).
- Males were more likely than females to play on one or more sports teams during the past 12 months, at 58% (Figure 54).
- Males were slightly more likely than females to play video or computer games or use a computer for something that was not school-related three or more hours per day on an average school day, at 36% (Figure 55).
- Tenth grade females and 11th grade males were more likely to play video or computer games or use a computer for something that was not school work three or more hours per day on an average school day, at 40% (Figure 56).
- Males were more likely than females to attend physical education (PE) classes on one or more days during an average week when they were in school, at 35% (Figure 57).
- Females were more likely than males to attend physical education (PE) classes daily during an average week when they were in school, at 12% (Figure 58).
- Ninth grade females were more likely than all other grade levels and males to attend physical education (PE) classes on one or more days in an average week when they were in school (Figure 59).

• Tenth graders females and 12th grade males were more likely than all other grade levels to attend physical education (PE) classes daily in an average week when they were in school (Figure 60).



Source: 2010 District of Columbia Youth Risk Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia Youth Risk Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia Youth Risk Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia Youth Risk Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia Youth Risk Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia Youth Risk Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia Youth Risk Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia Youth Risk Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia Youth Risk Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia Youth Risk Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia Youth Risk Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia Youth Risk Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia Youth Risk Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)



Source: 2010 District of Columbia Youth Risk Surveillance System (YRBSS) survey, Communities Putting Prevention to Work (CPPW)

Obesity and Social and Emotional Support

Social and emotional support received was lower among obese adults (39.7%) compared to the overweight (47.5%) and neither overweight nor obese adults (44.8%). Twenty-one percent of obese respondents stated they never had social and emotional support compared to 13.7% of adults who were neither overweight nor obese (Table 16).

TABLE 16: Weight Status by Social and Emotional SupportDistrict of Columbia, 2010							
Body Mass Index N Always Usually Sometimes Rarely Never							
Neither overweight nor obese	560	44.8%	25.2%	21.3%	*	6.2%	
Overweight	482	47.5%	20.7%	12.4%	5.6%	13.7%	
Obese	282	39.7%	16.3%	13.2%	9.1%	21.7%	
Total	1324	44.1%	21.0%	16.0%	5.5%	13.3%	

N = Unweighted Count

% = Weighted Percentage

* = Cell Sizes less than 50 or cell width greater than 10 are suppressed

Race Category Other = Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native

Source: 2010 District of Columbia Behavioral Risk Factor Surveillance System (BRFSS), Communities Putting Prevention to Work (CPPW) survey

Mental Illness and Stigma

Respondents were asked how often during the past 30 days they had felt nervous, hopeless, restless/fidgety, depressed, and worthless (Table 17).

- Overweight adults were more likely to feel nervous some of the time, at 29.8%.
- Respondents who were neither overweight nor obese were more likely to feel hopeless during the past 30 days some of the time, at 12.9%.
- Respondents who are obese were more likely to feel restless or fidgety some of the time, at 29.7%.
- Respondents who are obese were more likely to feel so depressed that nothing could cheer them up some of the time, at 17.7%.
- Respondents who are obese were more likely to feel that everything was an effort some of the time, at 23.2%.
- There were no differences among adults who stated that they felt worthless some of the time, at 3%.

TABLE 17: Obesity and Mental Illness and StigmaDistrict of Columbia, 2010									
About How Often During the Past 30 Days Did You Feel Nervous?									
Body Mass Index	N	All	Most	Some	A Little	None			
Neither overweight nor obese	568	*	2.9%	24.2%	31.5%	40.7%			
Overweight	484	*	2.4%	29.8%	27.7%	37.6%			
Obese	286	*	*	21.6%	30.1%	39.5%			
Total	1338	*	*	25.1%	29.9%	39.4%			
During the Past 30 Days About How Often Did You Feel Hopeless?									
Neither overweight nor obese	469	*	*	12.9%	10.6%	76.4%			
Overweight	383	*	*	7.0%	17.3%	73.1%			
Obese	221	*	*	3.4%	13.2%	71.8%			
Total	1073	*	*	8.1%	13.5%	73.9%			
During the Past 30 Days About How Often Did You Feel Restless or Fidgety?									
Neither overweight nor obese	280	*	1.6%	19.1%	26.5%	52.4%			
Overweight	245	*	2.1%	24.5%	24.1%	46.3%			
Obese	149	*	*	29.7%	19.6%	41.4%			
Total	674	1.8%	3.4%	24.0%	23.6%	47.1%			
During the Past 30 Days How Up?	Often Did Y	ou Feel So	Depressed	l That Nothi	ng Could Ch	eer You			
Neither overweight nor obese	491	*	*	4.7%	7.8%	86.2%			
Overweight	415	*	*	8.7%	7.6%	82.2%			
Obese	230	*	*	17.7%	7.4%	65.7%			
Total	1136	*	*	10.0%	7.6%	78.6%			
During the Past 30 Days About How Often Did You Feel That Everything Was an Effort?									
Neither overweight nor obese	340	*	4.3%	13.3%	29.0%	52.9%			
Overweight	271	2.1%	12.6%	18.5%	19.6%	47.2%			
Obese	135	5.9%	*	23.2%	15.4%	41.3%			
Total	746	2.7%	9.9%	17.9%	21.9%	47.6%			
During the Past 30 Days About How Often Did You Feel Worthless?									
Neither overweight nor obese	503	*	*	3.2%	13.6%	82.9%			
Overweight	426	*	*	3.3%	10.2%	86.0%			
Obese	238	*	*	2.8%	9.7%	75.1%			
Total	1167	*	*	3.1%	11.3%	81.4%			

% = Weighted Percentage

* = Cell Sizes less than 50 or cell width greater than 10 are suppressed

Race Category Other = Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native

Obesity and Disability

District respondents were asked if they were limited in activities because of physical, mental, or emotional problems (Table 18).

• Adults who are obese were more likely to be limited in their activities due to physical, mental or emotional problems, at 20.7%.

TABLE 18: Respondents who are Limited in Activities because of Physical, Mental or Emotional Problems District of Columbia, 2010						
Body Mass Index	N	Yes	No			
Neither overweight nor obese	605	17.3%	82.7%			
Overweight	506	14.0%	86.0%			
Obese	297	20.7%	79.3%			
Total	1408	17.4%	82.6%			

N = Unweighted Count

% = Weighted Percentage

* = Cell Sizes less than 50 or cell width greater than 10 are suppressed

Race Category Other = Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native

Access to Unhealthy, Healthier Foods and Grocery Stores

According to the District of Columbia Department of Health, Health Licensing and Regulation Administration (HLRA) listing of food establishments, there were 102 locations for 12 chain fast food restaurants in the District during the year 2009. Out of the 102 locations, there were 29 McDonalds, 12 Dominos Pizza, 10 each of Pizza Hut and Five Guys. The number of these restaurants increased to a total of 111 in 2010 (Figure 61).

Considering the healthy food options served by chain restaurants, there were 116 locations run by 6 chain restaurants in 2009 of which 58 of them were Subway sandwich shops followed by 18 Quiznos sandwich and 16 Au Bon Pain restaurants. The total number of healthy food restaurants increased to 118, by 2010 and two types of new restaurant have been added, Chop't Creative Salad and Roti, (Figure 62).

In assessing establishments that are classified as convenience or where residents and visitors can obtain household items such as toilet paper, condiments, tooth paste, aspirin, cleaning supplies in the District in 2009 there were a total of 23 7-Elevens and 52 CVS; the total number increased to 25, 7-Eleven and 57 CVS in 2010 (Figure 63).

There were 32 chain grocery stores in 2009, which grew to 41 in 2010 representing approximately one (1) store per 14,000 people; unfortunately the grocery stores are not equally distributed. Wards 7 and 8 have the least amount of grocery stores in the District compared to the remaining six (6) wards. Safeway is the most common store accounting for 40% (17 stores) in 2010 (Figure 64).

Food Options Defined

Grocery Store - An establishment that primarily sells food to the public.

Convenience Store - A small grocery store that primarily sells snack foods and sandwiches.

Fast Food – An establishment that prepares food quickly and specializes in entrées with low nutritional value and high caloric content.

Healthy Fast Food – An establishment that prepares food quickly, and specializes in preparing entrées with high nutritional value and low caloric content.



Source: District of Columbia Department of Health, Health Regulation and Licensing Administration, Food Safety and Hygiene Inspection Services Division



Source: District of Columbia Department of Health, Health Regulation and Licensing Administration, Food Safety and Hygiene Inspection Services Division


Source: District of Columbia Department of Health, Health Regulation and Licensing Administration, Food Safety and Hygiene Inspection Services Division



Source: District of Columbia Department of Health, Health Regulation and Licensing Administration, Food Safety and Hygiene Inspection Services Division

Communities Putting Prevention to Work Obesity Prevention and Reduction Policies and Programs

Physical Activity

Goal/Objective: Target and implement policies to promote physical activity in three community settings (parks, recreation facilities, after-school programs) and workplaces, increasing availability of and augmenting opportunities for children and adults to be physically active.

MAPPS Strategy: Access

- Implement joint-use agreements
- Identified existing memorandum in District of Columbia Public Schools (DCPS) that mandates community use of DCPS high school tracks
- Created workgroup (that included reps from Council-members Barry, formerly Thomas and Wells Offices, DCPS and Veronica Faldwell from (OPFM) to explore possibility of expanding memo to all DCPS playgrounds and fields
- Expand policies and opportunities to support physically inactive District residents to become more active
- Established Park Rx collaborative (with National Park Service, Children's, DC American Academy of Pediatrics, George Washington University (GWU) to get physicians to prescribe time in parks for children and families
- Explore policy to include 3rd-party reimbursement for community-based fitness instructors/ programs
- Established working group that includes Department of Housing and Finance (DCHF), DOH Diabetes program manager and Community Based Organizations (CBO)
- Identified standards of care, systems changes and language for Managed Care Organization (MCO) contracts as first steps

Nutrition

Goal/Objective: Expand access to affordable fresh produce at targeted government sites with high pedestrian traffic.

MAPPS Strategy: Access

- Promulgate policies to permit and facilitate sale of fresh produce at District government agencies
- Working with DC Hunger Solutions' Farmer's Market Collaborative, established permitting standards for new provision within DC Healthy Schools Act of 2010 to allow sale of healthy foods on District parkland that is now used at Department of Parks and Recreation (DPR)
- Completed Feasibility Study for DC Fresh Mobile Cart Program (it was a content analysis of existing mobile cart programs in the US and key informant interviews to examine viability of similar program

in DC)

New Deliverables

- Request for Application (RFA)/Grant for DC Fresh Mobile Cart Program (added because of money left over)
- Awarded Daddy's Corner (Community Based Organization) \$125,000 to manage and administrate 3-5 mobile produce carts in targeted areas
- ٠ Emergency legislation was passed
- Department of Consumer and Regulatory Affairs (DCRA) vending regulations created and approved
- Healthy Corners (additional funds provided by Kaiser) ٠
- Partnered with DC Central Kitchen to leverage our \$179K with their \$300k (awarded from Department of Small Local Business Development (DSLBD) to start Healthy Corners initiative (30 stores in Wards 5, 7, and 8)
- DDCK handles deliveries and logistics, DOH responsible for community outreach, education and ٠ integration with SNAP-ED Education and other DOH related programs

District of Columbia and National Obesity Initiatives

As the city and the nation continues to move forward in decreasing obesity, there are several initiatives that have been designed to increase quality of life by promoting healthy food options, removing food desserts, increasing access to physical activity.

Live Well DC - is an online initiative developed by the District of Columbia Department of Health to educate and promote the importance of making healthy lifestyle choices. The initiative encourages those who live, work and play in the District to develop and increase various habits that will increase quality of life and lifespan by following 10 Healthy Living Tips: move more, eat healthy, don't smoke, love responsibly, reduce stress, see your Doctor, wash your hands, be prepared, and make peace.¹⁸

Sustainable DC - Is an initiative designed to make the District the greenest, healthiest, and most livable city in the nation. The Office of Planning (OP) and the District Department of the Environment (DDOE) are the lead agencies tasked with leading the Sustainable DC project. The initiative has engaged individuals across the city to become participatory in the development of the city by creating an overarching vision for the city and providing a framework to bring the vision into reality.¹⁹

Let's Move Campaign - First Lady Michelle Obama's childhood obesity prevention initiative takes a sound public health approach, and focuses on getting parents, communities, schools, and corporations involved in helping kids exercise more and eat healthier food. Within two years, tens of millions of Americans will have better insurance coverage (many of these people now have no coverage at all). This coverage will allow many obese or overweight people to get better treatment for their weight-related illnesses; and most coverage will also include crucial preventive care, which will help some of them lose excess weight and become healthier.²⁰

The District of Columbia's Overweight and Obesity Action Plan 2010 – 2015²¹

GOAL 1 - Schools and Child Care Facilities

District of Columbia children and adults are able to maintain healthy eating and physical activity to support a healthy weight while in schools and child care facilities.

- Each year, an increasing number of schools, child care facilities, and after school programs will implement and regularly evaluate a comprehensive wellness policy that meets or exceeds that developed by DC Public Schools.
- Each year, an increasing number of children will have access to and select healthy meals and integrated, evidence-based nutrition education in schools, child care facilities, and after school programs.
- Each year, an increasing number of children will be physically active on a regular basis to meet the Physical Activity Guidelines for Americans.
- Each year, an increasing number of children and young adults from high-need neighborhoods will gain and use the knowledge needed to purchase and prepare healthy, affordable food through expanded educational opportunities.

GOAL 2- Medical and Health Services

District of Columbia residents have access to breastfeeding opportunities and integrated high-quality weight management interventions.

- Each year, an increasing number of women will breastfeed their children through the first 6-12 months of life.
- Each year, an increasing number of patients will have weight assessments and participate in weight management programs deemed medically necessary and clinically appropriate.

GOAL 3 -Food Retail and Food Service Establishments

District of Columbia residents consume a diet consistent with the Dietary Guidelines for Americans.

- Each year, an increasing number of residents with limited access to healthy food will have access to and use food retailers that sell healthy, affordable foods in their communities.
- Each year, an increasing number of residents with limited access to healthy food will have access to and use farmer's markets, urban gardens, and mobile food vendors that sell healthy, affordable food in their communities.
- Each year, an increasing number of residents with limited access to healthy food will have access to and use restaurants and food services that sell healthy, affordable foods in their communities.

GOAL 4 - Physical Activity

District of Columbia residents are physically active on a regular basis Consistent with the Physical Activity Guidelines for Americans.

• Each year, an increasing number of residents will use non-motorized forms of

transportation to get to school, work, place of worship, and retail establishments.

• Each year, an increasing number of residents of all ages and abilities will have access to, and will use, safe and clean opportunities to be physically active.

GOAL 5 -Worksites

District of Columbia residents are able to maintain healthy eating and physical activity at their place of employment to support a healthy weight.

- All District of Columbia agencies and organizations doing business in the District of Columbia will develop and implement comprehensive worksite wellness programs that will provide healthy foods, encourage regular physical activity, and support preventive health services for their employees.
- Each year, an increasing number of District of Columbia businesses will implement evidence-based worksite wellness programs.

GOAL 6 - Faith-Based Institutions

District of Columbia residents are able to maintain healthy eating and physical activity at their faith-based institutions to support a healthy weight.

• Each year, an increasing number of faith-based institutions will promote healthy eating and physical activity.

GOAL 7 & 8 Overarching Support Systems and Infrastructure

Goal 7: District of Columbia Government agencies collaborate to ensure that residents at risk of overweight and obesity have access to healthy foods, opportunities to be physically active, and information to regularly make healthy choices.

Goal 8: The District of Columbia Government obtains current and critical data sets that describe the health status of residents and track implementation of The DC Overweight and Obesity Action Plan.

- The District of Columbia will develop, update and promote an inventory of resources available to residents that promote healthy eating and active living.
- Key coalitions of stakeholders and community residents will emerge to implement nutrition and physical activity strategies in The DC Overweight and Obesity Action Plan.
- The District of Columbia will coordinate the development and maintenance of a 5-year communication program that effectively motivates residents to eat healthy food and be physically active every day.
- The District of Columbia will broaden its data collection and evaluation efforts to collect, analyze, and report information related to implementation and progress of The DC Overweight and Obesity Action Plan.

References

- ¹ Behavioral Risk Factor Surveillance System. Prevalence and Trends Data 2011. http://apps.nccd.cdc.gov/BRFSS/. Accessed September 2012
- ² Youth Risk Behavioral Surveillance System. Adolescent and School Health. Data and Statistics. http://www.cdc.gov/ healthyyouth/data/index.htm. Accessed September 2012
- ³ Robert Wood Johnson F as in Fat
- ⁴ (CDC adult obesity facts http://www.cdc.gov/obesity/data/adult.html). Accessed October 2012
- ⁵ Overweight and Obesity Data and Statistics http://www.cdc.gov/obesity/data/childhood. html. Accessed October 2012
- ⁶ Fastfoodfacts Report executive summary accessed October 24, 2012

⁷The National Institute of Health. Obesity. Retrieved from http://www.nlm.nih.gov/medlineplus/obesity.html

⁸ The National Institute of Health. Obesity. Retrieved from http://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/risk.htm#limitations

⁹U.S. Department of Health and Human Services. Overweight and obesity: Health consequences. Retrieved from http://www.surgeongeneral.gov/library/calls/obesity/fact_consequences.html

¹⁰ World Health Organization (WHO). Obesity and overweight. Retrieved from http://www.who.int/mediacentre/fact-sheets/fs311/en/

¹¹Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of obesity in the United States, 2009–2010. NCHS data brief, no 82. Hyattsville, MD: National Center for Health Statistics. 2012. Retrieved from http://www.cdc.gov/nchs/data/databriefs/db82.pdf

¹² Center for Disease Control and Prevention. CDC vital signs. Youth risk behavior surveillance system: 2011 National Overview. Retrieved from http://www.cdc.gov/healthyyouth/yrbs/pdf/us_overview_yrbs.pdf Centers for Disease Control and Prevention. Adult obesity facts. Retrieved from http://www.cdc.gov/obesity/data/adult.html

¹³ Center for Disease Control and Prevention. Behavioral Risk Factor Surveillance System. Retrieved from http://www.cdc.gov/brfss/index.htm

¹⁴Center for Disease Control and Prevention. District of Columbia: Burden of chronic disease. Retrieved from http://www.cdc.gov/chronicdisease/states/pdf/dc.pdf

¹⁵ U.S. Department of Health and Human Services. Overweight and obesity: Health consequences. Retrieved from

¹⁶Wang YC, McPherson K, Marsh T, Gortmaker S, & Brown, M. Health and economic burden of the projected obesity trends in the USA and the UK. The Lancet 2011; 378(9793):815- 825. doi:10.1016/S0140-6736(11)60814-3

¹⁷ Center for Disease Control and Prevention. The health effects of overweight and obesity. Retrieved from http://www. cdc.gov/healthyweight/effects/index.html

¹⁸District of Columbia Department of Health. Live Well DC. Retrieved from http://mylivewelldc.com/about/

¹⁹ Sustainable DC. www.sustainabledc.gov

²⁰ Let's Move. www.letsmove.gov

²¹ Government of the District of Columbia, Department of Health. 2010. Working towards a healthy DC: The District of Columbia's overweight and obesity action plan 2010 – 2015. Retrieved from http://newsroom.dc.gov/show. aspx?agency=doh§ion=2&release=19808&year=2010&file=file.aspx%2frelease%2f19808%2fFINAL%2520Obesi-ty%25202009%2520Report.pdf

Government of the District of Columbia Department of Health Center for Policy Planning and Evaluation (CPPE) Behavioral Risk Factor Surveillance System (BRFSS) 899 North Capitol Street 5th Floor Web Address: <u>www.doh.dc.gov</u>





