Reversing the Epidemic of OBESITY & DIABETES
2005 Greater Memphis Area Progress Report

Most Memphians Dangerously Overweight!

A collaborative effort of the University of Tennessee, University of Memphis, and Healthy Memphis Common Table

Healthy Memphis DATACenter
Reversing the Epidemic of Obesity and Diabetes
2005 Greater Memphis Area Progress Report

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EXECUTIVE SUMMARY

Memphis is at the center of a nationwide epidemic of obesity and diabetes that is leading to premature death and terrible suffering for many of our citizens. This report is designed to help mobilize our community to fight this modern plague that is afflicting our community. Since this epidemic begins in childhood, we must concentrate our resources and our efforts to combat this epidemic in our children and focus on supporting healthy lifestyles and creating healthy environments for the people of Memphis.

HEALTH STATUS in the Greater Memphis Area

- The majority of adults in the greater Memphis area are dangerously overweight or obese and are at increasing risk of premature death and disability.
- The number of adult diabetics in Memphis has grown exponentially over the last 20 years, and diabetes rates in the greater Memphis area are higher than the national average.
- The obesity and diabetes epidemic is impacting every part of Shelby County but is particularly severe in the lowest income areas of Memphis in which as many as a third of adults may have diabetes.
- The number of children being diagnosed with obesity, pre-diabetes, and adult-type diabetes is increasing exponentially.

HEALTHY LIVING in the Greater Memphis Area

- Few Memphis residents understand that the majority of diabetes can be prevented and can be cured by healthy eating and exercise habits.
- Most Memphians do not eat healthy foods every day, and few eat recommended amounts of vegetables and fruit.
- It appears people in the lowest income areas of Memphis are most likely to eat junk food and to live near fast food restaurants, and are particularly unlikely to eat healthy foods.
- Unhealthy eating patterns start in childhood, and Memphis children generally eat worse diets than children in other parts of Tennessee.
- Memphis adults are generally less likely than other Tennessee and U.S. adults to exercise regularly, and most do not get recommended levels of physical activity.
- Children in the greater Memphis area are generally less likely than other Tennessee and U.S. children to exercise regularly and are less likely to participate in regular physical education in their schools.
HEALTHCARE in the Greater Memphis Area

- Many people in the greater Memphis area still do not have adequate healthcare coverage, particularly those living in low-income areas.
- In some areas of Shelby County as many as 40% of adults may find it difficult to see a doctor when needed because of expense*.
- People in east Shelby County, particularly in higher income areas, are generally concerned that the healthcare system here is unsafe*.
- People in the greater Memphis area frequently do not receive recommended life-saving care for diabetes.
  - Less than half of Memphians with diabetes, whether insured by BlueCross BlueShield, Medicare or TennCare, get all the recommended care they need.
  - Only half of people with diabetes in the greater Memphis area participated in a diabetes education program in the past year.
- Screening for overweight and obesity in the greater Memphis area is inadequate. Many overweight and obese Memphians do not realize that they are at increased risk for serious weight-related disease.
  - Over 80% of Memphians do not know their body mass index (BMI).
  - Approximately 70% of Memphians report they have never had their BMI checked.

COMMUNITY RESPONSE in the Greater Memphis Area

- The Obesity and Diabetes Initiative of the Healthy Memphis Common Table has helped to build community awareness of the epidemic, to improve obesity and diabetes screening and management, and to build a business case for health promotion in the Mid-South.
- Many organizations and individuals are working together to reverse current trends in diabetes and obesity, and to promote the health and abundant life of people of Memphis and the Mid-South.

* Maps in this report show general trends for Shelby County neighborhoods. Be aware that for some zip codes sample sizes are small. Therefore, these data may not accurately reflect characteristics of particular neighborhoods.
INTRODUCTION

This report is designed to bring attention to the modern plague afflicting our region. Memphis is at the center of a nationwide epidemic of obesity and diabetes that is leading to premature death and terrible suffering for many of our citizens. Because this plague acts slowly, unlike earlier plagues, most Memphians are not aware of its presence, even when suffering from it.

Memphis has been rated the unhealthiest city in the country by leading health magazines. Unfortunately, their assessment is largely accurate. People in Memphis are among those in the United States most likely to suffer from disease or die prematurely. So it is important for Memphians to know how and why they are suffering unnecessarily. This report shows that the greatest reason for the ill health of Memphis may well be its epidemic of overweight.

Overweight and obesity cause many diseases, most notably diabetes and high blood pressure. Diabetes and hypertension are two of the most common diseases in Memphis. Around one in 10 Memphis adults has diabetes, and around a third suffer from pre-diabetes, a dangerous metabolic state caused by overweight and inactivity, marked by high cholesterol and high blood pressure. Pre-diabetes and diabetes are the major causes of heart attacks, strokes, kidney failure, hardening of the arteries, and other diseases that are the main killers in Memphis.

The epidemic of overweight, obesity, and diabetes begins in childhood. Scientists have shown that hardening of the arteries begins typically before age ten. If current rates of overweight continue, 1/3 of our children will suffer from diabetes in their lifetimes. This report focuses on the earliest stages of this epidemic in our children so that we can attack the epidemic at its roots. We must work together to save our children from this modern plague.

If Memphians want to reverse this epidemic, they must address the root causes. Many of the key risk factors leading to overweight, diabetes and other associated diseases are complex and inter-related as shown below:
The diagram below shows that there are multiple factors that contribute to the epidemic of obesity and diabetes in our community. The first major section of this report, *Health Status*, focuses on the scope of this modern epidemic in our community.
Many of the factors that are causing the epidemic are modifiable. Some require individual desire and commitment to change while others require the will of the entire community to change.

The top of the diagram lists the most modifiable factors. It shows the healthy living and environmental factors that Memphis needs to work hardest to change. These factors are addressed in the second major section of the report, entitled *Healthy Living*, that documents the daily lifestyle choices Memphis citizens make and the environments they have created in which to live. It is here that Memphis can make the biggest difference by working to help one another make healthy choices and to create fit environments with walking and biking trails, fitness centers, and healthy places to shop and eat.

The bottom of the diagram lists socioeconomic factors that impact diabetes and overweight and obesity in our community. Some of the factors cannot be modified while others, although huge challenges, can be changed. We believe, and there is evidence to support this belief, that the most important of these underlying factors contributing to the epidemic is education and that investment in education is one of the best investments we can make for the health of our children.

The third major section of this report, *Health Care Delivery*, details the work that the healthcare system is doing to fight this epidemic. Once considered the major “player” in stopping the epidemic of obesity and diabetes, it is now clear that the healthcare system cannot reverse the epidemic alone. Doctors and nurses mainly try to treat overweight, obesity and diabetes after they occur, and to limit their complications. This is important, and its importance should not be minimized. Good diabetes care is essential, can be life-saving, and frequently can help to prolong the lives of those afflicted with this terrible disease. However, it is clear that this strategy alone is failing. We can only effectively overcome this plague if both our doctors and all our community work together to fight this epidemic at its roots through prevention.

The last section of our report, *A Community Responds*, focuses on the grass roots response of the greater Memphis community, particularly emphasizing the activities of Healthy Memphis Common Table (HMCT) Community Partners. This last section of this report shows the “good news,” highlighting ongoing projects of the HMCT and selected other initiatives that are already fighting against obesity, and diabetes in Memphis and Shelby County.
1. HEALTH STATUS: SCOPE OF THE EPIDEMIC

1.3 General Health

In 2004, the majority of those interviewed in the Greater Memphis area considered their general health status to be Good, Very Good, or Excellent.

However, there are general areas of Shelby County where perceived health status ranked lower than in other areas of the community and was only “Good” to “Fair” on average.

The worse perceived health status in these areas may be due in part to an increased prevalence of obesity and diabetes, and the many other diseases associated with these conditions.
1.2 Prevalence of Diabetes

2. Selected Metropolitan/Micropolitan Area Risk Trends, Shelby County 2002, 2003
3. Memphis Behavioral Risk Factor Survey (MBRFS), 2004

- Diabetes rates in the greater Memphis area are higher than the national average.
- Diabetes rates for adults in the greater Memphis area have decreased slightly since 2002.
- Data obtained through (3) the Memphis Behavioral Risk Factor Survey generally agrees with data obtained by (2) the Centers for Disease Control and Prevention (CDC) for the greater Memphis area.
Memphis Behavioral Risk Factor Survey (MBRFS), 2004
See Appendix 2 to identify individual Shelby County zip codes

- The obesity and diabetes epidemic is impacting every part of Shelby County but is particularly severe in the lowest income areas of Memphis in which as many as a third of adults may have diabetes.

- The uneven geographic distribution of diabetes prevalence within the greater Memphis area suggests the possibility that those risk factors for diabetes identified in the introduction may also be geographically distributed within our community in a similar manner.

- Areas of highest diabetes prevalence roughly correspond with neighborhoods in the greater Memphis area where average annual household income and educational levels of residents are lowest (see Appendix 1).
Rates of diagnosed diabetes in children have escalated dramatically over the last several years for children 6-12 and 13-19 years of age.

The lower rates of diagnosed diabetes in Shelby County children are almost certainly due to under-diagnosis, since school Youth Behavioral Risk Survey (YRBS) data clearly indicates that Memphis children are more overweight and at risk for diabetes than other children in the state.

Under-diagnosis of diabetes in children appears to be a serious problem in Shelby County, and efforts to increase early diagnosis and treatment need to be supported.
Rates of diagnosed diabetes in children and adults served by BCBST have remained relatively stable over the last several years.

Over 6% of the middle-aged Shelby County adults enrolled in BCBST have been diagnosed with diabetes, a rate over 10 times higher than that seen before 1950.
• In summary, it merits re-emphasizing that:
  
  o Lower rates of diagnosed diabetes in Shelby County children are almost certainly due to under-diagnosis, since school Youth Behavioral Risk Survey (YRBS) data clearly indicates that Memphis children are more overweight and at risk for diabetes than other children in the state.

  o Under-diagnosis of diabetes in children appears to be a serious problem in Shelby County, and efforts to increase early diagnosis and treatment need to be supported.
1.3 Prevalence of Pre-Diabetes

Rates of diagnosed pre-diabetes in children have escalated dramatically over the last several years, for children 6-12 and 13-19 years of age.

The lower rates of diagnosed pre-diabetes in Shelby County children are almost certainly due to under-diagnosis, since school Youth Behavioral Risk Survey (YRBS) data clearly indicates that Memphis children are more overweight and at risk for pre-diabetes than other children in the state.

Under-diagnosis of pre-diabetes in children appears to be a serious problem in Shelby County, and efforts to increase early diagnosis and treatment need to be supported.

*For this report, pre-diabetes is defined as the presence of any diagnosis of metabolic syndrome, abnormal weight gain, acanthosis nigricans, hyperinsulinemia, pre-diabetes or obesity in the reporting year.*
"For this report, pre-diabetes is defined as the presence of any diagnosis of metabolic syndrome, abnormal weight gain, acanthosis nigricans, hyperinsulinemia, pre-diabetes or obesity in the reporting year."
1.4 Prevalence of Overweight and Obesity

In 2002-2004 obesity rates in the greater Memphis area generally exceeded state & national averages.

2. Selected Metropolitan/Micropolitan Area Risk Trends, Shelby County 2002, 2003
3. Memphis Behavioral Risk Factor Survey (MBRFS), 2004
In 2003, 15.8% of high school students in Memphis City Schools were overweight, higher than both the rising state and national averages.

The number of children in the greater Memphis area being diagnosed with overweight, obesity, pre-diabetes, and adult type diabetes is increasing exponentially.
Rates of diagnosed obesity are rising rapidly in Shelby County children.

A smaller percentage of children in Shelby County are diagnosed with obesity than in other parts of Tennessee, which is almost certainly a result of under-diagnosis in Shelby County, since school Youth Behavioral Risk Survey (YBS) data clearly indicates that Memphis children are more overweight and at risk for diabetes than other children in the state.

Obesity is still seldom diagnosed in children in Shelby County. Under-diagnosis in children appears to be a serious problem, and efforts to increase early diagnosis and treatment need to be supported.
1.5  Geographic Variations in Overweight and Obesity

Body mass index or BMI is the best number to tell a person’s weight is healthy, overweight or obese. All Memphians should know their BMI, because the BMI can help them determine their risk of developing illnesses like diabetes. The National Institutes of Health classifies a BMI of less than 19 as underweight; 19-24 as normal; 25-29 as overweight; 30-39 as obese; 40 or more as morbidly obese.

Memphis Behavioral Risk Factor Survey (MBRFS), 2004
See Appendix 2 to identify individual Shelby County zip codes

• Preliminary data shows that people in certain parts of Shelby County, particularly north and south of the center of the city, have higher Body Mass Index (BMI) on average.

• Despite geographic variation, average BMI is above recommended levels in almost all Shelby County neighborhoods.

• Even in the most physically fit greater Memphis neighborhoods, nearly half of people are dangerously overweight or obese.
Memphis Behavioral Risk Factor Survey (MBRFS), 2005
See Appendix 2 to identify individual Shelby County zip codes

• This map confirms the overall impression given by the map showing the geographic distribution of BMI.

• Even without the adjustment for differences in height that BMI figures provide, this map shows that average weight is higher in certain parts of Shelby County, particularly north and south of the center city.

• Despite geographic variation, average weight is above recommended levels in almost all Shelby County neighborhoods.
1.6 Prevalence of Diseases Associated with Overweight and Obesity

- High blood pressure, or hypertension, a condition that probably causes the majority of strokes, heart attacks, heart failure and kidney failure, is strongly linked to overweight, poor eating habits, and inactivity.

- The number of adults with elevated blood pressure has continued to gradually rise since the mid-1990s, both nationally and in the state of Tennessee.

- Almost one in three Memphis adults knows that he or she has high blood pressure. Even more have dangerously high blood pressure and do not know it.

- The number of adults in the greater Memphis area reporting high blood pressure exceeds both state and national averages.

2. Memphis Behavioral Risk Factor Survey (MBRFS), 2004
This preliminary data shows that people in certain parts of Shelby County, particularly north and south of the center city, more often report elevated blood pressure.

Areas with higher blood pressure correspond generally with those neighborhoods with higher than average BMI, which is as expected, since overweight is the most important risk factor for hypertension.

High blood pressure is extremely common in Shelby County neighborhoods, putting Memphians at very high risk for strokes, heart attacks and kidney failure.
1.7 Community Awareness

Before Memphis can hope to reverse its epidemic of diabetes, it must first understand its true causes.

**Percent Memphians who Know that Diabetes is Very Strongly Linked to Obesity***

- Very Strongly Linked: 62%
- Strongly Linked: 33%
- Weakly Linked: 5%

**Percent of Memphians who Know Diet and Exercise are Most Important to Prevent Diabetes***

- Yes: 72%
- No: 21%
- Unsure: 7%

- Most Shelby County residents know that overweight and obesity cause the majority of diabetes, but many still do not understand how strong this linkage is.
- Many Shelby County residents still do not know that a healthy diet and regular exercise are the most important things to prevent diabetes.
- Many people in Memphis still do not know how to prevent diabetes through healthy living.

*Memphis Behavioral Risk Factor Survey (MBRFS), 2004*
2. HEALTHY LIVING: CAUSES AND PREVENTION OF THE EPIDEMIC

2.1 Healthy Eating: Overview

- Numerous studies have linked pre-diabetes and diabetes to unhealthy eating habits. In particular, regular consumption of high calorie junk foods instead of healthful vegetables, fruits and lean meats is particularly harmful.

- Few Memphis residents understand that the majority of diabetes can be prevented and can be cured by a healthy diet.

This map shows that an extraordinary number of Memphians, particularly immediately north and south of the center city, do not eat fruits and vegetables on a daily basis.

- These eating patterns place Memphians at high risk of obesity, diabetes, cancer and many other associated diseases.
2.2 Dietary Fiber: How Vegetables Prevent Diabetes

- Eating high fiber foods, such as vegetables and unrefined whole grain foods, helps prevent and cure diabetes and pre-diabetes.

- Eating a high fiber diet decreases the risk of developing diabetes and cardiovascular disease, and improves blood sugar control in diabetic patients, reducing their risk of future complications.

- The level of fiber in the average American diet falls far below recommended levels, and the typical diet in Memphis is one of the unhealthiest in the country.

- Failure to eat adequate amounts of vegetables and fruits has contributed to the diabetes epidemic in America.

![Graph](image)

*Behavioral Risk Factor Surveillance Survey (2001 US = estimated data)*

- Americans who eat fewer fruits and vegetables also eat more unhealthy fat, refined carbohydrates and sugar.

- Tennessee consumption of vegetables slowly increased from 1996 to 2001. From 2001 to 2003 vegetable consumption decreased to the national average.

- Almost two-thirds of Tennessee adults fail to eat the recommended five or more vegetable servings per day.
2. Selected Metropolitan/Micropolitan Area Risk Trends, Shelby County 2003

- Poor eating habits begin in childhood, and by the time young people are in high school, these habits are usually well established.
- The vast majority of high school students fail to eat the recommended five or more vegetable servings per day.
- Memphis youth eat far fewer vegetables than young people in the rest of Tennessee or the rest of the country.
- It is critical for Memphis families, schools, and policy makers to find ways to support and encourage increased vegetable consumption in the greater Memphis area.
2.3 Dietary Fat and Carbohydrates: The Impact of Junk Food

- Research clearly shows that high calorie diets, with excessive calories from either fats or refined carbohydrates, encourage pre-diabetes and diabetes.

- Regular eating of refined carbohydrates contributes greatly to the epidemic of pre-diabetes, diabetes and associated cardio-vascular diseases in wealthy nations like the U.S.

Memphis Behavioral Risk Factor Survey (MBRFS), 2004
See Appendix 2 to identify individual Shelby County zip codes

- Eating of junk food is widespread in Memphis, particularly north and south of the center city, and in the main east-west corridor.

- These high rates of eating junk food with little or no nutritional value place Memphis residents at very high risk of obesity and all of the diseases associated with obesity.
2.4 Fast Food Restaurants

Memphis Behavioral Risk Factor Survey (MBRFS), 2004
See Appendix 2 to identify individual Shelby County zip codes

• In general, the distribution of fast food restaurants parallels the distribution of rates of eating junk food in the greater Memphis area.
Memphis Behavioral Risk Factor Survey (MBRFS), 2004
See Appendix 2 to identify individual Shelby County zip codes

- The map above shows that fast food restaurants are clustered along bus routes on popular thoroughfares in the greater Memphis area.

- Fast food is heavily marketed along these popular transportation routes.

- Lower income residents who are frequent users of bus services may be particularly likely to obtain meals “on the run” while waiting for public transportation, a style of eating that promotes weight gain.
2.5 Healthy Drinks: Choosing Milk instead of Soft Drinks

Low intake of calcium and other nutrients in dairy foods, such as potassium and magnesium, may be contributing to the diabetes epidemic. Soft drinks are some of the very worst foods for promoting weight gain and should rarely if ever be drunk by anyone in our dangerously overweight community.

Memphis Behavioral Risk Factor Survey (MBRFS), 2004
See Appendix 2 to identify individual Shelby County zip codes

- This map shows that residents in most areas of Shelby County frequently consume soft drinks. Some people consume more than their daily caloric requirements in soft drinks alone, an eating pattern that is extremely dangerous.
- Burgeoning soft drink consumption may be contributing to decreasing milk drinking
- Calcium and dairy food consumption is particularly low among black, Hispanic, and Asian populations. Although lactose intolerance may be partly to blame, dietary practices learned early in life may also play a role.
- Efforts to reduce or eliminate non-nutritional soft drink intake should be undertaken in the greater Memphis area, focusing efforts particularly in high intake areas.
Between 1999 and 2003, the percentage of TN students drinking the recommended servings of milk per day decreased from 16.2% to 12.3%. This decline may reflect the substitution of soft drinks for milk in the lunchroom and the presence of vending machines in the hallways of most TN schools.

The percentage of high school students in the greater Memphis area who consumed 3 or more glasses of milk per day in the previous week was only 7.6%, a level less than half the national average and much lower than the rate for the rest of Tennessee.

Recent Tennessee legislation to prohibit selling of soft drinks from vending machines in schools should help to discourage use of these unhealthy non-nutritional drinks by our vulnerable children.
2.6 Physical Activity

- The present day sedentary or “couch potato” lifestyle in Memphis is a major cause of the epidemic of diabetes in our community.

- Lack of daily physical exercise contributes to the increasing rates of overweight, obesity and diabetes in the greater Memphis area.

\[ \begin{align*}
\text{% Adults with No Daily Physical Activity 1990-2004} \\
\end{align*} \]

2. Selected Metropolitan/Micropolitan Area Risk Trends, Shelby County 2003
3. Memphis Behavioral Risk Factor Survey (MBRFS), 2004

- Almost a third of Shelby County adults reported no leisure-time physical activity in 2003 and 2004.

- Over the last 15 years the percentage of people in the U.S. and Tennessee participating in daily physical activity appears to be steadily increasing.

- The percentage of local Memphians with no daily physical activity appears to have markedly decreased from 2003 to 2004. Although this marked change could have occurred as a result of the small survey sample size, it may indicate growing awareness of the importance of exercise for health.
Memphis Behavioral Risk Factor Survey (MBRFS), 2004
See Appendix 2 to identify individual Shelby County zip codes

- The areas in Memphis where people exercise least are generally the same areas where rates of obesity and diabetes are highest.

- Memphians indicated that their greatest barrier to getting exercise was the lack of safe, convenient (i.e. close to where they live), free, public green spaces, where they could exercise with their family members.

- Research clearly shows that it is generally best for people to exercise or participate in vigorous physical activity for 30 minutes or more a day, and that any exercise is healthier than no exercise.

- Memphis adults are progressively less likely to exercise as they get older.

- Poor exercise habits in the greater Memphis area generally begin in childhood and adolescence and continue to deteriorate throughout adult life.
• Nearly half of high school students in Memphis City Schools are very sedentary, reporting that they did not participate in 20 minutes of vigorous physical activity on 3 or more of the prior 7 days.

• Students in Memphis schools are more sedentary than those in either Tennessee or the U.S. on average.

• Almost half of all Tennessee high school students watch three or more hours of television on an average school day. Research shows that television, video game and computer use discourage exercise.
2.7 Fitness Centers and Barriers to Exercise

- While fitness centers appear to be plentiful in the greater Memphis area, Memphians report that cost and transportation difficulties, particularly for those in neighborhoods located farther from the city center, were major barriers to their use.

- Memphis citizens report that their use of fitness center was discouraged by the limited hours of most centers, making it difficult for those who work long hours, or hold down several jobs, to take advantage of them.

- Another commonly cited barrier to the use of fitness centers in the greater Memphis area was the lack of family-centeredness. People complained of the lack of care and activities for children and the elderly within these facilities.

- Memphis residents frequently cited the need for safe (i.e. free from crime, drug and traffic hazards, loiterers, stray dogs and broken sidewalks), convenient (i.e. within walking distance of home or work), enjoyable (i.e. well-maintained, free of litter, with pleasant bathroom and drinking facilities), public (i.e. free), green spaces (i.e. parks, walking and biking trails) where the entire family can enjoy the outdoors.
2.8 Employer-based Health Promotion

Nationwide, many employers are encouraging their employees to lead healthier lives. Many studies have shown that employees who eat healthy diets, exercise regularly and do not smoke have fewer sick days, are more productive when on the job and have lower healthcare costs. Studies have shown that well designed workplace health promotion programs can actually save employers money while helping employees lead healthier and more abundant lives.

Percent of Memphis Employees with Access to Workplace Health Promotion Programs*

- Yes 23%
- No 77%

• Unfortunately, most employees in Shelby County do not benefit from workplace health promotion programs or incentive programs for healthy habits.

* Memphis Behavioral Risk Factor Survey (MBRFS), 2004
3. HEALTHCARE DELIVERY: IS MEMPHIS UP TO STANDARD?

3.1 Access to Healthcare

Memphis Behavioral Risk Factor Survey (MBRFS), 2004
See Appendix 2 to identify individual Shelby County zip codes

- Many people in the greater Memphis area still do not have adequate healthcare coverage, particularly those living in low-income areas.

- By comparing this map with the one illustrating the geographic distribution of diabetes and high blood pressure, it can be seen that those neighborhoods where large numbers of people have chronic illnesses are the same neighborhoods where large numbers of people do not have health care coverage through insurance.

- The map on the following page illustrates that many people in roughly these same neighborhoods were unable to see a doctor at some time during the 12 months prior to being interviewed, due to costs that were prohibitive for them.
Memphis Behavioral Risk Factor Survey (MBRFS), 2004
See Appendix 2 to identify individual Shelby County zip codes

- In some areas of Shelby County as many as 40% of adults found it difficult to see a doctor when needed because of high associated out-of-pocket expenses.

- Because many of the people interviewed in the most affected neighborhoods are of lower income, and a large percentage relied upon TennCare for their healthcare at the time of the interviews, the forthcoming changes to TennCare are likely to exaggerate these results in years to come.

- These major problems accessing needed healthcare are likely to have staggering implications for those suffering from diabetes in the greater Memphis area. We can expect that many people in Shelby County with diabetes and obesity will go untreated, resulting in unabated progression of their illness, decreased productivity, under-employment and unemployment as a result of their illness, increased unreimbursed healthcare costs and finally increased premature death, disability and suffering for individuals and their families.
The majority of respondents in those neighborhoods where there is a higher geographic distribution of diabetes, obesity and hypertension clearly consider the healthcare they receive to be “Very Safe” or “Safe”.

People in east Shelby County, particularly in higher income areas, are generally quite concerned that the healthcare system is unsafe.
3.2 Screening for Obesity and Diabetes

One of the best ways to tell if someone is overweight, or at risk of developing diabetes, hypertension or other illnesses related to being overweight, is to calculate their body mass index (BMI). Doctors and other healthcare providers should check the BMI of every patient they see every year. Most experts think that every person should know his BMI. Unfortunately, in Shelby County:

- Most people never get their BMI checked
- Most people do not know their BMI.

*Memphis Behavioral Risk Factor Survey (MBRFS), 2004*
Percent of Shelby County Residents who Know their Correct BMI*

- Don't Know Correct BMI: 97%
- Know Correct BMI: 3%

*Memphis Behavioral Risk Factor Survey (MBRFS), 2004

- The few people who think they know their BMI, actually do not know their correct BMI.
- The greater Memphis area is doing very poorly in screening for obesity and diabetes using BMI.
3.3 Diabetes Care for all Diabetics

People with diabetes are less likely to be hospitalized, have serious complications or die prematurely if they obtain the following critical outpatient health services that have been recommended by national guidelines since 1988:

- A Glycosylated Hemoglobin (also known as HbA1C) is a laboratory test that measures average blood sugar. People with diabetes should have their HbA1C checked at least two times per year.

- A Lipid Panel is a laboratory test that measures cholesterol. People with diabetes should have a lipid panel checked every year.

- A Diabetic Eye Exam is an examination of the eyes by an ophthalmologist used to check for early treatable eye damage caused by diabetes. People with diabetes should have a diabetic eye exam every year.

- Nephropathy Monitoring means to test the urine to see if there is damage to the kidneys from diabetes. People with diabetes should have a urine test for kidney damage every year.

There are other services which people with diabetes should receive regularly as part of their regular care from their primary care providers including:

- Diabetes Education
- Weight Loss, Nutrition and Exercise Counseling
- A Foot Exam, at least yearly, to check for nerve damage from diabetes.

The following section relates the reports of people with diabetes in Memphis regarding their receipt of these essential recommended services. In interpreting this data, keep in mind that when people report on themselves they are likely to exaggerate positive responses, so that the results they report are probably a little less favorable than reported in reality.

The following self reported data shows that people with diabetes in Memphis receive many of the life-saving services, recommended at least annually, only a little more than half the time. Furthermore, the data indicates that very few diabetics receive the entire package of recommended services on an annual basis.
Memphis Behavioral Risk Factor Survey (MBRFS), 2004
• This graph suggests that most Memphis residents with diabetes are at least receiving some recommended essential services.

Memphis Behavioral Risk Factor Survey (MBRFS), 2004
• However, the graph above shows that only about 75% report that they are receiving HbA1c testing, an important test of average blood sugar levels, at recommended intervals. Because of people often exaggerate when they report about the care they have received, the true percentage getting this test is probably even lower.
Memphis Behavioral Risk Factor Survey (MBRFS), 2004

- Eye exams are recommended annually for adult diabetics in order to prevent blindness.

- Most people with diabetes in the greater Memphis area appear to be getting recommended eye care, but there is still room for improvement.

Memphis Behavioral Risk Factor Survey (MBRFS), 2004

- Over 1 in 4 Memphis diabetics have never received a foot exam, placing them at increased risk of an amputation that could leave them disabled for life.
3.4 Diabetes Care for BlueCross BlueShield of Tennessee Enrollees

- The percentage of diabetic BCBST enrollees receiving HbA1c testing at least once a year has steadily improved.

- Shelby County has dramatically improved HbA1c testing for children with diabetes, and diabetic BCBST enrollees from age 0 – 17 in Shelby County are now more likely than diabetics on BCBST in other parts of Tennessee to receive this potentially life-saving recommended care.

- Among BCBST enrollees, adults with diabetes in Shelby County are still less likely than diabetics in other parts of Tennessee to receive recommended testing.
The percentage of diabetic BCBST enrollees receiving annual cholesterol screening has steadily improved for both adults and children.

Among BCBST enrollees, diabetics in Shelby County are still less likely than diabetics in other parts of Tennessee to receive this potentially life-saving recommended care.
• There were 25 BCBST member children aged 0 – 17 with diabetes in Shelby County in 2002, and this number increased to 28 by 2004.

• Shelby County achieved 100% eye examination rates for the BCBST member children with diabetes in 2004, making these children more likely than diabetic children on BCBST in other parts of Tennessee to receive this potentially sight-saving recommended care in 2004.

• The percentage of adult diabetic BCBST enrollees receiving annual eye exams has slowly improved.

• Among adult BCBST enrollees, diabetics in Shelby County are still less likely than diabetics in other parts of Tennessee to receive this recommended care.
The percentage of diabetic BCBST enrollees receiving annual kidney screening has not improved significantly for either children or adults.

Among BCBST enrollees, diabetics in Shelby County are still more likely than diabetics in other parts of Tennessee to receive this recommended care.

The care provided to Shelby County diabetic BCBST enrollees has generally fallen below the levels achieved both nationally and within the rest of the state.

Greater emphasis needs to be placed on increasing the rates of delivery of recommended care to Shelby County diabetics served by BCBST.
3.5 Diabetes Care for Medicare Enrollees

The percentage of diabetic Medicare enrollees receiving HbA1c testing at least once a year has steadily improved.

Medicare enrollees with diabetes in Shelby County are still less likely than diabetics on Medicare in other parts of Tennessee and the nation as a whole to receive this potentially life-saving recommended care.
The percentage of diabetic Medicare enrollees receiving biennial cholesterol screening has steadily improved.

Among Medicare enrollees, diabetics in Shelby County are still less likely than diabetics in other parts of Tennessee and the nation as a whole to receive this potentially life-saving recommended care.

Even fewer diabetic Medicare enrollees than those shown above receive recommended cholesterol screening at least once a year as is recommended.
• The percentage of diabetic Medicare enrollees receiving biennial eye exams has slowly improved.

• Medicare enrollees with diabetes in Shelby County are still less likely than diabetics on Medicare in other parts of Tennessee and the nation as a whole to receive this potentially sight-saving recommended care.

• The care provided to Shelby County diabetics on Medicare has consistently fallen below the levels achieved both nationally and within the rest of the state.

• Greater emphasis needs to be placed on increasing the rates of delivery of recommended care to Shelby County diabetics on Medicare.
3.6 Diabetes Education

Memphis Behavioral Risk Factor Survey (MBRFS), 2004

- Only around half of people with diabetes in the greater Memphis area participated in a diabetes education program in the past year.

- Many authorities recommend annual diabetes self-management training for all people with diabetes. Clearly this standard is not being met in the greater Memphis area.

- Regular ongoing diabetes self-management training needs to be encouraged, both by providers and by payers.
3.7 Hospitalizations of People with Diabetes

Many studies have shown that people with diabetes that do not get recommended outpatient primary care are much more likely to require hospitalization.

BlueCross BlueShield of Tennessee

- Children with diabetes are much more likely than children without diabetes to require hospitalization.

- When children with diabetes require hospitalization it is often because their diabetes is dangerously out of control, but they are also more likely to get infections and to have other coexisting diseases like asthma that require careful outpatient management.

- Shelby County has markedly improved the average number of hospitalizations for children with diabetes.

- Diabetic BCBST enrollees from age 0 – 17 in Shelby County were less likely in 2004 than young diabetics on BCBST in other parts of Tennessee to require hospitalization.

- The improvements in hospitalization rates suggest that diabetes care for young diabetics in Shelby County is improving.

- These improvements are likely to result in improved quality of life, fewer premature deaths and overall cost savings.
Children with diabetes typically spend a higher number of days per year in the hospital rather than at home or in school compared with other children.

Shelby County has markedly reduced the average number of days spent in the hospital for children with diabetes.

Diabetic BCBST enrollees from age 0 – 17 in Shelby County spent fewer days in the hospital in 2004 than young diabetics on BCBST in other parts of Tennessee.

The improvements in hospitalization rates also suggest that diabetes care for young diabetics in Shelby County is improving.

These improvements are likely to result in improved quality of life, fewer premature deaths and overall cost savings for children with diabetes in Shelby County.
• Adult diabetics are much more likely to be hospitalized than other BCBST enrollees.

• Hospitalization rates and hospital days for Shelby County diabetic adults served by BCBST remain higher than for their counterparts in other areas of Tennessee.
These findings suggest that diabetes care for adult diabetics in Shelby County remains suboptimal.

Improvements in diabetes care are needed to result in improved quality of life, fewer premature deaths and overall cost savings.
4. A COMMUNITY RESPONDS:  
THE HEALTHY MEMPHIS COMMON TABLE

The Healthy Memphis Common Table (HMCT) is a 501(c)(3) non-profit organization whose mission is to support and encourage people working together to improve the health of everyone in our community. HMCT is made up of its Community Partners: organizations, coalitions or individuals dedicated to improving health and healthcare of people in the greater Memphis area. It serves as a regional health and healthcare improvement collaborative for the greater Memphis area.

Since late 2003 HMCT has focused its first community-wide initiative on reversing the obesity and diabetes epidemics in the Mid-South by 2008. Toward this end representatives of over 150 Community Partners have participated in regular working group and action team meetings as part of the Obesity and Diabetes Initiative (ODI). Although the HMCT organization has worked to support these working groups and action teams by providing an infrastructure for their collaboration, Community Partner organizations and individuals are themselves responsible for the success of these projects.

The following section provides a sampling of local efforts to reverse the obesity and diabetes epidemics in the greater Memphis area. This report specifically focuses on the progress of HMCT affiliated projects. However, many other notable projects are mentioned as well, some of which are not formally affiliated with the Common Table effort. The report thus recognizes that the most important activities in the Mid-South to reverse the modern plague of diabetes and obesity must occur at the grass roots level, in our schools, churches and communities.

Four Obesity and Diabetes Initiative (ODI) Working Groups and their action teams (see Appendix 3) have worked with Community Partner champions to introduce 18 projects in 2005 with concrete, measurable objectives. The ODI Working Groups have focused on four major areas of intervention, including 1) Building Community Awareness, 2) Improving Obesity and Diabetes Screening, 3) Improving Disease Management, and 4) Building a Business Case for Health Promotion. The following sections will describe the overall objectives of each of these working groups and major activities in each of these major areas in our community.
4.1 Building Community Awareness

The goal of the Community Awareness and Education Working Group is to help everyone in Memphis know how to prevent diabetes through healthy living. Data presented in this report demonstrates that people in Memphis are beginning to understand the major causes of the obesity and diabetes epidemic, but that they are only beginning to learn how to make the changes in their own lives to help reverse it. Substantial literature demonstrates that for community education to be successful it must be broad-based. This working group seeks to penetrate eight areas of the community to provide education and promote awareness through the media, schools, food sources, the faith-based community, fitness-organizations, health care providers, businesses, and government.

The Healthy Memphis Common Table recognized 9 major projects in the area of Community Education and Awareness in 2005:

1. **Community Resource Identification.** This project is compiling a list of community resources for people seeking to prevent or overcome obesity or diabetes. The project will disseminate this information through HMCT Community Partners and the HMCT web site. The project leaders plan to develop a process for an expanding database to identify new resources and maintain accuracy of information. The database will be marketed throughout the community.

2. **Uptown Kiosk Project.** This project, led by Humes Junior High School and University of Memphis, is working to identify walking trails for students, workers, and apartment dwellers in an Uptown neighborhood. Walking clubs will be developed for adult African-American women, especially targeting “first time” pregnant females, children and adolescents. The project will develop a touch screen kiosk with online identification and description of walking trails, promote media coverage of walking clubs, and work to help install exercise stations in the Uptown neighborhood. The project will be implemented in stages with the walking clubs being the focus for 2005.

3. **Community Diabetes Day.** This project, led by the Diabetes Store, is focused on coordinating Community Diabetes Day 2005. This will be the fourth annual event representing collaboration between the Diabetes Store, the American Diabetes Association (ADA), hospitals, and media outlets. Community Diabetes Day will promote awareness about diabetes and obesity, and participants will receive free information. Participants will gain access to key opinion leaders, disease specific vendors for product information and support, workshops, screenings and special population specific components.

4. **Health & Fitness Expo.** This project, led by the HMCT Media Action Team in collaboration with WREG-TV and The Commercial Appeal, will bring together members of the medical community (hospitals, doctors, and nurses), fitness community (Hope and Healing, Fitness Centers, parks and recreation, etc.), food and nutrition (grocer, restaurant, etc.), pharmaceutical (drug stores, manufacturers, etc.) and any other organization that has the potential to positively impact the issue of obesity and related diabetes in our community. The goal is to provide individual BMI screening and to initiate the process of change through a fun, interactive, and educational expo. Members of the Healthy Memphis Steering Committee (which include many HMCT Community Partners) are working with WREG-TV and The Commercial Appeal
providing input for all awareness and education initiatives under the “Healthy Memphis” umbrella.

5. **Child Prescription and Obesity Prevention at Hope and Healing Center.** This project, led by Church Health Center, is using Child Life programming to focus on addressing the root causes of poor mental, physical and spiritual health for children, including inactivity, poor diet, low self-esteem and violence. Through art, play, creative movement, reading and numerous other activities, individuals learn healthy lifestyles and attitudes early in life, to be ingrained and maintained throughout adulthood. HMCT Partners are being invited to spread components of this programming to school or faith-based sites.

6. **2005 Community Assessment.** This project seeks to develop a self-assessment form to be distributed through the newspaper and the Internet at literacy levels appropriate for the Mid-South. The project team will distribute, collect, and report results that can provide benchmarking, Healthy Memphis campaign marketing, and immediate feedback and community education to Mid-South consumers.

7. **www.healthymemphis.org.** This project seeks to develop and maintain the official Healthy Memphis Common Table website to facilitate community-wide collaboration against obesity and diabetes. Healthymemphis.org must serve Community Partners, citizens who want better health, and organizations that need to be reached by the HMCT. This project team will work to make the website assist effective communications among: (1) External audiences: citizens, businesses and groups, and (2) Internal audiences: HMCT Community Partners, Board, and Council members.

8. **Tracking 12 People.** This project, led by the Media Action Team in collaboration with WREG-TV and The Commercial Appeal, is sharing real-life examples of people who are improving their health, and telling how they are doing it. This project will provide inspiration and motivation to others to take up the challenge to lose weight and be more physically active. Twelve Memphis citizens are being selected to follow over the course of 2005. Community Partners will support this project by helping to identify candidates and providing input, information and encouragement throughout the year.

9. **Restaurant Menu Identification Program.** This project is led by the Food Sources Action Team in collaboration with the Memphis Restaurant Association, Tennessee Healthy Weight Network, University of Tennessee, University of Tennessee Extension Services, University of Memphis, Hope and Healing, Shelby County Health Department, Methodist Healthcare Foodservice, and Creative Foodworks. The Restaurant Menu Identification Program is inviting Memphis Restaurant Association (MRA) members to collaborate with HMCT to promote healthy eating habits and active lifestyles. Most MRA members are local independent operators with limited budgets, versus chain operators that are more likely to have nutrition data for menu items. This program is enlisting at least 5 local restaurants to: a) identify, analyze and promote menu items and combinations that help diners monitor their calorie intake and meet research-based guidelines for preventing diabetes; and b) promote physical activity.

Many other Community Partner organizations are conducting additional projects to build awareness of the obesity and diabetes epidemics, and to promote community will to reverse the trends. These are some examples:

1. **WREG TV Channel 3 and The Commercial Appeal (CA) joined forces on an 18-month news and education campaign called “Healthy Memphis,” with funding from some of**
their advertisers. See http://www.wreg.com/Global/category.asp?C=57566 and
http://www.commercialappeal.com/mca/healthy_memphis/. This campaign has
included Monday feature articles in the CA, Thursday features with Mike Suriani,
occasional “Live at 9” coverage on WREG, and website links to
www.healthymemphis.org from the CA and WREG sites.

2. Tennessee on the Move led a successful effort championed also by the Common Table
to prohibit vending machines in schools.

3. The Shaping America’s Youth Town Meeting is a community summit planned for late
2005 at the FedEx Forum. Funded by Federal Express, American Diabetes
Association, Nike, Campbell Soup, Johnson & Johnson. The Town Meeting will focus
on childhood obesity and diabetes. It will be hosted by the Healthy Memphis Common
Table and coordinated by Academic Net and America Speaks. This large project
involves collaboration with hundreds of groups in the Mid-South (schools, churches,
government, business, health care payers, health care providers, etc.)

4. Leadership Memphis featured childhood obesity for its 2005 "Building a Healthier
Memphis Class Day" and opened the event to the public.

5. The State Health Department chose a Healthy Memphis Common Table team to
conduct faith-based ministry training in collaboration with public health providers and
planners.

6. Two project teams from The Leadership Academy have tackled the obesity and
diabetes issue.

7. Memphis University School project team is educating the student body about obesity
and diabetes.

8. UT highlighted obesity at two major events: the Rice Bowl competition and an Allied
Health forum.

9. The CDC’s VERB™ Campaign staff is working with the Common Table to reach
adolescents in Memphis.

10. Methodist Le Bonheur hosted a Childhood Obesity Epidemic Symposium for health

11. The UT/U of M Healthy Memphis Data Center was launched to track measurable
outcomes of the Obesity and Diabetes Initiative.

12. The Memphis Flyer and the Memphis Business Journal both did feature stories on
obesity.

13. The American Diabetes Association (ADA) has continued to host “America’s Walk for
Diabetes” and conduct numerous community education activities in Memphis

14. The Tennessee Department of Health has established a Faith-based/public partnership
program and a year-long campaign, “Respect Your Health,” as part of their Better
Health: It’s About Time! Initiative to build awareness about the benefits of healthy
lifestyles.

15. The Virtual Health Information Center and website (http://www.memphislibrary.org/virtualhic/loc... is making health information
available to people throughout the Mid-South. This is sponsored by the Memphis
Public Library Business and Science Department.

16. The Regional Bicycle and Pedestrian Plan is being designed to provide more
transportation choices, help ease congestion, improve safety, health and fitness, and
reduce air pollution. Memphis and Shelby County planning officials and the project’s
consultant team (RPM Transportation Consultants; Hawkins Partners; SR Consulting;
and McNeely, Pigott and Fox) collected opinions and data for the project last fall. The
plan, which will cover Shelby County, parts of Fayette County (Tennessee) and parts of DeSoto County (Mississippi), will include a comprehensive network of bike lanes, multi-use trails, road-sharing routes, and new sidewalks.

17. Methodist Le Bonheur Healthcare kicked off the *Methodist on the Move* campaign with its Walk for Life at Methodist University Hospital in March.

18. The Pediatric Wellness Roundtable overseen by Dr. Marian Levy has focused its over 50 members on critical issues for the health of children, and particularly on the impact of obesity and diabetes on children.

19. The Tennessee Healthy Weight Network has been very active in the Memphis area promoting awareness of the importance of a healthy diet and exercise.

20. Tennessee on the Move has led a Tennessee-wide education campaign to promote daily walking.
4.2 Improving Obesity and Diabetes Screening

The main goals of the Screening Working Group are to help see that everyone in Memphis has a BMI checked, and that everyone knows his or her BMI. Data presented in this report demonstrates that most people in Memphis do not get their BMI checked, and most people do not know their BMIs. This working group seeks to ensure that 100% of healthcare providers and screeners in Shelby County screen for Body Mass Index (BMI) using standardized tools/resources, and an evidence-based obesity/diabetes risk-factor profile protocol, followed by referral to appropriate care, as needed.

The Healthy Memphis Common Table recognized 2 major projects focused in the area of Screening in 2005:

1. **BMI Health Fair Screening Tool** – this project has led to the development of a tool with a BMI calculator on one side and information about risk categories, as well as health conditions that increase the risk of a high BMI, on the other side. The tool will be distributed at health fairs where para-professionals will assist people in learning to use the tool and understanding their results.
2. **Screening Evidence for Physicians** - Physicians need to receive more information on how to screen for obesity and for the risk of obesity, with an emphasis on medical evidence. This project will identify, collect, report, and distribute evidence and will package it for easy use by physicians. Paper and website distribution models are being considered. Easy access to new evidence, as it is released, will also be explored.

Many other Community Partner organizations are conducting additional projects to improve community-based screening for obesity and diabetes. For example:

1. **Bluff City Medical Society** kicked off an obesity initiative focused on increasing BMI screening by African-American doctors in Memphis.
2. **UT Pediatric Endocrinology** provided screening and treatment tools to hundreds of primary care doctors throughout the Mid-South.
4.3 Improving Disease Management

The main goal of the Disease Management Working Group is to help see that everyone with diabetes gets recommended care. Data presented in this report demonstrates that around half the time people in Memphis with diabetes do not get recommended care. This working group seeks to ensure that 100% of obese and diabetic patients in Shelby County receive the recommended care by: implementing evidence-based, replicable Demonstration Projects; enrolling 100% of the County’s diabetics in a data registry; and identifying and coordinating community resources for standardized obesity and diabetes disease management that 100% of Shelby Co. providers will implement.

The Healthy Memphis Common Table recognized 5 major projects focused in the area of Disease Management in 2005:

1. **Total Integration Approach to Diabetes Care in the Primary Care Setting.** This project, led by UT Lifestyle Diabetes and Obesity Care Center in collaboration with the UT College of Nursing and CentroSalud PC, is providing primary care practitioners with integrated assessment, education, technology, research and management assistance programs for their diabetic and obese patients. The project focuses on efficient group education using culturally sensitive programs, risk stratification, and tracking outcomes. The assessments will be aimed at enhancing patient compliance, self-management, and reducing referrals. HMCT is critical in obtaining support and recognition from community, providers, and payers.

2. **Evaluation of Bridges to Excellence for the Memphis Market.** This project is led by the Memphis Business Group on Health in collaboration with QSource, Baptist Health Services Group, Health Choice, local medical societies, individual physicians, and MBGH members. The traditional fee-for-service reimbursement system pays all physicians the same regardless of whether they practice evidence-based medicine or not. However, the payment scheme itself can and should facilitate the provision of appropriate care and therefore reward those physicians that practice evidence-based medicine. The Bridges to Excellence program pays a bonus to those physicians that provide diabetics with the appropriate care and achieve certain clinical outcomes. If more physicians practice evidence-based medicine for diabetics, and if more diabetics are cared for by physicians that practice evidence-based medicine, the quality of care for diabetics improves in Memphis, and the health status for diabetics improves. MBGH will undertake a community-wide evaluation of how many physicians would qualify as Diabetes Recognized Physicians by meeting the NCQA criteria for recognition. This evaluation will (1) identify the opportunity for improvement and (2) give physicians important feedback to actually improve the care they provide diabetics.

3. **Improving Diabetes Indicators for Medicare Beneficiaries.** This project, led by QSource in collaboration with the Health Loop Clinics and UT Medical Group, is providing tools and resources to 100 physicians and other clinical staff from UT Medical Group and Health Loop clinics to improve rates of dilated eye exams, HemoglobinA1c and lipid profile. HMCT will spread word of this project through media, website, posters, and recognition of physicians who improve diabetes care in the Mid-South.

4. **Harbor of Health.** This project, led by the Church Health Center in collaboration with Methodist University Hospital, First Tennessee, and other businesses, will provide a preventive community model for care and will incorporate the best of high-technology
and high-touch methods. A critical piece of the innovation is the buy-in/ownership from three major corporate businesses that will provide start-up funds for this venture. HMCT partnerships could be leveraged to establish more business partners in terms of buy-in from a concierge/corporate standpoint, subsidizing this care for their employees and enhancing overall health.

5. **MD Office and Hope and Healing Family.** This project, led by the Church Health Center in collaboration with the UT Youth Lifestyle Clinic, is providing programming including a “Teen Movin and Groovin” dance class (now expanded to all family members as well), Teen Discussion, teen sports, and Teen Takeover nutrition classes for Memphis families. Adult programming includes core offerings, e.g., Prescription for Health, exercise and movement assessment, Healthy Bodies, and access to all health education, nutrition, wellness and therapeutic classes (as indicated per member health status). HMCT physician partners are invited to make referrals to Hope and Healing for this program, or to simply come and learn more about programming available for both adult and pediatric populations.

Many other Community Partner organizations are conducting additional projects to improve disease management for obesity and diabetes.
4.4 Building a Business Case for Health Promotion

The main goal of the Business Case Working Group is to help see that every business, payer, and person finds a way to pay for prevention and real value in healthcare. Data presented in this report demonstrates that most employees in Memphis do not participate in workplace health promotion programs. This working group seeks to research and identify, or create, by 2005, effective business models for public and private organizations to follow to help reverse the growth of diabetes and obesity in the Mid-South.

The Healthy Memphis Common Table recognized 2 major projects focused on building a business case in 2005:

1. **Employers Weigh In On Business Case Against Obesity and Diabetes.** This project, through a collaboration involving numerous self-insured employers in the Memphis area, has worked to identify local businesses with active programs that support reducing the trend in obesity and diabetes, to inform the community about wellness programs currently provided by businesses, to publicize the business efforts, and to publicize increases in businesses who offer wellness/prevention.

2. **Aiming for Diabetes Quality Improvement.** This project is led by the Memphis Business Group on Health in collaboration with the Agency for Health Research and Quality. It seeks to develop and provide a diabetes services guide for regional employers that can serve as a national model.

Many other Community Partner organizations are conducting additional projects to build a business case for prevention for obesity and diabetes. For example:

1. Each year, Baptist Memorial Hospitals conduct a three-month employee health incentive program called Team Trim: A Healthy Competition, which provides incentives for employees to lose weight. The Baptist Memorial Hospital for Women also offers the Club Red program in conjunction with the American Heart Association, which helps female employees lose weight, exercise, and live a healthy lifestyle in an effort to prevent heart disease.

2. Methodist on the Move is the result of a partnership between Methodist Healthcare and America on the Move to help get their Associates fit. The program incorporates walking a few more steps every day and eating fewer calories every day. Methodist paid over half the cost of step counters for their Associates. At each of their facilities they mapped out walking routes that Associates can follow and keep track of how far they have walked. Methodist Healthcare also is offering a discount to Hope and Healing, a fitness facility, their website offers weight management tips and in each of their cafeterias they are offering a Weight Watcher menu option.

3. The Regional Medical Center Weight Watchers Program is being offered to all employees and is achieving high rates of participation through active promotion in the workplace. Since the inception of the program in July, 2003, The MED has not only supported employee participation by providing them with an on-site location for group meetings but has also offered a monetary incentive to members who reach a significant weight loss goal during a given time frame. Over the course of nearly 3 years, MED employees have lost over 2000 pounds. Program members have
reported decreased cholesterol levels, increased energy, and an overall feeling of better health.

4. St. Francis Hospital has a number of wellness activities for its employees. A walking track provides a safe walking experience for employees. Employees can get discounts to the YMCA programs and can pay dues to Weight Watchers at Work through payroll deductions. When employees’ children get sick, they can go to a “Sick Bay” provided by the hospital. The hospital has sponsored Weight Loss Olympics, Smoking Cessation programs, and Walk for Wellness when pedometers were given to the employees.

5. The Church Health Center (CHC) presents a number of programs to the public as well as to its employees. Team Boosters, a brown bag event for staff, combines spirituality and wellness. Employees can earn days off or cash for meeting set goals. The CHC also has programs called “Healthy Bodies” and “Commit to Quit.”

6. University of Tennessee Medical Group (UTMG) offers Weight Watchers at Work and “Lunch and Learn” sessions for employees at various sites throughout the city.

7. Baker, Donelson, Bearman, Caldwell & Berkowitz law firm has an employee walking program that is in its second year. They supply wellness information to employees including a health risk assessment. They have had health fairs offering cholesterol screening, flu vaccinations, and education booths. Employees can join Weight Watchers at Work and take advantage of gym discounts at certain locations.

8. Smith & Nephew has a Wellness Center that is open for employees from 8:00 a.m. until 8:00 p.m. They work with Health Fitness Corporation for their wellness services. The Wellness Center offers first aid, flu and tetanus vaccinations, and over-the-counter medicines. They offer screening for glucose, cholesterol, colon (using a take-home test), and prostate with follow-up on any sub-normal results. Other programs include a semi-monthly “Lunch and Learn program using a health observance calendar, an annual health fair with approximately 60 vendors, Weight Watchers at Work, reimbursements for certified health clubs, on-site aerobics for employees and their spouses, and a Diabetes Self-Management program.

9. Fred’s, which has multiple sites, offers its employees an annual health fair with screenings. The response to their Weight Watchers at Work program has been “fabulous.” They also support a walking program.
4.5 Tracking Progress to a Healthier Memphis

The Healthy Memphis Common Table appropriately has set as a 5-year goal to begin to show a real difference in obesity and diabetes trends in the greater Memphis area. The impact of these many projects will not be apparent overnight, nor is it possible to easily separate out the impacts of each of the many ongoing projects in the Mid-South. However, all the available evidence suggests that, for communities to substantially impact their health status, their interventions need to be multi-tiered and in multiple settings, to meet people where they live in order to have a meaningful impact on their lives.

Thus, although the Healthy Memphis Data Center is unable to report on all the good works that are going on in our community, each project group involved in the Obesity and Diabetes Initiative (ODI) will continue to be encouraged to set measurable goals and to measure, track and report on progress toward these goals. Project leaders will continue to report on their key process indicators at regular Healthy Memphis Common Table (HMCT) Community Partner meetings. In general, projects will focus on improving short-term process goals for their projects, such as participation rates, knowledge, attitude, and behavior change rates for project participants, and participant completion rates for each HMCT intervention.

Simultaneously, the Healthy Memphis Data Center (HMDC) will continue to focus on reporting our whole community’s progress toward its intermediate and long-term goals. Unlike individual project teams, the HMDC will focus on tracking key outcome measures for the entire community. During our first year of operation we have assisted the Shared Urban Data System (SUDS) in acquiring extracts of several healthcare utilization databases and have continued to develop the Memphis Behavioral Risk Factor Survey to expand its focus on the key health needs of children in the Mid-South. For some of these databases this has been our first year of data. However, most of these data resources will permit ongoing tracking of key health outcomes for our community. The Healthy Memphis Data Center remains committed to long-term tracking of our progress to a healthier Memphis.
DATA SOURCES

The data sources employed for this report are detailed below. Extracts of these databases are being maintained on the Shared Urban Data System (SUDS) http://suds.memphis.edu/ with the assistance of the Healthy Memphis Data Center.

The Memphis Behavioral Risk Factor Survey (MBRFS) –This survey was developed and is maintained by University of Memphis’ Center for Community Criminology and Research (CCCR), the Mid-South Social Survey Program and the University of Tennessee’s Healthy Memphis Data Center. The MBRFS uses the identical questions as the CDC Behavioral Risk Factor Survey (BRFS) as its core questions so that results from it can be directly compared with national and state statistics. Additional questions are directed to focus on the factors that can help us better attack the obesity and diabetes epidemic in the MidSouth. For more information go to the web links listed below:

http://msss.memphis.edu/
http://www.healthymemphis.org/2004_Memphis_Behavioral_Risk_Factor_Surv.217.0.html

The Youth Risk Behavior Surveillance (YRBS) –This survey is conducted in the Memphis area by the Memphis City Schools. For more information on national, Tennessee and local survey data go to the web links listed below:

http://www.cdc.gov/HealthyYouth/yrbs/index.htm

The Behavioral Risk Factor Surveillance System (BRFSS) –State Health Departments all over the country conduct this annual survey to assess trends in the behaviors and activities of Americans that have the greatest impact on their health. For more information go to the web link listed below:

http://www.cdc.gov/brfss/

Tennessee Medicaid/TennCare Healthcare Utilization Database –This database is maintained at the University of Tennessee by the Outreach Center, with the support of the Healthy Memphis Data Center and the Bureau of TennCare. For more information on key contacts for this database go to the web links listed below:

http://www.healthymemphis.org/Key_Contacts.136.0.html
http://www.utmem.edu/outreach/

Tennessee Medicare Healthcare Utilization Data –This data is maintained by QSource. For more information regarding this database go to the web link listed below:

http://www.qsource.org/
BlueCross BlueShield of Tennessee Healthcare Utilization Data – This data is maintained by BlueCross BlueShield of Tennessee. For more information regarding this database go to the web link listed below:

http://www.bcbst.com/

U.S. Census Data – Most recent U.S. Census data is maintained on the SUDS database at the University of Memphis. For more information regarding this database go to the web link listed below:

http://suds.memphis.edu/
DISCLAIMERS

The data presented in this report is subject to a number of major limitations. In general, these limitations are described on the referenced websites in the data sources section of this report. However, several limitations merit special mention here so that data highlighted in this report is not subject to misinterpretation.

All maps in this report are meant to be suggestive of general trends only. Readers should be aware that for some zip codes sample sizes are small. Therefore, the mean values or averages shown on maps for individual zip codes have high standard errors and may not accurately reflect characteristics of particular neighborhoods. Therefore, these data should not be used for statistical or detailed analytical purposes.

In general, the behavioral risk factor data presented for Shelby County as a whole should be deemed to represent accurate estimates. Similar methodology and identical questions were employed for the local survey and national CDC surveys of behavioral risk factors. However, since minor differences in methodology could exist, caution should be used in interpreting general population trends and differences between national, Tennessee and Shelby County populations.

The administrative data presented in this report similarly is subject to a number of limitations. TennCare and Medicare administrative or billing data is reported and analyzed for entire respective populations. Thus, no sampling error is realized, and any differences between groups reported are real differences. However, results should be interpreted with caution. Differences are sometimes low in magnitude and may not be of practical significance. Also, since this data is solely obtained for billed services, it may not accurately reflect all services received by people in Tennessee and Shelby County. In particular, billing data tends to underestimate the true prevalence of disease in the community because most prevalent chronic diseases like diabetes are under-diagnosed, and even when they are diagnosed these diagnoses may not be recorded in billing records. Therefore, the administrative data presented here should be interpreted with caution and should be understood to generally present minimum estimates of rates of disease and actual service utilization.
APPENDIX 1: UNDERLYING CAUSES OF THE EPIDEMIC

The underlying socioeconomic factors that contribute to the severity of the diabetes and obesity epidemic in our community are more difficult to define and even more difficult to change, but it is important to be aware of these underlying factors.

Memphis Behavioral Risk Factor Survey (MBRFS), 2004

- This map demonstrates that average income in many Shelby County zip codes is below the poverty level. The poorest zip codes are also generally the same areas with the highest rates of overweight, obesity and diabetes.

- Innumerable studies confirm the strong connection between poverty and disease. Long-term economic development strategies have potential to substantially improve the health status of Memphis residents.
Memphis Behavioral Risk Factor Survey (MBRFS), 2004

• This map demonstrates that in many of the same areas with low average income, average educational level is low. The zip codes with the lowest average educational level are also generally the same areas with the highest rates of overweight, obesity and diabetes.

• Innumerable studies confirm the strong connection between educational level and disease. Improved educational systems and opportunities can substantially improve the health status of Memphis residents on the long term.

• Investment in education, particularly physical education, is one of the best investments we can make for the health of our children.
APPENDIX 2: SHELBY COUNTY ZIP CODE MAP
## Healthy Memphis Common Table: Obesity & Diabetes Initiative

### Working Groups & Action Team Leader Organization Chart & List

<table>
<thead>
<tr>
<th>Working Group</th>
<th>Leader</th>
<th>Contact Information</th>
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</thead>
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</table>

No separate Action Teams at this time in Business Care Working Group: working as a whole to support the other Working Groups’ need for business case data.
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