COMMUNITY HEALTH

MAJOR HOSPITAL NEEDS ASSESSMENT ~ IMPLEMENTATION PLAN November 2016

Please address written comments on the Community Health Needs Assessment as well as requests for a paper copy to

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COMMUNITY HEALTH NEEDS ASSESSMENT ~ IMPLEMENTATION PLAN

MAJOR HOSPITAL

November 2016

Major Hospital
Community Health Needs Assessment and Implementation Plan
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COMMUNITY HEALTH NEEDS ASSESSMENT

PREFACE

Introduction

A ***Community Health Needs Assessment*** (CHNA) is designed to give a community the information it needs to become healthier. This may include, but is not limited to information about rate of disease, recreation facilities, health education, and socio-economic determinants of health and well-being. No two assessments are alike due to the unique nature of each community. However, there are similarities as regions, states, and the nation tackle similar challenges such as obesity.

Community Health Needs Assessments are a federal requirement for non-profit hospitals. The assessment is used to guide hospital and community leaders in working together to improve the health of the community.

The CHNA is conducted through analysis of primary and secondary data. Primary data is gained by interviewing and surveying residents of the community. A Community Health Needs survey was conducted in Shelby County from October 4 – November 4, 2016.

Secondary data is reportable information from schools, government, hospitals and other organizations. Health data is compiled and analyzed by several public health entities, such as universities, foundations and the *Centers for Disease Control and Prevention*. This public information provides a scientific assessment of our community's health and trends it over time.

From 2014 – 2015, Shelby County had surveys and analyses conducted that focused on residents aged 55 and older, economic development, and high school students. The first two assessments were specific to Shelby County. The youth assessment was part of the broader *Youth Risk Behavior Surveillance Survey* taken by Shelbyville Central High School students along with other students throughout Indiana. While it is not specific, it still provides important information about what is likely happening with Shelby County youth. These assessments are used in this CHNA.

Together, primary, secondary and more granular data provide a meaningful picture of our community's health and wellness. This information will help guide efforts to improve our county's health over the next three years.

This CHNA is made possible by: **MAJOR HOSPITAL ~ MAJOR HEALTH PARTNERS**

PREFACE

Executive Summary

Over the last three years, Shelby County has made progress in improving its health as can be evidenced by the County Health Rankings in this CHNA. This progress has been a multi-sector effort. Health is everybody's business.

The county's primary health challenges continue to be Major Cardiovascular Disease, Cancer and Diabetes. Chronic disease creates a burden on the individual, family, workplace, healthcare system and the community at large. While genetics play a role, these chronic diseases are largely the consequences of unhealthy lifestyles: unhealthy eating habits, sedentary lifestyles and tobacco use.

Socio-economic determinants of health complicate the picture. The Centers for Disease Control and Prevention has clearly found that a person's zip code or even his census tract or neighborhood can greatly influence how healthy she will be and how long she will live. While Shelby County is doing well over-all, on several socio-economic indicators there are still pockets within the county where a variety of nutritious food is not easily accessible; where seniors and youth live in poverty. Shelby County is in the top 50% of the Indiana's 92 counties in terms of how little is spent on public assistance. However, there are hard-working individuals and families who do not bring enough money into the household to meet the cost of living in Shelby County, even when juggling multiple jobs. They do not receive public assistance, but they don't make ends meet, either.

The Community Health Needs survey revealed that mental health and substance abuse are primary concerns of Shelby County residents. In the next 4 years, depression is projected to become the largest common health condition next to Major Cardiovascular Disease. Depression and chronic disease tend to be entwined.

The public survey revealed that many of the respondents were making healthy changes but that change is hard. The environments in which we live, learn, work, play, and pray influence decisions about what we eat and if it is natural and easy to take a walk and be physically active. The policies, systems, and many environments of Shelby County do not always support the healthy choice. Barriers are created to healthy living that many may not even be aware of as they chastise themselves once again for not having more discipline to stick to a diet or an exercise regimen.

Follows is primary and secondary health information about Shelby County and the many communities of the county. Based on this data, a plan has been formulated to improve the well-being of Shelby County's residents. The Community Health Needs Implementation Plan is

- **Congruent with the mission of Major Hospital ~ Major Health Partners**
- **In collaboration with other local services and organizations**
- **A continued demonstration of Major Hospital's commitment to improving the overall health of our community.**

PREFACE

Interviews with Community Health Stakeholders

*Community health stakeholders included representatives from

- Administration and Nursing from Shelby County schools
- Agencies serving older adults
- Agencies serving young children and their families
- Government
- Community Wellness Coordinator of Shelby County Purdue Extension
- Director of Disease Management – Population Health Clinics of Major Hospital
- Each quadrant of the county
- Faith community
- First Responders
- Healthy Shelby County coalition members
- Hispanic/Latino community
- Human Resources in local industry and small business
- Law Enforcement
- Nurse Practitioner from Major Health Partner's OnSite Clinics
- Shares, Incorporated
- Shelby County Health Department

In general, the interviews focused on the social and health issues in Shelby County, in the particular communities of Shelby County, and in the various domains represented. The interview questions were based on the 2015 Community Health Needs survey of the Indianapolis Metropolitan Area hospitals, secondary health data for Shelby County, and community health research. The interviews not only captured important perspectives but also informed what additional secondary data should be explored for this Community Health Needs Assessment.

While there were unique perspectives and issues identified from each interview, there was also considerable similarity in what each person saw as the community health challenges facing Shelby County and in some ideas about what action might need to be taken. Follows are the top issues gleaned from these interviews as well as a vision of how a healthier community might look.

**For a more specific breakdown of persons interviewed and populations represented, see Addendum, pages A132-134.*

PREFACE

*Interviews: Top Social Issues

1 Mental Health Problems

- Lack of treatment options
- Law enforcement and First Responders as defacto mental health system

2 Under-employment; hard-working families who do not make enough money to achieve the basic cost of living in Shelby County

- Need to bridge the opportunity gap between different income levels
- Nearly everyone employable is employed with current low rate of unemployment in the county
- Hunger and food insecurity for seniors and low income families

3 Alcohol and drug abuse

- Increased DCS cases
- Grandparents raising grandchildren
- Crime
- Drain on community resources
- Insufficient resources for treatment and recovery
- Entwined with mental illness

4 Breakdown of the family

- Inadequate parenting, relationship, and life skills
- Parents not holding their children accountable; culture of blame
- Divorce; economic impact of divorce
- Over-worked and over scheduled, rushed and little time together

5 Insufficient money coming into the county

- Insufficient upper and middle income housing so that would-be Shelby County investors can live in the county and not just work in the county
- Small businesses in the county cannot generate the tax revenue needed for community and infrastructure development

PREFACE

Interviews: Top Health Issues

1 Unhealthy diet and subsequent health problems

- Lack of access to fresh produce and nutritional food for lower income families, some neighborhoods and some rural communities
- Patients with diet-sensitive conditions in the population health clinics of MHP do not have healthy diets that would help optimally manage their diseases.
- Lack of knowledge about nutrition and healthy eating
- Highly processed, easily accessible and affordable convenience food

2 Mental Health problems

- Lack of treatment options in Shelby County
- Rural communities and schools lack knowledge of resources in general and for mental health and substance abuse treatment in particular

3 Lack of access to health promotion, education, immunizations, and health care

- In rural communities
- For lower income families
- For adults with Intellectual and Developmental Disabilities (IDD) and their caregivers
    - Health problems are often identified via crisis instead of routine care.
    - Care may be through the Emergency Department of Major Hospital and therefore is neither preventive nor comprehensive.
    - Most of the consumers of Shares, Incorporated were in Life Skills programming in their K-12 schools. They have not had access to the basic reproductive health information that is part of the curriculum of health classes. Sexually Transmitted Infections and pregnancy is a concern, especially with the younger female consumers who are easily exploited.

4 Obesity

- Lack of knowledge about immediate as well as long term benefits of eating healthy foods instead of processed convenience foods
- Practical guidance on how to eat healthy on a budget, how to shop, how to prepare foods, prepare healthy food quick, how to eat healthy in the 21st Century.
- Physical activity and healthy eating needed in workplaces since that is where people spend most of their time
- Physical activity options are limited in rural communities
- Physical activity is cost prohibitive for lower income families (gym memberships, youth sports)
- Technology: "Adults and youth do not play football – they play fantasy football."
- Physical activity campaign needed, especially after Blue River Trail opens

5 Culturally competent approach to disease prevention and management

- English as a second language for many laborers in the work force
- Hispanic/Latino residents for whom disease is embarrassing and is a family rather than an individual issue

PREFACE

Interviews: Mental Health

1 **Improve knowledge of the Mental Health resources we do have in the county and surrounding area**

- Equip rural communities and schools with information about resources
- People need help navigating the complex mental health system. Who are the point persons who can help the public navigate the Mental Health systems of care?

2 **Improve education about mental hygiene, stress management, and coping skills**

- Teach in schools; organizations serving youth, seniors, and families with young children; churches; health care; business and industry; post-secondary education; etc.
- Top reason cited for missing work was stress from work, child and parent care

3 **Increase number of Mental Health providers in Shelby County**

- Able to accept HIP 2.0, Medicaid, Medicare, commercial insurance and sliding fee scale for self-pay patients
- Qualified to provide substance abuse treatment
- Consider the role of government and non-government organizations in recruiting and incentivizing provider(s)

PREFACE

Interviews: Miracle Question

Shelby County has health and wellness challenges. If a miracle happened tonight while you were sleeping, what would you notice tomorrow that would tell you Shelby County had changed and now embraced a culture of health?

- Children are well-nourished and playing outside without any technology in sight. They and their families have safe places to live and play.
- There are affluent neighborhoods and low-income neighborhoods. Neighborhoods are places where people know one another. Most people are able to meet their basic needs.
- There are community gardens in neighborhoods and a variety of nutritious, affordable food is easily accessible.
- Quick marts stock fresh, healthy food items because hardly anyone was buying the sugary, processed drinks and convenience foods anymore.
- Healthy eating is a priority with healthy menu items at area restaurants, concession stands, events and the Major Medical Center.
- Families are cooking together and sitting down to eat together at least a couple of nights a week. Kids are getting into less trouble because they feel connected to their families.
- At school, every student has a standing desk and physical activity is incorporated daily into the learning environment.
- School cafeteria garbage cans are no longer filled with the healthy lunch items. Students actually eat them.
- People of all abilities, ages and stages are seen walking regularly on safe, well-lighted sidewalks for their pleasure or to get to their destination.
- Biking is regularly enjoyed on safe, well-marked and vehicle-honored paths and on the Blue River Trail. There are lots of physical activity opportunities for youth and adults.
- Latino physicians have been recruited to join the staff at Major Health Partners.
- Diversity is welcomed and celebrated because it enriches the community. There is a healthy curiosity about differences and a deep respect for all people.
- There is very little physical, emotional, spiritual, or verbal abuse.
- People are curious, motivated, and invested in taking care of themselves: their minds, their bodies, and their spirits. Of course, policies, systems, and the environment now make it easier to make healthy choices in the places where people live, work, learn, play and pray.
- There is no public use of tobacco or nicotine. In fact, hardly anyone uses nicotine.
- Drug and alcohol problems are barely present. Drug-related crime is down significantly.
- There are fewer mental health problems because of good nutrition, improved health, and more opportunities, more hope. But when there is a problem, help is readily available.
- People seem a little less stressed. They just feel better, healthier.

PREFACE

Survey Methodology

In order to adequately represent the diversity by which residents receive information, a variety of options for responding to the survey was available from October 4 – November 4, 2016:

- **Email Distribution:** The survey was distributed through multiple existing distribution lists for community service providers, ministerial association, medical and ancillary providers, government, schools, nonprofits, and the *Healthy Shelby County* coalition.

- **Internal Communication Systems:** Industry, City government, and *Major Health Partners* distributed the survey through their internal communication systems. The *Society for Human Resources Management* helped distribute the survey in their respective businesses and industries. Nonprofit executive directors promoted it with their boards.

- **Printed Surveys:** Paper surveys were broadly distributed throughout the county with special attention to areas where older seniors live and receive services; to lower-income housing communities and the agencies that provide services to lower-income residents; the *Shelby County Public Health Department*, healthcare facilities; *ShelbyGo* (public transportation); the *Shelby County Public Library*, and Hispanic churches and service providers. Local industry has several employees from Burma (Myanmar), so a Burmese printed translation was made available along with Spanish and English language surveys.

- **Promotional Signs and Fliers:** Signs noted URLs of English and Spanish surveys, location of paper surveys, and highlighted the ability to use smart phones to take the survey. Signs and fliers were broadly distributed to places where people congregate and/or must wait to be served and to where public notices are posted in schools, industry, health clinics, neighborhoods and all the towns of Shelby County. Special attention was given to low-income neighborhoods that might have limited access to other promotions.

- **Meetings and Events:** The MHP Community Liaison promoted the survey at several public meetings, organization meetings, and public events.

- **Social Media:** The survey was promoted on the *Facebook* pages of *Major Health Partners* and *Healthy Shelby County*.

- **Traditional Media:** The survey in its entirety appeared 3 times in the *Shelbyville News* along with an article about the Community Health Needs Assessment. The survey was also promoted on *The Sky's the Limit* local radio program and was featured through the *Shelby County Chamber of Commerce*.

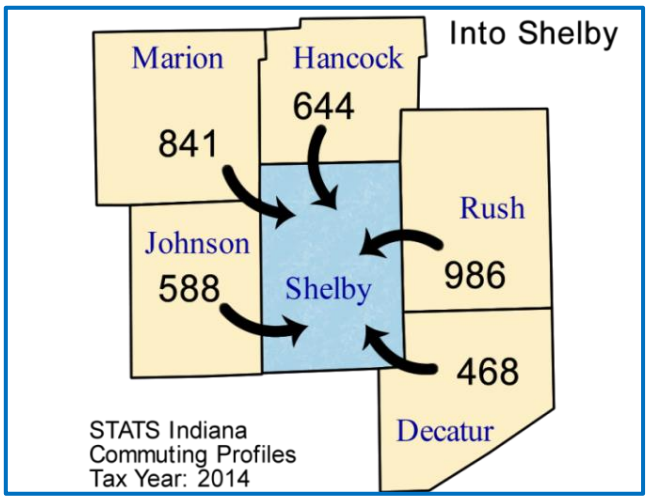
- **Websites:** Links to English and Spanish language surveys were on the MHP and *Healthy Shelby County* websites.

PREFACE

Survey Methodology

Steps were taken to give full voice to the entire county, regardless of geography, gender, race, or socio-economic level. There is fairly good distribution across ages, household income, ethnicities, and population centers. However, there are still deficiencies. The Fountaintown and Flat Rock areas are under-represented as are Hispanic residents. Because of the workers commuting into the county, the percentage of high-end earners was greater than the county's income rates per the 2014 census.

Based on the 2014 Tax Year, 18% of Shelby County's workforce commuted from 23 other counties and 3 other states. The chart below shows the top 5 counties sending workers into Shelby County. These employees use the *MHP OnSite Clinics*, teach our children, eat in our restaurants, put out our fires, provide medical care for our families, work in our industries, and so on. Therefore, they are important community stakeholders in Shelby County and their viewpoints will be heard in this *Community Health Needs Assessment* survey.



Community Health Needs Assessment Survey

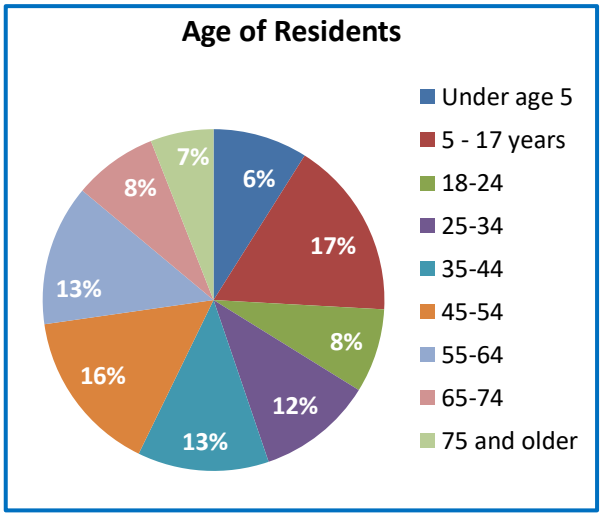
The sample size of the assessment is ~ 643. The sample size is not specific because a different number of individuals opted to answer each question. The sample size is significant. According to the county's estimated 2015 population of 44,478 citizens, a minimum of 381 respondents was needed to adequately reflect the county's population at a 95% confidence level. The data was separated by age, ethnicity, income and zip code.

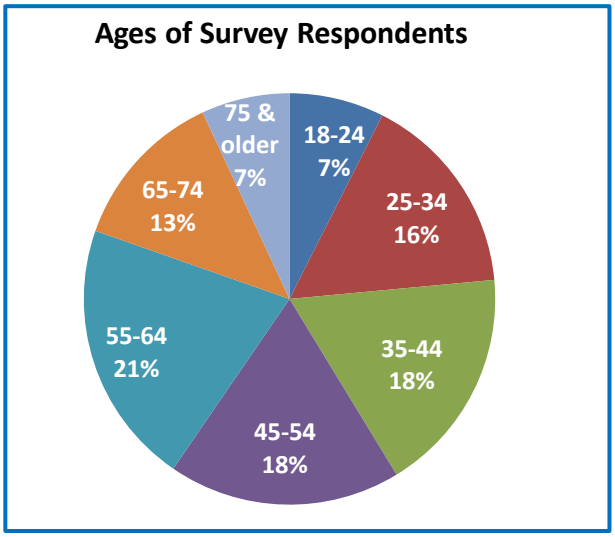
PREFACE

Demographics: Census and Survey Respondents

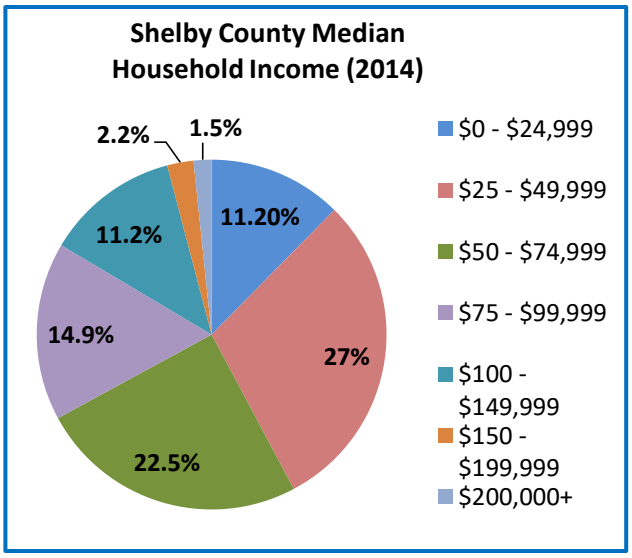
Shelby County Census:

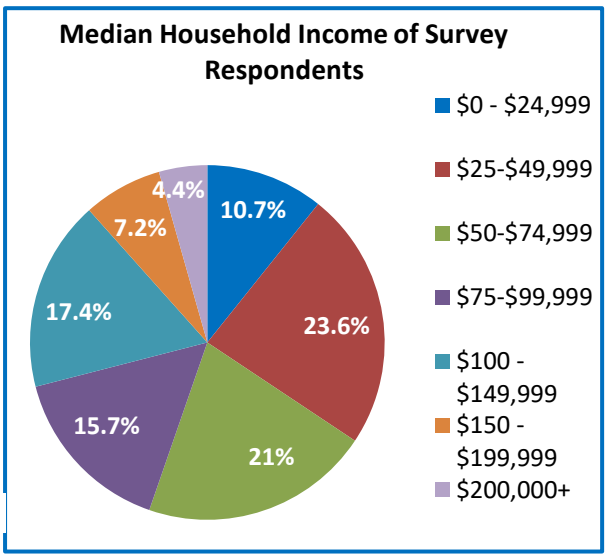
- Shelby County population (2015 census estimates): 44,478 residents
- 23% are under the age of 18 years
  - 6% are under the age of 5 years
- 77% are over the age of 18
  - 19% are ages 18 – 34
  - 42% are ages 35 - 64
  - 15% are over the age of 65





The 2016 *Ball State University* economic analysis of Shelby County reports that since 2010 there has been migration into the county of children ages 1-4 and adults ages 25-35. The appraisal is that young families have been moving into the county. Adults 18- 24 have also been moving to Shelby County, albeit at a slower pace. The highest percentage of people moving into the county has been 35–44 year olds.



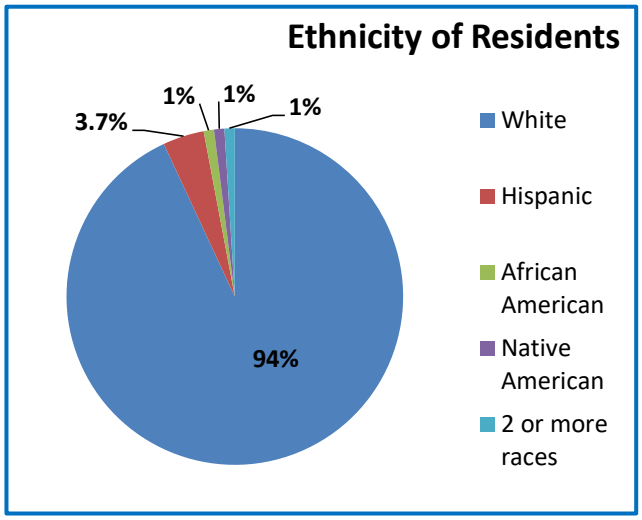


PREFACE

Demographics: Census and Survey Respondents Geography

Shelby County Census:

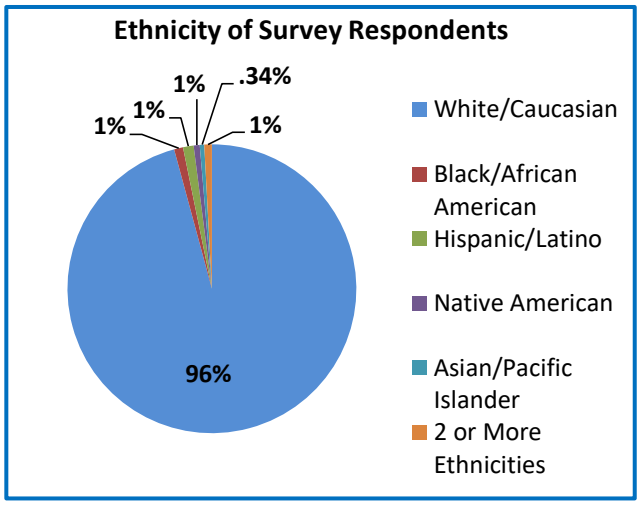
- 94% identify as Caucasian/White
- Nearly 4% as Hispanic
- Just over 1% as African American/Black
- 0.5% as Asian
- 1% as Native Americans
- Just over 1% identify as being of 2 or more races



English is the primary language in Shelby County, but per the 2014 census, 4.1% of the population may speak another language at home.

- Spanish 1307
- Japanese 136
- German 72
- Guyarati 25

Local industry also employees several workers from Burma (Myanmar)



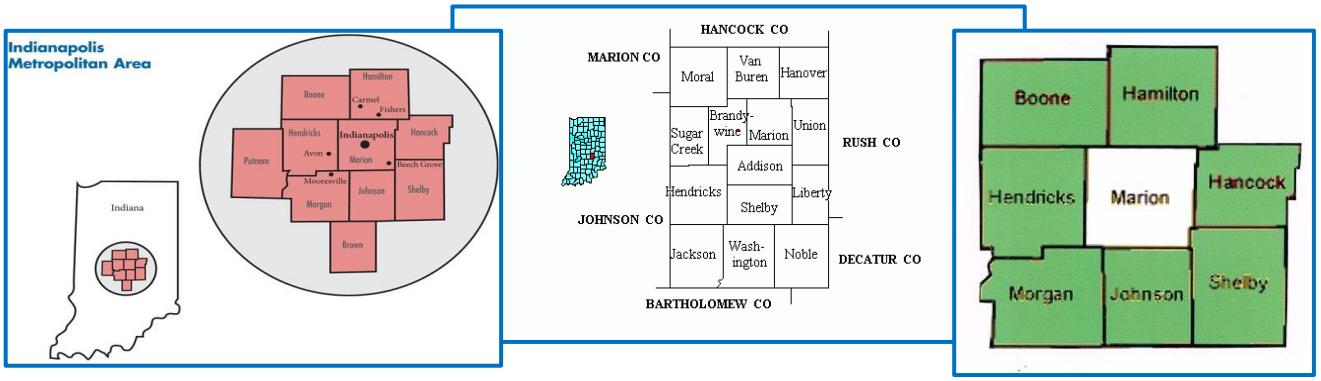
Geography

Geographic Region of the Community Health Needs Assessment

The CHNA covers the geographic region of Shelby County, Indiana. Shelby County is primarily a rural community of just over 411.15 square miles located in central Indiana with 108.1 people per square mile. The county is considered a "donut" county along with Boone, Hamilton, Hancock, Hendricks, Johnson and Morgan Counties that surround Marion County, home of the state capitol, Indianapolis. Shelby County is considered part of the Indianapolis Metropolitan Area.

PREFACE

Demographics - Geography

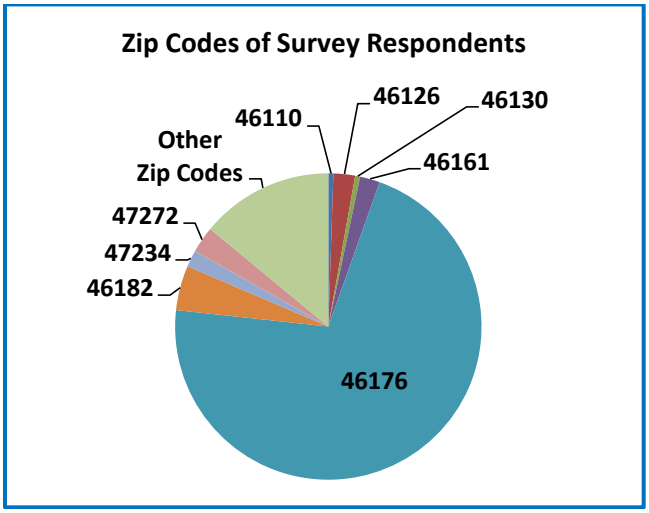


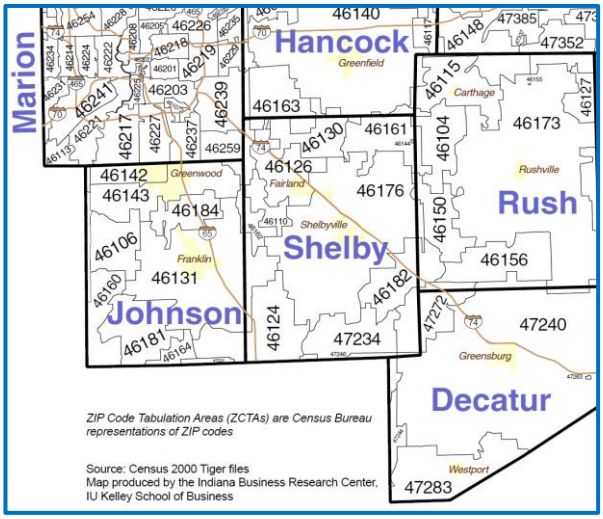
The County Seat of Shelbyville is located in the middle of the county, 28 miles from Indianapolis. The county borders Rush, Bartholomew, Decatur, Hancock, Johnson, and Marion Counties. There are 14 townships and several small towns in the county including 3 moderately sized towns: Waldron, Morristown, and Fairland.

Shelby County includes the following primary zip codes:

46110 (Boggstown)
46176 (Shelbyville)
46130 (Fountaintown)
46144 (Gwynnville)
46161 (Morristown)
46126 (Fairland)
46182 (Waldron)
47234 (Flat Rock)

Several zip codes have a small presence in Shelby County but their population centers are located in another county: small areas of 46131 (Franklin), 46150 (Manilla), 46162 (Needham), 46163 (New Palestine), 46259 (Marion County), 46104 (Rush County), and 47246 (Hope). St. Paul (47272) and Edinburgh (46124) are in the Shelby Eastern (Waldron) and Southwestern school districts, respectively. The area of St. Paul within Shelby County is 9% and the Edinburgh area is 2% of Shelby County's total population. (STATS Indiana, 2015).





PREFACE

Demographics – Shelby County Characteristics

The following information about Shelby County is from the 2014- 2015 *U.S. Census Bureau* data.

Dials indicating in which quartile Shelby County falls within Indiana's 92 counties are from the *Healthy Communities Institute*.

Shelby County has had a 0.2% population increase since the 2010 census. Shelbyville is the County Seat with 43% of the county's population: 19,133. There are 17,315 households in the county with an average of nearly 2.5 persons per household. 12,021 households are families. 8,753 couples are married. Female and male residents are nearly even, with females at 50.5% of the population. There are 3,124 civilian veterans. The median age in the county is 40. The median age in the County Seat is 36.

The county has 4 school districts, 2 parochial elementary schools, and an *Ivy Tech* campus through Indianapolis. There are also 2 adult learner programs for those without a high school diploma: the GED program through the *Blue River Career Center* and an accelerated high school diploma program through the *Excel Center* – a *Goodwill Industries* program.

Uninsured residents were 12.6% of the population in 2014. However, 36.9% of Latino residents were uninsured. Unemployment rate as of July 2016 was 3.7%. 

Shelby County has a low violent crime rate: 34 violent crimes from 2010 – 2012, placing the county in the top 50th percent of all Indiana counties. 

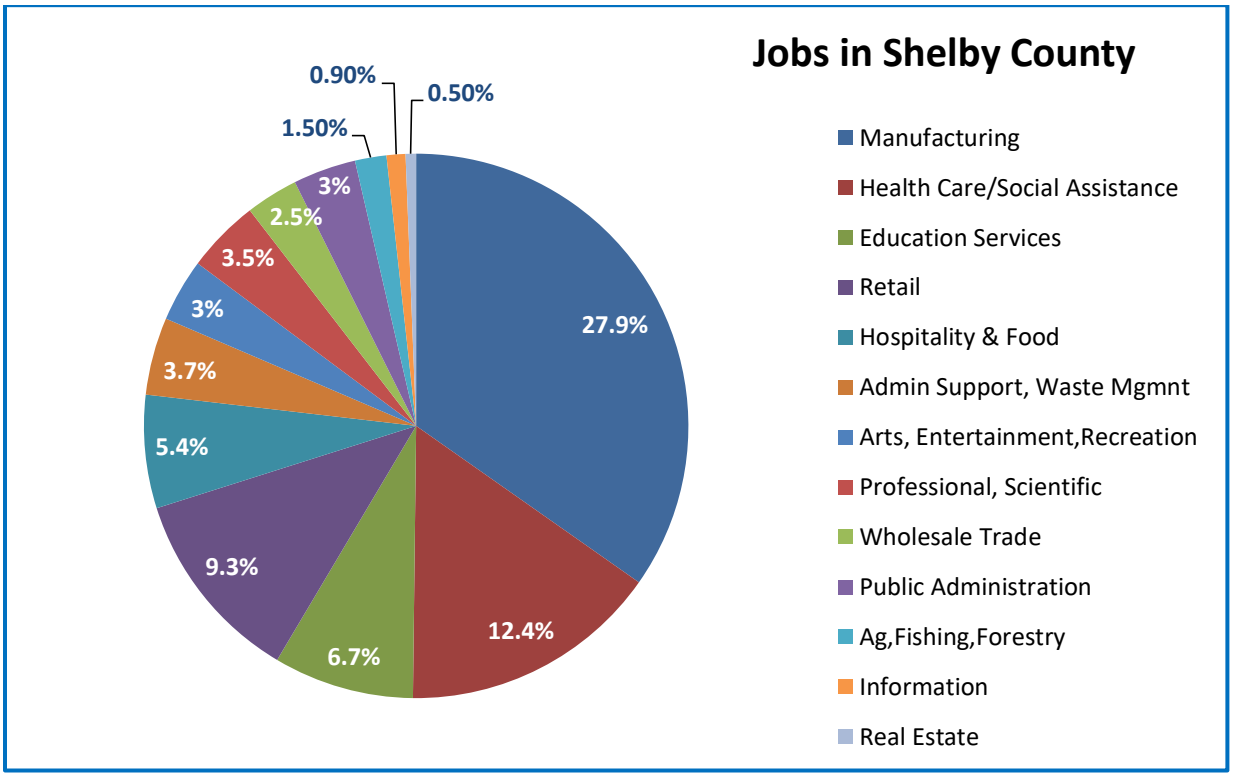
Shelby County – County Seat Comparison (2014)

	Shelby County	Shelbyville
Median Age	40	36
Per Capita Income (2014)	$24,200 	$21,240
Median Household Income (2014)	$52,341 	$41,525
Owner-Occupied Homes (2015)	71.2%	51%
Poverty	11.8% 	17%

PREFACE

Demographics – Jobs

In 2014 the top jobs in Shelby County were Manufacturing, Health and Life Sciences, Retail Trade, and Education Services. Per the census, there are 3,602 companies in the county.



Per the 2014 tax year, 26% of the implied *resident* labor force worked outside of Shelby County. The implied workforce receives 18% of its labor from outside Shelby County.

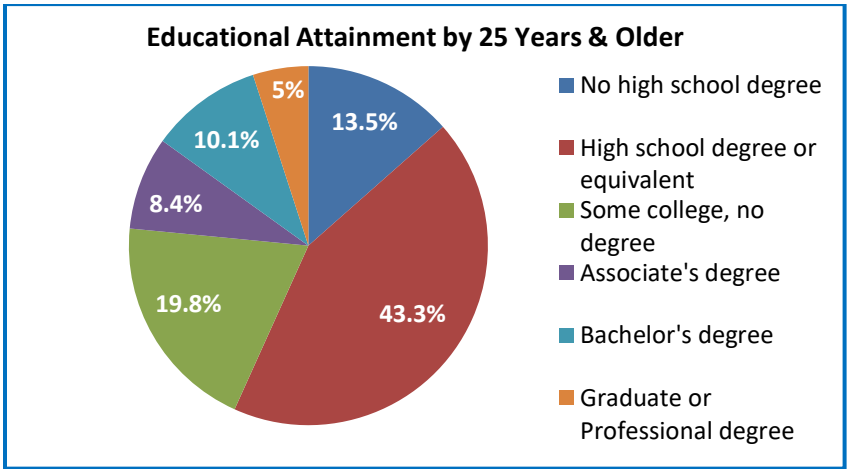
Workforce	
Number of people who live in Shelby County and work *(implied resident labor force)*	29,569
Number of people who live AND work in Shelby County	21,813
Total number of people who work in Shelby County *(implied workforce)*	26,638
Commuters	
Number of people who live in Shelby County but work outside the county	7,756
Number of people who live in another county (or state) but work in Shelby County	4,825

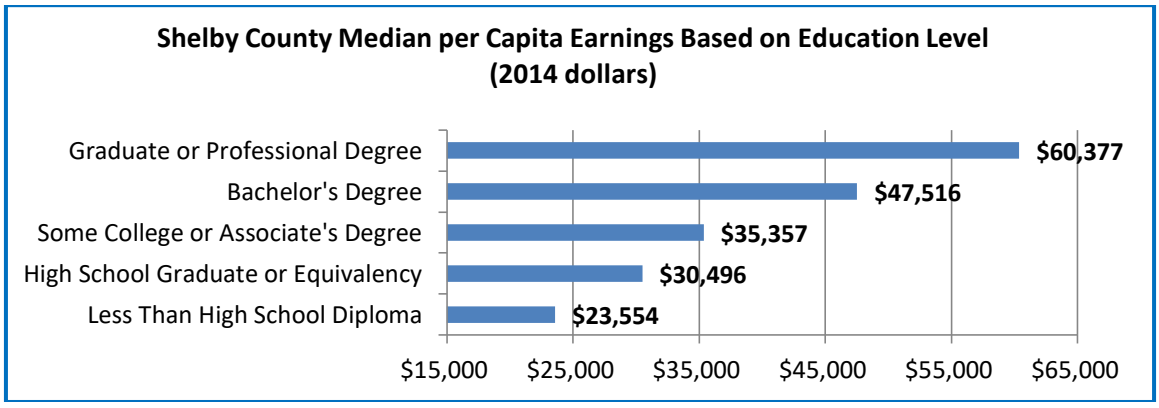
STATS Indiana, 2015

PREFACE

Demographics – Education

Shelby County is in the median quartile among Indiana counties in its rate of residents 25 years and older with high school degrees or higher  and those with Bachelor's degrees or higher  (*American Communities*, 2010 – 2014). The *Lumina Foundation's* goal is by 2025 60% of American's will have degrees, certificates, or high-quality post-secondary training.





The county's schools are in the top 50% of Indiana's 92 counties in the following areas:

- 4th Grade Students Proficient in English/Language Arts  **76.9%**
- 4th Grade Students Proficient in Math  **72.9%**
- 8th Grade Students Proficient in English/Language Arts  **67.5%**
- 8th Grade Students Proficient in Math  **64.4%**
- High School Graduation (within 4 years of entering 9th grade  **96.1%**

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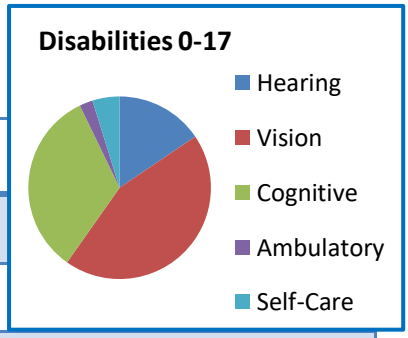
Demographics – Disability

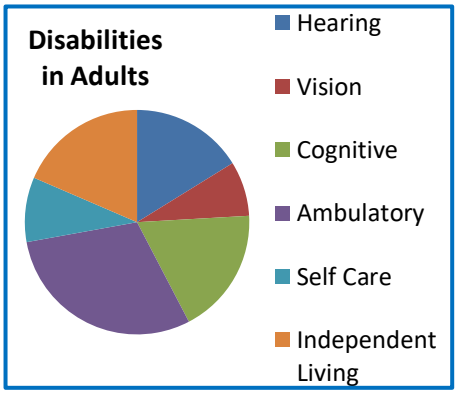
Disability: Per the 2015 census, in Shelby County there were 6,497 persons age 0 – 75+ living with at least one disability. The *United States Census Bureau* identifies the following disabilities:

- **Hearing difficulty**: deaf or having serious difficulty hearing.
- **Vision difficulty**: blind or having serious difficulty seeing, even when wearing glasses.
- **Cognitive difficulty**: due to a physical, mental, or emotional problem; includes dementing illnesses as well as intellectual and developmental disabilities that begin in childhood and typically last throughout a person's lifetime.
- **Ambulatory difficulty**: having serious difficulty walking or climbing stairs.
- **Self-care difficulty**: having difficulty bathing, dressing or feeding one's self.
- **Independent living difficulty**: due to a physical, mental, or emotional problem.



*Shelby County Residents	2014 Disability Estimates	Types of Disabilities
With any disability	**4,830** (12% of 2014 population of 43,746)	
0-4 years old	**35** (1.2% of this age group)	Hearing 26%; Vision 100%
5-17 years old	**404** (5.1% of this age group)	Hearing 13%; Vision 11%; Cognitive 83%; Ambulatory 6%; Self-care 12%
18 to 34 years	**441** (5.1% of this age group)	Hearing 15%; Vision 22%; Cognitive 64%; Ambulatory 49%; Self-care 15%; Independent Living 36%
35 – 64 years	**2392** (13.1% of this age group)	Hearing 24.5%; Vision 13%; Cognitive 31%; Ambulatory 55%; Self-care 21%; Independent Living 28%
65 - 74 years	**1023** (29% of this age group)	Hearing 45.5%; Vision 14%; Cognitive 19%; Ambulatory 63%; Self-care 20%; Independent Living 32%
75 years and older	**1173** (44% of this age group)	Hearing 40%; Vision 12%; Cognitive 27%; Ambulatory 63%; Self-care 16%; Independent Living 47%

Percentages for disabilities are rounded up and do not equal 100%: a person may have more than one disability. *Civilian (non-active duty military), non-institutionalized residents (nursing homes, prisons, jails, mental hospitals and juvenile correctional facilities)



In 2013 the *United States Social Security Administration* (SSA) reported the following:

- Estimates are that 1 in 4 persons will experience at least one disability in his/her lifetime.
- Just over 1 in 4 of today's 20 year olds will become disabled before they retire.
- About 12% of the U.S. total population is disabled and more than 50% are in their working years from ages 18-64.
- **Approximately 90% of disabilities are caused by illnesses rather than accidents.**

PREFACE

Demographics – Disability

Social Security Insurance (SSI) for aged, blind, and disabled:

- In Shelby County, 1.5% of the population (685 persons) infants through older adults receive SSI (2015).
- The range of residents receiving SSI benefits among counties surrounding Shelby and Marion was 0.5% to 1.8% of the population.

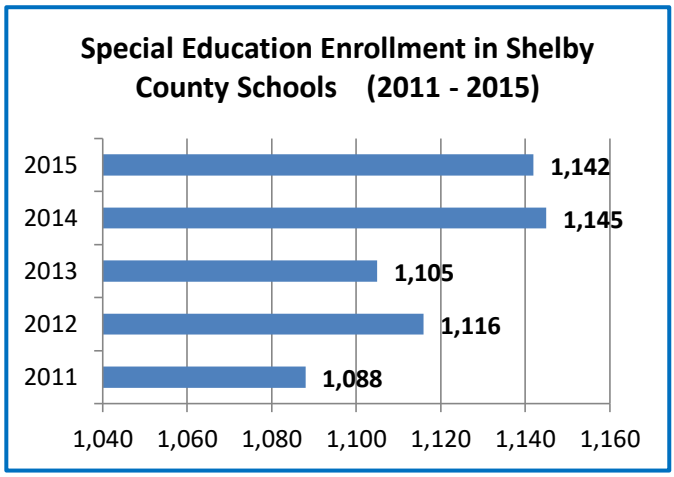
Developmental Disabilities:

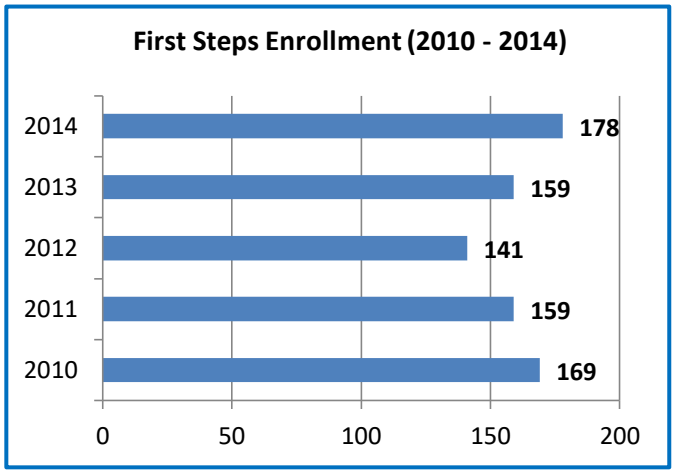
- **One in 6 children in the U. S. had a developmental disability in 2008** ranging from mild disabilities such as speech and language impairments to serious developmental disabilities, such as intellectual disabilities, cerebral palsy, and autism. (*CDC*, 2006 – 08)
- Autism Spectrum Disorder is the fastest growing developmental disability in the United States, conservatively affecting 1 in 68 children (*CDC, 2014 and 2016*).
- Among children with developmental disabilities, 44% have a normal to above normal intelligence (*CDC*).

Autism:

- A complex neurological disorder that affects the normal functioning of the brain, impacting development in
  - Social interaction and
  - Communication skills.
- **Children and youth with ASD have annual medical expenses 4.1 to 6.2 times greater than children without Autism.** (*CDC*, 2014 – 2016).
- In 2006 the autism rate was 1 in 110; today it is 1 in 68.

Enrollment has increased for Special Education in Shelby County's schools and for *First Steps:* an early intervention program addressing intellectual/ developmental delays and physical disabilities for infants thru age 3. Preschoolers still in need of services transfer to the public school system.

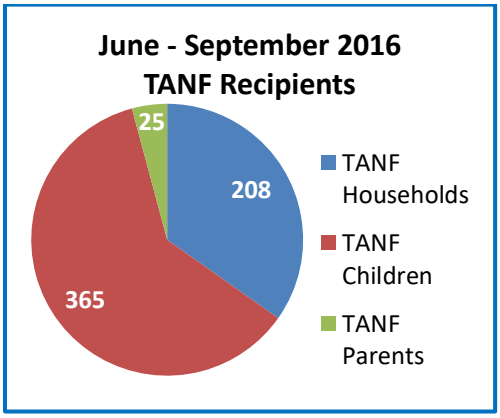


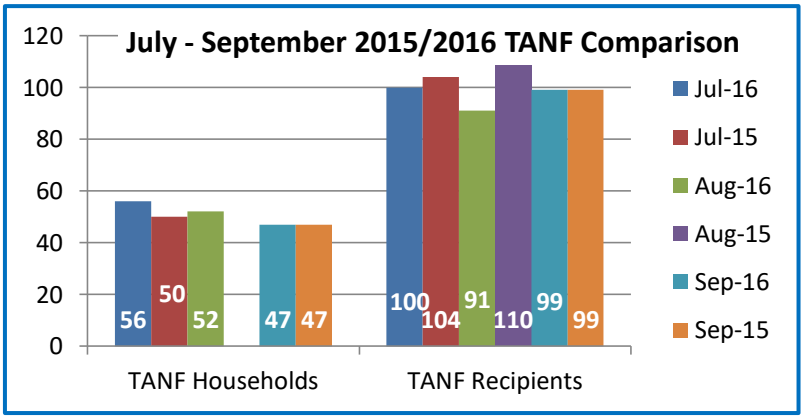


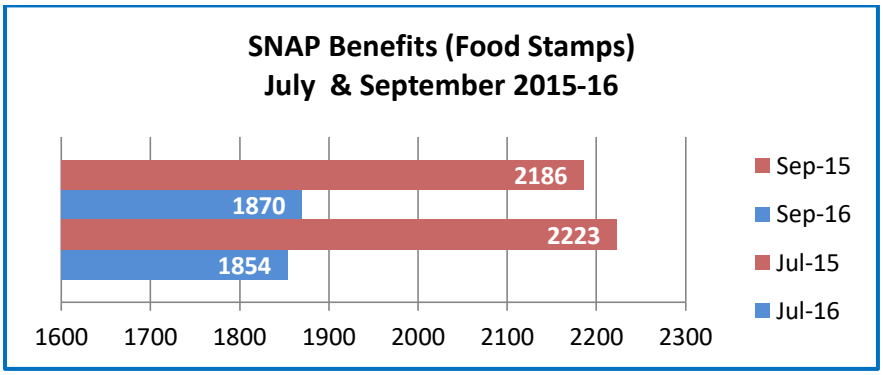
PREFACE

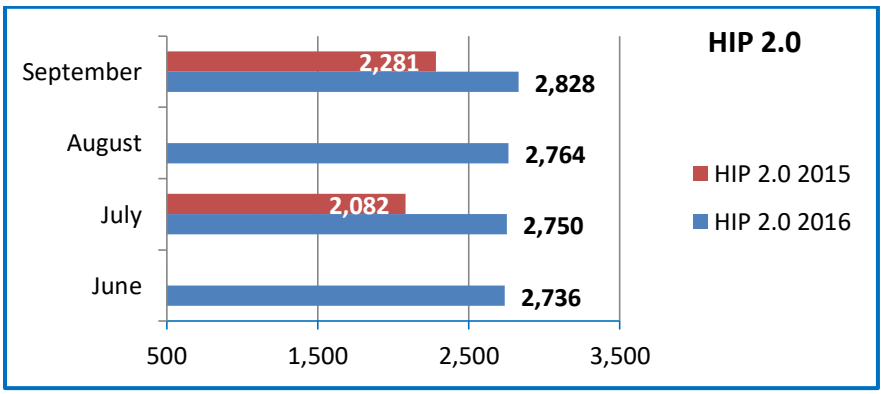
Demographics – Public Safety Net

Shelby County is just at the top 50th percentile of Indiana counties with regards to the number of persons receiving *Temporary Assistance to Needy Families* (*TANF*) - public cash assistance. The cut-off was 2.0% of the population and Shelby County was at 2.1%. In 2010 in the 5 Indiana counties with the highest food stamp usage, the average monthly usage per person was $26.42. Shelby County's spending per person was $16.52.









The number of people receiving *Supplemental Nutrition Assistance Program (SNAP)* benefits decreased largely due to reinstatement of work requirements which were waived during the recession.

HIP 2.0 is Indiana's Medicaid expansion program for 18-64 year old adults who are at 138% of the *Federal Poverty Level* and not eligible for Medicaid or Medicare. It has cost-sharing features through premiums and a type of health savings account for preventive care.

PREFACE

Demographics – Public Assistance

In August 2016 there were 9,309 residents enrolled in Indiana Health Coverage Programs. In addition to *HIP 2.0*, there are the following programs:

- *Hoosier Healthwise*, for children age 18 and under plus caretaker parents: 4,058 persons.
- *Hoosier Care Connect* for the aged, blind or disabled and some foster children: 497 persons.
- *Fee for Service*, for dual Medicare/Medicaid-eligible emergency services: 1,242 persons. (*FSSA*, August 2016)

***WIC* is for income eligible and nutritionally at-risk *Women, Infants and Children*.** *WIC* has remained fairly steady over time. Important to note is that the percentage of breast-feeding mothers at 1 year after delivery has increased. Breast feeding is an important protective health factor for infants and women.

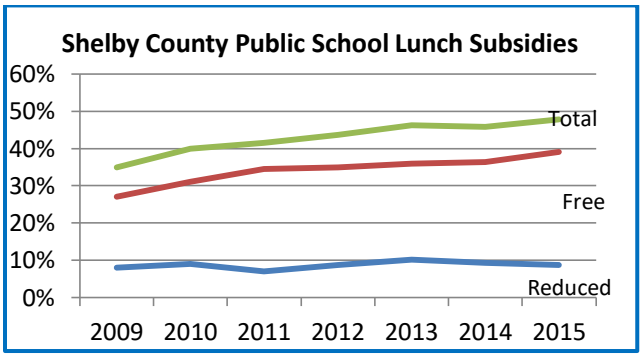
WIC Special Supplemental Nutrition Program	2010	2011	2012	2013	2014
Pregnant Women					
Number	**365**	**329**	**328**	**324**	**318**
Percentage	**19.3%**	**18.3%**	**18.%**	**18.9%**	**17.6%**
Breast-feeding Women up to 1 year after delivery					
Number	**84**	**68**	**58**	**63**	**83↑**
Percentage	**4.4%**	**3.8%**	**3.3%**	**3.7%**	**4.6%**
Non-Breast-feeding Women up to 6 months after delivery					
Number	**145**	**145**	**149**	**131**	**123**
Percentage	**7.7%**	**8.1%**	**8.4%**	**7.6%**	**6.8%**
Children under the age of 5					
Number	**677**	**690**	**686**	**670**	**717**
Percentage	**35.7%**	**38.4%**	**38.9%**	**39.1%**	**39.7%**
Infants – Babies under the age of 1 year					
Number	**624**	**564**	**543**	**527**	**565**
Percentage	32.9%	31.4%	30.8%	30.7%	**31.3%**
Total	**1,895**	**1,796**	**1,764**	**1,715**	**1,806**

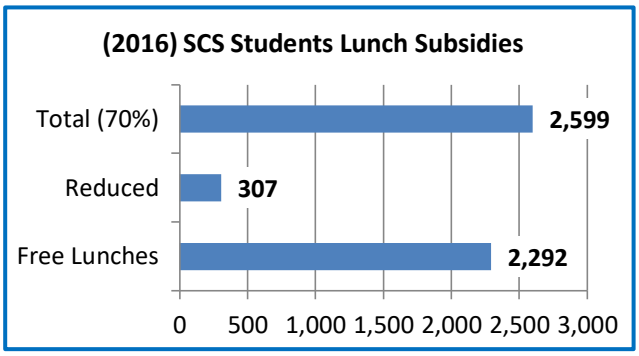
PREFACE

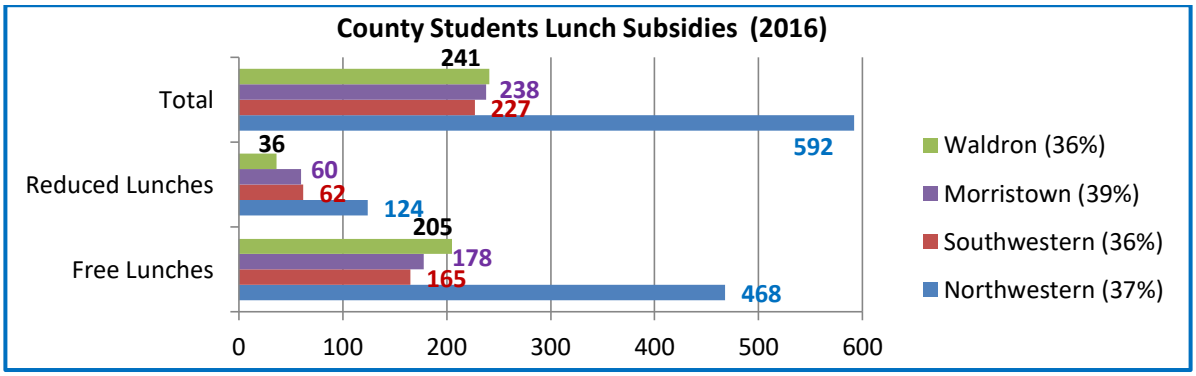
Demographics – School Lunch Subsidies

Public School Student Lunch Subsidies	2009	2010	2011	2012	2013	2014	2015
Free lunches							
Percentage Students	27%	31%	34.5%	34.9%	35.9%	36.4%	**39.1%**
Number Students	2,081	2,383	2,603	2,594	2,609	2,703	**2,886**
Reduced fee lunches							
Percentage Students	8%	9%	7.1%	8.8%	10.2%	9.4%	**8.7%**
Number Students	629	691	533	654	743	697	**640**
Total free & reduced							
Percentage Students	35%	40%	41.5%	43.7%	46.2%	45.8%	**47.8%**
Number Students	2,710	3,074	3,136	3,248	3,352	3,400	**3,526**

School lunch subsidies have increased a little over 2% each year since 2009. The largest increase was between 2009 and 2010 during the recession. In 2015 lunch subsidies were received by 47.8% of Shelby County's students (*Kids Count Data Center*). In top performing U.S. counties, only 25% of students are eligible for lunch subsidies. In 2014 with regards to only free lunches, the county was in the top 50th percentile of Indiana counties. Household income for free lunches is 130% of the *Federal Poverty Level*. For reduced lunches, household income is between 130% and 185%.







PREFACE

Demographics – Health Providers

Primary Care Physicians

In 2013 the ratio of primary care physicians to patients in Shelby County was 4,970 patients to each physician.

This placed Shelby County in the bottom quartile of all Indiana counties.

- Optimal primary care physician – patient ratio is a challenge across the nation for rural counties.

Non-Physician Primary Care Providers

Shelby County is in the top 50% of Indiana counties for non-physician primary care providers such as Nurse Practitioners and Physician Assistants.

- We exceed the national rate. 
- In 2015 there were 2,041 patients for every non-physician primary care provider.

Dentists

In 2014 there were 2,970 patients per every dentist in Shelby County, placing the county just within the top 50% of Indiana counties.

Mental Health Practitioners

- In 2015 there were 1,240 patients for every mental health provider in Shelby County.
- Indiana's ratio was 710 patients for every provider.
- This includes psychiatrists, psychologists, licensed clinical social workers, counselors marriage and family therapists, and psychiatric advance practice nurses - all of whom may provide both substance abuse and/or mental health care.
- Shelby County has 36 mental health providers with an identification number for electronic billing in the *National Provider Identification* data base.
    - While an imperfect system for identifying the number of mental health providers since not every provider engages in electronic billing or he has ceased practicing, it does give an estimate of the number of providers available.

Adequate providers increases the likelihood that people will have a medical home for preventative care and health promotion rather than delay care until it is emergent.

PREFACE

Major Hospital Overview

Major Hospital exists to create and deliver superior healthcare solutions by providing patients and other customers with optimal clinical and economic outcomes. The vast majority of Major Hospital's patients reside in Shelby County. With the new MHP Medical Center, the community will have an enhanced level of medical care, safety, quality, comfort and convenience. Major Pediatrics and Major Gynecology will move into the new center in October 2016. Hospital patients will be moved on January 22, 2017 and outpatient physician practices will complete their moves in March 2017.

The health challenges of Shelby County are not the sole responsibility of any single group including the health care system. Improving the wellness of our residents requires expertise and commitment from many different sectors: government, education, business, industry, faith communities, health care, civic and non-profit organizations, and individual citizens. All are stakeholders in an improved quality of life.

Major Hospital recognizes and values the vital work of the many people and organizations that are working to make Shelby County a better place to live. Additionally, its employees serve as community leaders and key collaborators in improving community health. The Community Health Needs Assessment will provide information and a framework for stakeholders to collaborate on improving health and wellness for all the communities of Shelby County.

DATA

Secondary Community Health Data Sources

- *AdvantAge Initiative Survey,2016*
- *ALICE Indiana Study of Financial Hardship, 2016*
- *America's Health Rankings*
- *Annie E. Casey Foundation, Kids Count Data Center*
- *"An Assessment of Shelby County: Strategies for Economic Resiliency and Growth," Indiana Communities Institute, Ball State University, 2016*
- *Centers for Disease Control and Prevention* (CDC)
    - *Behavioral Risk Factor Surveillance System for adults (BRFSS) and youth (YBRFSS)*
    - *Multiple data bases and tools*
- *Common Core of Data, National Center for Education Statistics*
- *Data Resource Center for Child and Adolescent Health*
- *Department of Child Services* (DCS)
- *Enroll America*
- *Health Grove by Graphiq*
- *Healthy Communities Institute* (HCI)
- *Healthy People 2020*
- *Indiana Department of Education, Compass School and Corporation Reports*
- *Indiana Family and Social Services Administration* (FSSA)
- *Indiana Indicators*
- *Indiana State Department of Health*
    - *Indiana Infant Mortality Report*
    - *Indiana Mortality Report*
    - *Indiana State Cancer Registry*
    - *Indiana State Health Improvement Plan* (I-SHIP)
    - *Indiana Youth Tobacco Survey*
- *National Cancer Institute, State Cancer Profiles*
- *National Institute of Mental Health (NIMH)*
- *Shelby County Health Department*
- *STATS Indiana* through the *Indiana Business Research Center at Indiana University's Kelley School of Business*
- *Shelby County Drug Free Coalition*
- The *Robert Wood Johnson Foundation* (RWJF)
    - *Health Policy Snapshot; Issue Brief, March 2013*
    - *Institute for Health Promotion Research, Salud America*
    - *University of Wisconsin Population Health County Health Rankings and Roadmaps*
    - *Trust for America's Health: The State of Obesity*
- *Turning Point Domestic Violence*
- *United States Census Bureau*
    - *American Community Survey - multiple data bases tools*
- *United States Department of Agriculture* (USDA) *Food Atlas*
- *U.S. Social Security Administration*

DATA

Understanding the County Health Rankings

The *County Health Rankings and Roadmaps* is an annual analysis that provides a model of population health emphasizing the many factors that when improved can help make communities healthier places to live, learn, work, play and pray. Indiana's 92 counties are ranked against each other, but more important is the specific data about the health and wellness of Shelby County's residents.

Health Outcomes measure how long people live and how healthy people feel while alive.

Health Factors measure the following categories that impact health and wellness:

- **Health Behaviors:** Unhealthy food choices, tobacco use, and physical inactivity are responsible for many preventable diseases and deaths.
- **Clinical Care**: Individuals without insurance or adequate financial resources may not seek and receive preventive care. Clinical care is also impacted by the availability of local primary and specialty care providers.
- **Social and Economic Factors:** Education, employment, poverty, social support, and crime impact an individual's or family's ability to meet basic needs, manage stressors, and engage in health and wellness activities.
- **Physical Environment**: Access to recreational facilities, number of fast food restaurants, and how the built environment supports or challenges health for all ages and abilities.

Some of the data is "age-adjusted": Almost all diseases or health outcomes occur at different rates in different age groups. A community made up of more families with young children will have a higher rate of bicycle injuries. While a community with a larger number of older persons will have higher rates of cancer, hospitalizations, and deaths. Age-adjustment is a statistical process applied to rates of disease, death, and injuries that allows communities with different age distributions to be fairly compared. For more information, visit http://www.cdc.gov/nchs.

Rate: A large population has more health events simply due to its larger size. A rate is a measure of a disease, condition, or event in relationship to a unit of population during a period of time. It allows for comparison of communities of different sizes. If 60 men out of 50,000 have prostate cancer, then that is the same as 120 out of 100,000. The total number of events is divided by the total applicable population for a given year and then multiplied by standard values such as10,000 or 100,000. The number is then expressed as "rate per 100,000 population".

Key indicators from the 2016 *County Health Rankings* are in this CHNA. To view the more data, trends from 2011 – 2016, and other states' and counties' annual health rankings, visit http://www.countyhealthrankings.org

DATA

Key Indicators: County Health Rankings – Shelby County

County Ranking: Lower number is better.
Indicators: Lower or higher number is better depending on whether more of less of something is desirable.
Improvement: ☺

INDICATORS:	IN 2016	2016 Top Performers	2016	2015	2014	2013	2012	Data Years	Definitions
OVER ALL HEALTH OUTCOMES			**27 ☺**	**56**	**57**	**61**	**77**		
HEALTH OUTCOME: LENGTH OF LIFE			**40 ☺**	**46**	**47**	**47**	**78**		
Premature Death	7,600	5,200	**7,500☺**	7,707	7,529	7,529	9,013	2011 - 2013	Yrs potential life lost before age 75
HEALTH OUTCOME: QUALITY OF LIFE			**21 ☺**	**68**	**69**	**63**	**72**		
Poor or fair health	17%	12%	**15% ☺**	23%	23%	22%	18%	2014	Self-report on health quality of life
Poor physical health days	3.8	2.9	**3.6 ☺**	4.6	4.6	4.8	5.0	2014	Self-report on days health not good
Poor mental health days	3.9	2.8	**3.9 ☺**	4.5	4.5	4.4	3.5	2014	Self-report on days mental health not good
Low birth weight	8%	6%	**6% ☺**	7.3%	7.2%	8.0%	8.2%	2007- 13	% live births≤ 5lbs 8oz
OVER ALL HEALTH FACTORS			**45 ☺**	**48**	**50**	**63**	**57**		
HEALTH FACTOR: HEALTH BEHAVIORS			**53**	**50**	**67**	**88**	**82**		
Adult Smoking	20%	14%	**21% ☺**	**27%**	**27%**	**29%**	**26%**	2014	% of adults smoking most days/100 cigarettes in lifetime
Adult Obesity	**31%**	**25%**	**32%**	**31%**	**34%**	**36%**	**36%**	2012	% 20+ yr old adults with BMI of 30 & over
Food Environment Index	7.2	8.3	**7.9 ☺**	8.0	8.3			2012 & 2013	0-10 scale, 10 is best; % of low income – no access to grocery & those without reliable access to food past yr
Physical Inactivity	**28%**	**20%**	**31%**	**29%**	**31%**	**33%**	**33%**	2012	% of 20+ yr old adults reporting no leisure time physical activity
Access to Exercise Opportunities	75%	91%	**54%**	54%	43%			2014	% of adults living 1-3 miles from a park or recreational facility
Excessive Drinking	16%	12%	**15% ☺**	16%	16%	19%	14%	2014	% adults binge/heavy drinking last 30 days
Alcohol-impaired Driving Deaths	25%	14%	**15%**	15%	16%			2010-2014	
Sexually Transmitted Infections	428.7	134.1	**285.6**	**250**	273	203	97	2013	
Teen Births	37	19	**44**	39	45	45	48	2007-2013	# births per 100,000 women, age 15-19
HEALTH FACTOR: CLINICAL CARE			**55 ☺**	**61**	**56**	**60**	**69**		
Uninsured	17%	11%	**16% ☺**	15%	16%	17%	16%	2013	% under 65 with no health insurance

INDICATORS:	IN 2016	2016 Top Performers	2016	2015	2014	2013	2012	Data for this report	Definitions
Primary Care Physicians**	1,490:1	1,040:1	**4,970:1**	4,941:1	4,031:1	3,697:1 **	2,457:1	2013	Ratio of population to primary care MD
Dentists**	1,930:1	1,340:1	**2,970:1** ☺	2,982:1	2,965:1	3,697:1 **		2014	Ratio of population to primary dentists
Mental Health Providers	710:1	370:1	**1,240:1**	1,242:1	1,271:1			2015	Ratio population to mental health clinicians
Preventable Hospital Stays	**63**	**38**	**63** ☺	**78**	**85**	**79**	**95**	2013	Hospitalization for OP treatable diagnoses, Medicare population
Diabetic Monitoring	84%	90%	**82%**	82%	81%	80%	82%	2013	Pts 65-75 with blood sugar clinically monitored in last year
Mammography Screening	62%	71%	**60%**	62.7%	64.7%	63.2%	65.4%	2013	% females 67-69 with screening in last 2 yrs
HEALTH FACTOR: SOCIAL/ ECONOMIC FACTORS		**34**	**39**	**33**	**31**	**30**	**33**		
High School Graduation**	87%	93%	**93%** ☺	91%	91%**	89%	80%	2012-2013	% 9th grade cohort that graduate in 4 yrs
Some College	61.0%	72%	**50%** ☺	49.9%	50.8%	49.4%	47.7%	2010-2014	% 25-44 with at least some post-secondary education, even if no degree obtained
Unemployment	6.0%	3.5%	**5.6%** ☺	7.8%	8.7%	10.0%	10.1%	2014	% 16+ unemployed & looking for work
Children in Poverty	21%	13%	**17%** ☺	19%	19%	19%	16%	2014	% children under 18 living in poverty
Income Inequality	4.4	3.7	**3.6**					2010 - 2014	Ratio of households in 80th percentile income to those in 20th percentile
Children in Single-Parent Households	34%	21%	**36%**	37%	33%	30%	28%	2010 - 2014	% of children living in single-parent headed household
Violent Crime	334	59	**77** ☺	97	110	100		2010-2012	# reported violent crime per100,000 pop.
Injury Deaths	63	51	**66** ☺	71				2009-2013	# deaths due to injury per 100,000 pop .
HEALTH FACTOR: PHYSICAL ENVIRONMENT			**23** ☺	**34**	**35**	**57**	**50**		
Air Pollution – Particulate Matter	13.5	9.5	**13.6**	13.6	13.2			2011	Average daily density of fine particulates
Drinking Water Violations	0%	0%	**0%**	0%	0%			FY2013-FY2014	% pop. exposed to water violation last yr.
Severe Housing Problems	14%	9%	**10%**	10%				2008 - 2012	% of households with 1 of these: high cost, overcrowding, lack of kitchen or plumbing
Driving Alone to Work	83%	71%	**83%**	83%				2010-2014	% of workforce driving alone to work
Long Commute – Driving Alone	30%	15%	**36%**	35%				2010 – 2014	% driving to work alone more than 30 min.

**2015 & 2016 can be compared but data should not be compared with prior years due to changes in definition

DATA

2016 County Health Rankings County Comparison

While Shelby County's ranking in Indiana on health indicators is not as important as whether the county is improving on established state and federal goals for community health, it still provides information about how the county is doing in creating a healthier place to live, work, learn, play and pray.

In the February 2016 report by *Ball State University*'s *Indiana Communities Institute*, Shelby County was compared to Morgan County because of similar demographics. Therefore, Morgan will be highlighted in this comparison as well.

2016 County Health Rankings Key Indicators: Surrounding Counties Comparison

County Ranking: Lower number is better.
Indicators: Lower or higher number may be better depending on whether more or less of something is desirable.

	IN	Shelby	Hancock	Hamilton	Boone	Hendricks	Morgan	Johnson	Rush	Decatur	Bartholomew
HEALTH OUTCOMES:		**27**	5	1	3	2	**44**	4	59	58	33
LENGTH OF LIFE		**40**	9	1	6	2	**51**	7	50	63	33
Premature Death	7,600	**7,500**	6,200	3,800	6,000	5,100	**8,000**	6,000	7,900	8,600	7,300
QUALITY OF LIFE		**21**	7	1	2	4	**39**	9	65	41	36
Poor or Fair Health	17%	**15%**	13%	11%	12%	13%	**15%**	14%	17%	16%	16%
Poor Physical Health Days	3.8	**3.6**	3.3	2.5	3.0	3.1	**3.6**	3.4	3.8	3.6	3.5
HEALTH FACTORS		**45**	6	1	2	4	**34**	8	33	41	14
HEALTH BEHAVIOR		**53**	27	1	2	5	**32**	21	45	43	30
Adult Smoking	20%	**21%**	18%	13%	17%	16%	**19%**	19%	20%	21%	19%
Adult Obesity	31%	**32%**	35%	25%	28%	30%	**34%**	32%	33%	30%	32%
Physical Inactivity	28%	**31%**	29%	19%	25%	29%	**30%**	25%	35%	32%	27%

Health Outcomes: How long people live and how healthy they feel
Health Behaviors: Lifestyle behaviors, the environment, and genetics that influence the health of individuals and populations.

DATA

County Health Rankings - Key Findings

The *County Health Rankings* report was used as a starting point for this CHNA. One health factor the annual report highlights is lifestyle choices that lead to illness, injury, chronic disease and premature death in Shelby County. While Shelby County is making progress, follows is how the county compares to top performers in the United States on key health behaviors.

***County Health Rankings*: Key Health Behaviors**	
Shelby County	**Top U.S. Performers**
21% of use tobacco (2014) = 6,890 adults 18+ ☺	14%
32% are obese (2014) =10,499 adults 18+	25%
31% are physically inactive (2014)=10,171 adults 18+	20%
54% have access to exercise opportunities (2014)= 17,717 adults 18+	91%
15.4% drink excessively (2014)= 5,503 adults 18+ ☺ Shelby County has met *Healthy People 2020* goal of 25.4% or less of adult population drinking excessively and is in Indiana's top 50th percentile of 15.8% or less.	12%

Indicator for which Shelby County is making progress: ☺

Socio-economic factors play a significant role in the well-being of people and the over-all health of Shelby County. A reliable social network, family income, transportation, affordable housing and childcare, adequate employment to meet life's basic needs, access to healthy foods and safety are all factors that impact community health.

***County Health Rankings*: Key Socio-Economic Health Factors**		
Shelby County	**Top U.S. Performers**	**More Recent Data**
5.6% Unemployment (2014) ☺	3.5%	*3.7% - July 2016 ☺
16% Uninsured (2013) ☺	11%	**12.6% - 10% ☺
17% Children Living in Poverty (2014) ☺	13%	
50% Adults 25-44 with some college (2014)	72% (90th percentile)	

Indicator for which Shelby County is making progress = ☺
*Source: *Indiana Department of Workforce Development (2016)*
** Source: *American Fact Finder (2014); Enroll America (2015)*

DATA

Healthy People 2020

Healthy People provides science-based, 10 year national objectives for improving the health of all Americans. For three decades, *Healthy People* has established benchmarks and monitored progress to achieve the following goals:

- Attain high-quality, longer lives free of preventable disease, disability, injury, and premature death.
- Achieve health equity, eliminate disparities, and improve the health of all groups.
- Create social and physical environments that promote good health for all.
- Promote quality of life, healthy development, and healthy behaviors across all life stages.

Healthy People 2020 goals will be noted throughout the CHNA for several of the challenging health factors in Shelby County. Estimated number of Shelby County population per 2015 census estimates appears in parentheses to provide an idea of the number of residents required to meet goal.

- **Smoking**: 12% or less of the adult population ***(4113 or fewer adults)***
- **Lung Cancer Deaths**: 45.5 deaths or fewer per 100,000 adult population ***(16 deaths)***
- **Obesity**: 30.5% or fewer of the adult population ***(10,454 or fewer adults)***
- **Women smoking during pregnancy**: 1.4% or fewer of pregnant women ****(7 or fewer)***
- **Stroke deaths**: 34.8 or fewer per 100,000 adult population ***(12 or fewer deaths)***
- **New Breast Cancer cases**: 41 per 100,000 adult population ***(14 or fewer new cases)***
- **Colorectal Cancer**: 46 cases or fewer per 100,000 adult population ***(16 or fewer cases)***
- **Colorectal Cancer deaths**: 14.5 deaths or fewer per 100,000 adult population ***(5 or fewer)***
- **Physically inactive adults**: 32.6% or fewer of the adult population ***(11,174 or fewer adults)***
- **Suicide**: 10.2 deaths or fewer per 100,000 total population ***(5 or fewer persons)***
- **Infant Mortality**: 6.0 deaths or fewer per 1,000 live births. ***(3 deaths per 2014 births)***
- **Early prenatal care**: 77.9% or more of pregnant women ****(407 or more women)***
- **Salmonella:** 11.4 or fewer cases per 100,000 population ***(6 or fewer persons)***
- **Commuters**: 5.5% or more of the commuting workforce use public transportation *****(around 306 persons)***

**Based on the number of births in 2014: 522.*
********Based on the top 5 Shelby County work commuting destinations for the 2014 tax year.*

To learn more about the 26 leading Healthy People 2020 indicators visit https://www.healthypeople.gov/

DATA

Healthy Communities Institute (HCI) and Indiana State Health Improvement Plan (I-SHIP)

The *HCI* data base has over 100 nationally recognized and scientifically rated measurements of health and social determinants of health. Several *HCI* generated charts will be used in the CHNA. *HCI* also uses dials for at-a-glance understanding of how a county or zip code is doing in comparison to the state. Green is the top 50th percentile. Red is the lowest quarter percentile. 

Age-Adjusted: Age adjustment is a statistical process applied to rates of disease, death, or injuries that allows communities with different age distributions to be fairly compared. More information may be found on page 25 of this report.

Rate: A large population has more health events simply due to its larger size. A rate is a measure of a disease or condition in relationship to a unit of population during a period of time. It allows for comparison of communities of different sizes. The total number of events are divided by the total applicable population for a given year and then multiplied by standard values such as 10,000 or 100,000. The rate is then expressed as "rate per 100,000 population.

I-SHIP

Indiana State Health Improvement Plan was a 5 year plan launched in 2011. It is currently being updated. Revision of the CHNA Implementation Plan will be considered subsequent to the new *I-SHIP*. The following health priorities provide some of the framework for this CHNA:

- **Assure Food Safety** by reducing infectious/intoxication associated with food-borne illness outbreaks due to pathogens commonly transmitted through foods
- **Reduce the burden of HIV, Sexually Transmitted Diseases and Viral Hepatitis** by decreasing incidence in Indiana
- **Reduce Infant Mortality** by decreasing the percentage of preterm births in Indiana
- **Increase Hoosiers at a Healthy Weight** by reducing the prevalence of Obesity in Indiana
- **Decrease Tobacco Usage** to reduce the tobacco burden on Indiana.

The *HCI* data is made available to Shelby County through the generosity of the *Community Health Network*. To view all the data, visit http://www.healthyshelbycounty.org , "Community Health Data" and then click on the boxes with the dials.

To review the 2011-16 I-SHIP, visit http://www.state.in.us/isdh/files/Indiana_State_Health_Plan_FINAL_6_23_11.pdf

DATA

Mortality Rate

From the most recent *Indiana Mortality Report* (2014), below are the top 10 causes of death in Shelby County per 100,000 deaths. Total deaths = 780 from 39 selected causes of death. Shelby County has experienced a decrease in deaths from these top causes of death with the exception of Diabetes and Suicide. Death from Diabetes and Suicide remain a low percentage of Shelby County deaths: 2.8% and 2.4% respectively. However, the percentage increase between 2009 and 2014 is 22.2% for Diabetes and nearly 19% for Suicide. Of the 6 counties surrounding Marion County, Shelby County has

- Along with Hamilton County, the lowest rate of death from Chronic Lower Respiratory Diseases
- The 4th highest rate of death from Diabetes
- The highest rate of death from Chronic Liver Disease and Cirrhosis
- **Along with Boone County, the highest rate of Suicide**

Ranking	Cause of Death	Age-Adjusted Death Rate Per 100,000 deaths 2014 Mortality Report	2009 Mortality Report
1	*Major Cardiovascular Disease	**250** ↓	266
2	All Cancers	**159** ↓	166
3	Chronic Lower Respiratory Diseases	**35** ↓	48
4	Alzheimer's Disease	**31** ↓	36
5	Diabetes	**22** ↑	18
6	Suicide	**19** ↑	16
7	Kidney Disease	**14** ↓	23
7	Motor Vehicle Accidents	**14**	14
8	Chronic Liver Disease and Cirrhosis	**13**	12
9	Influenza & Pneumonia	**5** ↓	16

↓ = **decrease** in a cause of death ↑ = **increase** in a cause of death

* Major Cardiovascular Disease includes the following:

- Diseases of the heart
- Hypertensive heart disease with or without renal failure
- Ischemic heart disease
- Other heart diseases
- Essential hypertension and hypertensive renal disease
- Cerebrovascular diseases (stroke)
- Atherosclerosis
- Other diseases of circulatory system

DATA

Major Health Partners Community Biometric Report

Major Hospital ~ Major Health Partners has a health screening team. From 2015 – 2016, they screened an average of 1,886 persons living-in and/or working-in Shelby County. The range of adult participants screened for each risk factor ranged from 1,837 -1,941 persons. (For various reasons, not every person participated in every biometric screening.) Follows are the risk factors and the percentage of participants that fell into the each risk category. Highlights the comparison of participants' collective health data with state and county data.

RISK FACTOR	Number of Participants	Percentage at risk	Comparison with County and State Health Data
Total Cholesterol 200-239 = borderline high	1,941	**22.4%**	
Total Cholesterol >/= 240, high	1,937	**6.7%**	**39.8%** of Indiana adults age 20 & older have had their blood cholesterol checked and been told it was high (*2011)
HDL "good" Cholesterol < 40, low	1,933	**26.6%**	
LDL "bad" Cholesterol </= 130 (for borderline, high, or very high risk categories)	1,849	**15.7%**	
Triglycerides Fasting and non-fasting criteria combined	1,869	**20.6%**	
Pre-Diabetic Range Fasting and non-fasting criteria combined	1,908	**11.6%**	**7.7%** of Indiana adults age 20 & older have been diagnosed with pre-diabetes (*2014)
Diabetic Range Known diabetic or **A1C results>/= 6.5	1,911	**10.1%**	**11.2%** of Shelby County adults age 20 & older have been diagnosed with diabetes (*2013)
Blood Pressure >/= 140/90 (follow-up with healthcare provider determines a diagnosis of Hypertension)	1,863	**19.5%**	**33.5%** of Indiana adults age 20 & older have been diagnosed with high blood pressure (*2013)
Overweight ***BMI of 25-29.9	1,849	**29.5%**	**35.4%** of Indiana adults age 18 & older are overweight (*2012)
Obese BMI >/= 30	1,852	**41.5%**	**33.1%** of Shelby County adults age 18 & older are Obese (*2013)
Tobacco or Nicotine Use	1,837	**25.7%**	**21%** of Shelby County adults age 18 & over smoke (*2014) – *does not include smokeless tobacco, e-cigarettes or hookahs*

*Behavioral Risk Factor Surveillance Survey (BRFSS) conducted by the Centers for Disease Control and Prevention and the Indiana State Department of Health

**A1C: a blood test that provides information about a person's average levels of blood glucose (sugar) over the past 3 months.

***Body Mass Index (BMI): measure of body fat based on weight in relation to height, and applies to most adults age 20 and older.

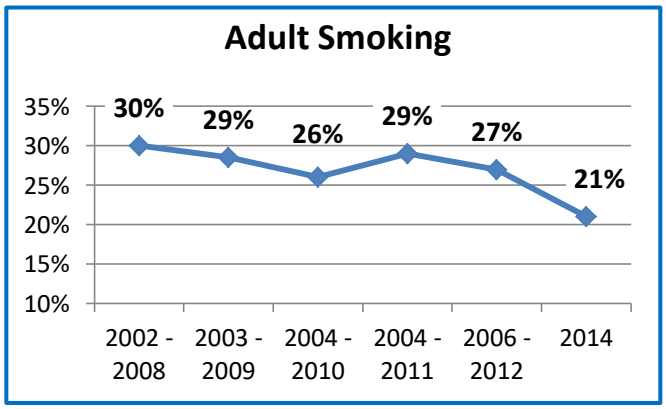
Medication, treatment, and fasting status are not reflected in this data.

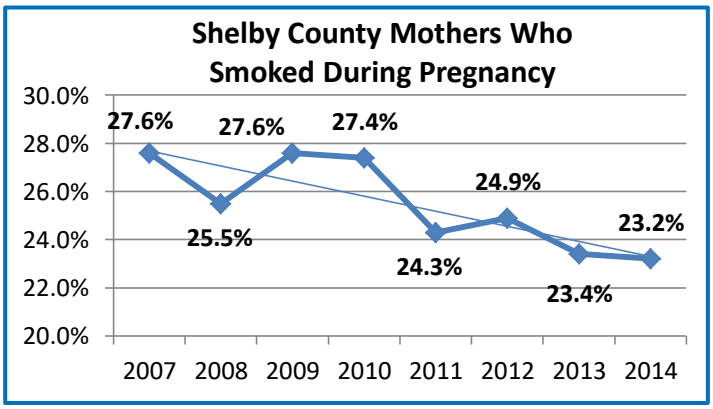
DATA

Tobacco Use Smoking and Pregnant Women

Tobacco use remains the nation's number 1 preventable cause of death and disease. Shelby County's smoking rate has been declining as a result of death, cessation, and prevention. Tobacco use affects all of the body's organs. Evidence continues to grow for the negative health impact of second- hand smoke and third-hand smoke (smoke particles left on materials and surfaces) on the health of non-smokers (*American Cancer Society, 2015*). Especially vulnerable populations are infants, children, the elderly, and the medically fragile.

The *Indiana 2015 Tobacco Control Strategic Plan* defines adult smoking as adults 18 and older who report smoking at least 100 cigarettes during their lifetime and who currently smoke "every day" or on "some days." The strategic plan is for 18% or fewer adults to be smoking at this level. In 2015, 21% of adults 18 and older smoked. **The *Healthy People 2020* goal is a smoking rate of 12% or less of the adult population.**





Tobacco Use data does not include electronic cigarettes, hookahs, or smokeless tobacco.

Smoking and Pregnant Women

Smoking during pregnancy is associated with poor health outcomes for mother and infant:

- Higher risk of low birth weight
- Higher risk of Sudden Infant Death Syndrome
- Higher risk of ectopic pregnancy (A pregnancy in which the fertilized egg implants outside the uterus.)
- Higher risk of miscarriage
- Higher risk of pre-term delivery

The rate of mothers smoking during pregnancy has been declining. Shelby County's rate of smoking during pregnancy is higher than the state's 15%. Among the "donut" counties, Shelby County has the next to highest rate. ***Healthy People 2020* goal is for 1.4% or fewer women to be smoking during pregnancy.**

DATA

YOUTH TOBACCO USE

Per the *Indiana Youth Tobacco Survey* conducted by the *ISDH, Tobacco Prevention Commission* (TPC), in Indiana from 2000 - 2014 there was a 62% reduction of Indiana high school youth who reported smoking. Middle School youth smoking decreased by 70% during the same time period.

In 2015 Shelbyville Central 9th – 12th grade students (1,305 students) participated in the *Youth Risk Behavior Surveillance System* (YRBSS) survey. The following percentages are for all Indiana students who participated in the 2015 YRBSS. Of the total number of students taking the survey, 54% were from Shelbyville High School. To see the complete YRBSS, visit http://www.cdc.gov/healthyyouth/.

Nicotine Delivery Product Use	2003	2015
Use of all nicotine delivery products: *e-cigarettes, smokeless tobacco, cigars, cigarettes*		***32.4%**
Use of cigarette, cigar, and smokeless tobacco products	32.8%	**21.4%↓**
Smoked 20 days or more in the previous 30 days *white/Caucasian students had a 3 times higher percentage than other ethnicities*	12.4%	**3.4%↓**
Among those smoking in the previous 12 months, students who attempted to quit smoking *primarily white/Caucasian students*	59.7%	**49%**
Smokeless tobacco used in the previous 30 days: chewing tobacco, snuff, dip *highest percentages of users were white/Caucasian, or males, or 12th grade students*	7.2%	**9.4%↑**
Smoked cigars, cigarillos, or little cigars in the previous 30 days *highest percentages of users were males and 12th grade students*	14.7%	**11.4%↓**
Ever used e-cigarettes, e-cigars, e-pipes, vaping pens or hookahs in the previous 30 days *higher use in males, or 12th grade students, or Hispanic students*		***43.9%**
No use of any nicotine delivery product in the previous 30 days		***70.1%**
No use of any cigarette, cigar, and smokeless tobacco product	69.6%	**80.4%↑**

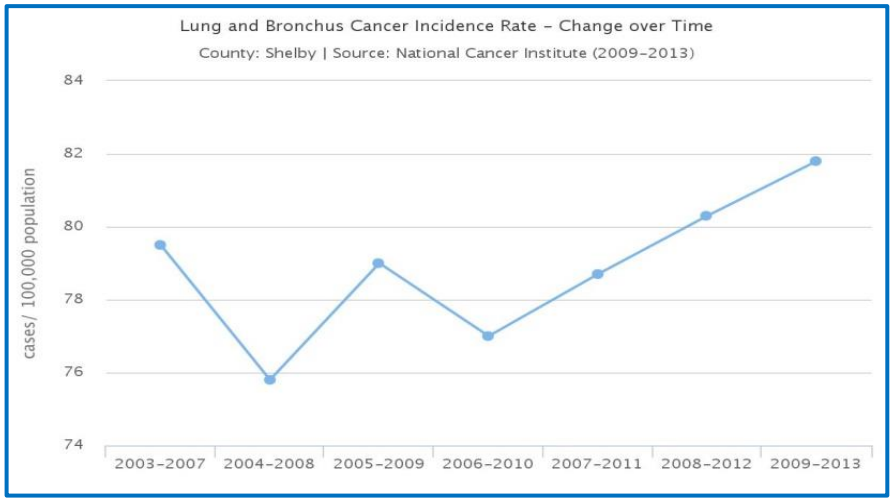
e-nicotine delivery products not previously surveyed; **Green arrows note improvement; **Red** arrows, an increase in use.*

Surveys have only recently begun to capture data on electronic-cigarette use or "vaping". Per the CDC and the TPC, youth are increasingly using fruit and candy flavored cigarillos and e-cigarettes. Many of these products have higher nicotine content than cigarettes. The amount of nicotine in the liquid or "juice" used is often inconsistent with the labeling, even when the label states there is no nicotine in the product. (*Cheng. (2014) Chemical Evaluation of Electronic Cigarettes. Tobacco Control BMJ, Vol. 23)* As of July 1, 2016 cigar products, e-cigarettes and hookahs began to be federally regulated. The regulation will be methodically implemented over the next several years. The law is not comprehensive, and is expected to be delayed by litigation.

DATA

Smoking and Lung Cancer

While there are different types of lung cancers and not all are related to tobacco use, it remains that **the greatest risk factor for lung cancer is duration and quantity of smoking.** The smoking data does not include vaping, smokeless tobacco or hookahs.



Healthy Communities Institute Chart

CDC Cancer Statistics report that **more people die from lung cancer annually than any other type of cancer**. Deaths from lung cancer have plateaued for men, but continue to rise among women. However, over all lung cancer deaths have been trending down since a high in 2010

Disparity: *Men in Shelby County are still dying from lung cancer at nearly twice the rate of women.*

Lung and Bronchus Cancer Incidence Rate (2009 – 2013)

81.8 cases per 100,000 population Target: 76.1 cases per 100,000

Disparities: ***Men are more likely to develop lung cancer than women are*** *(106.1 vs. 62.9 per 100,000).* ***African Americans have the highest risk of developing lung cancer.***

Age-Adjusted Death Rate due to Lung Cancer (2009 – 2013)

56.2 deaths per 100,000 population in Shelby County. Target: 58.5 per 100,000

However, the ***Healthy People 2020*** **goal is 45.5 deaths per 100,000 adult population.**

DATA

Obesity

Obesity contributes to chronic disease and premature death. The Body Mass Index (BMI) is the standard for measuring underweight to obese. While BMI does not capture all the dynamics of a given individual's body, it is the accepted standard of measurement for identifying risks and trends. A BMI of 25.0 – 29.9 is overweight and a BMI 30.0 and above is obese.

The ISDH identifies risk factors for obesity as:

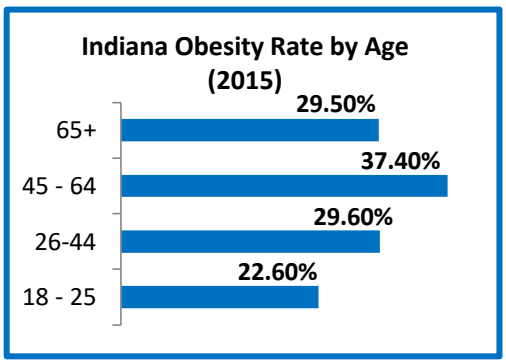
- Physical Inactivity
- Unhealthy Diet and Eating Habits
- Social and Economic Issues
- Not Breastfed as an Infant
- Family Lifestyle
- Genetics
- Age

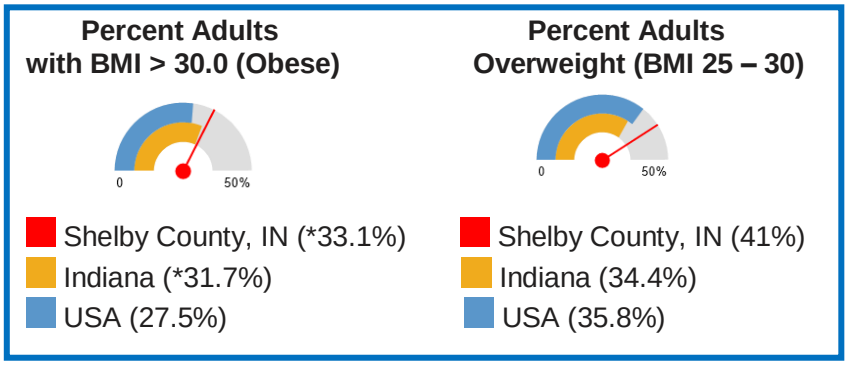
Obesity rates for adults are beginning to slow. Still, obesity rates in the nation and in Shelby County are high, burdening people with a host of chronic diseases and conditions. In a new report released in September 2016 by *The State of Obesity: Better Policies for a Healthier America (*RWJF *and Trust for America's Health)*, **Indiana now has the 15th highest obesity rate in the nation**.

Per the *ISDH* (2015), the health impact of being overweight or obese includes:

- Hypertension (high blood pressure)
- High total cholesterol, low high density lipoprotein (HDL) cholesterol (good cholesterol), and/or high levels of triglycerides
- Coronary heart disease
- Gallbladder disease
- Sleep apnea and respiratory problems
- Type 2 Diabetes
- Stroke
- Osteoarthritis
- Some Cancers

In Shelby County, 33.1% of adults age 20 and older were obese in 2013. **The *Healthy People 2020* target is 30.5% or fewer obese adults. The *Indiana State Obesity Plan*'s target is for 25% or fewer adults with a BMI of 30 or more.**



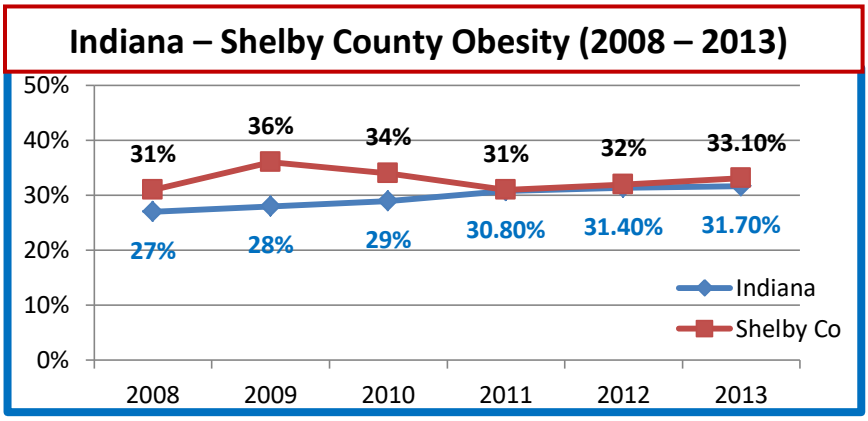


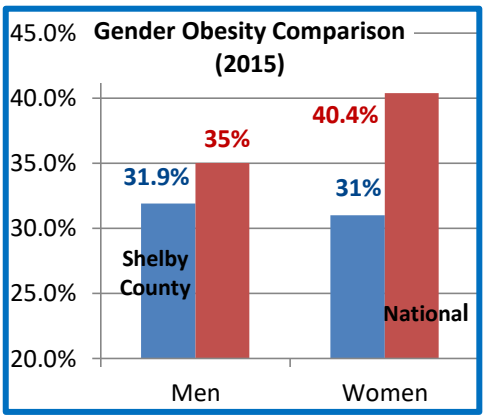
Institute for Health Promotion Research, Salud America Graphic
*Graphic data is from the 2010-11 BRFSS. *2013 CDC Diabetes data.*

DATA

Obesity

Historically, Shelby County's obesity rate has been higher than the state's. In 2013 among adults age 18 and older, 67.2% or 3.3 million Indiana adults were considered overweight or obese. *This was slightly higher than the entire population of Iowa!* For the last 5 years, Indiana has been spending $3.5 billion dollars annually in obesity-related health care and lost productivity costs (*ISDH, 2012*). Medicaid and Medicare recipients account for 36.9% of these costs. Nationally, women are more obese than men; however, in Shelby County they have a fairly equal percentage of obesity.

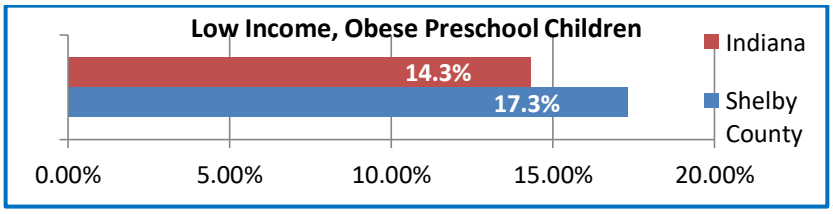




Child and Youth Obesity

Since 1980, childhood obesity rates in the nation have tripled (ages 2 – 19 years) with 1 in 4 children already overweight or obese by ages 2-5. **In Indiana, nearly 1 in 3 children is obese,** impacting 30% of Latino children and 21% of Caucasian/white children**.** Children who are overweight when they enter kindergarten are 4 times more likely to be obese in 8th grade compared to their peers who are normal weight. (*Data Resource Center for Child and Adolescent Health*, 2011)

In 2011 of the "donut" counties, Shelby County had the highest percentage of obesity in low-income preschool children (17.3%) (*USDA Food Atlas)*. Nationally, Indiana ranks 26th for its percentage of low-income 2-4 year olds enrolled in WIC who are obese (14.3% in 2014).

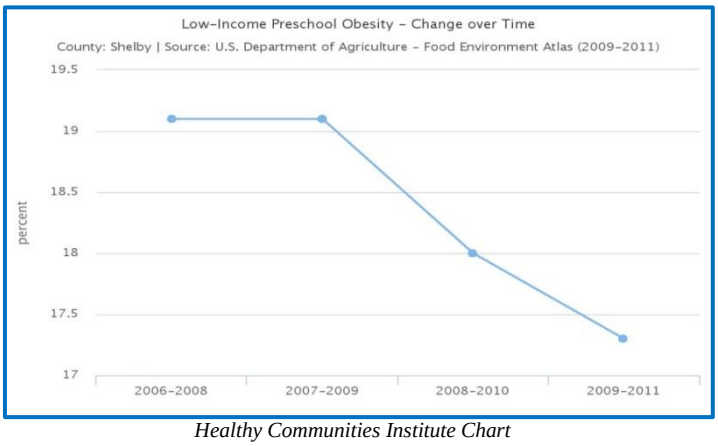


RWJF – Trust for America's Health

DATA

Child and Youth Obesity

From 2010 – 11, Major Pediatrics collected BMI data on 2-5 year olds to learn about the prevalence of obesity in their practice. They found 40% of 5 year old children were overweight and obese. Some of these young patients were being treated for joint problems, diabetes, heart disease and other chronic health problems once found primarily in older adults.



Healthy Communities Institute Chart

Childhood obesity can have a harmful effect on the body in immediate and long-term ways:

- High blood pressure and high cholesterol: risk factors for cardiovascular disease. The *CDC* found that 70% of obese children had at least one cardiovascular disease risk factor, and 39% had two or more.
- Increased risk of impaired glucose tolerance, insulin resistance and Type 2 Diabetes
- Breathing problems, such as sleep apnea, and asthma
- Joint problems and musculoskeletal discomfort
- Fatty liver disease, gallstones, and gastro-esophageal reflux (heartburn)
- Psychological stress such as depression, behavioral problems, and issues in school
- Low self-esteem and low self-reported quality of life
- Impaired social, physical, and emotional functioning (CDC)

In 2011 thirty-seven percent of Latino children ages 10-17 were overweight or obese, compared with 30.6% of Caucasian/white children (*Data Resource Center for Child and Adolescent Health*). Per the most recent data (2015), Indiana has the 18th highest percentage in the nation of high school youth who are obese (*RWJF -Trust for America's Health*). The ISDH reports the following weight status for all 9th – 12th grade students in Indiana for 2015:

- **13.6% were obese (slight decrease from 2011 - 14.7%);**
- **17.3% were overweight (slight increase from 2011 - 15.5%).**

The 2015 YRBS survey in which 1,035 Shelbyville Central High School 9th – 12th grade students participated, found the following among Indiana students from 43 schools who took the survey:

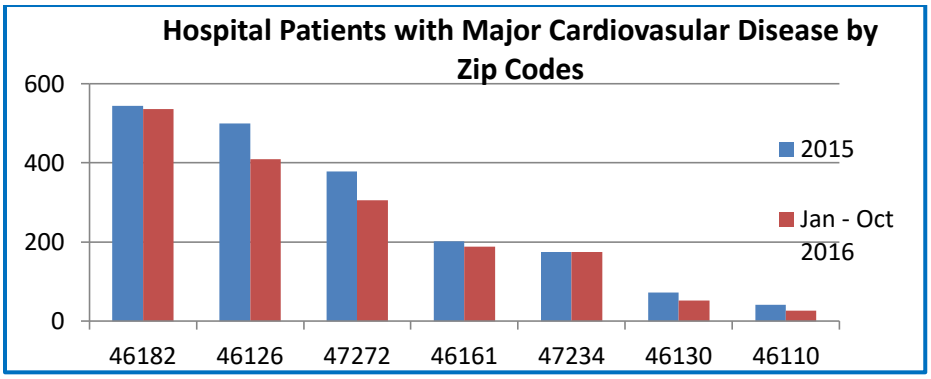
- **16.2% were obese;**
- **18.6% were overweight.**

DATA

Obesity and Cardiovascular Disease

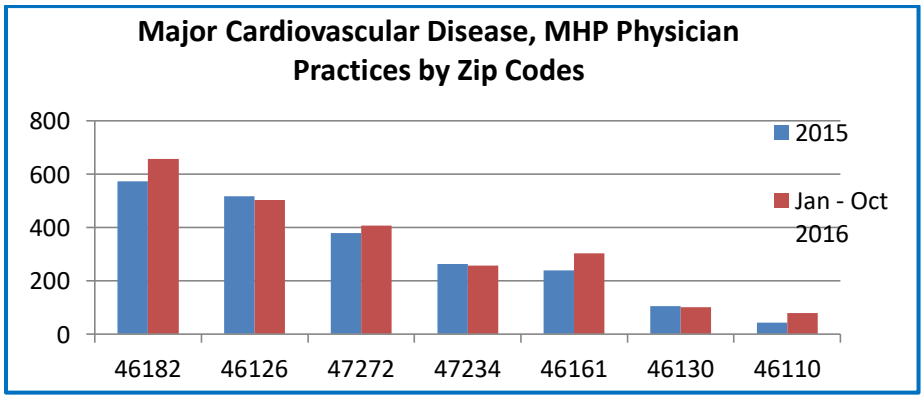
Cardiovascular Disease is the number 1 cause of death in Shelby County. The following charts look at 5 key Major Cardiovascular Disease diagnoses for a snapshot of cardiovascular disease at Major Hospital and cardiovascular disease in the major Shelby County zip codes.

# of Individual Patient Encounters at Major Hospital -->	**Heart Failure** (heart doesn't pump blood as well as it should)	**Ischemic Heart Disease** (fat & cholesterol in coronary arteries limit blood flow to the heart)	**Hypertension** (high blood pressure)	**Stroke** (blood supply to the brain is interrupted or reduced)	**Atherosclerosis** (build-up of fats &cholesterol in and on the artery walls)
2015	58	68	5625	194	1200
Jan – Oct 2016	120	78	5365	544	119



Major Hospital: Cardiovascular Disease Patients for 46176 (Shelbyville)

2015: 7,926
2016: 6,942
(January – October)

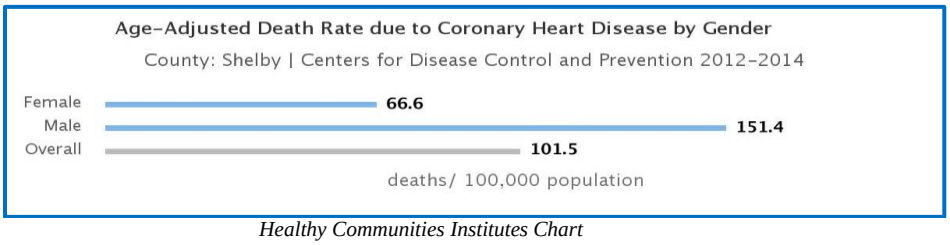


MHP Physician Practices: Cardiovascular Disease Patients for 46176 (Shelbyville)

2015: 8,048
2016: 9,215
(January – October)

For heart failure, ischemic heart disease, hypertension, and atherosclerosis

Disparity: ***Men die from heart disease at more than double the rate that women do*.**



Healthy Communities Institutes Chart

Deaths from Coronary Heart Disease have been decreasing since 2011. Shelby County has exceeded the Healthy People 2020 goal with 101.5 deaths per 100,000.

DATA

Cardiovascular Disease

A leading cause of heart disease is Hypertension. **Obesity increases the risk of Hypertension.** In Indiana, 32.4% of the population is burdened with hypertension. Nationally, Indiana has the 21st highest rate of hypertension among adults (20+ years). In 2015 and 2016, Hypertensive diseases accounted for the majority of cardiac admissions to Major Hospital. Stroke deaths have been declining in Shelby County from around 53 per 100,000 adult population in 2007 to 37 per 100,000 in 2013. Direct medical spending on Hypertension reached $42.9 billion in 2010. Nearly half of this was on prescription medications (*Agency for Healthcare Research and Quality, HCI*).

The ***Healthy People 2020*** **target is 34.8 stroke deaths or fewer per 100,000 adults.**

Age-Adjusted Hospitalization Rate due to Hypertension (2012-2014)

4.9 hospitalizations per 10,000 population Target: 3.8 or fewer hospitalizations per 10,000

Disparities: ***Women have almost double the hospitalization rates as men. People 85 years and older have the highest rate of hospitalizations due to hypertension.***

Hypertension: Medicare Population (2014)

58.1% of Medicare recipients are burdened with Hypertension. Target: 56.3% or fewer

High blood pressure increases the risk of heart disease and stroke. **Obesity, tobacco use, diabetes, high salt intake, and excessive alcohol use are all risk factors.**

Hypertension is the leading cause of stroke and a major cause of heart attacks. In Shelby County, 4.3% of Medicare beneficiaries have had a stroke (2014).  It is the 4th leading cause of death in the nation and a leading cause of long-term disability, nationally costing an estimated $38.6 billion annually (*CDC*).

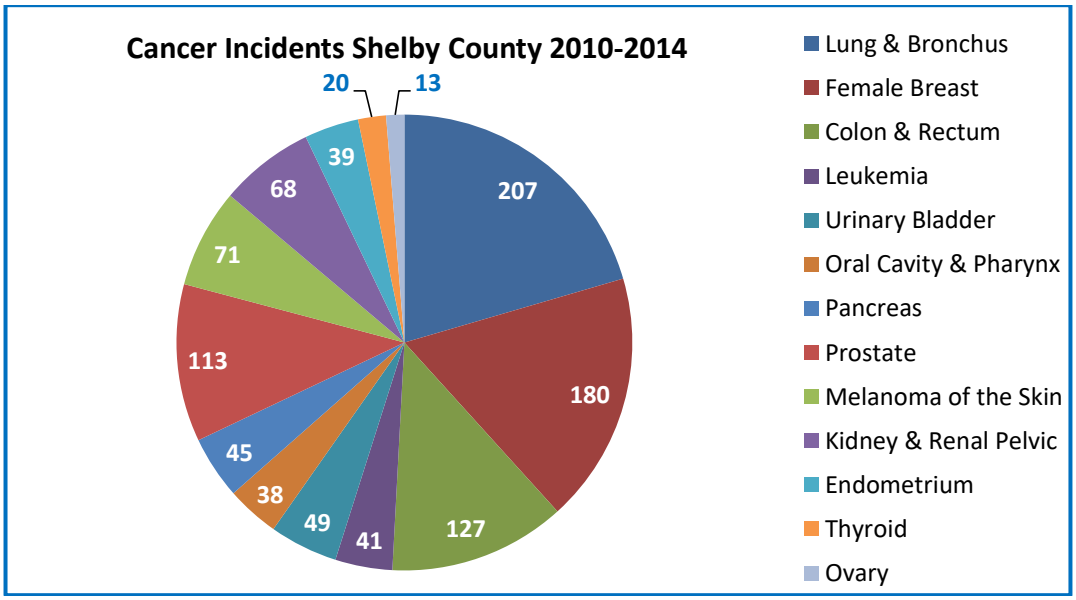
In 2013 there were 37 Stroke deaths per 100,000 adult population. 

Disparities: ***Women have a somewhat higher rate of stroke than men. Three fourths of strokes occur in persons 65 years and older. Stroke is on the rise in this demographic both in Indiana and throughout the United States.***

DATA

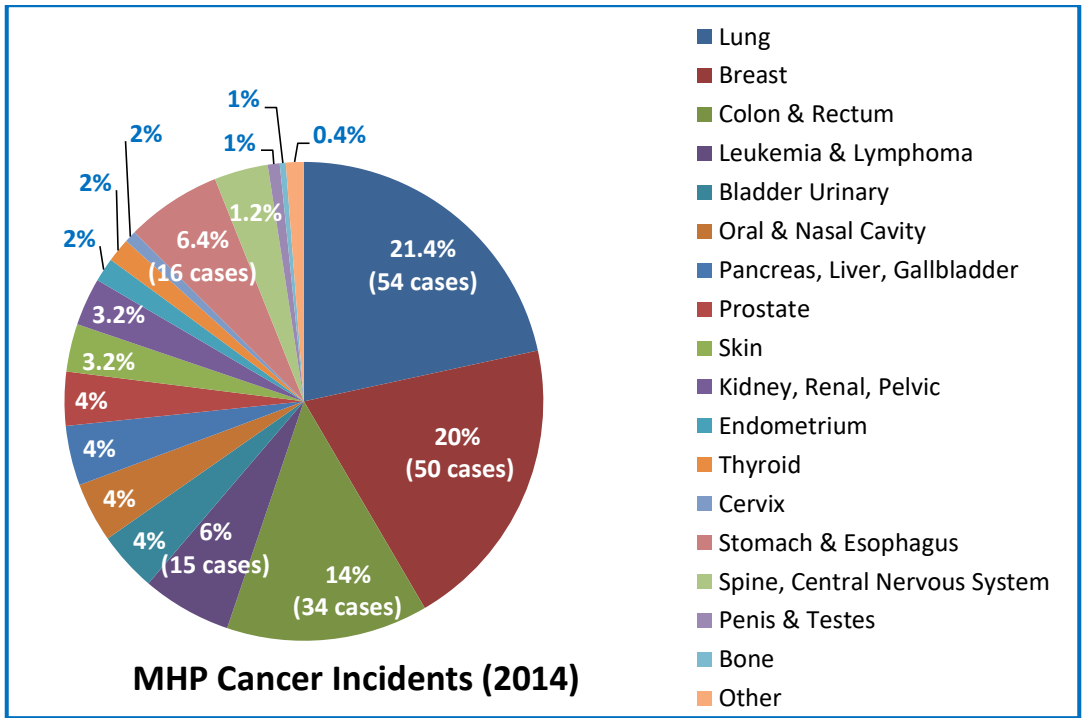
Cancer

Cancer is the 2nd leading cause of death in Shelby County.



Data compiled October 13, 2016 by the Indiana State Cancer Registry

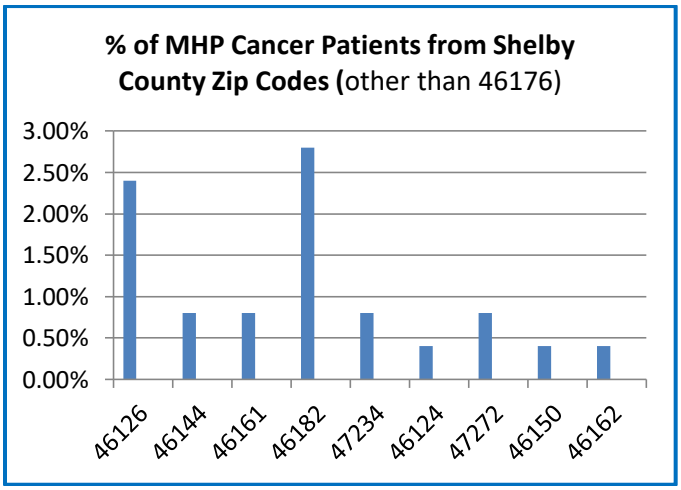
Total number of cancer incidents at MHP in 2014 was 252.

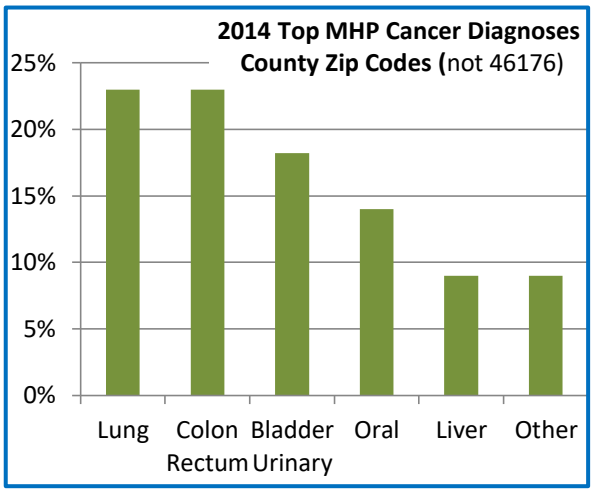


Indiana State Cancer Registry, Compiled October 2016

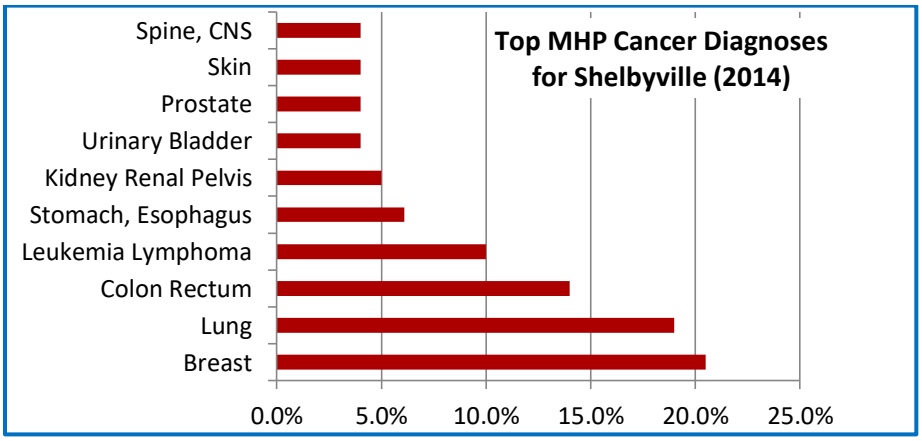
DATA

Cancer



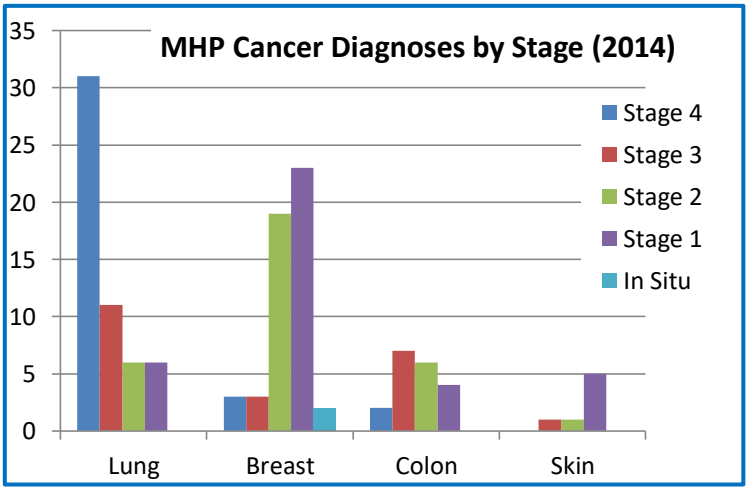


St. Paul, Manila, and Needham are included subsequent to their zip code presence in Shelby County.



Obesity is associated with an increased risk for the following types of cancer (*National Cancer Institute*):

- Breast Cancer (after menopause)
- Colon & Rectum
- Endometrium
- Esophagus
- Gallbladder
- Kidney
- Prostate (advanced cancer)
- Liver
- Ovaries
- Pancreas
- Stomach
- Thyroid



DATA

Colorectal and Breast Cancer

Colorectal Cancer is a leading cause of cancer deaths in the United States.

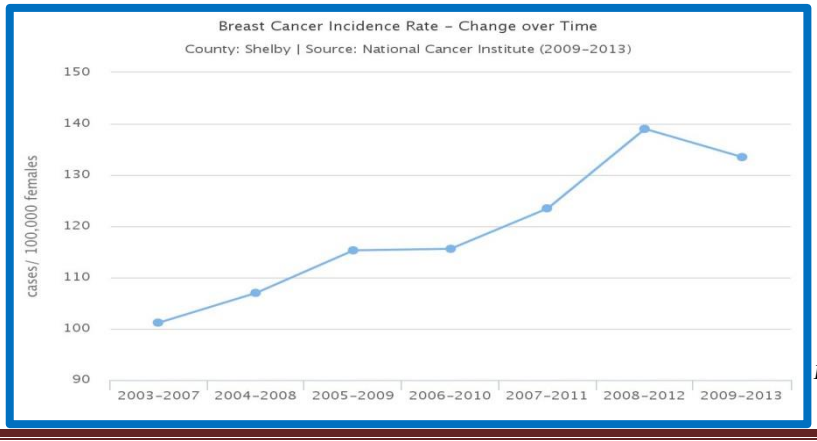
- ***Men in the county are more likely to die from this cancer than women*** (20.5 vs. 13.7 per 100,000).
- **The county has the 2nd highest rate of Colorectal Cancer deaths among the donut counties.**
- The county's rate is 16.0, just under the 16.3 per 100,000 target for the top 50th percentile of Indiana Counties. Colorectal Cancer deaths have been trending down by 27.3% from 2007 to 2013.
- However, the **Healthy People 2020 target is 14.5 or fewer deaths per 100,000 adult population.**

The *CDC* estimates that with regular screening, 60% of deaths from colorectal cancer could be prevented.

- In 2014 in Shelby County there were 47.6 colorectal cancer cases per 100,000 population.
- Shelby County has the 2nd highest rate among the donut counties.
- **The *Healthy People 2020* target is 39 or fewer colorectal cancer cases per 100,000 population**.

According to the *American Cancer Society*, 1 in 8 women will develop breast cancer and 1 in 36 women will die from breast cancer.

- Post-menopausal obesity is associated with a modest increase in breast cancer.
- Breast Cancer rates have increased in Indiana and across the nation.
- In Shelby County, there were 133.5 per 100,000 female population of new breast cancer cases in 2013.
- The Shelby County rate of Breast Cancer is the highest of the donut counties**.**
- **The *Healthy People 2020* target is 41 new cases or fewer per 100,000 population.**



Healthy Communities Institute Chart

DATA

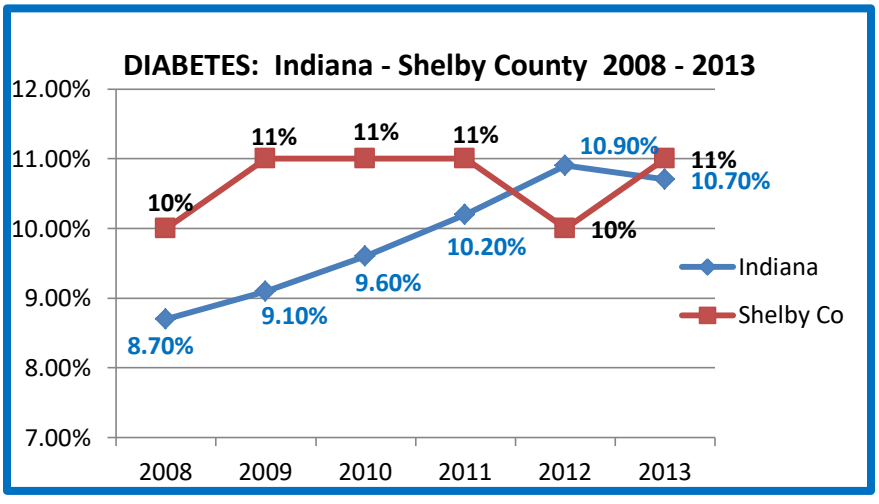
Obesity and Diabetes

Diabetes can be harmful to most of the body's organ systems. It is a frequent cause of renal (kidney) disease and lower-extremity amputation, and a leading cause of blindness among working age adults. Persons with diabetes are also at increased risk for ischemic heart disease (restricted blood flow to the heart), neuropathy (nerve numbness, typically in hands and feet), and stroke.

A *Healthy People 2020* objective is to "reduce the disease and economic burden of diabetes and improve the quality of life for all persons who have or are at risk for diabetes." Strategies include improved diabetes education, improved compliance with screening and treatment, and reduced rates of serious complications such as foot ulcers, amputation, and death.

The *CDC* estimates that the direct economic cost of Diabetes in the United States is nearly $116 billion dollars. This does not include lost work time or premature death secondary to Diabetes. This data excludes Gestational Diabetes.

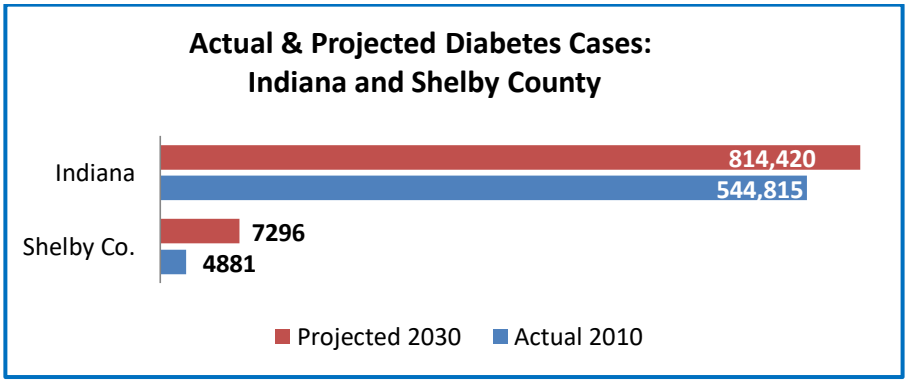
Indiana is the 13th highest state in the nation for Type 2 Diabetes. Type 2 Diabetes may have a genetic component or be the result of one's health and medical history. Obesity, tobacco use, stress, and physical inactivity are risk factors; therefore lifestyle plays a significant role in the development of Type 2 Diabetes. As the nation's obesity rate has risen, so too has the Type 2 Diabetes rate. As of 2015, Indiana's percentage of residents with Diabetes was 11.4%. **Type 2 Diabetes is largely preventable when healthy eating and physical activity are incorporated into daily routines and tobacco use is curtailed.**



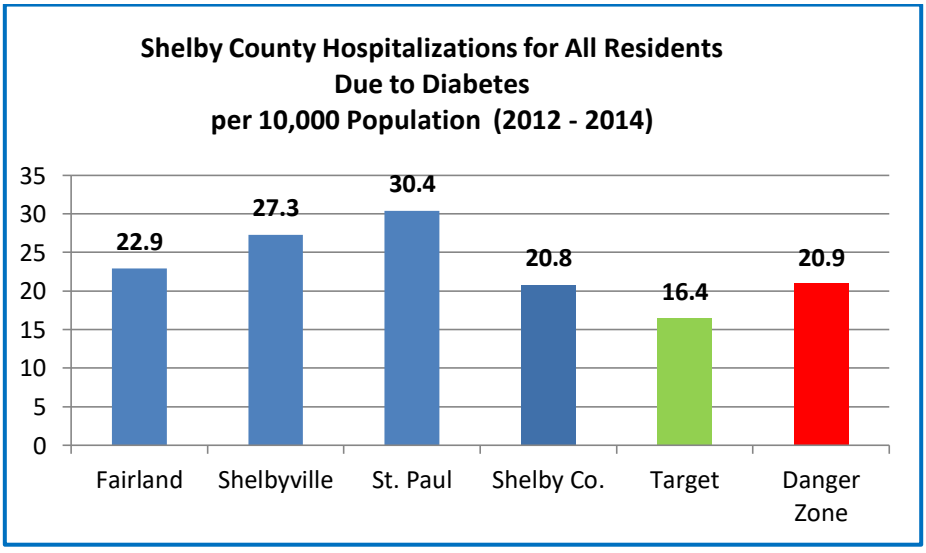
DATA

Obesity and Diabetes

The research of *The Robert Wood Johnson Foundation* and *Trust for a Healthier America*, projects that at the current pace, cases of Type 2 Diabetes in the state could be 49.50% higher by 2030. Applying that same projected percentage increase to Shelby County, nearly 7,300 adult residents might have Type 2 Diabetes by 2030.



Different areas within Shelby County have a higher burden of complications from Diabetes resulting in hospitalization. The divide between Shelby and Decatur County is in the middle of the town of St. Paul; therefore, the entire zip code area is included as part of Major Hospital's service area in this CHNA.



Hospitalizations secondary to Diabetes have been trending up since 2011.

DATA

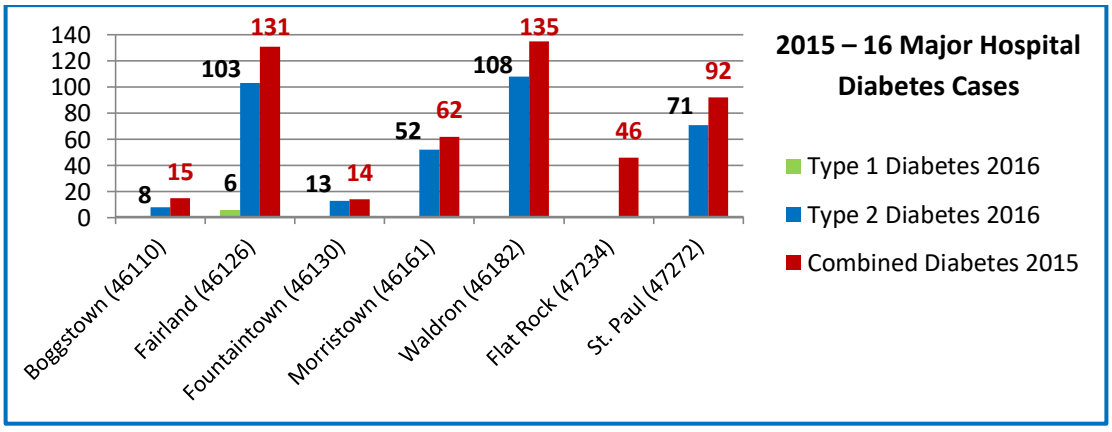
Diabetes and Major Hospital

In 2015 and through October 2016, Major Health Partners' physician practices saw 3,093 patients with a diabetes diagnoses. Of those patients, 76% were from Shelby County zip codes.

From 2015 to 2016, disease coding changed from ICD 9 to ICD 10. Diagnostic codes are now broken down into more specific descriptors such as the cause and origin of a disease. Type 1 Diabetes (Juvenile Diabetes) is an autoimmune disease in which the pancreas stops producing insulin, a hormone that enables people to get energy from food. Type 2 Diabetes causes blood glucose (sugar) levels to rise higher than normal. The body does not use insulin properly. Type 2 Diabetes is the most common form of Diabetes.

Type of Patient Visits for Diabetes	Type 1 Diabetes 2016	Type 2 Diabetes 2016	All Diabetes 2015
Number of Patients Visiting Major Hospital	150	2,634	3,189
Number of Patients Admitted For Observation	5	122	126
Number of Patients Admitted For Inpatient	10	236	296
Number of Patients with More Than 1 Visit to Major Hospital	53	1,286	1,660

Major Hospital patient visits for Type 1 and Type 2 Diabetes in the communities of Shelby County follows. Any number less than 5 is not reported to protect confidentiality. Shelbyville had 2,055 combined cases in 2015; in 2016 there were 112 Type 1 Diabetes cases and 1,740 Type 2 Diabetes cases. 2016 data is for January thru October.



DATA

Diabetes and Disparities

The following Shelby County health data on Diabetes is for adults 18 and older or is Medicare specific. The data is maintained is by *HCI* and the years of measurement are noted in parentheses.

Age-Adjusted Hospitalization Rate due to Short-Term Complications of Diabetes

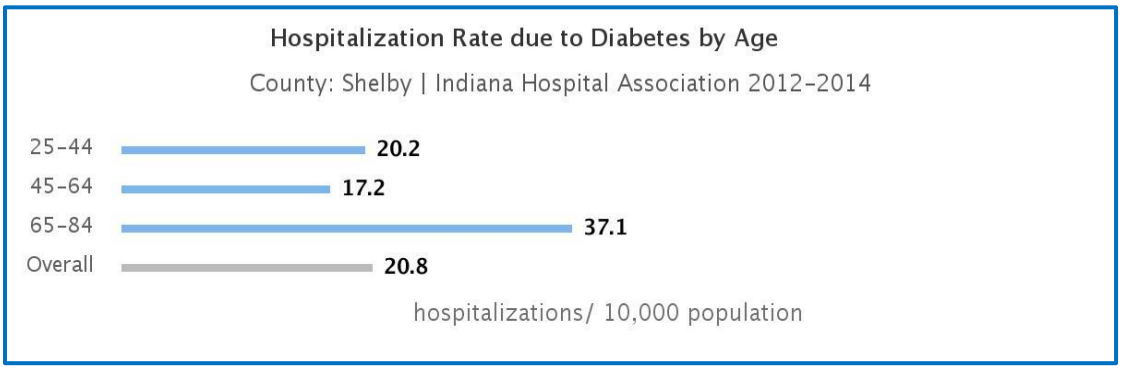
10.4 Hospitalizations per 10,000 population 18+ years (2012-2014) Target: 6.8 or fewer

Disparities*: Adults age 25-44 have a higher rate of hospitalizations for short-term complications than other age groups. Females have a higher rate than men.*

Age-Adjusted Hospitalization Rate due to Long-Term Complications of Diabetes

9.1 Hospitalizations per 10,000 adult population (2012-2014) Target: 8.0 or fewer

Disparities*: Adults age 65 – 84 have the highest rate of hospitalization for long-term complications. Men have a higher rate than women.*



Age-Adjusted ER Rate due to Diabetes (2010-2012)

23.1 ER visits per 10,000 adult population 18+ years Target: 23.9 ER Visits

Disparities: *Adults over the age of 85 have the most ER visits, followed by adults age 65 – 84.*

DATA

Suicide

Suicide is the 10th leading cause of death of adults in the United States.

- The nation's suicide rate has increased by 24% from 1999 - 2014.
- Suicide is the 2nd leading cause of death in the nation for people age 15 to 34.
- Women, youth, and the elderly attempt suicide more often than men do; however, men more frequently die by suicide (*ISDH)*.
- An average of 100 persons commits suicide daily (*CDC*).

***SCHD Deaths by Suicide Report* from 2010 – 2015: an average of 6.7 suicides annually**

- This does not include suicides by Shelby County residents that occurred outside of the county or suicides that were not noted as such on death certificates.
- Per the 2014 *Indiana Mortality Report*, there were 19 suicide deaths in Shelby County.
    - This was an increase from the 2009 report in which there were 16 suicides.

The *National Institute of Mental Health* (NIMH), the *CDC Youth Risk Behavior Surveillance Survey* (YRBSS) and the *SCHD, Deaths by Suicide Report* provide the following information about suicide in the United States and Shelby County.

- **Youth**
    - Among youth, the suicide attempt rate has decreased over all from 1991 – 2013.
    - 2009 – 2013: an increase in youth who seriously consider suicide and make a plan.
    - 2010 – 2015 *SCHD Deaths by Suicide Report*: youngest suicide was 14 years old
        - 9% of 14-24 year olds died by suicide
    - In 2015 Shelbyville Central students in grades 9-12 participated in the *YRBSS* (1,305 students - 54% of all students taking the survey). In the 12 months prior to the survey, among the Indiana high school students participating in the *YRBSS:*
        - 19.8% had seriously considered suicide.
        - 17% reported having made a plan to commit suicide
        - Nearly 10% reported actually attempting suicide.
        - Nearly 4% made an attempt that required medical treatment.
        - 34.2% of female students reached out for help prior to a suicide attempt
- **Adults**
    - Nationally the percentage of adults having serious thoughts about suicide was highest among 18 – 25 year olds.
    - Per the 2010 – 2015 *Shelby County Health Department, Deaths by Suicide Report:*
        - 9% of 14-24 year olds died by suicide
        - 30% of suicide deaths were ages 30 – 39
        - 13% were ages 40 – 49
        - 30% were ages 50 – 64
        - 18% were 65 and older; the oldest was 81

DATA

Suicide

- **Males**
  - Since 1999: suicide rate for males has remained 4% higher than that of females
  - Suicide rate is highest for men age 75 and older
  - White middle-age males account for 7 out of 10 suicides.
  - Among those 65 and older, white males comprise over 80% of late life suicides
  - More than half of all male suicides were by firearms
  - *SCHD Deaths by Suicide Report* from 2010 – 2015: 80% of suicides were by males
  - In the first 6 months of 2016 there were 4 deaths by suicide, all males ranging from the late 30's to early 80.

- **Females**
  - Suicide rate is highest for women age 45 – 64
  - Over one third of all female suicides were by poisoning
  - In Shelby County from 2010 – 2015: 20% of suicides were females

Suicide is a complex public health issue that is preventable.

- Many suicide attempts go unreported because not all self-injury results in medical attention.
- 2012 – 2014: Indiana's suicide rate (14.2 suicide deaths per 100,000 population) was higher than the nation's (12.7 suicides per 100,000 population) (*CDC*).
- 2014: Shelby County's suicide rate was 19 per 100,000 population.
- **The *Healthy People 2020* Target is: 10.2 or fewer suicide deaths per 100,000 population.**

By 2020 depression will rank as the second leading cause of disability after heart disease (*CDC*).

- **Nearly 1 in 4 Americans have some type of mental illness each year.**
- Half of all long-term mental disorders start by age 14.
- 2015: childhood mental illness affected more than 17 million children in the U.S.
  - The current national rate for adolescents experiencing a Major Depressive Episode in the last 12 months is 9.1% (*NIMH*, 2012)
  - **The *Healthy People 2020* Target is 7.5% or fewer adolescents report a Major Depressive Episode in the previous 12 months.**

Mental health disorders also have a serious impact on physical health, impacting chronic diseases including diabetes, heart disease, and cancer. Persons with mental health disorders die an average of 20-25 years earlier than the general population primarily from a lack of medical care. The presence of mental health disorders or substance abuse increases the risk of suicide when those disorders are not treated. 20.2 million adults have experienced substance abuse disorders. Half of them also had co-occurring mental health disorders (*NIMH*, 2012)

DATA

Substance Abuse

In 2015 Scott County, located just 1 ½ hours south of Shelby County, made national news because of its HIV epidemic. The primary cause? IV (intra-venous) drug use and all its associated problems: needle sharing, unprotected sexual activity, rampant Hepatitis C, and STIs. The *CDC* came on site. Indiana's Governor ultimately allowed the Scott County Health Department to launch a needle exchange program. Protocols were developed. Outreach was conducted into high-risk areas of the county. Surrounding counties were impacted. Soon other Indiana counties' drug and associated problems were resulting in additional state approvals for needle exchange programs. Locally, the *Healthy Partners* clinic saw an increase in the number of persons seeking confidential testing.

The *Shelby County Drug Free Coalition* is organized around prevention, treatment, and law enforcement activities in 4 impact areas: underage drinking; adult misuse of alcohol; marijuana use; and prescription drug abuse. Follows is data from the coalition on these problem areas:

	2013	**2014**
Possession/ Consumption/ Transportation of Alcohol		
Shelbyville Police Department	161 alcohol-related juvenile arrests	82 alcohol-related juvenile arrests↓
Shelby County Sherriff's Department	-------	7 juvenile arrests
Adult Alcohol-misuse		
Shelbyville Police Department	131 adult arrests	80 adult arrests↓
Shelby County Sherriff's Department	68 adult arrests	93 adult arrests↑
Marijuana Use		
Shelbyville Police Department	83 arrests	19 arrests↓
Shelby County Sherriff's Department	25 arrests	30 arrests↑
Shelby County Probation	178 positive screens (52% of total screens)	220 positive screens ↑ (63% of total screens)
Shelby County Department of Child Services	78 positive screens (32% of total screens)	114 positive screens↑ (38% of total screens)
MHP Priority Care (Employment Drug Screens)	72 positive screens (71% of total screens)	133 positive screens ↑ (72% of total screens)
Prescription Drug Abuse		
Shelby County Probation	Present in .05% of total screens	Present in 25% of total screens↑
Shelby County Department of Child Services	Present in 46% of total positive screens	Present in 55% of total screens↑
MHP Priority Care	7% increase in positive screens	Present in 7.5% of total screens↑

Positive screens are for illegal substances, non-prescribed prescription drugs and over-the-counter medications.

DATA

Substance Abuse

According to the *CDC*, excessive alcohol use, either in the form of heavy drinking (drinking more than two drinks per day on average for men or more than one drink per day on average for women), or binge drinking (drinking more than 4 drinks during a single occasion for men or more than 3 drinks during a single occasion for women), can lead to increased risk of health problems such as liver disease or unintentional injuries.

Excessive alcohol use is the 3rd leading lifestyle-related cause of death for the nation (*CDC*). In the following data, Alcohol Abuse includes alcohol dependence, non-dependent alcohol abuse, alcohol psychosis, excessive blood alcohol level, and fetal alcohol syndrome

Hospitalization Rate Due to Alcohol Abuse Whether Acute or Chronic (2014)
10 per 10,000 adult hospitalizations Target: 7.9 or fewer

Age-Adjusted ER Rate due to Alcohol Abuse (2010-2012)
29.1 Emergency Department visits per 10,000 population 18+ years
Target: 19.6 or fewer

Death Rate due to Drug Poisoning (2012 – 2014)
15.0 per 100,000 population Target: 16.5 or fewer

In 2010, 60% of drug overdose deaths were related to pharmaceuticals, the majority of which were prescription painkillers. Shelby County's drug overdose deaths have dropped from 16.8 in the last measurement period ending in 2012.

Controlled Substances Dispensed (2015)
1.0 Controlled substance dispensed per capita Target: 1.0 or fewer
Down from 2.1 in 2011

This indicator shows the number of controlled substances dispensed by a licensed pharmacist or physician per person. The amount of prescriptions for controlled substances such as opioids, stimulants, and depressants decreased between 2014 and 2015.

	2013	2014	2015
Alcohol Poisonings	25 cases	27 cases	27 cases
Drug Poisonings	65 cases	113 cases	115 cases↑
Emergency Department: Positive Marijuana Screens	24 cases	72 cases	72 cases
Emergency Department: Positive Prescription and Over-the-Counter Screens (not prescribed)	170 cases	140 cases	257 cases↑

DATA

Substance Abuse

Shelby Central High School youth participated in the 2015 *YRBSS* (1,035 9th – 12th grade students – 54% of all students participating).

Follows is substance use data from those Indiana students participating in the survey:

Substance Use	2003	2015
Consumed alcohol at least once in previous 30 days more likely among seniors	44.9%	**30.5%↓**
Drank 5 or more drinks in a row within a couple of hours at least once in the previous 30 days more likely among seniors	28.9%	**17.4%↓**
Used Marijuana at least once in the previous 30 days more likely among juniors and seniors	22.1%	**16.4%↓**
Used any form of Cocaine one or more times during their life somewhat more likely among Hispanic students	7.9%	**4.0%↓**
Used Inhalants one or more times during their life sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high; somewhat more likely among African American students	12.9%	**7.4%↓**
Used Heroin one or more times during their life more likely among Hispanic students	2.4%	**2.4%**
Used Methamphetamines one or more times during their life more likely among male 9th and 11th grade students	8.2%	**2.9%↓**
Used Ecstasy one or more times during their life; also called "MDMA"**;** more likely among male, or Hispanic, or 11th grade students	6.4%	**5.0%↓**
Used Synthetic Marijuana one or more times during their life more likely among male, or Hispanic, or 11th and 12th grade students	*-----	**16.8%**
Used Prescription Medication without a Doctor's Prescription one or more times during their life: such as OxyContin, Percocet, Vicodin, codeine, Adderall, Ritalin, or Xanax**;** more likely 11th and 12th grade students, or Hispanic students	2009 22.3%	**2015** **16.8%↓**

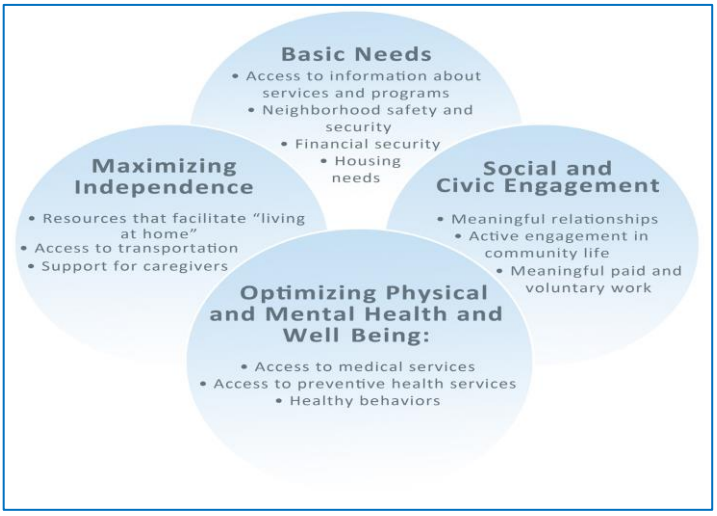
*not previously surveyed

One key tenet of preventing the abuse of prescription drugs is to have a safe, consistent location for people to dispose-of outdated or unused medications. In 2015 Shelby County *Solid Waste Management* received a grant to purchase the first Drop Box for prescription and over-the-counter medications. Since January 1, 2016 the Drop Box has been located in the lobby of the Shelbyville Police and Shelby County Sheriff Departments.

DATA

Senior Health

Shelby Senior Services commissioned the *Center for Home Care Policy & Research* of the *Visiting Nurse Service of New York* to conduct the *AdvantAge Initiative Survey* for residents 55 and older. The purpose of the survey was to help *Shelby Senior Services* measure the "aging-friendliness" of Shelby County on 4 domains and then to develop plans and implement action steps to make the county a better place to live for older adults and their families. A total of 510 eligible Shelby County residents age 55 and older participated in the survey between May 2014 and September 2015.



AdvantAge Survey;
Center for Home Care Policy & Research Service of the Visiting Nurse Service of New York

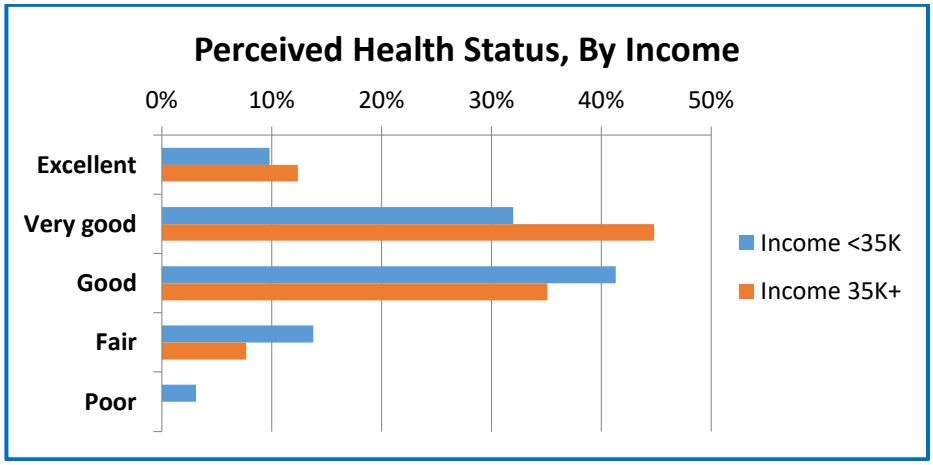
The following quotation from the *Overview Summary* of the *AdvantAge Initiative* report identifies a significant disparity and challenge for Shelby County:

"Those with annual incomes under $35,000 are more likely to have poor health status; insecurity about housing; neighborhood safety concerns; less access to community activities; and difficulties getting transportation to places they need to go. In contrast, even if some of their demographic characteristics, such as marital status and living arrangements, are different, there are fewer apparent differences in responses to the survey questions from respondents who live in different geographic locations; city dwellers, suburbanites, and rural folk are remarkably more consistent in their responses than might be expected." *(AdvantAge Initiative Survey, p. 3, 2015)*

DATA

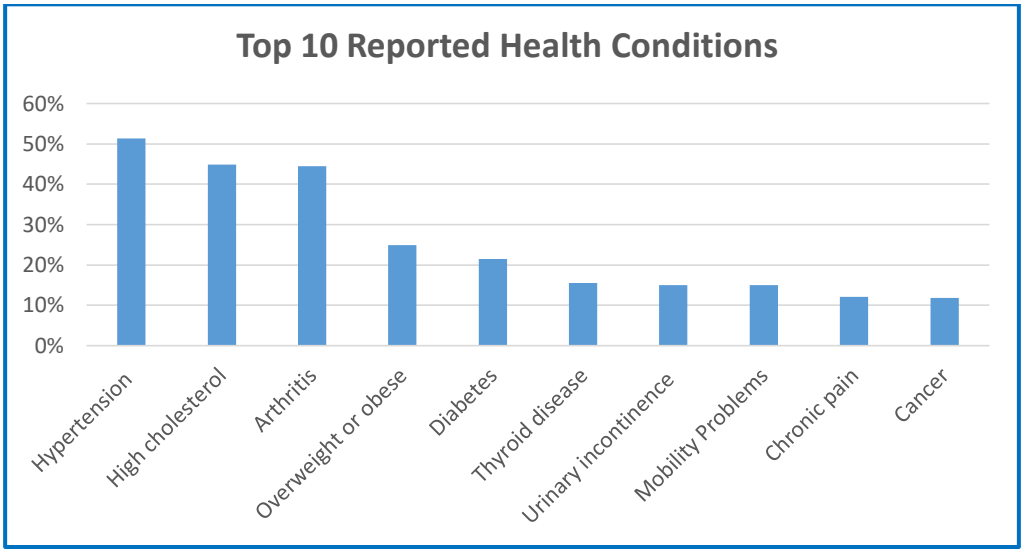
Senior Health

The AdvantAge Initiative Survey (AdvantAge Survey) identified a disparity between those 55 and older making less or more than $35,000 annually as to how they experienced their health.



Shelby County AdvantAge Initiative Survey, 2015;
Center for Home Care Policy & Research Service of the Visiting Nurse Service of New York

The health conditions reported by respondents to the *AdvantAge Survey* are congruent with the health challenges identified in the secondary data. The survey covered ages 55 and older. The health data that follows is specific to Medicare recipients – those 65 and older, or those younger than 65 with certain disabilities. Specific *HCI* health data for Medicare recipients is not available for every health condition identified in the survey. The year in parentheses notes when the health condition was last measured. Other health indicators impacting seniors are also presented. Target percentage or rate is the top 50th percentile of Indiana counties.



Shelby County AdvantAge Initiative Survey, 2015;
Center for Home Care Policy & Research Service of Visiting Nurse Service of New York

DATA

Senior Health

Hypertension: Medicare Population (2014)
58.1% treated for hypertension. Target: 56.3% or fewer

Hypertension is the leading cause of heart disease, heart attack, and stroke.
Obesity, tobacco use, diabetes, high salt intake, and excessive alcohol use are all risk factors.

Hyperlipidemia: Medicare Population (2014)
48.2% treated for high cholesterol (3,162 persons) Target: 43.6% or fewer

***Hyperlipidemia can lead to heart disease and other chronic conditions*. Three key risk factors are physical inactivity, obesity, and tobacco use. *Shelby County has the highest percentage of Medicare beneficiaries being treated for Hyperlipidemia in Marion and the donut counties*.**

Stroke: Medicare Population (2014)
4.3% treated for stroke. Target: 3.5% or fewer

Ischemic Heart Disease: Medicare Population (2014)
28.9% treated for narrowing arteries and reduced blood flow to heart.
Target: 28.2% or fewer

Atrial Fibrillation: Medicare Population (2014)
8.7% treated for atrial fibrillation (irregular heart beat) Target: 8.0% or fewer

Rheumatoid Arthritis or Osteoarthritis: Medicare Population (2014)
34.6% treated for rheumatoid arthritis or osteoarthritis. Target: 29.5% or fewer

Arthritis is the most common cause of disability in the United States, *limiting the activities of nearly 21 million adults (CDC). In Shelby County, 38.8% of adults 18 and older have been diagnosed with arthritis (2006 – 2010)*

Diabetes: Medicare Population (2014)
28.7% treated for diabetes Target: 27.3% or fewer

Diabetic Screening: Medicare Population (2013)
81.6% of ages 65-75 had a blood sugar (HbA1c) test in the past year.
Target: 85.2% or more

In the *AdvantAge Survey* 81% of respondents reported having their blood sugar tested in the last 12 months. However, among ages 65-75, blood sugar testing is in the bottom quartile.

DATA

Senior Health

Cancer: Medicare Population (2014)
8.1% of Medicare beneficiaries were treated for cancer. Target: 7.1%

Almost 3 times as many adults 65 and older have cancer as compared to those under age 65.

The *Advantage Survey* found that 26% of respondents had not received a flu shot in the past 12 months and 36% had not received a pneumonia shot. (Some of the respondents were less than 65 years old – the recommended age for the pneumonia vaccine.) These immunizations are important for preventing illness and hospitalization subsequent to complications from the illness.

Age-Adjusted Hospitalization Rate due to Immunization-Preventable Pneumonia and Influenza (2012 – 2014)
There were 2.8 hospitalizations per 10,000 population among adults18 years and older.
Target: 2.1 hospitalizations or fewer

Alzheimer's Disease or Dementia: Medicare Population (2014)
10.7% treated for Alzheimer's or other dementia. Target: 9.3%

Age-Adjusted Death Rate due to Alzheimer's Disease (2012-2014)

38.2 deaths per 100,000 population Target: 29.7

Chronic Kidney Disease: Medicare Population (2014)
18.7% treated for chronic kidney disease. Target: 16.1%

Asthma: Medicare Population (2014)
4.7% treated for asthma. Target: 4.4%

COPD: Medicare Population (2014)
16.0% treated for Chronic Obstructive Pulmonary Disease Target: 13.7%

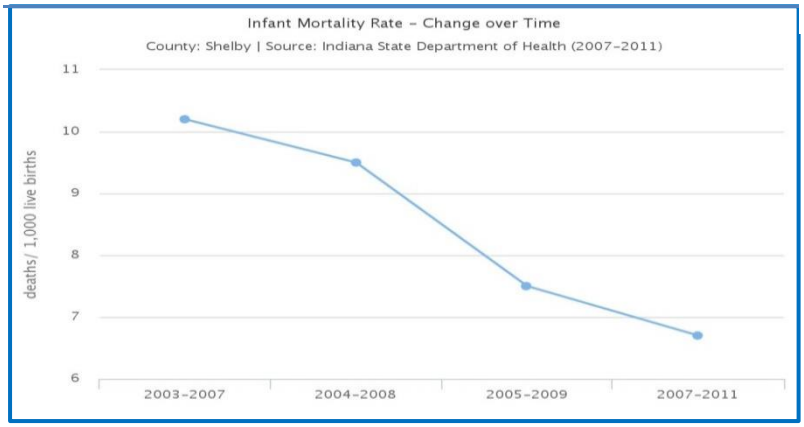
Depression: Medicare Population (2014)
20% of adults age 60 and older treated for depression (1,312 persons)
Target: 17.4 %

In the *AdvantAge Survey*, 11% of participants acknowledged that in the past year they had needed professional help for depression or anxiety but nearly half (47%) did not get the help they thought they needed.

DATA

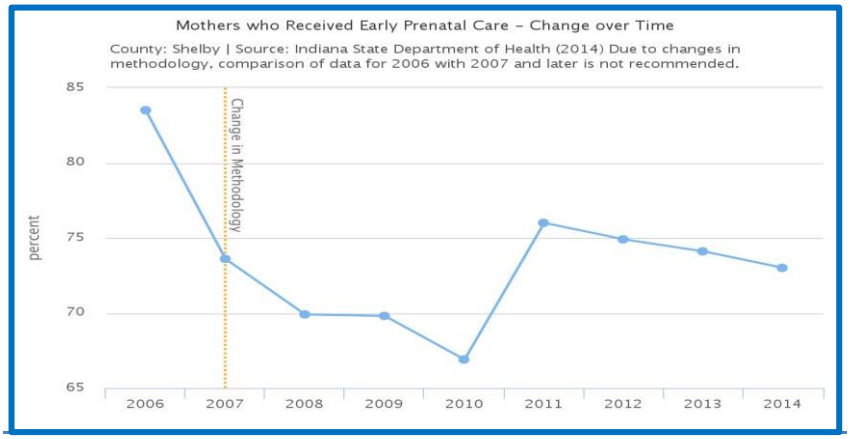
Healthy People 2020: Maternal and Infant Health

In Shelby County there were 6.7 infant deaths per 1,000 live births in 2011. **Infant mortality is one of the most widely used indicators of community health.** The leading causes of death among infants are birth defects, pre-term delivery, low birth weight, Sudden Infant Death Syndrome, and maternal complications during delivery. **Compared to all Indiana counties, Shelby County is in the top 50%. However, the *Healthy People 2020* goal is 6.0 deaths per 1,000 live births.**



Healthy Communities Institute Chart

Babies born to mothers who do not receive early prenatal care are 3 times more likely to have low birth weight and 5 times more likely to die. Early prenatal care provides an opportunity for health problems and unhealthy behaviors to be addressed for the optimal well-being of both mother and infant. In 2014, 73% of pregnant mothers in Shelby County received prenatal care in the first trimester of the pregnancy, meeting the state's target of 69.4% or better. However, the ***Healthy People 2020* target is for 77.9% of mothers receive early prenatal care.**



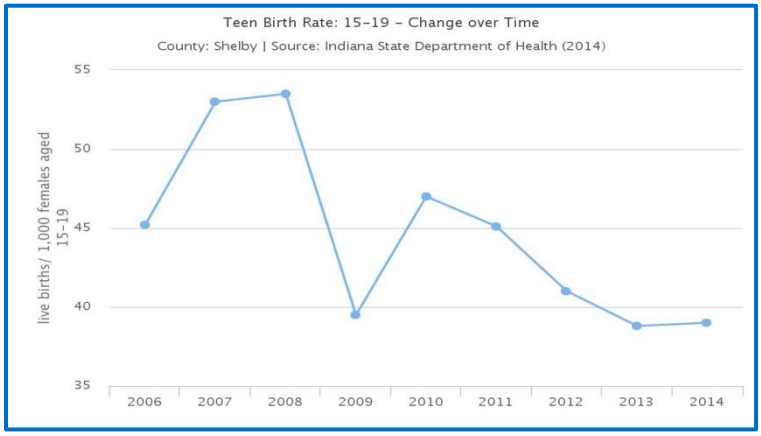
Heathy Communities Institute Chart

DATA

Teen Births

Shelby County has the highest teen birth rate among the donut counties and Marion County. The teen birth rate has been decreasing. The largest teen population giving birth is 18-19 year olds. The 2014 rate of birth among 15-19 year olds was 39 births per 1,000 females.

At Major Hospital, average teen birth rate since 2005 has been 12.6% of total births. 2013 – 2015 percentages have been trending down. 2015 teen births were 7.3% of total births: a 37.6% decrease from 2014. Not all of the county's births occur at Major Hospital.



Healthy Communities Institute Chart

	2007	2015
Are or have been sexually active *especially among 12th grade students*	48.8%	**41%↓**
Females report using a birth control method *(pills, IUD, implant, shot, patch, or birth control ring)*	44%	**29%↓**
Used condoms during their last sexual encounter	55.4%	**53.4%↓**
Use no pregnancy prevention method	9.7%	**15.5%↑**

Aforementioned data is from the 2015 YRBSS in which 1,035 Shelbyville Central students participated equaling 54% of all students from the 43 participating schools.

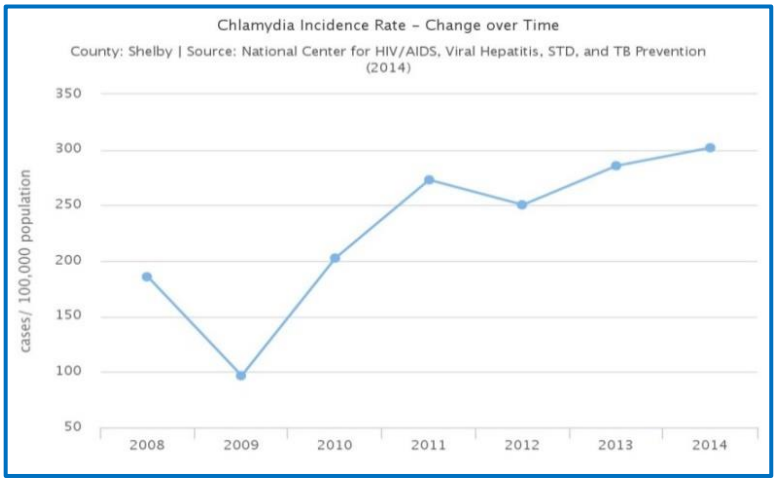
Teen births present health risks for mother and infant. Babies born to teen mothers are more likely to be born pre-term and/or with a low birth weight. Teen pregnancy is not only harmful to the developing teen age body, but creates social, educational and financial challenges immediately and into the future.

DATA

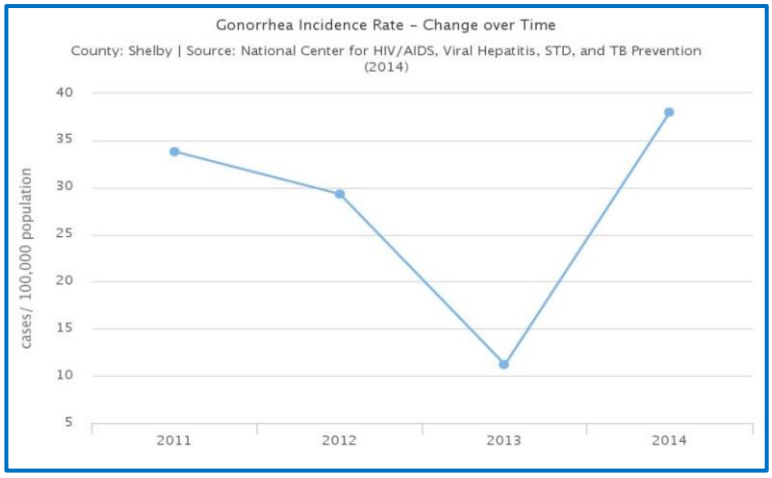
Sexually Transmitted Infections (STI)

Chlamydia Incidence Rate (2014)
301.8 Cases per 100,000 population (134 cases in Shelby County)
Target: 251.1 cases or fewer per 100,000 population

Gonorrhea Incidence Rate (2014)
38.0 Cases per 100,000 population (17 cases)
Target: 30.8 or fewer cases per 100,000 population



Healthy Communities Institute Charts



DATA

Sexually Transmitted Infections (STI)

Syphilis: To protect confidentiality, the number of syphilis cases is not available for Shelby or any county that has fewer than 5 cases.

Hepatitis:

- 2014: 11 new cases of viral Hepatitis, or Hepatitis C (ISDH, 2015)
- 2015: 30 confirmed cases and 18 probable cases (SCDH)
- January thru November 30, 2016: 23 confirmed cases and 27 probable cases (SCHD)

Age-Adjusted Hospitalization Rate due to Hepatitis (2010-2012)

1.1 Hospitalizations per 10,000 population 18 years and older

HIV:

- 2015: ISDH reported 5 new cases of HIV in Shelby County
- 59 people living with HIV at the end of December 2015
  - (Some residents may have been initially diagnosed in another state or county).
- Nationally, as well as in Indiana, the number of HIV cases has remained stable for several years as increasingly fewer people die of complications.
- Improved treatment and access to treatment has allowed people with HIV to live longer and healthier lives.

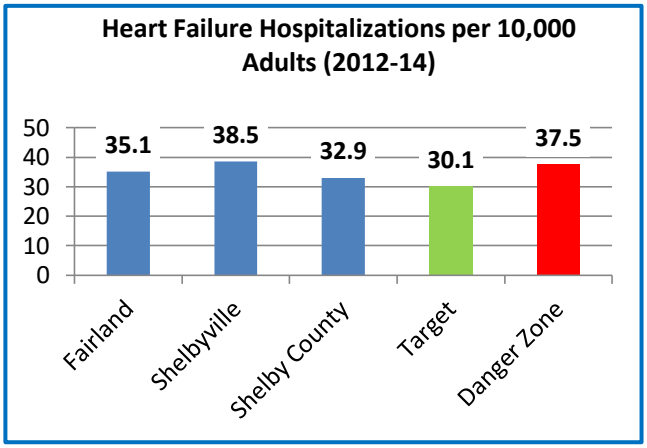
The *Healthy Partners* clinic opened in 2014. In September 2014 they entered into a Memorandum of Understanding with the *Damien Center* in Indianapolis. The *Damien Center* is a HIV/STI testing center that works through the *Indiana State Board of Health.* Together, *Healthy Partners* and the *Damien Center* provide free and confidential testing and treatment.

- July 2015 – July 2016, *Healthy Partners* tested 197 persons (59 males; 138 females).
- Of those tested, 22 persons and their partners were treated for STIs.
- Treatment has been for 22 cases of chlamydia and 2 cases of Trichomoniasis.
- HIV, Syphilis, and Trichomoniasis are tested and treated by the *Damien Center*.
- With the outbreak in 2015 of HIV and Hepatitis C in Scott and surrounding counties, *Healthy Partners* experienced an increase in the number of persons coming for testing.

DATA

Hospitalization and Emergency Department

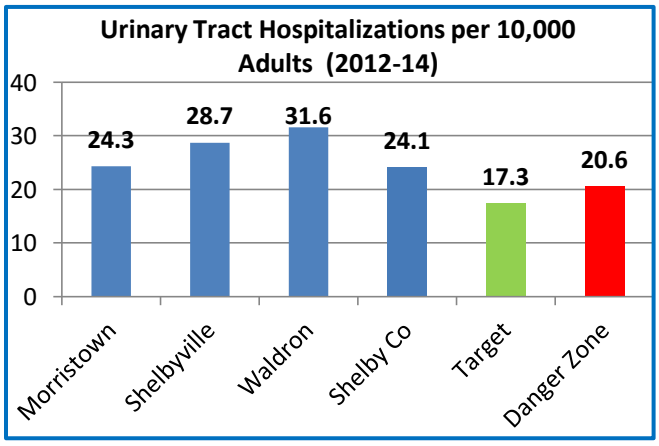
In 2014 the top 3 inpatient diagnoses for Major Hospital were: respiratory (COPD and pneumonia), gastrointestinal (gastritis, stomach/bowel procedures, gastrointestinal hemorrhage), and cardiac (heart failure, arrhythmias, acute heart attack). Data from January 1 to November 4, 2015 identified the top 5 admission diagnoses for the Emergency Department as gastrointestinal, extremity injuries, respiratory, skin complaints, and chest pain.

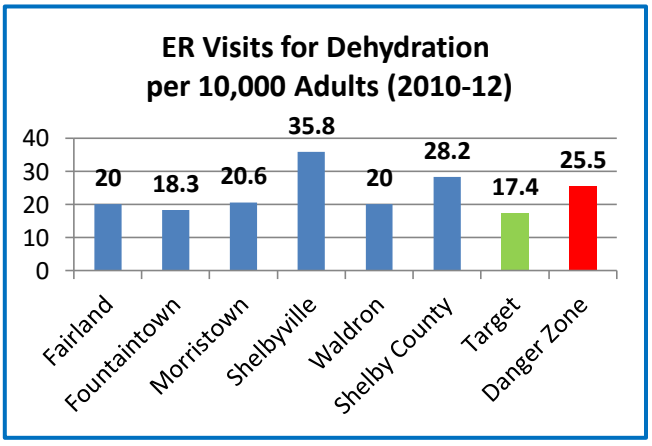


Heart Failure is a condition in which the heart can't pump enough blood to the body's other organs.

- Characterized by swelling in the legs and lungs resulting in shortness of breath while reclining.
- Can result from congenital heart problems, hypertension, diabetes, and other heart diseases.
- Shelby County rate is 32.9 heart failure hospitalizations per 10,000 adult population.
- Heart Failure hospitalizations have been trending up since 2011 by 7.6%.

Urinary Tract Infections: Urinary tract infections are the 2nd most common infection in the body, tending to infect more women than men. These infections can be debilitating to an older adult. Morristown, Shelbyville, and Waldron are all home to Extended Care Facilities (Nursing Homes). This rate has been trending down since 2011.



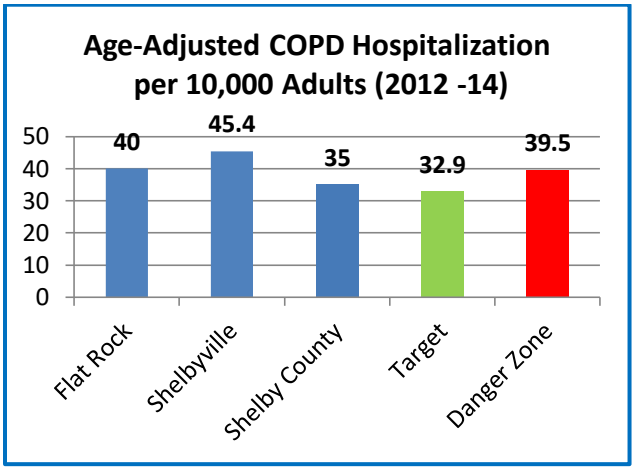


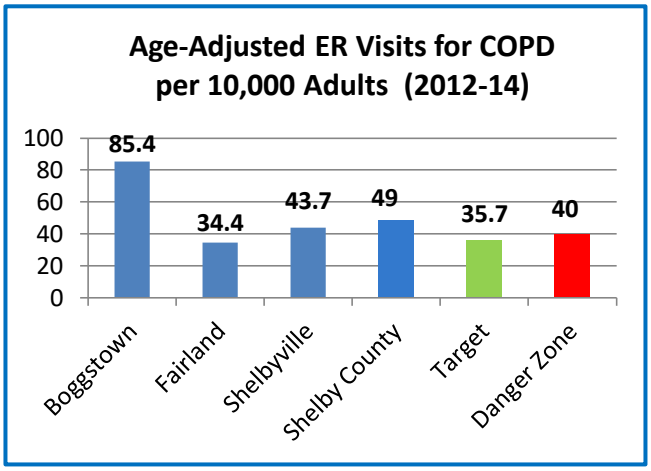
Dehydration: The source may be illness or behavioral, such as intense exercise and not consuming enough water. Severe dehydration can lead to changes in the body's chemistry, kidney failure, and can even become life-threatening. There has been a 15.3% decrease in hospitalizations for dehydration between 2013 and 2014. Time will reveal whether this is a trend.

DATA

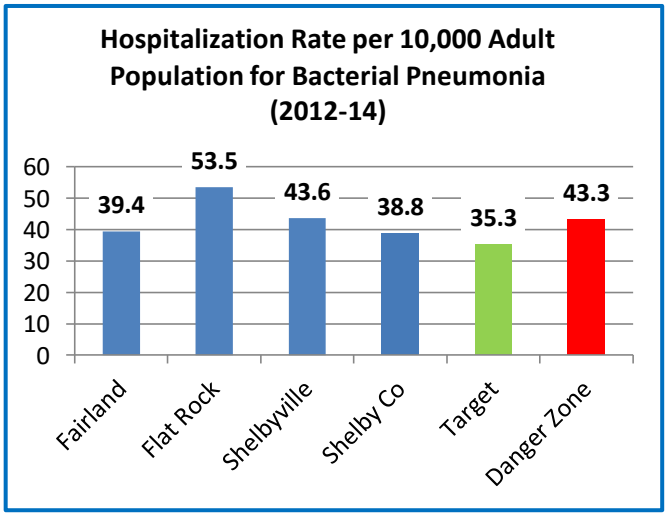
Respiratory Disease

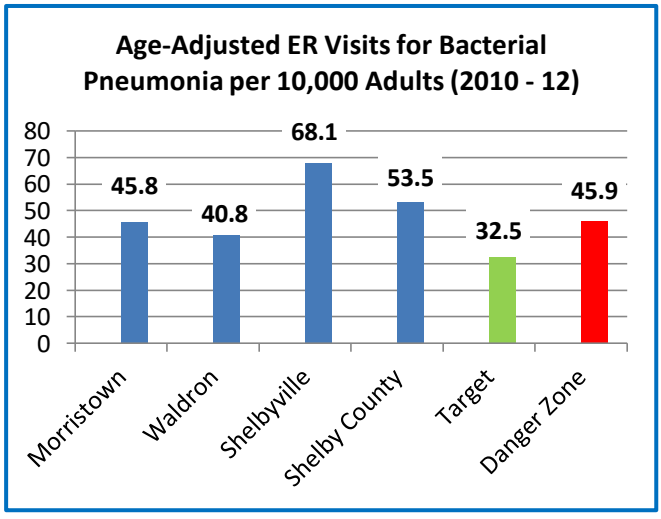
Chronic Obstructive Pulmonary Disease (COPD) is actually a group of diseases that cause airflow blockage and breathing problems (not including asthma). **It is the 4th leading cause of death in America.** Hospitalizations for COPD have been trending up since 2011 – 2013 by 16 3%.





Bacterial Pneumonia: Pneumonia is an inflammation of the lungs caused by infection, bacteria, fungi, or other organisms. Older adults and those with chronic illnesses are most vulnerable. Antibiotic resistant strains of pneumonia are on the rise. Major Hospital ~ Major Health Partners has made a concerted effort to increase pneumonia vaccinations. The rate of hospitalization for Bacterial Pneumonia was 53.2 per 10,000 population. There was a 27.6% decrease in hospitalizations between 2009 - 2011 and 2012 – 2014.

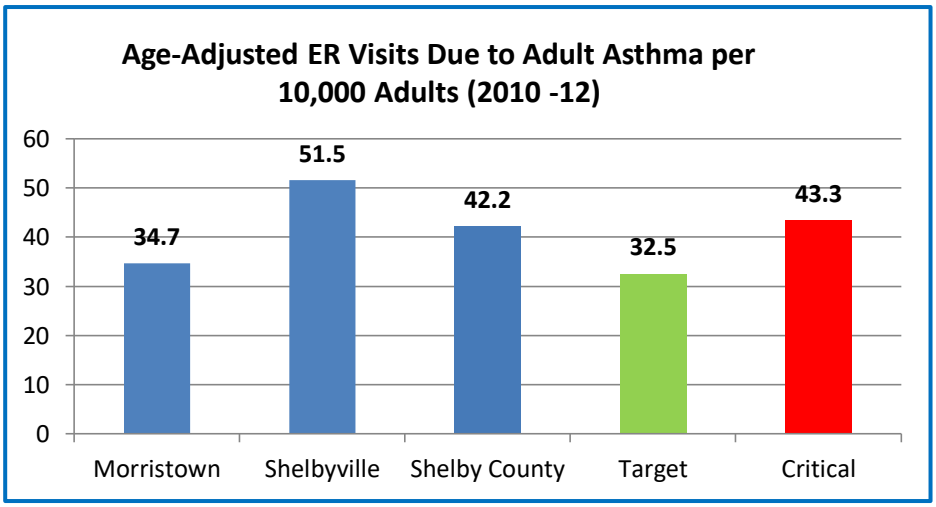




Respiratory Disease: Asthma

Asthma: Difficulty breathing through a narrowing of air passages can be triggered by dust, pollen, cigarette smoke, environmental pollutants and other allergens. It is mostly managed through short and long term medication strategies, but may be serious enough to warrant hospitalization.

Disparity: ***Women and African Americans have more ER visits for Adult Asthma.***



Age-Adjusted Hospitalization Rate due to Adult Asthma (2012-2014)

10.2 Hospitalizations per 10,000 population 18+ years Target: 7.7 or fewer hospitalization

Hospitalizations for adult asthma have been trending up since 2011.

Age-Adjusted Hospitalization Rate due to Pediatric Asthma (2012-2014)

12.0 Hospitalizations per 10,000 population under 18 years Target: 6.3 or fewer hospitalizations

Disparity: *Males age 0-4 are more frequently hospitalized subsequent to asthma.*

Over-all, hospitalizations for pediatric asthma have been trending down since 2011.

Age-Adjusted ER Rate due to Pediatric Asthma (2010-2012)

68.7 ER visits per 10,000 population under 18 years Target: 51.9 or fewer ER visits

Disparity*: Males age 5-9 years old have more ER visits for Pediatric Asthma.*

DATA

Health Behaviors – Physical Activity 

Physically inactive adults are at higher risk for obesity, heart disease, Type 2 diabetes, colon cancer, and high blood pressure. Being physically inactive is responsible for one in 10 deaths among U.S. adults. The CDC recommends at least 150 minutes of moderate-intensity aerobic activity (such as brisk walking or fast bicycling) every week and muscle strengthening activities two or more days a week. This minimum amount has been proven to both prevent and to improve management-of chronic disease. It can also help to minimize fall risk as people age.

In Shelby County, 32.8% of adults 20 years or older have sedentary lifestyles. Of the counties surrounding Marion and Shelby Counties, Shelby County has the highest percentage of physically inactive adults. **The *Healthy People 2020* target is 32.6% or fewer adults 20 years and older are obese.**

- 80% of adults do not meet the government's physical activity recommendations for aerobic and muscle strengthening.
    - 55% *of AdvantAge Survey* respondents reported never doing muscle-strengthening activities such as lifting weights or push-ups.
- 60% of adults are not sufficiently active to achieve health benefits.
    - The *AdvantAge Survey* revealed that 51% of respondents reported engaging in vigorous physical activity only one or more times a week.
    - 74% of *Advantage Survey* respondents reported being very or somewhat active.
    - ***Disparity:*** Survey respondents perceive they are more active than they actually are.
- A lifestyle of physical inactivity increases risk of mortality and metabolic syndrome.
- **Sedentary adults annually pay $1,500 more in healthcare costs than physically active adults.**

DATA

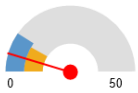
Health Behaviors – Physical Activity

Access to Exercise Opportunities (2016)

53.7% of the population has access to physical activity opportunities Target: 63.2%

Recreation and Fitness Facilities (2013)

Shelby County, IN (4.50 per 100,000 population; 2 facilities in 2013*)
Indiana (9)
USA (10.1)



Target: 0.8 per 1,000 population

Institute for Health Promotion Research, Salud America Graphic

Shelby County has had several additional fitness businesses open in the last 3 years.

When physical activity options are close to where people live and work, they are more likely to participate in those activities. Along with reducing the risk of chronic disease and increasing optimal management of existing disease, an active lifestyle helps maintain bone strength and a healthy weight, improves mood and sleep, and improves stress management.

Shelbyville Central High School students participated in the 2015 *YRBS* survey (1,035 students equaling 54% of total number of students taking the survey). The following information is from all Indiana students participating in the survey.

Activity	2005	2015
Physically active, enough to increase heart rate and make breathing harder, for at least 5 out of the previous 7 days *especially for Caucasian/white students, or males, or 9th grade students who still are required to take physical education*	32.2%	**46.5%↑**
Not vigorously physically active for at least 60 minutes even 1 day in the previous 7 days	15.4%	**27.6%↑**
Vigorously physically active for at least 60 minutes each of the previous 7 days more true for male students	16.4%	**25.3%↑**
Play computer or video games or spend time on computer for 3 hours or more each day (not related to school work) *somewhat lower for Juniors and Seniors*	20.9%	**38.4%↑**
Played on at least one organized sports team through school or the community in the last 12 months	57.1%	**60.4%↑**

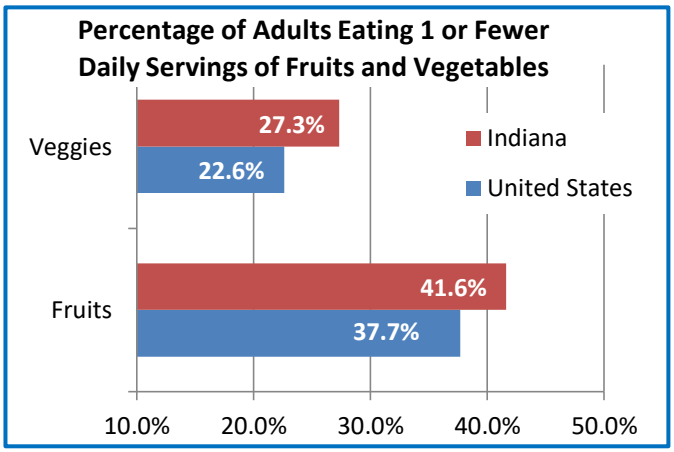
Green arrow notes improvement

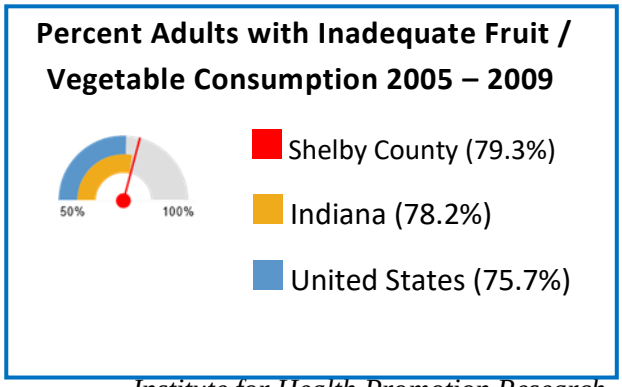
Red arrow notes an unfavorable increase

DATA

Health Behaviors – Healthy Eating

A diet rich in a variety of fruits and vegetables can reduce the risk of chronic disease. The ***USDA*** at https://www.choosemyplate.gov provides tools to help determine the amount of fruits and vegetables different ages and genders should eat daily. Five to 9 or more daily servings (1/2 cup) of fruit and vegetables are recommended. The general recommendation is to fill half of the plate with fruits and vegetables at each meal.





Institute for Health Promotion Research, Salud America Graphic (CDC BRSS)

The majority of *AdvantAge Survey* respondents (79%) reported eating 1 to 3 servings of fruits and vegetables on a typical day.

- Only 21% had 4 or more servings.
- Income level and geographic location did not impact the consumption of fruits and vegetables.
- Two in four respondents (42%) said there weren't convenient places in their neighborhoods to buy fresh fruits and vegetables
- **8% said that the fresh fruits and vegetables were not affordable.**

In the 2015 YRBSS in which 1,035 Shelbyville Central High School students participated (54% of total participants), Indiana 9th – 12th grade survey respondents reported the following:

Fruit and Vegetable Consumption	2003	2015
No fruits or vegetables eaten in previous 7 days	4.6%	7.3%↑
Fruits and vegetables eaten once a day	64.3%	57.5%↓
Fruits and vegetables eaten three times a day	12.9%	9.8%↓

DATA

Disparity – Access to Healthy Food

The number of grocery stores per 1,000 people is a good way to determine how easy it is to access a wide variety of nutritious food. The *CDC* emphasizes that how long people live and how healthy they are during their lifetimes is directly linked to where they live. For both cities and towns, urban centers and rural areas, health can even drill down to the census tract or block where people live. **Food insecurity is an economic and social indicator of the health of a community.** Food insecurity is defined as households who at various times during the year are unable to provide adequate food in both quality and quantity to all or some members of the household.

Shelby County is doing well over-all with

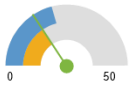
Child Food Insecurity  ***Low-Income and Low-Access to a Grocery Store*** 

Percentage of ***Children with Low-Access to a Grocery Store*** 

Residents ***65 and Older with Low-Access to a Grocery Store*** 

However, for an individual or family living in an underserved area, healthy, affordable food may be difficult to access, especially if there is no personal vehicle; no grocery store within walking distance; or no safe pedestrian paths even if a grocery store is nearby. If the household is low-income and uses SNAP benefits but the local store does not accept SNAP, then the food is still not accessible.

Grocery Store Density (2012)



Shelby County, IN (15.75 stores per 100,000 population or 7 stores)
Indiana (15.6)
USA (21.1)

Institute for Health Promotion Research, Salud America Graphic

Target: 0.17 stores or more per 1,000 population (8 stores per 2015 population estimates)

(Convenience stores and large general merchandise stores (supercenters and warehouse clubs) are not in this count.)

SNAP Certified Stores (2012)

0.5 Stores per 1,000 population (22 stores selling a variety of nutritional food in 2012) 

Target: 0.7 stores or more per 1,000 population (31 stores per 2015 population estimates)

Formerly called Food Stamps, the goal of SNAP is for low-income residents to be able to access nutritious food. In 2012 Shelby County food stores redeemed $367,138.00 in SNAP benefits. The number of stores accepting WIC vouchers decreased from 2011 .14 per 1,000 population to .09 per 1,000 in 2012. Eligible stores redeemed $161,982 in WIC vouchers in 2012.

DATA

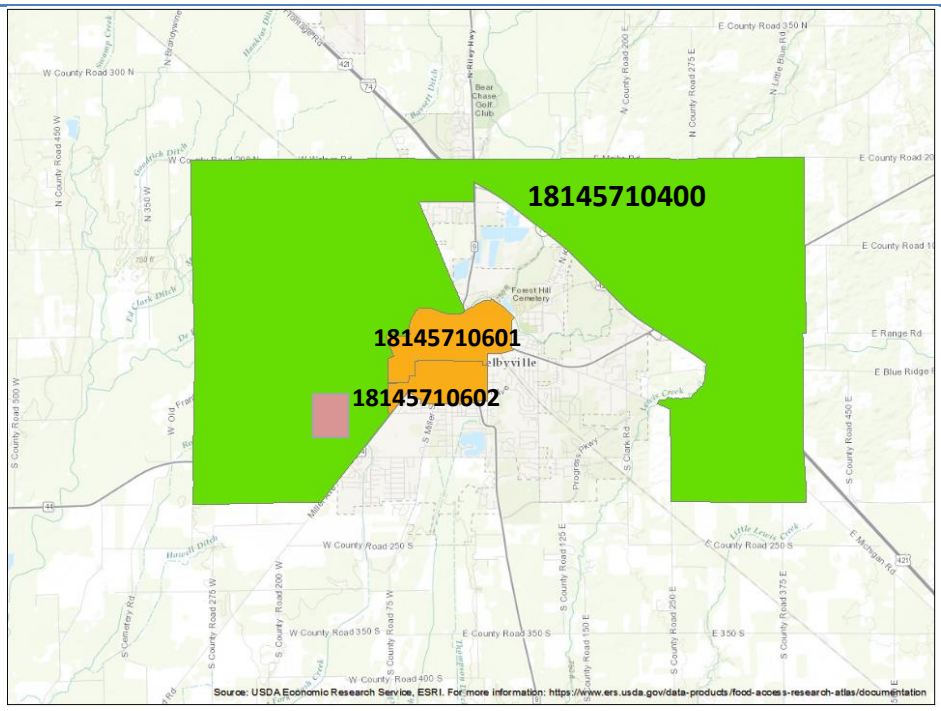
Disparity – Access to Healthy Food

The *USDA* standards for grocery store access are ½ to 1 mile for urban areas or 10 miles from the nearest grocery store in rural areas. One-half mile is considered accessible by walking. Being able to walk to a grocery store is especially important for low-income neighborhoods with low access to a personal vehicle or with insufficient financial resources for gas and vehicle upkeep.

The following census tracts in Shelbyville are low-income with a poverty rate of 20% or greater or a median household income of less than 80% of the median income for the Indianapolis Metropolitan Statistical Area. Each area has access challenges. Census numbers are rounded. Data is from 2010.

Census Tract 18145710602

- 1,248 housing units
- Population: 3,266
- This is a low-income area.
- 288 people have low-access to a grocery store at a ½ mile.
- 170 people are low-income, low-access at a ½ mile.
    - 79 children have low-access to a grocery store at a ½ mile.
    - 27 persons age 65 and older have low-access at a ½ mile.
- 21 housing units do not have access to a vehicle.
- Grocery store accessible within 1-10 miles.



USDA Economic Research Service Map

DATA

Health Disparity – Access to Healthy Food

Census tract 18145710601

- 1,422 housing units
- Population 3,477
- Approximately 2,097 people are low access to a grocery store at ½ mile distance
- 1,022 people are low-income and low-access at a ½ mile
    - 622 children have low-access to a grocery store at a ½ mile
    - 181 persons 65 and older have low-access at a ½ mile
- **173 low-income, low-access households do not have access to a vehicle**
- Grocery store accessible within 1-10 miles

In this low-income, low-access community, 12% of the residents do not have access to a personal car. Members of 173 households depend on their feet, a bike, or the generosity of others to access needed and desired services. If some of these housing units without vehicles belong to persons 60 years and older, *ShelbyGo* is an affordable public transportation option. For those residents under the age of 60, *ShelbyGo* may be an expensive and limited option.

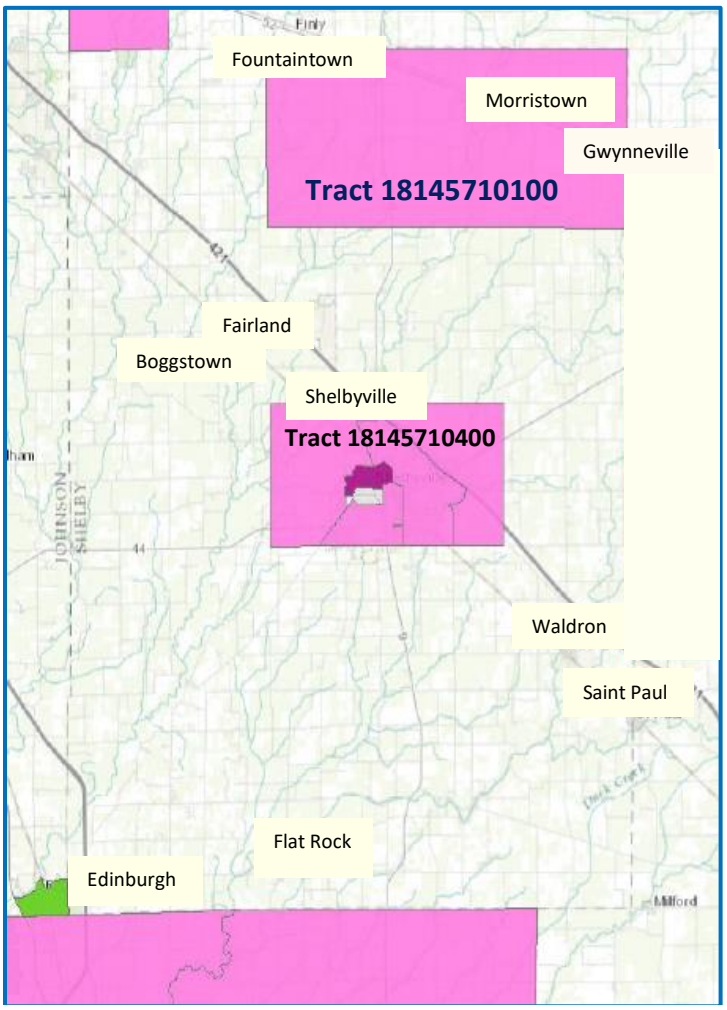
Census Tract 18145710400

- 1227 housing units
- Population 3,218
- Approximately 2,584 people are low access to a grocery store at ½ mile distance
- 1,378 people are low-income and low-access at a ½ mile
    - 813 children have low-access to a grocery store at a ½ mile
    - 354 persons 65 and older have low-access at a ½ mile
- Westar mobile home community is an isolated community with 200 households in this tract
- Isolated without sidewalks, safety lighting, or a grocery store
    - Grocery store closed 10+ years ago
    - Currently there is a convenience store featuring tobacco products
- Diversity: older residents, Hispanic residents, families with young children, lower-income

Walkability and connectivity to needed services is a goal of a healthy community. These low-income areas need access to affordable, healthy food and a grocery store that accepts SNAP benefits.

DATA

Health Disparity – Access to Healthy Food



USDA Economic Research Service Map

Hanover Township

Another census tract in the county with food access challenges covers Morristown and Gwynnville. This tract of 55.25 square miles of land includes a rural town with a 2014 population of 4,008. The area's risk factors include:

Nearly a third of the residents have household incomes less than the cost of living. Nine percent live below the *FPL*.

Morristown

- 2% of households receive TANF benefits
- 950 are 65 and older

Gwynnville

- 100% single parent households
- 18.2% do not own a vehicle
- Per capita income is below 200% of the *FPL*

Fountaintown

- Low-income are: nearly 14% of adults 65 and older living in poverty and nearly 28% of children under the age of 18 living in poverty.
- Per USDA grocery store access standards for rural areas, they are less than 10 miles from a grocery.
- This is not an area with low access to personal vehicles.

- 1,439 housing units in the census tract
- In Morristown there are 3 gas station quick marts with a limited variety of nutritional food
- The closest grocery stores are in
  - New Palestine (11 miles for Morristown, 13.6 miles for Gwynnville)
  - Greenfield (12 miles for Morristown, 13.5 miles for Gwynnville)
  - Rushville (15 miles for Morristown, 11 miles for Gwynnville)
- **At the 10 mile standard for rural areas, 1,050 persons still have low-access to a grocery store** (28% of the tract population – primarily in Morristown and Gwynnville)

DATA

Health Disparity – Access to Healthy Food: Farmers Markets

The Shelbyville – Shelby County Farmers Market is the only Farmers Market in the county. However, there are many roadside stands throughout the county and in Shelbyville. SNAP benefits are accepted and coordinated through the market sponsor – Mainstreet Shelbyville. Fresh produce vouchers for WIC and Senior Farmers' Market Nutrition Program for low income seniors are accepted by some vendors but must be managed by each individual vendor. Percentage-wise, less than 1% of Shelby County WIC vouchers are redeemed at the Shelbyville Farmers Market whereas in Indiana, nearly 19% of WIC recipients redeem vouchers at Farmers Markets for fruits and vegetables. Compared to the Indiana average, Shelbyville's Farmers Market has 38% more fruits and vegetables for sale than other markets in the state.

In 2007, Shelby County had $26,000 in direct to consumer farm sales. This includes sales from roadside stands, farmers markets, pick-your-own, door-to-door, etc. It does not include sales of craft items or processed products. In 2007 direct sales per capita were $1,140.

Farmers Market Density (2013)

0.02 markets per 1,000 population Target: 0.04 per 1,000 or more, Indiana

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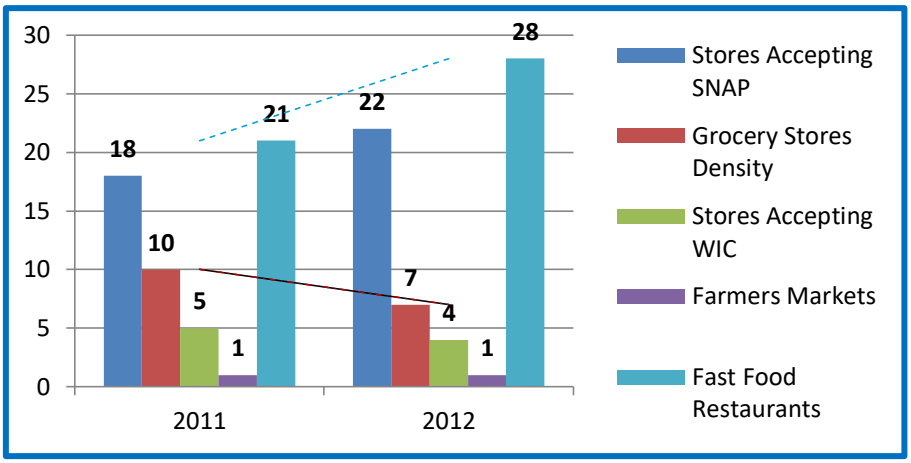
Why are Farmers Markets important to personal and community health?

Economy: more food dollars, SNAP, WIC and Senior voucher redemptions go back into the local economy to the growers producing the food.

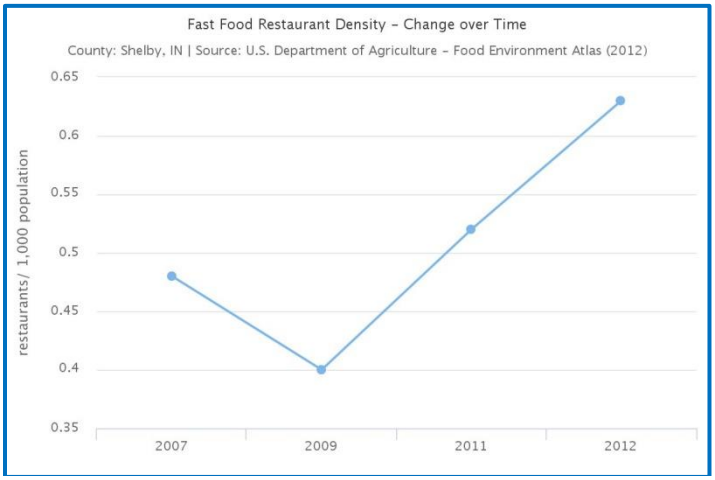
Nutrition: farmers markets are primary opportunities to purchase and learn how to prepare fresh fruits and vegetables directly from the producer. For those areas that are low-income, low-access to a grocery store, access to farmers markets is even more essential. Unfortunately, it is the fast-food restaurant that is becoming more accessible, not nutritious food.

DATA

Health Disparity – Fast Food



Fast food (food that is paid for in advance of eating) is often high in fat and calories and lacking in recommended nutrients. A diet high in fast food is typically low in consumption of fresh fruits and vegetables, increasing the risk of obesity and all its accompanying chronic health conditions. Convenience stores and fast food chain restaurants are typical fast food establishments. The number of fast food establishments is relevant because it measures environmental influences on dietary behaviors. Fast food restaurants often offer value meals that are nutritionally-poor and calorie-dense, but inexpensive. They are also convenient for a culture that is busy and on-the-go.



Healthy Communities Institute Chart

In 2012 there were 28 fast food establishments in Shelby County.

The county was right at the cut-off for being in the top 50% of Indiana's 92 counties for fast food restaurant density (0.63 fast food establishments per 1,000 population – around 28 establishments; USDA Food Environment Atlas).

In 2016 the number of fast food establishments in the county is around 38 or more.

In 2007, the per person fast food expenditure in Shelby County was $652.97. This was the Indiana average as well.

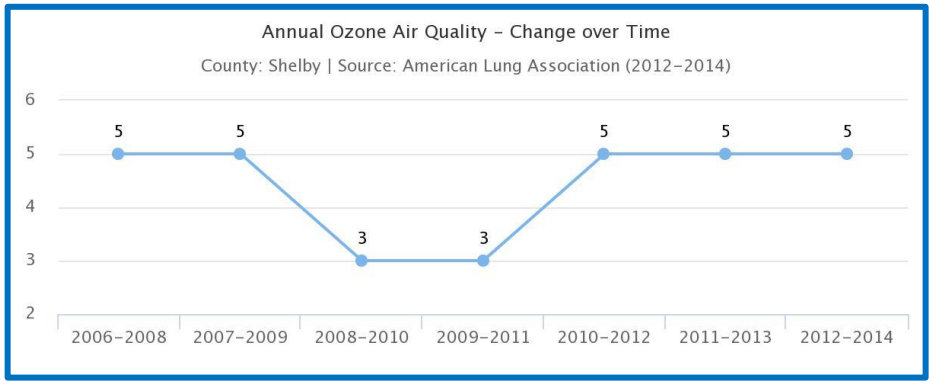
DATA

Air Safety and Food Safety

Annual Ozone Air Quality (2012-2014) Air Quality Index: 5

The American Lung Association gives a grade to every county in the United States based on the number of high ozone days. The grade ranges from 2 – 5. The median value for the Indianapolis Metropolitan Area is 5.

While ozone is an important shield against ultraviolet rays, it is also a pollutant that causes health problems at ground level. Ozone primarily affects the respiratory tract, causing breathing difficulties, aggravating existing lung diseases, and inflaming lung tissue. Children, people with lung disease, and older adults tend to be more sensitive to ozone.

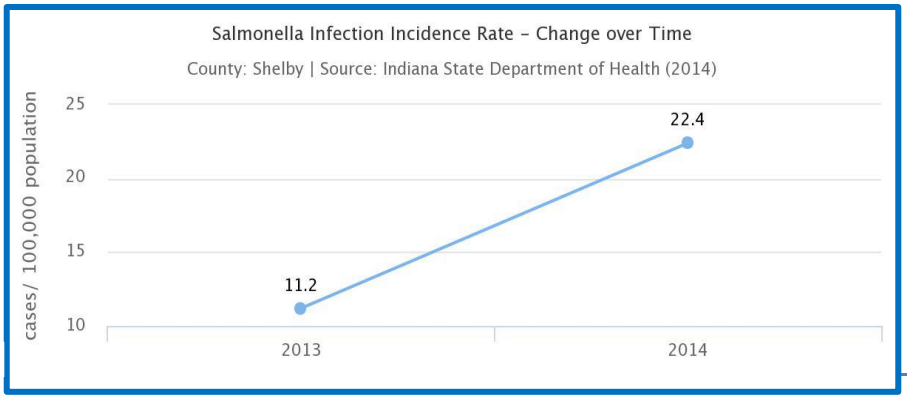


Healthy Communities Institute Chart

Salmonella Infection Incidence Rate (2014)
22.4 Cases per 100,000 population

Target: 15 or fewer cases

Salmonella Infections have been rising. ***Healthy People 2020*** **goal is 11.4 or fewer cases per 100,000 population.**

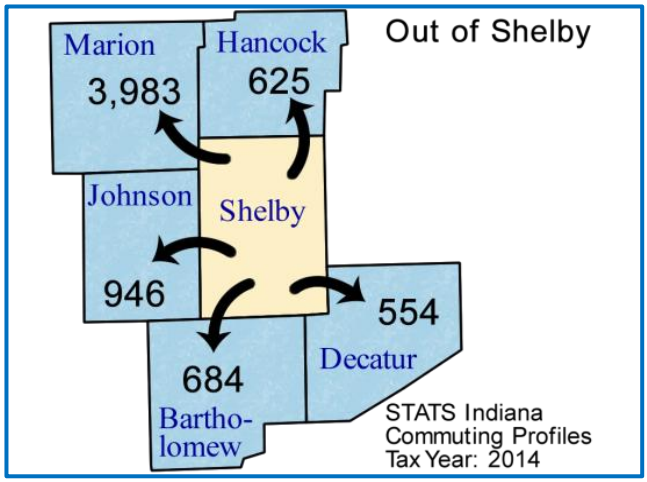


Healthy Communities Institute Chart

DATA

Healthy People 2020: Commute Time

In 2014, the top 5 counties that Shelby County workers (age 16 and older) commuted-to for employment were Decatur, Bartholomew, Johnson, Marion and Hancock Counties (13.1% of workers). In 2014, the average commute was 24 minutes. However, 35.3% of Shelby County workers commuted alone for more than 30 minutes to their employment.



Why is commute time a health indicator? Long commute times reduce the time available for family and friends, recreation, and civic involvement – all social determinants of well-being. Workers with long commutes may also experience health problems such as headaches, anxiety, and high blood pressure – not necessarily from the stress of traffic, but also from air pollution. The pollution from increased use of fuel and traffic congestion has been associated with respiratory-related and cardiac health problems. Long drives are a sedentary habit and may be part of a lifestyle of little physical activity and obesity.

Commuter Connect is a public transportation system for workers traveling into Johnson and Marion Counties – the top 2 commuter employment destinations. However, only 2% of Shelby County workers use public transportation. The ***Healthy People 2020*** **goal is that 5.5% of commuters would use public transportation.**

DATA

Socio-Economic Determinants of Health

Health is more complex than disease and treatment. Not only do genetics and lifestyle choices impact health, but so too do social and economic factors. These factors may create barriers to healthy choices and well-being. They strongly influence the health of the individual and community. Studies repeatedly show a strong correlation between socio-economic status and health outcomes.

The following information looks at some of these challenges in the communities of Shelby County. While Shelby County as a whole may be making progress or doing well on a given health indicator, there are disparities throughout the various communities of Shelby County.

All data and definitions about the socio-economic determinants of health are from the *Healthy Communities Institute* (*HCI*) and the measurement period is 2010 – 2014. Data is age-adjusted to allow for fair comparison among communities. Adults are persons18 years and older. ***Target* is the minimum best rate or percentage of the top 50th percentile of all Indiana Counties. *Danger zone* is the minimum rate or percentage for all Indiana Counties in the bottom quartile.**

2017 Federal Poverty Level

	100%	138%	200%	250%	300%	400%
1	11,880	16,400	23,760	29,700	35,640	47,550
2	16,020	22,100	32,040	40,050	48,060	64,100
3	20,160	27,800	40,320	50,400	60,480	84,650
4	24,300	33,600	48,600	60,750	72,900	97,200
5	28,440	39,250	56,880	71,100	85,320	113,800
6	32,580	44,950	65,160	81,450	97,740	130,300
7	36,730	50,700	73,460	91,850	110,190	146,900
8	40,890	56,450	81,780	102,250	122,670	163,550

Add $4,160 for each additional family member

2014 Federal Poverty Level

	100%	138%	200%	250%	300%	400%
1	11,670	16,104	23,340	29,175	35,010	46,680
2	15,730	21,707	31,460	39,325	47,190	62,920
3	19,790	27,310	39,580	49,475	59,370	79,160
4	23,850	32,913	47,700	59,625	71,550	95,400
5	27,910	38,516	55,820	69,775	83,730	111,640
6	31,970	44,119	63,940	79,925	95,910	127,880
7	36,030	49,721	72,060	90,075	108,090	144,120
8	40,090	55,324	80,180	100,225	120,270	160,360

Poverty

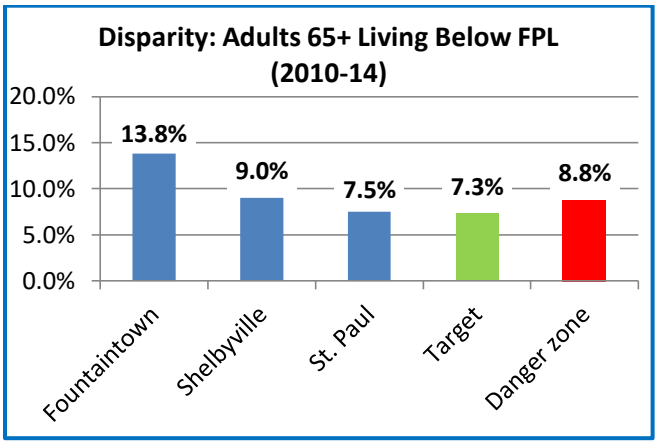
The *Federal Poverty Level* (FPL) is set every year by the Census Bureau. Since the *HCI* data for the socio-economic factors of health are from 2010 – 2014, a 2014 *FPL* chart is provided as well as a 2017 *FPL* for comparison. The official FPL is published in late January; however, these are the guidelines for the insurance Marketplace to determine subsidies.

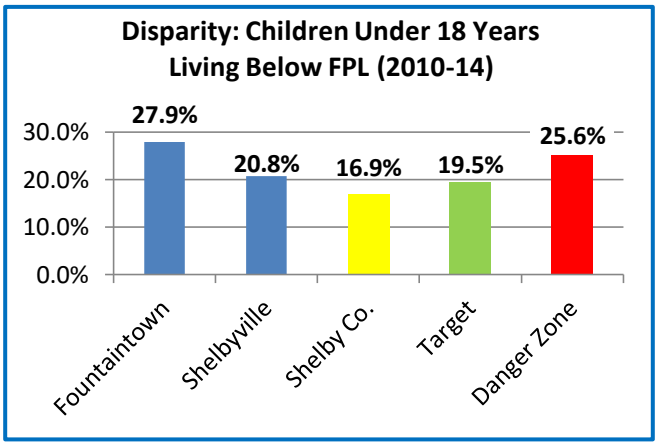
Adults with incomes up to 138% of the FPL are eligible to apply for HIP 2.0.

DATA

Socio-Economic Determinants of Health

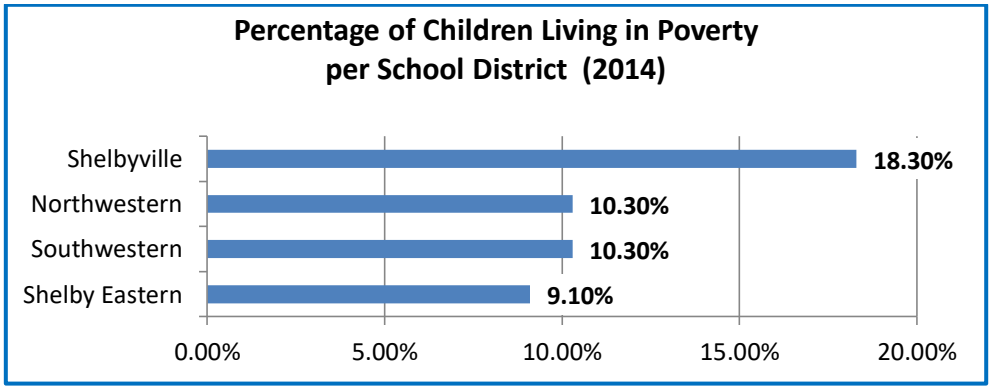
Senior Poverty: Nationwide, seniors are increasingly slipping into poverty. Seniors often live on fixed incomes from Social Security, pensions and other retirement plans. The costs of prescriptions alone, as well as the cost of living increasingly make their incomes insufficient. Among the host of challenges created by poverty, for seniors it creates food insecurity, inability to maintain their home, and challenges accessing medical care. In Shelby County, older adults struggle in some of our communities more than in others.





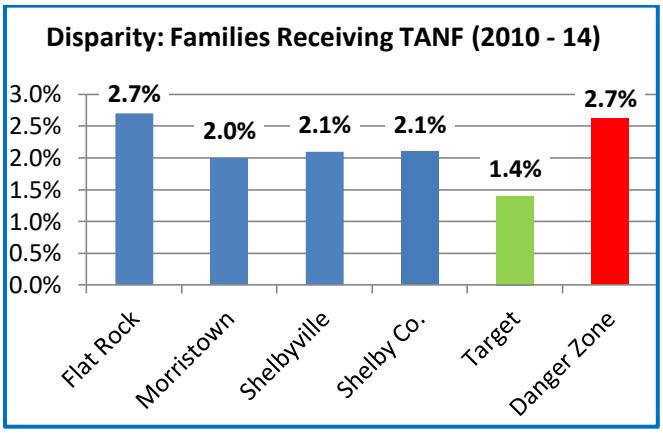
Children living in poverty are more likely to have health, behavioral, and emotional problems. They are at risk for not doing well in school and for dropping out of school, creating a life-long challenge for adequate employment and for access to medical care and other quality of life amenities. **Nearly a quarter of Latino children live in poverty.** All other races, including Caucasian are 16.38%.

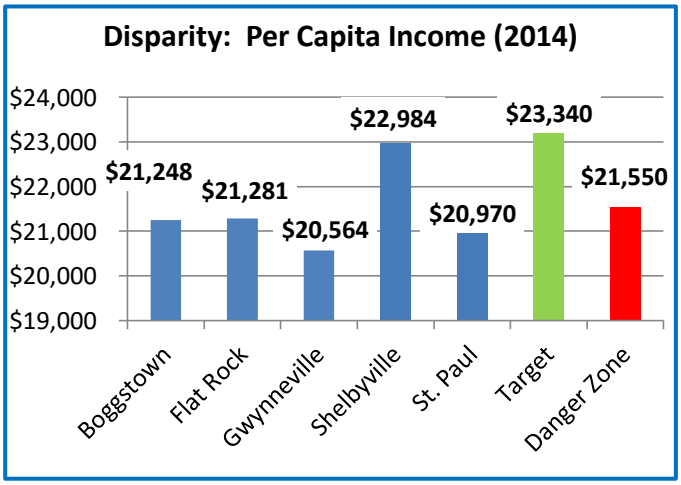
In 2014 the percentage of children ages 5 – 17 who were living in poverty was 15.1%. Another way to view childhood poverty is via Shelby County's school districts.



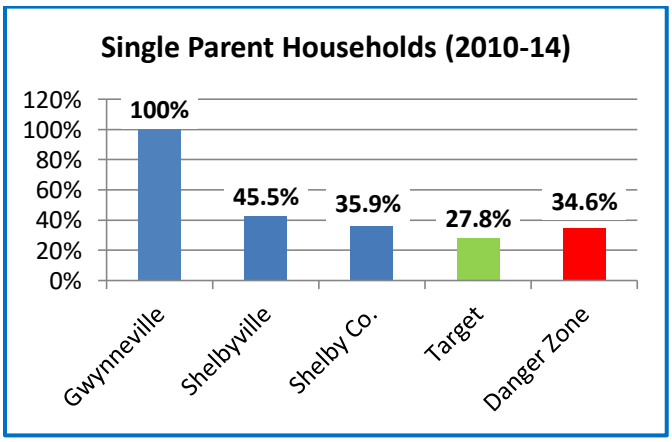
Socio-Economic Determinants of Health

Temporary Assistance to Needy Families (TANF): These households lack the financial resources to adequately care for members in the household. Their limited assets may keep them from having the resources they need to succeed at school or work. As these households juggle their limited income, health care may not be a priority or may be seen as unaffordable. Medical attention may be delayed until it is an emergency.





Per Capita Income (individual income) is the total income of the region divided by the population. It is an indicator of economic well-being: an individual's capacity to participate in the economy of the region, including how well s/he is able to provide for basic needs and medical care. At the *FPL*, a single adult in 2014 would have made $11,670 annually and a family of four, $23,850. At 200% of the *FPL***,** an individual would have been making $23,340 in 2014. The personal income in many Shelby County communities was less than 200% of the *FPL*.



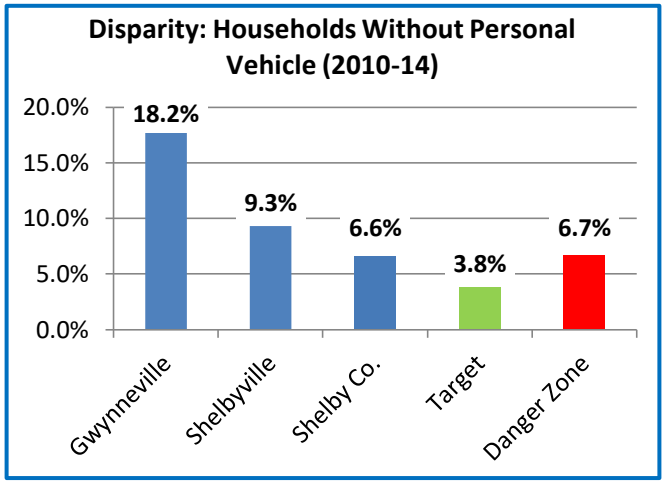
Single Parent Households:

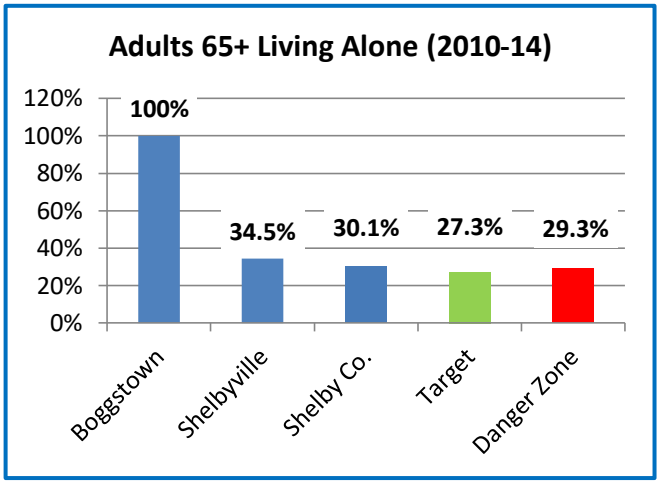
The risk of economic, emotional and behavioral challenges is greater for single-parent than for two-parent homes. Per 2015 census estimates, there are 1,855 single mothers and 1,046 single fathers raising children and perhaps caring for aging parents or relatives, too.

DATA

Socio-Economic Determinants of Health

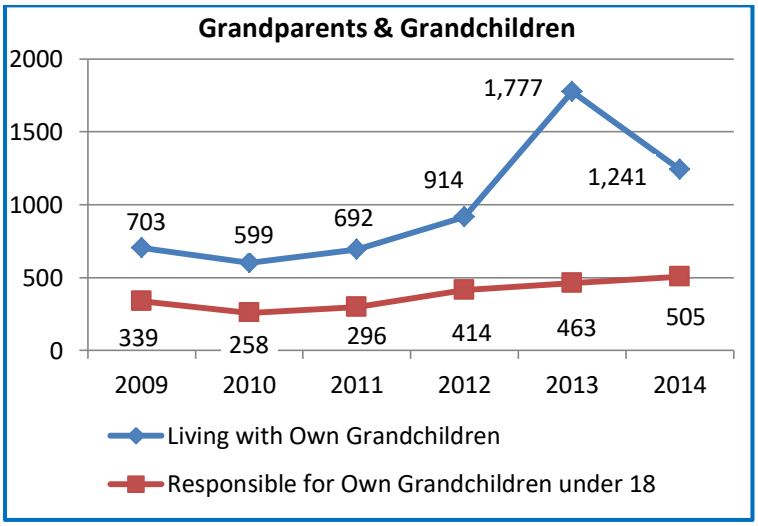
For all Shelby County communities to become walkable is certainly a goal. However, in a rural county, to not have access to a personal vehicle limits access to grocery stores, healthcare, employment and other needed and desired activities.





Older adults who live alone may be at greater risk for social isolation, a limited support network, and insufficient assistance for urgent and emergent situations. Nationally, a third of adults 65 and older live alone. Many are at greater risk for poverty, disabilities, hunger, lack of access to care, and inadequate housing.

Grandparents Raising Grandchildren:



- **1,241 grandparents live with their grandchildren**
  - **14.4% are responsible for raising grandchildren under the age of 18**
  - **22% of these households have no parent present**
- **Median length of time grandparent has been responsible: 3-4 years.**
  - **34.1% have been raising them for 5 or more years.**
- **14.1% are living in poverty**
- **13% of these grandparents have a disability**
- **63.2% are still in the workforce**

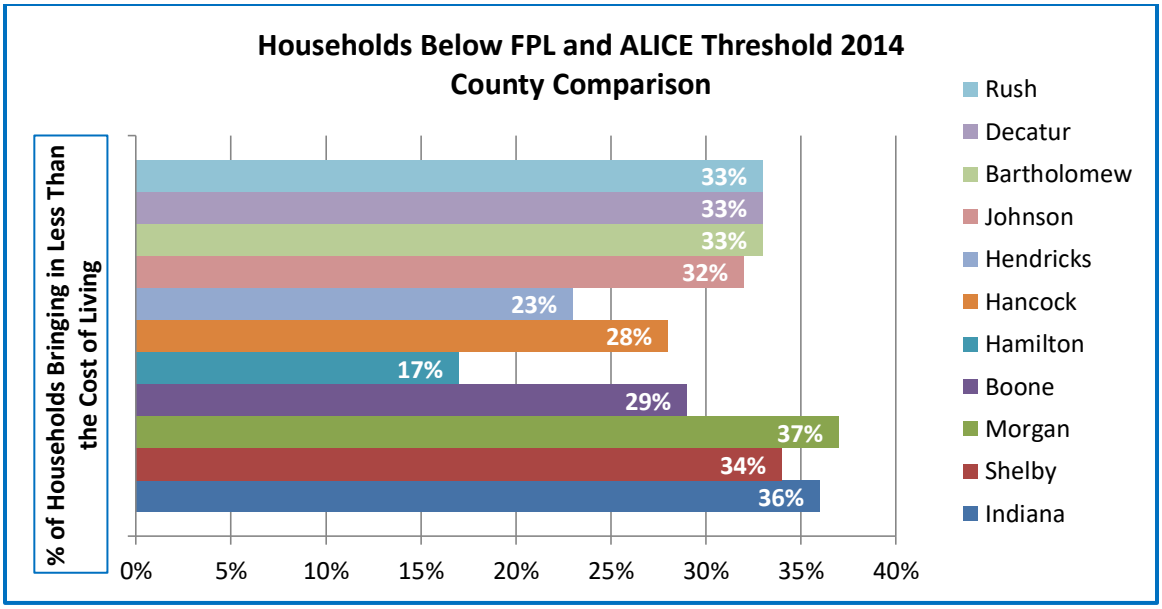
(American Fact Finder 2009 – 2014)

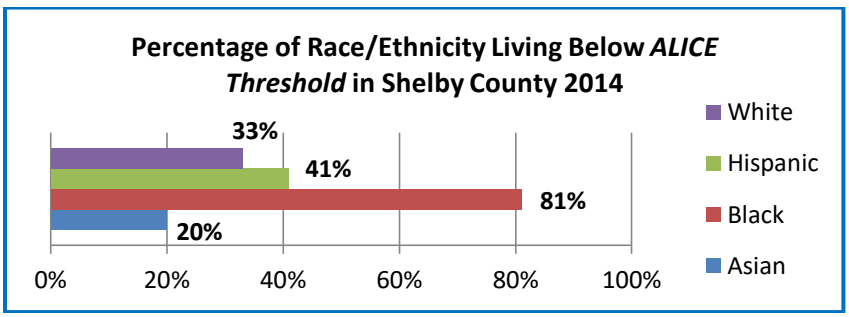
Socio-Economic Determinants of Health: Asset-Limited Income-Constrained Employed (ALICE)

ALICE: In 2014, The *Indiana Association of United Ways* produced the first data-driven research about ***A**sset-**L**imited **I**ncome-**C**onstrained **E**mployed* residents of Indiana.

- ***ALICE Threshold* describes households earning more than the *FPL*, but less than the basic cost of living for the county.**
  - Benchmarks are adjusted for each Indiana county and for household size.
  - In 2014 in Shelby County, the annual *ALICE Threshold* for households whose residents were younger than 65 years old was $40,000; for those 65 and older it was $30,000.
  - **Among those 65 and older, 41% were living below the *ALICE Threshold*.**

- **In 2014 in Shelby County, 34% of households earned less than the basic cost of living.**
  - 23% of the population was at the *ALICE Threshold.*
  - The poverty rate was 11%.





Socio-Economic Determinants of Health: ALICE

Percentage of Households Below and Above Alice Threshold
Shelby County Townships, Towns, and City

Townships where total ALICE and poverty vs. those above ALICE threshold is nearly equal.
Townships where around a third or more residents are at ALICE threshold or in poverty.

Township, Town or City	Population	Households (HH)	% in Poverty	% ALICE	Total ALICE and Poverty	% above ALICE
Addison Township (Shelbyville) SC Schools	20,516	8,388	15%	28%	43% 3607 HH	57%
Brandywine Township (Fairland) (NW)Triton	2,034	786	11%	17%	28% 229 HH	72%
Fairland (Brandywine Township) (NW) Triton	334	136	19%	32%	51% 69 HH	49%
Hanover Township SE Schools, **Morristown**	2,330	919	9%	21%	30% 276 HH	70%
Hendricks Township SW Schools	1,172	406	6%	21%	27% 110 HH	73%
Jackson Township SW Schools	1,777	668	9%	18%	27% 180 HH	73%
Liberty Township (Waldron) SE Schools	1,693	699	7%	19%	26% 182 HH	74%
Marion Township (Shelbyville) SC Schools	1,584	598	5%	21%	26% 156 HH	74%
Moral Township NW Schools, Triton	4569	7809	2%	12%	14% 1093 HH	86%
Morristown (Hanover Township) SE Schools	1,329	521	9%	32%	41% 214 HH	59%
Noble Township (St. Paul) SE Schools, Waldron	1,716	599	6%	30%	36% 216 HH	64%
Shelby Township (Shelbyville) SCS School	1,656	643	2%	13%	15% 97 HH	85%
Shelbyville (Addison Township) SCS Schools	19,216	7737	15%	29%	44% 3404 HH	56%
Sugar Creek Township (Boggstown) NW Schools, Triton	1,169	442	15%	13%	28% 124 HH	72%
Union Township SE Schools, Morristown	1,147	370	5%	11%	16% 59 HH	84%
Van Buren Township (Fountaintown) SE Schools, Morristown	1,433	565	12%	21%	33% 187 HH	67%
Waldron (Liberty Township) SE Schools	7472	250	10%	8%	18% 45 HH	82%
Washington Township (Flat Rock) SW Schools	1,368	502	6%	24%	30% 151 HH	70%

DATA

Socio-Economic Determinants of Health: ALICE

The *ALICE Household Survival Budget* is the cost of bare necessities (housing, child care, food, health care, transportation) in a county.

- It does not allow for any savings but does include the penalty for not having health insurance.
- These households make too much money to qualify for HIP 2.0 but are typically unable to afford even the Bronze level insurance in the marketplace.

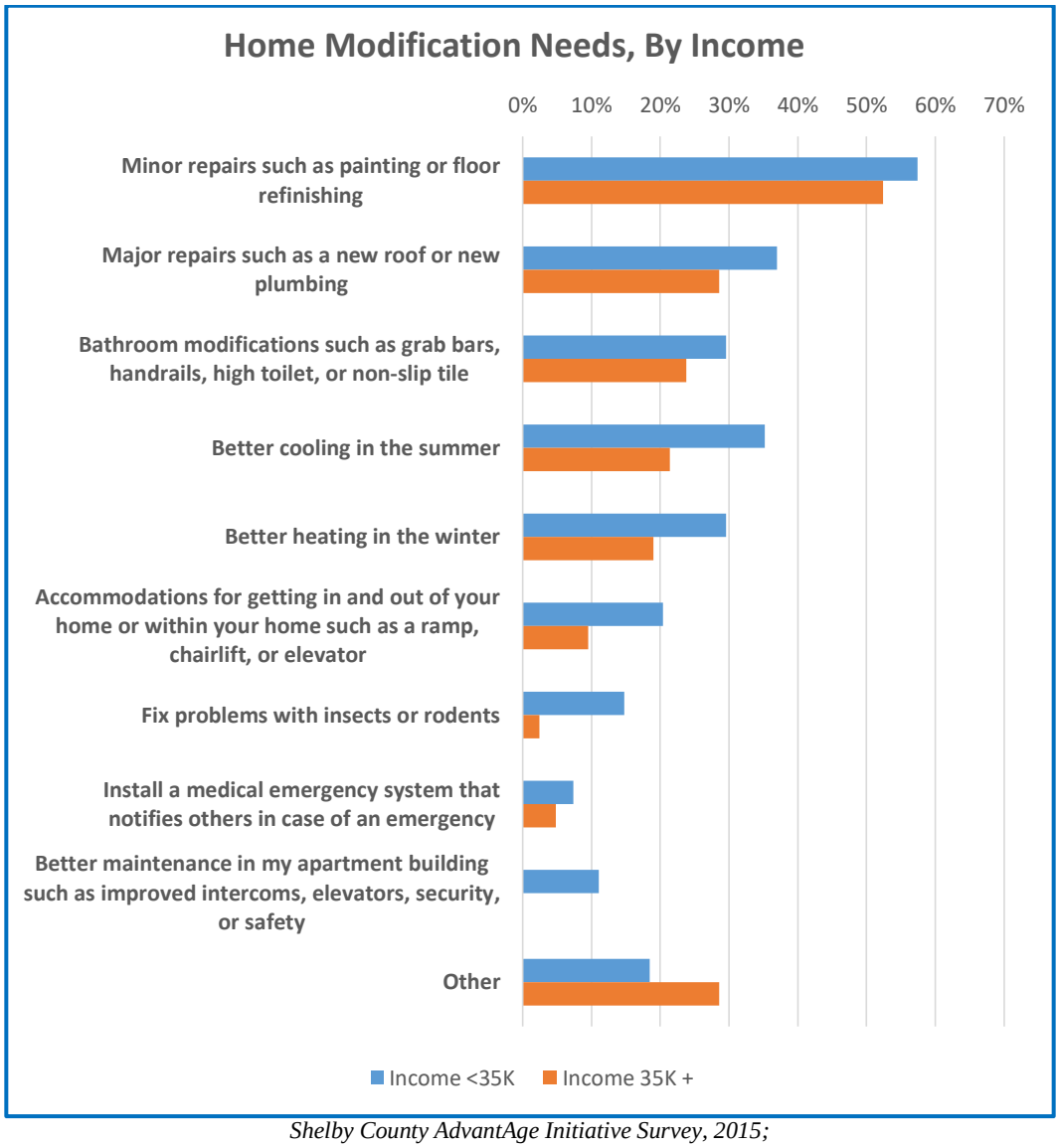
	2014 Individual	2014 Family of 4	2016 Individual	2016 Family 4
FPL	$11,670	$23,340	$11,880	$24,300
138% for HIP 2.0			$16,105	$32,913
200% of FPL	$23,340	$47,700	$23,760	$48,600
ALICE Household Survival Budget	$18,396	$50,712	$18,727 estimate	$51,669 estimate

The *ALICE Income Assessment* is the calculation of all sources of income, resources, and assistance that come into *ALICE* and poverty-level households.

- Even with assistance, there is a gap between what these households bring in and what is needed for the basic cost of living in the Shelby County.
- Both Indiana State and federal assistance fell 14% between 2012 and 2014, thus widening the gap for reaching the *Survival Household Budget*.
- Only health care charity increased by 15% during this time frame.
- The reduced federal spending included programs such as *WIC, School Breakfast Program, SNAP, Head Start, Low Income Home Energy Assistance, Section 8 Housing Vouchers* and *Social Security Disability* among others.
- In general in Indiana, poverty and ALICE households have been increasing since 2007 while those above the ALICE Threshold have been decreasing. .
- Without public assistance, *ALICE* households would face even greater hardship, and many more would be in poverty. However, government and charitable assistance is not designed to create financially sustainable households.

Socio-Economic Determinants of Health

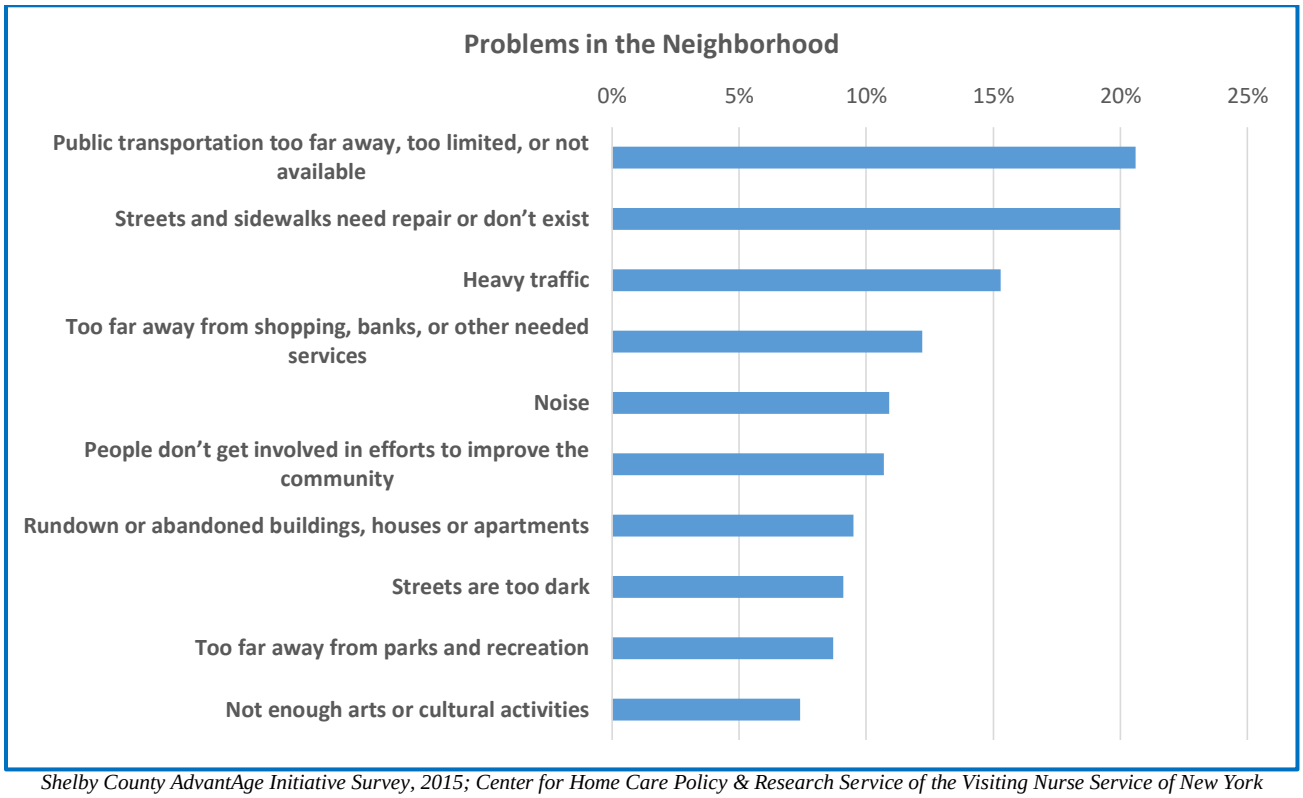
The following graph from the *AdvantAge Survey* highlights areas of both immediate and future needs for improving the "aging friendliness" of Shelby County. The income disparity is clear. Important to remember is that these home improvements and modifications benefit not only aging residents, but also residents with disabilities and families with young children who need many of the same safety and accessibility features as aging residents.



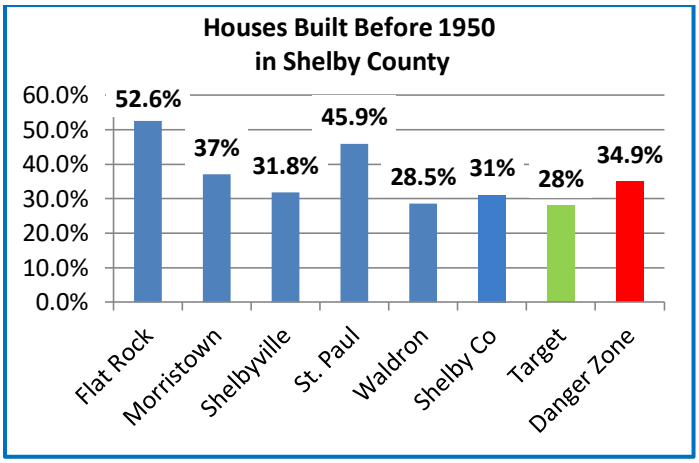
Shelby County AdvantAge Initiative Survey, 2015;
Center for Home Care Policy & Research Service of the Visiting Nurse Service of New York

Socio-Economic Determinants of Health

Improving homes and neighborhoods are quality of life initiatives that do more than improve life for the older residents of a neighborhood, or even for every other resident of that neighborhood. Improved neighborhoods also increase the status of Shelby County as a whole when it is being considered by outside investors for business ventures and by future residents as they evaluate the quality of life for themselves and their families.



Shelby County AdvantAge Initiative Survey, 2015; Center for Home Care Policy & Research Service of the Visiting Nurse Service of New York



Houses built prior to 1950 that have not have been up-dated may contain lead-based paint, asbestos insulation, and inadequate air filtering systems to address moisture and particulates. Lead poisoning from paint chips and from the dust of deteriorating paint is especially harmful to children under the age of 6, causing neurological problems and developmental delays. For all ages, inhaled dust from deteriorating paint and insulation leads to respiratory illnesses.

DATA

Socio-Economic Determinants of Health – Child Abuse

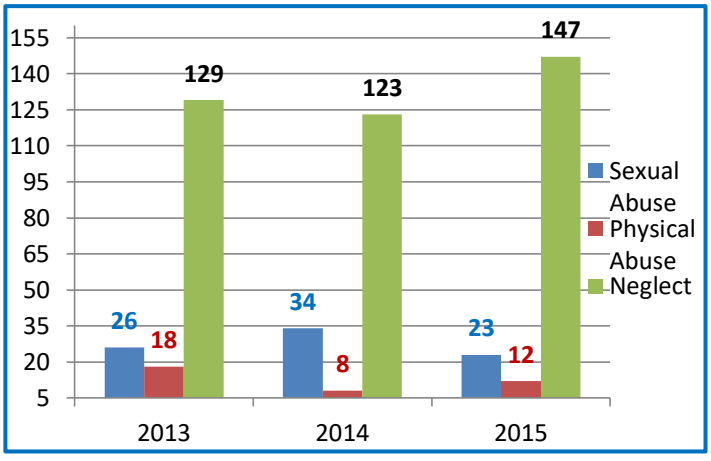
At a basic level, child abuse is an action or lack of action by the parent, guardian or custodian that seriously endangers a child's physical or mental health. Sexual abuse, physical abuse, illegal manufacturing of a drug or controlled substance occurring where a child lives, or allowing a child to commit a sex offense are all examples of child abuse or neglect. Child neglect is the inability, refusal, or neglect of parent, guardian, or custodian to supply a child with necessary food, clothing, shelter, medical care, education or supervision. **Shelby County's rate of child abuse is 17.4 per 1,000 children. Target for top 50% of Indiana counties is 15.6 or fewer.**

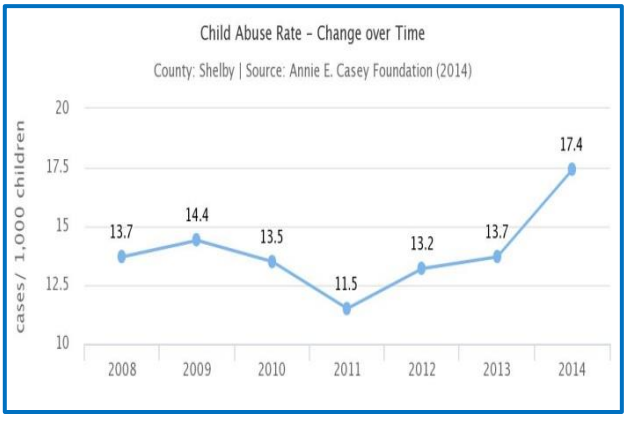
Shelby County January – July 2016

	Sexual Abuse Substantiated	Sexual Abuse Unsubstantiated	Physical Abuse Substantiated	Physical Abuse Unsubstantiated	Neglect *Sub	Neglect **Unsub	Total *Sub	Total *Unsub
Jan	0	3	0	21	5	98	**6**	122
Feb	0	8	2	14	6	69	**8**	91
Mar	2	5	0	29	6	118	**8**	152
April	0	6	0	18	7	81	**7**	105
May	2	15	0	14	14	117	**16**	146
June	2	8	3	33	11	113	**16**	154
July	1	8	2	24	15	72	**18**	104
Aug	1	14	0	20	15	115	**16**	149

*Sub/substantiated = investigated and proven cases **Unsub/unsubstantiated = investigated and not proven cases

The following chart on the left is of substantiated abuse case from 2013 – 2015. The county's *DCS* office reports that drugs have been a key factor in the increase in substantiated neglect cases. Child abuse has been on the rise since 2012.





Healthy Communities Institute Chart

DATA

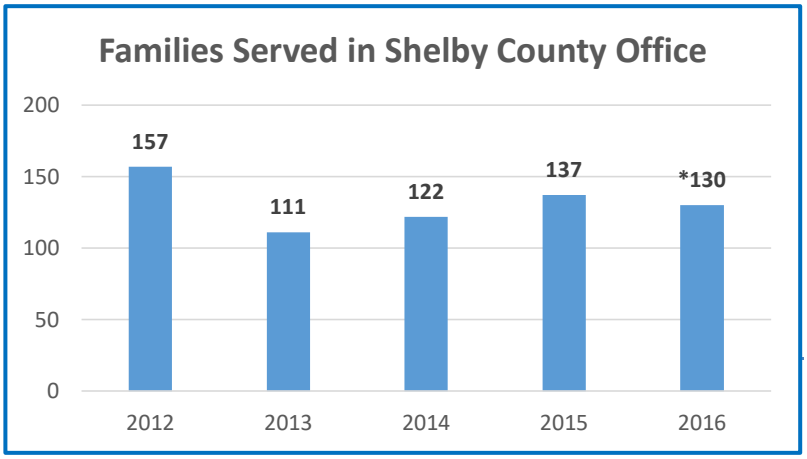
Socio-Economic Determinants of Health: Domestic Violence

- **The estimated cost of intimate partner rape, physical assault and stalking in the United States totals $8.3 billion annually for direct medical and mental health care services and lost productivity from paid work** (CDC, 2003).
    - Higher medical costs account for $5.8 billion and $2.5 billion for lost productivity.

- The *Affordable Care Act* identifies domestic violence screening as a national health priority, alongside smoking cessation, exercise, nutrition, substance abuse reduction and the provision of mental health services.
    - **When women talk with their physicians about domestic violence, they are four times more likely to receive the needed services and end the abusive relationship.**

- Patients being admitted to Emergency Department or inpatient services at Major Hospital are screened for domestic violence and provided referral information.
    - Physician practices have domestic violence literature available for their patients.

Turning Point Domestic Violence Services provides prevention, support, and advocacy services to victims of intimate partner violence, sexual assault, and stalking to residents of Shelby County. They have access to shelter services as well. The demonstrated need for services in Shelby County resulted in an additional staff person this year.



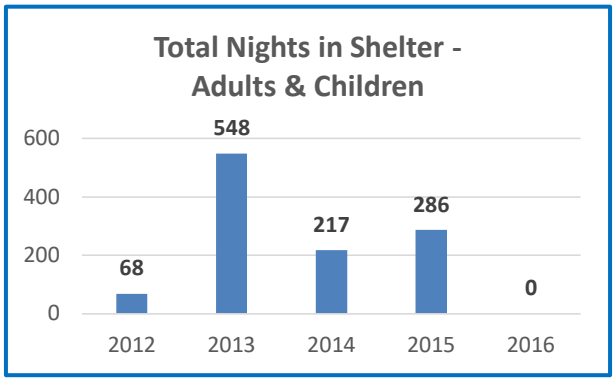
Almost 80% of the victims served by Turning Point in 2016 had a high school diploma, or some college, or a college degree. Domestic violence cuts across all socio-economic categories. It is not the plight of low-income, uneducated women.

**data for 2016 is for the first 3 quarters*

Turning Point serves both men and women, though the preponderance of victims is women – both by national statistics and as evidenced in Shelby County through *Turning Point* and the legal system.

DATA

Domestic Violence



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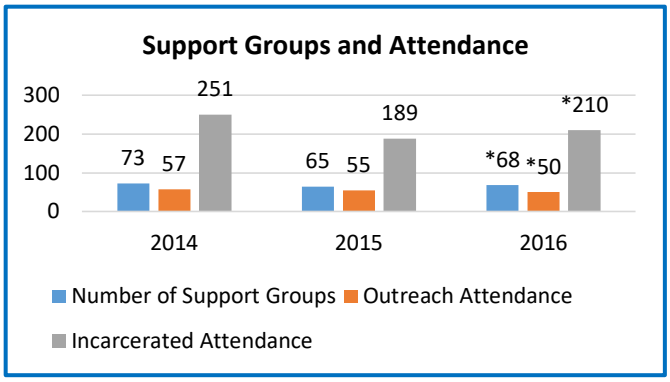


*data for 2016 is for the first 3 quarters

Unfortunately intimate partner violence is a common dynamic in women's drug use – a frequent reason for adult female incarceration.

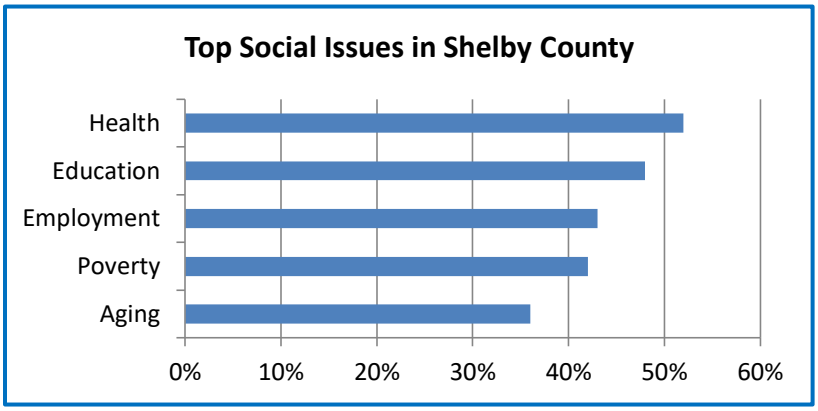
- **Prevention is essential to decreasing domestic violence.**
  - *Turning Point* uses evidence-based programming in the county's schools to address healthy dating relationships and domestic violence.
  - First 2 quarters 2016: 179 programs reaching 474 youth and 375 adults
  - Anecdotally, many young women have not only received education and support to disengage from an unhealthy relationship, but have helped their mothers connect with *Turning Point Domestic Violence Services* after learning of the resource and the right every person has to be respected and safe in a relationship.

The 2015 YRBSS included 1,035 Shelby High School students. Among all Indiana students participating in the survey, 41% were sexually active. Nearly 13% of males and females had experienced dating violence, though more female students had been victimized. Dating violence occurred at every grade level, though predominantly among 11th and 12th grade students.

Dating Violence	2007	2015
Predominantly female students have been forced to have sexual intercourse	9.4%	**10%**
Predominantly female students have experienced physical dating violence in the previous 12 months: *including being hit, slammed into something, or injured with an object or weapon on purpose by someone they were dating or going out with*	*-----	**10%**
Experienced sexual dating violence in the previous 12 months : *including kissing, touching, or being physically forced to have sexual intercourse when they did not want to by someone they were dating or going out with*	*-----	**12.6%**

*These dating violence questions had not been previously asked.

Community Health Needs Survey: Top Social Issues



Among the top 5 Social Issues of the smaller communities of Shelby County were also

- ***Youth***
- ***Environment*** (sidewalks, bike paths, parks)
- ***Housing*** (at the right price point)
- ***Poverty***

- **36% of 18 – 34 year olds were concerned about the *Environment* (sidewalks, bike paths, parks) instead of *Aging*.** This is consistent with Community and Economic Development research about what attracts and keeps Millennials in a community. Pedestrian and bike trails, walkability, and recreational opportunities are important quality of life amenities that factor heavily in the decision of where to live instead of what employment opportunities are available. This is a significant difference from how their parents and grandparents likely made decisions about where to live.

- **44% of respondents 65 and older were concerned about *Transportation* instead of *Poverty*.** Health and limited financial resources may make driving unfeasible. Maintaining a personal vehicle is expensive. Easily accessed transportation to needed and desired destinations is essential to maintaining independence and employment. For non-Caucasian respondents, transportation was a top social issue. Transportation is an ongoing challenge in the county.

- ***Youth* and *Transportation* were among the top concerns of respondents with household incomes of $25,000 - $74,000.** This income range was the top household income level for adults 35-64 and 65 and older; therefore, likely reflecting the concerns of parents of youth and older adults.

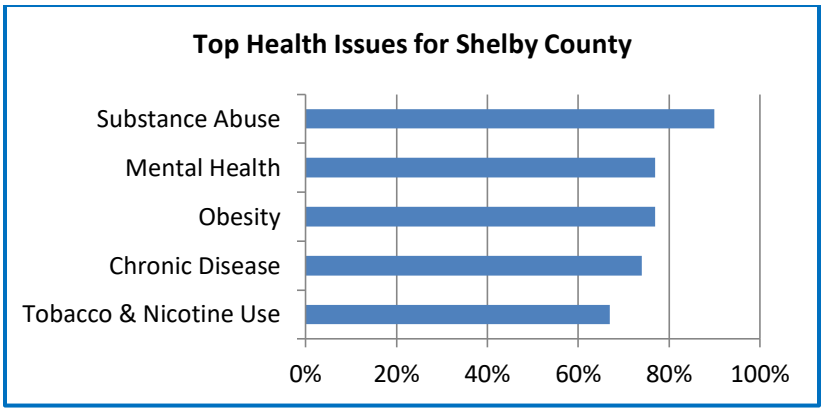
- **Interestingly, for 18 – 24 year old respondents, the top concern was *Aging* (62.5%).**

Survey: Top Social and Health Issues

For the open-ended comments, repeated social concerns included:

- **57% of the 81 respondents identified substance abuse a top social issue**.
- 11% perceived public assistance as excessive and that those receiving assistance are unmotivated to help themselves
- 9% cited mental health issues
- 5% cited lack of activities for youth
- 5% cited local government decision-making on a variety of issues
- 5% cited lack of supports for families on a variety of issues
- 4% cited lack of retail establishments and quality restaurants
- 2.5% cited homelessness
- 2.5% cited bed bugs

Top Health Issues



The Top Health Issues were the same for every age, income, ethnic and geographic group with the exception of those **55 – 74 years of age.** ***Access to Care*** **was a higher priority** than *Tobacco and Nicotine Use* for this age group.

For the open-ended question there were 26 comments. The majority of responses were a variety of specific concerns. The common health issue cited by 12% of respondents was lack of mental health and psychiatric care for both managing chronic disease and preventing mental and physical illness.

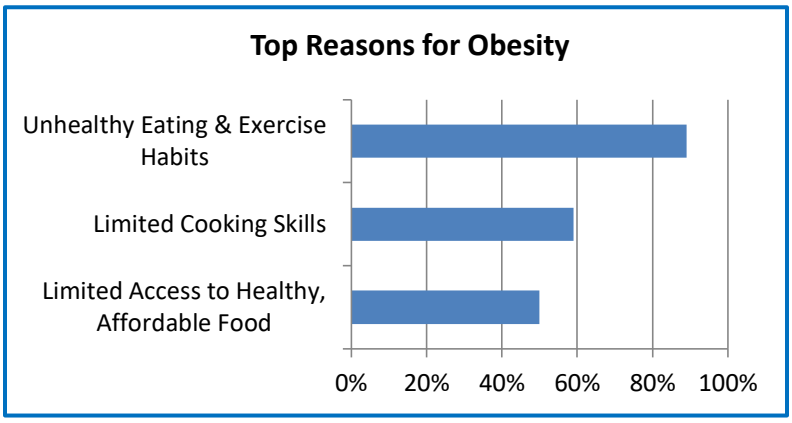
Two comments in particular summarize the relationship between social and health issues:

"I think [it] is not necessarily access to healthcare or a specific health problem- it's a social problem. There is some type of social need- financial, extra help/support, etc. that is needed by a person. They are unable to meet [the need] or sustain it. That leads to their health problem or prolongs it."

"These issues are all linked; building on and worsening one another."

DATA

Survey: Top Reasons for Obesity



Across all age, income, ethnic and geographic groups, *Unhealthy Eating and Exercise Habits* was the top reason chosen for obesity. When that choice is removed, **the third highest choice was *Lack of Recreation/ Physical Activity Programs for Children and Adults (31%).***

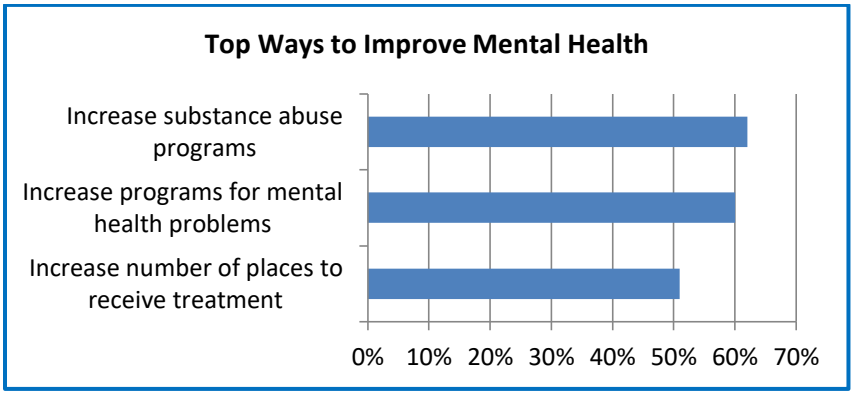
In the smaller communities of Shelby County, *Limited Access to Healthy and Affordable Food Close to Where People Live* was a top reason for obesity for nearly 60% of respondents. After *Unhealthy Eating and Exercise Habits*, household income correlated with respondent's answers.

- **$0 - $74,999:** primarily concerned with *Limited Access to Health and Affordable Food Close to Where People Live*
- **$25,000 - $74,999:** primarily concerned with *Lack of Recreation/Physical Activity Programs for Children and Adults*
- **$25,000 - $124,999:** primarily concerned with *Limited Cooking Skills*

For the open-ended comments, 71 respondents shared their thoughts:

- **39% - lack of motivation** to engage in healthy lifestyle; laziness
- **17% - people lack education** about what is nutritional and healthy; they may think they are making healthy choices but are not
- **14% - lack of affordable, accessible community and personal physical activity opportunities**; gym memberships are too expensive for some of the people who most need it; limited opportunities for families to be physically active together; built environment (sidewalks, bike trails, parks) does not support biking and walking
- **14%- healthy food is expensive**; fast, unhealthy food is convenient and cheap; healthy restaurant food is not widely accessible
- **10% cited untreated mental health problems** as a basis for poor eating habits, stress, and low motivation to engage in a healthy lifestyle
- **7% cited busy families** and an always on-the-go lifestyle

Survey: Top Ways to Improve Mental Health
Missing School or Work Due to Illness



Top choices were consistent across all ages, ethnicities, geographies and household income levels.

Affordability of mental health and substance abuse treatment was a top comment (38%).

There were 26 respondents to the open-ended question. Along with affordability, respondents noted:

- State and federal insurance do not reimburse adequately.
- Local psychiatric care is a top priority.
- Given that this is a problem in all Indiana small cities and towns, the solution must be imaginative: such as electronic treatment, home-based and walk-in treatment.

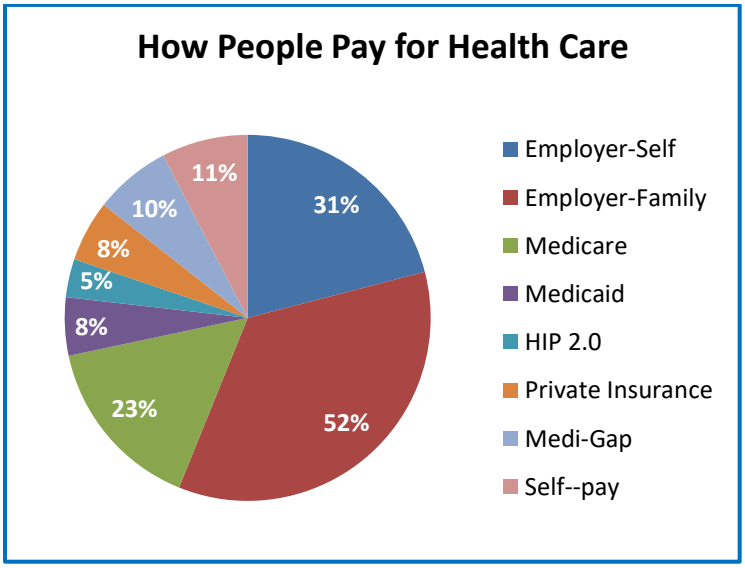
Missing School or Work Due to Illness

In the past 12 months, have you or someone in your household missed school /work due to the following illnesses or conditions.

The majority of respondents reported that they or someone in their household primarily missed work or school due to common illnesses such as a cold or the flu (52%). **The next most common reason for missing work or school was depression: (13.4%).** Different age groups had additional reasons:

- **18-24 year olds** also missed due to injury (23%) or depression (23%).
- **25-34 year olds** missed work due to depression (19%).
- **35-44 year olds** had the broadest range of reasons for missing work: depression (23%); injury (13.4%); breathing problems (7.2%); substance abuse (6.2%); and chronic disease (5.2%). This age group may have a range of different age children in the household and perhaps aging relatives that would increase the types and frequency of illnesses experienced.
- **45-54 year olds** also missed work due to depression (16%).
- **55-64 year olds** cited injuries (9%) and breathing problems (9%) as reasons for missing work.
- **65 and older** noted they were retired (21%).
- **37% reported no one in the household had missed work or school in the last 12 months.**

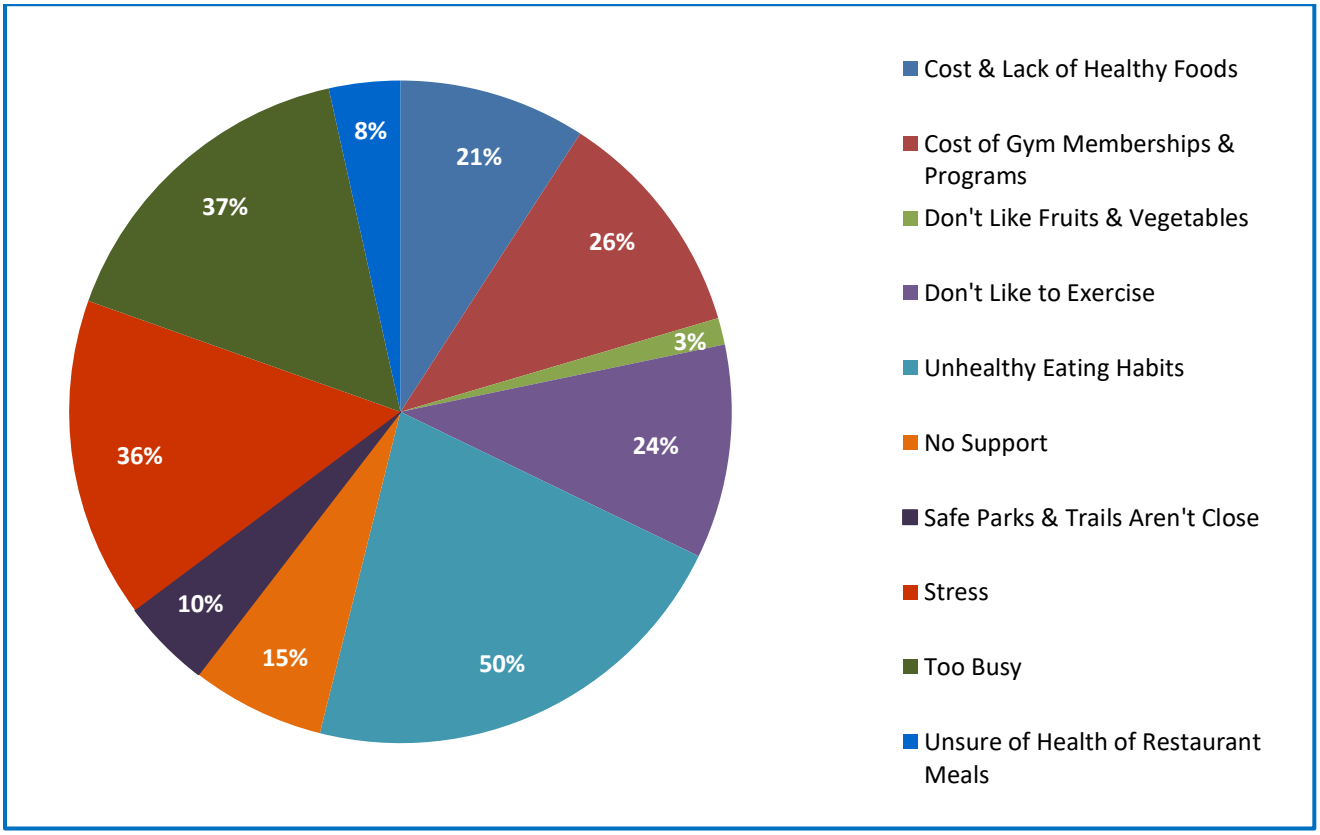
Survey: Paying for Health Care
Barriers to a Healthy Weight



The majority of individuals and families have health insurance through an employer. The percentage of survey respondents without health insurance is congruent with the data for the county. To the open-ended question, respondents reported:

- 25% Health Savings Accounts
- 13% High deductible insurance
- 9% Veterans or Active Military
- 9% Shelby Community Health Center

Barriers to a Healthy Weight



DATA

Survey: Barriers to a Healthy Weight

Across all ages, household incomes, ethnicities, and geographies, the top barriers for achieving a healthy weight were *Unhealthy Eating Habits, Stress,* and *Too Busy*.

- **Among survey respondents whose household incomes ranged between $0 and $74,999**: the top barriers to a healthy weight were the *Cost and Lack of Access to Healthy Foods* and the *Cost of Gym Memberships and Physical Activity Programs*.
- **Among respondents 55 and older**: the top barriers were *Unhealthy Eating Habits, Cost of Gym Memberships,* and *Not Liking to Exercise.*
- **19% reported having no problems with maintaining a healthy weight**

There were 50 responses to the open-ended question with many similar comments. The primary focus of these responses was physical activity:

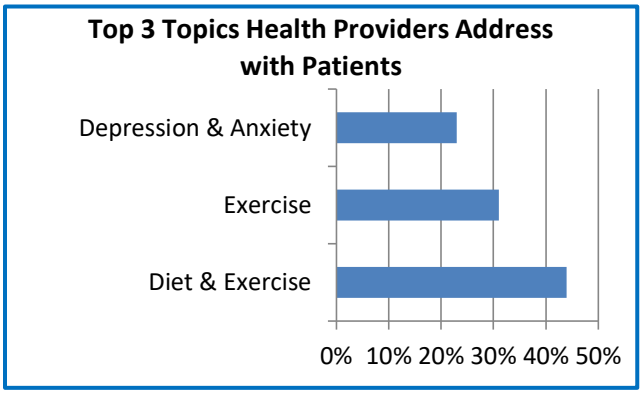
- **22% cited access to gyms or physical activity programs as a primary barrier**.
- **26% of respondents cited cost of gym memberships as a barrier**. Identified needs:
    - Affordability
    - Broad programming for all ages and abilities
    - Affordable, community-based, physician-guided exercise and wellness
    - Family friendly
        - Physical activity that families could do together
        - Programming that recognized families are busy during typical business hours
        - Exercise equipment and programs for children, not just older teens and adults
        - Concurrent programming or equipment access for adults and children/youth
        - Child care
    - Smaller communities of Shelby County wanted physical activity opportunities closer to where they live

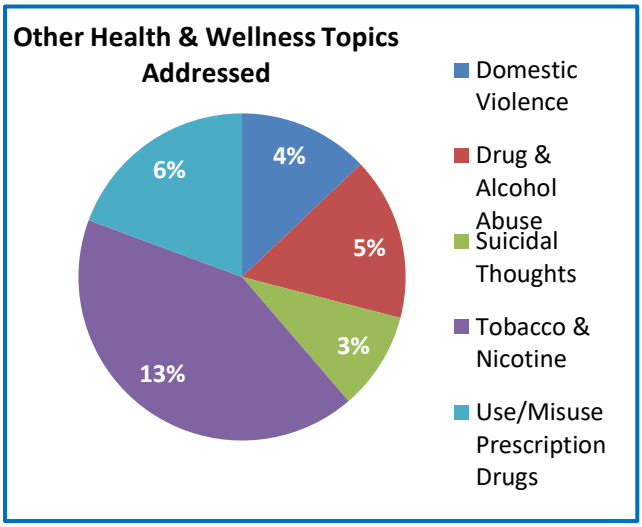
- **18% reported work as a barrier**
    - Long work hours that limit many pursuits, not just exercise
    - Stress from the work itself as well as from the long hours of working
    - Unhealthy eating habits primarily from convenience foods
    - **37% of survey respondents cited being too busy as a barrier to healthy weight**
    - **36% of respondents cited stress as a barrier**

- **14% cited health limitations** as barriers to exercise
- **12% cited personal motivation** as their barrier to healthy eating and physical activity

DATA

Survey: Health and Wellness Conversations





Of 643 survey respondents, 96 did not have Primary Care Providers in Shelby County.

There were 30 responses to the open-ended question. There was a range of specific comments. 30% of respondents cited specific topics that had been discussed with them. Related comments included

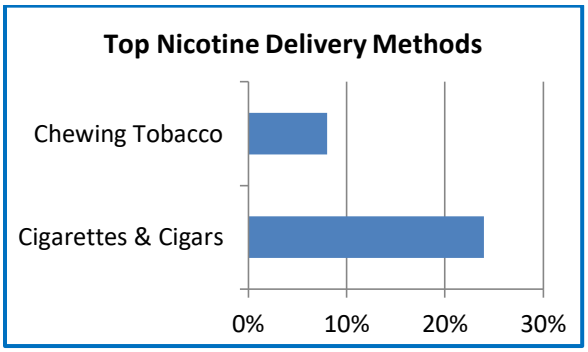
- **27% of respondents from age 25 to 75+ reported that these topics were not addressed.**
- 10 unique responses cited the following:
    - If any of the topics was the purpose of the appointment, then the physician had a conversation about the issue
    - The health issues were noted in the new patient paperwork but the provider did not address them
    - The health topics were only addressed if the patient initiated the conversation

The survey responses may suggest that patients may not yet see themselves as partners with their health providers in working toward optimal health and well-being. Patients may be waiting for the provider to initiate conversations about a range of psychosocial and substance treatment issues.

Providers appear to be initiating conversations about health-specific issues such as diet and exercise. Primary care providers continue to be the most common source of assessment and treatment for depression *(Robinson, Geske, Prest, and Barnacle. (2005) Depression Treatment in Primary Care. Journal of the American Board of Family Medicine, Vol. 18, No. 2)*. The survey suggests that Shelby County health care providers are actively addressing depression with their patients.

DATA

Survey: Nicotine Use
Top Challenges Accessing Health Care

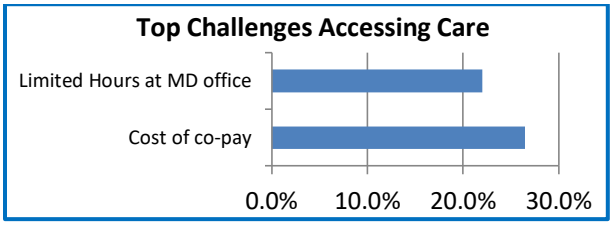


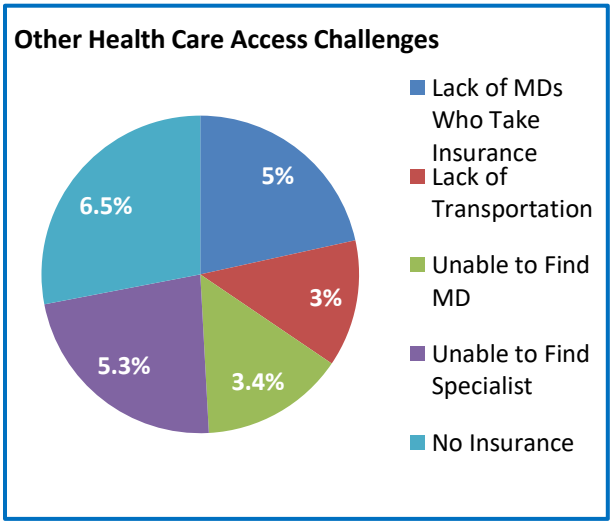
70.4% - no tobacco/nicotine use by respondent or their households
3% - electronic cigarettes
1% - hookah

Cigarettes and cigars were the primary choice among households making up to $100,000 annually. Chewing tobacco was the primary choice among households making $150,000 to $175,000.

Cigarette and cigar use were fairly evenly distributed across 18 – 64 year old respondents. Electronic cigarettes were used by 18-44 year olds and 55-64 year olds. While the percentage of hookah users was low, the use was distributed evenly across 18 – 64 year old respondents.

Top Challenges Accessing Health Care





48.3% of survey respondents reported no challenges in accessing health care.

52 respondents commented to the open-ended question. Primary comments were:

35% - High costs of co-insurance; of labs and procedures; of high deductible insurance; of out-of-network specialists

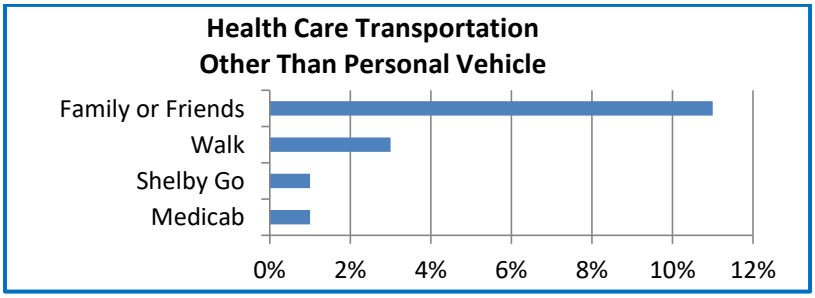
- Respondents were shopping for the lowest cost
- Postponing medical care
- Identified as an issue for respondents whose household income was from $0 - $150,000

29% - Inability to get timely appointments especially for acute conditions

- Challenge of talking to a person and being caught in a phone loop

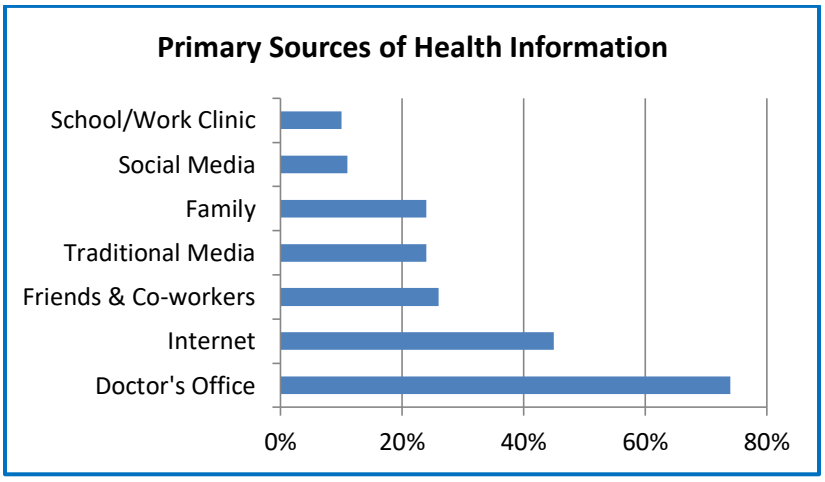
DATA

Survey: Transportation to Health Care
Health Information



93.4% of survey respondents use a personal vehicle to get to needed health services.

Health Information



The *Doctor's Office or Local Clinic* as the primary source of health information was evenly distributed across all age groups.

5% receive health information from *Social and Community Organizations.* This was more true for respondents 55 – 75+.

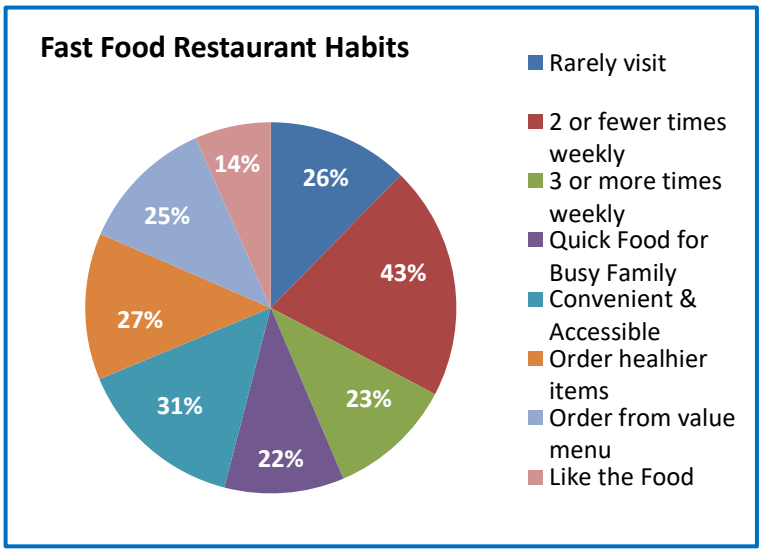
1% receives health information from their *Churches*.

- *Internet* and *Social Media* as sources for health information were fairly evenly distributed across age groups until age 75 and older.
- Respondents 45 – 75+ were more likely to receive health information via *Traditional Media* (radio, news-papers, television).
- The open-ended question was answered by 31 respondents. Most common responses were:
    - 32% were in the health care or allied health care field and gained information from professional journals, conferences, and their everyday work
    - 29% were non-health professionals who received health-related newsletters from Social Security or health organizations; used trustworthy internet medical sites designed for the layperson; and routinely read about health in a variety of print resources.

DATA

Survey: Fast Food
Healthy Life Style Changes

The majority of survey respondents do not frequently eat at fast food restaurants, and when they do it is for the unsurprising purpose of fast, inexpensive food. Even when ordering from the value menu, 27% are choosing the healthiest options. Calorie information is helpful in their decision-making. Affordable, healthy food options at the destinations where busy families are headed would be of benefit to them, such as healthy concession stand options. Advanced meal planning for active families and others could also minimize dependence on fast food.



FAST! 52.4% use *Fast Food Restaurants* for convenience, especially for busy families.

69% eat rarely to less than twice a week at *Fast Food Restaurants.*

CHEAP! 25% order from the value menu. Among the 10 comments for the open-ended question, inexpensive food was the driver for eating at *Fast Food Restaurants.*

Healthy Life Style Changes

To the open-ended question: **In the past 12 months what positive changes have you made for your own health?,** 395 respondents commented on their changes. Several key repeated words and phrases reveal how the process of making healthy changes is experienced:

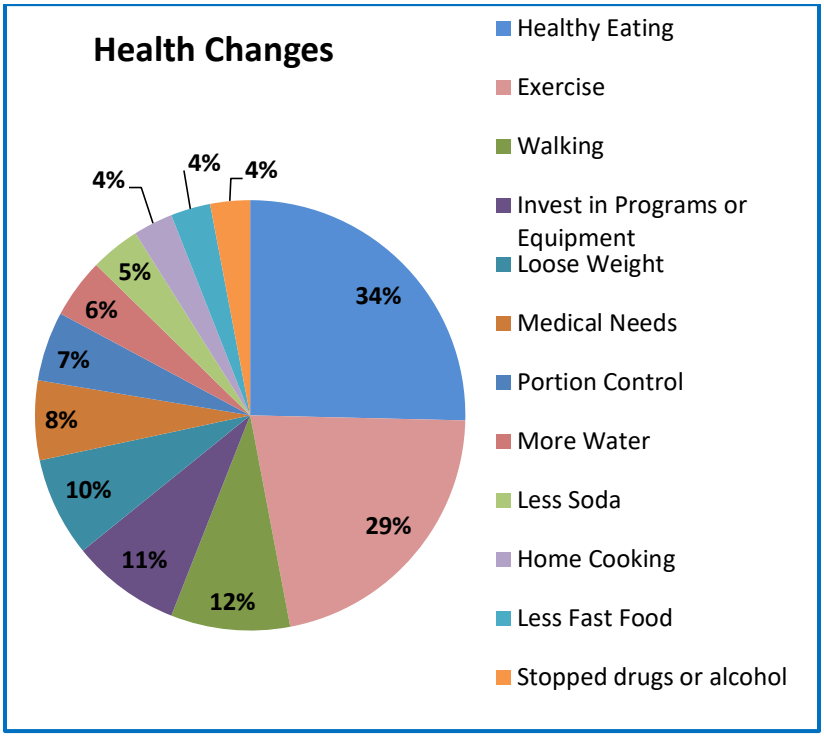
- **"Trying to":** Change is hard. Respondents are **trying to** walk, **trying to** eat healthier, etc.
- **"More":** Respondents are increasing behaviors; drinking **more** water, exercising **more**, etc.
- **"Stop"**: Respondents are decreasing behaviors; **stop** smoking, **stop** snacking at night, etc.
- **"Begin"**: Respondents had just started or were about to start a healthy change. Some were **beginning again**.

DATA

Survey: Healthy Lifestyle Changes

Some respondents had more defined goals, ranging from the general to the specific. Several key words or phrases communicated the discipline of change. More defined, specific goals have a higher likelihood of success:

- **Daily, regular, consistent, keep on a schedule, morning routine, committed**
- **Tracking** calories or steps; **Planning** out meals in advance and shopping accordingly
- **Defined**: Walking 2 miles three times a week; eating a minimum of 4 fruits daily;
    - **8% of respondents had defined goals**
- **Specific**: Walking on the treadmill 4 times a week for 30 minutes at 3.8 miles per hour; exercising at the gym on Monday, Tuesday and Thursday evenings and Saturday mornings for 30 minutes of aerobic exercise and 20 minutes of weight lifting
    - **5% of respondents had specific goals**



Healthy Eating, when defined by respondents, was about eating more fruits and vegetables; less red meat, sugar, and sodium; and avoiding chemicals such as preservatives and artificial sweeteners.

Other health changes included

3% Took steps to manage stress
3% Stopped smoking or chewing tobacco
2% Improved sleep
2% Engaged their spouses and families in healthy changes
1% Reduced caffeine

DATA

Major Hospital ~ Major Health Partners Health and Wellness Resources

Major Hospital ~ Major Health Partners

Major Hospital, a Major Health Partner (MHP) is the only hospital in Shelby County. It is not a critical access hospital; however, the hospital is less than 40 minutes from a Level 1 Trauma Center.

While historically *Major Hospital* has been located in downtown Shelbyville, a new medical facility is being built on Intelliplex Drive where MHP Orthopaedics, Sports Medicine, Rehabilitative Therapies, Oncology, Cardio-pulmonary, Nephrology and OB-GYN service lines are already located. Hospital patients will be moved to the new medical facility in January 2017. The new MHP Medical Center will be home to all physician practices and most clinical services in order to provide quality clinical in-patient and ambulatory care and optimal outcomes for patients and all MHP customers. The state-of-the-art facility will have a heightened focus on patient safety, clinical work flow, and patient and family convenience and comfort.

DATA

Major Hospital ~ Major Health Partners Health and Wellness Resources

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MHP Primary Care

MHP Family Medicine
MHP Internal Medicine (Primary Care & Internal Medicine)
MHP Medical Associates (Primary Care – all ages)
MHP Pediatrics

Major Medical Center

Major Hospital
MHP Bariatric and Weight Loss
MHP Cardiology
MHP Disease Management Clinic
MHP Medical Specialties
    Pain Management,
    Urology,
    Gastroenterology
    Otolaryngology
MHP Nephrology and Internal Medicine (Kidney & Internal Medicine)
MHP OB-GYN
MHP Oncology and Hematology
MHP Plastic & Cosmetic Surgery
MHP Pulmonology

Additional MHP Ambulatory Care

MHP Home Care (Home-based healthcare)
MHP Foot and Ankle
MHP Orthopedic Center (Surgery & bone health)
MHP Palliative Care
MHP Physical and Occupational Therapy
MHP Priority Care (Urgent Care)
MHP Psychology
MHP Sleep Center
MHP Spine Clinic
MHP Sports Medicine
OnSite Solutions (Industry & business –based healthcare)

DATA

Community Health and Wellness Resources

Clarity

Formerly Pregnancy Care Center, *Clarity* is a faith-based center providing limited pre-natal services, counseling, education and newborn support services.

Hancock Immediate Care

This urgent care clinic is operated by *Hancock Regional Health* in Morristown, Indiana. They provide acute care services without an appointment.

Healthy Partners

This clinic operates one day a week to provide confidential testing and treatment for Chlamydia and Gonorrhea. The *Damien Center* in Indianapolis provides support and clinical services one day a month to test and treat the whole range of STIs, including HIV. With the merging of the Shelby Community Health Center and the Jane Pauley Community Health Center, the Healthy Partners clinic is temporarily without a home, having been previously located in the Shelby Community Health Center. The WHNP Director is actively pursuing other locations for the crucial health service

Jane Pauley Community Health Center

This clinic is a Federally Qualified Health Center. Located at the site of the former *Shelby Community Health Clinic*, they provide preventive and acute care, disease management, and prescription assistance to the community. They accept all state, federal, and private/commercial insurance. The clinic also provides mental health services to Shelby Central School students and those services are located in the Middle School. A sliding fee scale and payment plans are available to income-eligible patients. County residency is not necessary.

Shelby County Public Health Department

The health department promotes and enforces public health laws, investigates environmental concerns/complaints, and oversees residential/commercial sewage disposal systems in the county. They provide immunizations, track communicable diseases, and serve as an educator and coordinator for health emergencies.

Women, Infants and Children (WIC)

The WIC clinic provides vouchers for nutritious food and formula for income-eligible and nutritionally at risk women, infants and children. They also provide breast-feeding education and support.

DATA

Community Health and Wellness Partners

Allied Health

- Alcoholics Anonymous and Alanon
- 3 Assisted Living Facilities
- Cancer Association of Shelby County
- 6 Chiropractic Offices
- 1 Community Mental Health Center
- 3 County EMS/Firefighter Stations
- County Coroner
- 20 Dental Practices
- 1 Dermatology Practice
- 2 Dialysis Centers
- 5 Extended Care Facilities
- First Steps Early Intervention Program
    - Shelby County served via Columbus Point of Entry Office
- 1 General Surgery Practice
- 3 Gyms/Athletic Clubs
- 38 Home Health and Hospice providers have asked to be on the Major Hospital Choice List
    - 2 General Inpatient Hospice Providers Contracted with Major Hospital
    - Inpatient hospice centers: Our Hospice (Columbus) and Franciscan Health (Indianapolis)
- 7 Massage Therapy Businesses
- Medicaid Medical Transportation
- 3 Medical Alert Companies actively serve Shelby County
- 5 Mental Health and/or Substance Abuse Practices
- Narcotics Anonymous
- 5 Non-medical home care providers contracted with CICOA for Shelby County
    - 2 non-medical home care providers have offices in Shelby County
- 1 Occupational Health Center
- 6 Optometry Practices
- 1 Oral Surgery, Limited Scope
- 1 Orthodontic Practice
- 5 Pharmacies
- 2 Physical Therapy Offices
- 1 Private Ambulance Service
- SART (Sexual Abuse Response Team)
- Shelby Senior Services

Arts, Entertainment and Recreation

- Bear Chase Golf Course
- Blue River Bowl
- Blue River Memorial Park Cross Country Course
- Community Band and Community Choir
- Grover Museum
- Mainstreet Shelbyville
- Morristown and Boggstown Parks
- Shelbyville Parks and Recreation
- Shelby County Arts Alliance
- Shelby County Players
- Shelby County Special Olympics
- Shelby County Tourism
- Strand Theatre
- Studio 10 Cinemas

Economic and Community Development

- City and County Councils
- City and County Government
- County Commissioners
- Mainstreet Shelbyville
- Shelby County Chamber of Commerce
- Shelby County Economic Development Corporation
- Shelby County Purdue Extension Services
- USDA Rural Development
- WorkOne Workforce Development

Education and Youth Development

- Advantage Shelby County
- Blue River Career Programs
- Blue River Community Foundation
- Blue River Soccer
- Boys and Girls Club
- Boy Scouts
- Church youth programs
- 4-H
- Girls, Incorporated
- Girl Scouts
- Grover Museum
- Head Start
- Ivy Tech
- Preschool and Day Care Programs
    - Per the FSSA Child Care Locator, there are 17 child care providers in Shelby County
    - There are 17 preschools
- Shelby County Arts Alliance
- Shelby County Drug Free Coalition

DATA

Community Health and Wellness Partners

Education and Youth Development Continued

- Shelby County Public Library
- Shelby County Schools
- Youth Assistance Program
- Youth Baseball Programs

Environmental Resources

- Shelby County Solid Waste Management
- Shelby County Water Treatment

Faith Based Communities

- There are 40 churches in Shelby County
- Many have youth programs, support programs, and food pantries
- Shelby County Ministerial Association
- Church Secretaries Group

Media

Public Support, Advocacy and Assistance

- Shelbyville News
- Shelbyville Today
- WSVX

Philanthropic

- Blue River Community Foundation
- City and County Racino Funds
- Habitat for Humanity
- Indiana Downs and Indiana Live Casino
- Major Foundation
- SCUFFY

Public Safety

- CASA
- Community Corrections
- Department of Child Services
- Shelby County Bar Association
- Shelby County Emergency Management
- Shelby County Fire Department
- Shelby County Probation
- Shelby County Sheriff's Department
- Shelbyville Police Department
- Victims Assistance

Public Assistance and Advocacy

- Aktion Club
- Arc of Shelby County
- CICOA
- Domestic Violence Task Force
- Food Pantries: Gleaners and Pantry Pals
- FUSE (Families United for Support and Encouragement)
- Giving Tree
- Healthy Shelby County
- Human Services, Incorporated
- Livable Communities Coalition
- Mario Hayes Bilingual Services
- Master Gardeners
- Meals on Wheels
- Red Cross
- Rupert's Kids
- Salvation Army
- Senses (Sensory gym for young children)
- Shares, Incorporated
- Shelby County Council on Aging
- Shelby County Division of FSSA
- Shelby County Legal Aid
- Shelby County Trustees
- ShelbyGo
- Shelby Senior Services
- Turning Point Domestic Violence Advisory Council
- Wheels on the Ground

Other Civic Organizations

- Blue River SHRM
- Business and Professional Women
- Fraternal Order of Police-Lodge #84 and the FOP Auxiliary
- Helping Hands for Freedom
- Kiwanis Club of Shelbyville, Inc.
- Knights of Columbus #822
- Morristown Chamber of Commerce
- Psi Iota Xi, Beta Phi Chapter
- Rotary Club of Shelbyville
- Shelby County Builders Association
- Shelby County Farm Bureau
- Shelbyville Lions Club
- U.S. Marine Corp. Reserves Toys for Tots
- Veterans of Foreign War Post #2695

Undoubtedly, there are more organizations that are investing in the well-being of Shelby County residents. A hallmark of Shelby County is how people come together around an idea or passion and work to give their vision life.

DATA

Information Gaps

While there was broad representation throughout the county and from different ethnicities, there were fewer responses from some of the county's smaller communities and from persons of different ethnicities. While Shelby County is predominantly a Caucasian/White county, 6% of the population is not. Efforts were made to engage all residents in all 4 quadrants of the county along with Shelbyville. However, future efforts will need to consider how to engage more residents from the smaller communities of Shelby County and all of its ethnicities.

The most current health data for our county was considered in this Community Health Needs Assessment; however, published data typically lags behind subsequent to when data was last reported and analyzed. Ongoing review of data as it is published may precipitate course adjustment as more current data becomes available.

Areas Documented, Not Targeted For Focus by Major Hospital

There are multiple areas that are cause for concern in our community as identified by the CHNA community survey, the secondary data, and per the science-based objectives of Healthy People 2020. However, part of the process of this assessment is determining priorities for improving community health over the next three years*. Certainly, many of the issues are interrelated. Fortunately, these issues are not without intervention in the community and at Major Hospital. Concerns that are not the direct focus of the CHNA Implementation Plan include:

- **Low percentage of commuters using public transportation**
- **Poverty**
- **Salmonella Infections**
- **Sexually Transmitted Infections (STI)**
- **Substance Abuse**
- **Suicide**
- **Teen Pregnancy**

Low Percentage of Commuters Using Public Transportation

Resources such as Commuter Connect and Central Indiana Transit Authority initiatives to provide commuter parking at key locations into Johnson and Marion Counties will be promoted but will not be a focus of this CHNA.

Poverty

Major Hospital has assistance programs for patients in need, ranging from prescription assistance to financial assistance for medical care. The Implementation Plan of this CHNA will seek to impact some lower-income residents and patients by increasing their access to fruits and vegetables. Poverty is over-determined. Skills, employment opportunities, the economy, education, culture and more play a role. Education and skills are foundational.

- **SCUFFY** will be launching a program of financial literacy and case management services for the many working families in Shelby County who still struggle to make ends meet every month. As part of this program, service and healthcare providers and county leaders will be encouraged to participate in Bridges Out of Poverty community-wide training to facilitate an improved understanding of the challenges faced by people living in poverty.

**For more information on concerns not targeted in the CHNA Implementation Plan, see Addendum pages A144-145.*

Areas Documented, Not Targeted For Focus by Major Hospital

- **Salvation Army** has a case management program that seeks to provide holistic, comprehensive services over time to persons in need who are invested in improving their life situations. Collaboration with community resources is a key component of the case management services.

- **Blue River Career Center and Rose Hulman Emerge**. The Mayor of the City of Shelbyville has spearheaded more training opportunities for advanced manufacturing through the *Blue River Career Vocational Career Programs.* The *Rose Hulman Emerge* program is partnering with schools to increase awareness of science, technology, engineering and math (STEM) careers.

- **Advantage Shelby County.** The City and County have joined forces in the innovative *Advantage Shelby County* program to provide a 2 year college education through Ivy Tech to every graduating senior. The program covers the gap between scholarship money and the tuition cost. Graduates of a Shelby County High School beginning in 2016 are eligible if they have at least a 2.0 GPA and are enrolled full-time. To maintain eligibility, students must maintain a 2.0 GPA, complete 10 hours of community service each term, participate in the mentoring program, and continue to be a Shelby County resident.

  The degree programs equip students with skills that Shelby County employers need or prepare students to continue-on to acquire a bachelor's degree. *Advantage Shelby County* Degree Programs include: Advanced Automation and Robotics Technology (AART), Business Administration, General Studies, and Transfer General Education Core. Learn more at https://www.ivytech.edu/central-indiana/14612.html

- **The Excel Program of Goodwill Education Initiatives, Incorporated, a not-for-profit organization formed by Goodwill Industries of Central Indiana, Incorporated** New to Shelby County in 2016, the Excel Center provides adult learners with a Core 40 high school diploma, industry certifications and/or college credits. The program is free and provides a free drop-in child care center, free transportation assistance, and the flexibility needed to balance school, work, and family schedules. Students work with a life coach not only to prepare for a career, but also for help with the barriers and challenges they face now. Learn more at http://www.excelcenter.org/campus/shelbyville

- **Blue River Career Programs**. Several Adult Basic Education classes are offered through Blue *River Career Programs.* Along with ***English as a Second Language*** and ***Adult Literacy***, adult learners may prepare to take the ***High School Equival*****ency** exam (previously the General Education Diploma) and earn industry certificates through *WorkOne* in Health Care, Advanced Manufacturing, Business Administration and Support, Hospitality, Information Technology, or Transportation and Logistics. Learn more at http://www.brcp.k12.in.us, Adult Ed

Areas Documented, Not Targeted For Focus by Major Hospital

Salmonella Infections

The *Shelby County Health Department* actively educates about safe food handling, preparation, and storage. Emergent opportunities for partnering in promotion of safe food behaviors will be considered.

Sexually Transmitted Infections

When *Planned Parenthood* closed its doors in Shelby County, concerned citizens quickly convened to explore how the confidential testing of STIs could be offered. *Healthy Partners* launched in 2014 providing free, confidential testing for Gonorrhea and Chlamydia. The *Damien Center* soon came on-board and began providing testing for HIV and other STIs. *Healthy Partners* operates one evening a week and *Damien Center* is present once a month.

Healthy Partners has been operating out of the *Shelby Community Health Center*. *Healthy Partners* provides an essential public health service in Shelby County and will continue to provide free, confidential STI testing in the same location now managed by the *Jane Pauley Community Health Center.*

Substance Abuse

Major Hospital has already addressed the policies and practices related to narcotics prescribed through the Emergency Department. Patients who are admitted to the Emergency Department and to the hospital secondary to an overdose are provided resources for treatment and assistance with connecting with a treatment provider.

Turning Point Domestic Violence Services provides substance abuse education as part of their programming at the Shelby County Jail and in the support group they facilitate. They routinely refer victims of domestic violence to treatment providers who are knowledgeable about the role substance misuse can play in intimate partner violence.

D.A.R.E continues to provide education in county schools about positive choices as part of substance abuse prevention programming.

Areas Documented, Not Targeted For Focus by Major Hospital

Shelby County Drug Free Coalition's Youth Council provides peer-generated prevention messages and activities within the schools and the community. The coalition makes available grants in the areas of prevention/education, treatment/intervention, and criminal justice to support community efforts to prevent and reduce substance misuse in Shelby County.

Girls, Inc. provides prevention education in their programming for girls.

Shelby Senior Services and *ER Counseling* have a partnership for providing seniors education about prescription misuse, alcohol misuse, and navigating substance abuse issues within the family.

Suicide

Major Hospital takes seriously its charge to provide safety for her patients. This includes safety for patients who have attempted suicide or who have suicidal ideation. The hospital provides tele-psychiatric assessments for mental health emergencies through the *Community Health Network.* *Major Hospital* has also invested in mental health services through Major Psychology.

- *Major Hospital* has partnered with *Community Behavioral Care (Gallahue)* to provide training opportunities. The most recent community training was in September 2015 on Suicide Assessment and Referral for laypersons as well as professionals. A previous training was held in August 2013 on Crisis Assessment and Intervention. Both trainings have been well-attended and received positive feedback. Future training partnerships will be considered.

- Major Health Partners provides mental health services through *Major Psychology*. Assessment and treatment of mental health illnesses is a key factor in suicide prevention. The future addition of a psychiatric Nurse Practitioner will further expand treatment for Major Health Partners, private behavioral health practitioners in Shelby County and the patients they serve.

- *Community Behavioral Care* has increased their capacity to provide crisis assessments during their office hours for law enforcement, community corrections, and the community at large. Crisis assessments continue to be a challenge for law enforcement and first responders and will remain a point of discussion and problem-solving for the Community Behavioral Care Advisory Council.

Areas Documented, Not Targeted For Focus by Major Hospital

Teen Pregnancy

Teen pregnancy has been slowly declining in Shelby County, though it remains high. The majority of teen pregnancies has shifted to 18-19 year old women. The rate of teen pregnancy in Shelby County is 38% higher than the national rate and the highest rate among the donut counties.

- *Turning Point Domestic Violence Services* continues to work toward providing education in all the county schools on healthy relationships and dating violence.
- *Clarity* (formerly *Pregnancy Care Center)* also provides healthy relationship and abstinence education in some of the schools as well.
- *Girls, Inc.* has expanded their programming into the county's elementary schools, thus reaching more young girls with foundational empowering messages and experiences to equip girls with a strong sense of self and assertiveness skills.

CHNA Implementation Plan

CHNA Implementation Plan

Aligning Priorities

This CHNA is informed by secondary and primary data and aligned with local, state and national objectives. **The over-arching goal of this CHNA Implementation Plan is to prevent, reduce, and optimally manage chronic disease.** To achieve this goal, there are 5 Priority Areas. State and national plans are numbered and objectives within this implementation plan note the larger objectives that are being addressed. The programs within this implementation plan are pilots or activities designed to bring about change in systems, policies, and the environment for long-term health impact.

- **Healthy Eating**
- **Physical Activity**
- **Tobacco and Nicotine Prevention and Treatment**
- **Behavioral Health**
- **Health Promotion**

1) Healthy People 2020 provides a national framework for prevention with a comprehensive set of key disease prevention and health promotion objectives. The CHNA Implementation Plan addresses the following Healthy People 2020 focus areas. http://www.healthypeople.gov/2020

- Access to Health Promotion and Care
- Cancer
- Child and Adolescent Health
- Diabetes
- Disability and Health
- Environmental Health
- Heart Disease and Stroke
- Mental Health
- Nutrition and Weight Status
- Older Adults
- Physical Activity
- Social Determinants of Health
- Tobacco Use

2) The Indiana State Health Improvement Plan identifies state health goals, some of which are addressed in this CHNA Implementation Plan. One of the risk factors of infant mortality is tobacco use by the Mother during pregnancy and after delivery.
http://www.in.gov/isdh/files/Indiana_State_Health_Plan_6_23_11.pdf

- Reduce Infant Mortality
- Decrease Tobacco Usage
- Increase Hoosiers at a Healthy Weight

Aligning Priorities

3)The Indiana Comprehensive Nutrition and Physical Activity Plan provides a framework for Indiana to address the policy, system, and environmental change strategies for increasing healthy eating, physical activity, and healthy weight across the lifespan and in the places Hoosiers live, learn, work, play and pray. The CHNA Implementation Plan addresses the following areas. https://inhealthyweight.org

- Communities
- Health Care
- Older Adults
- Schools
- Worksites

4) The Indiana Tobacco Prevention Control Plan is a framework for communities to prevent and reduce tobacco use and exposure based on the CDC's *Guide to Community Preventive Services for Tobacco Control Programs.* The Indiana Quit Line is the state's nicotine use treatment tool. This CHNA Implementation Plan addresses the following areas. http://www.in.gov/isdh/tpc/files/IN_2015_Tobacco_Control_Strategic_Plan.pdf

- Preventing tobacco product use initiation, especially among adolescents
- Increasing treatment and cessation
- Reducing exposure to secondhand smoke

5) The Indiana Cancer Control Plan provides a framework for communities to address cancer prevention, early detection, treatment and quality of life. Nearly 65% of new cancer cases and 33% of cancer deaths could be prevented by eliminating tobacco and nicotine use; eating more fruits, vegetables, and nutritious foods; regular physical exercise; maintaining a healthy weight; obtaining early detection cancer screenings; and obtaining timely and appropriate cancer treatment. This CHNA Implementation Plan addresses the following: http://indianacancer.org/indiana-cancer-control-plan/

- Prevention
  - Tobacco prevention, treatment and cessation
  - Healthy Eating
  - Physical Activity
- Early Detection

CHNA Implementation Plan

*Aligning Priorities

6) Shelby County: In 2015 the Blue River Community Foundation conducted interviews of the government and non-profit organizations for the purpose of identifying plans and objectives where partnership opportunities naturally existed. The compilation was included in the *Ball State University Indiana Communities Institute's* February 2016 report: *An Assessment of Shelby County: Strategies for Economic Resiliency and Growth.* The CHNA Implementation Plan is aligned with the following plans and objectives. To view the Ball State report visit http://blueriverfoundation.com/wp-content/uploads/2016/04/ShelbyCo-EconResiliency.pdf

- Health and Healthy Lifestyles
    - Complete Streets
    - Opportunities for physical activity in schools and worksites
    - Prevention
    - Tobacco prevention and reduction among youth
    - Healthy lifestyle programming for youth and seniors
    - Healthy food options at Parks and Recreation Department and worksites
- Public Spaces and Environment
    - Greening and Street Tree program
    - High quality public events in downtown Shelbyville
- Vibrant and Safe Neighborhoods
    - Walkability

**For more information on determining the focus for the CHNA Implementation Plan and on community partners involved in the activities of the plan, please see the Addendum pages A140-151.*

CHNA Implementation Plan

Priority 1: Healthy Eating

Good nutrition, especially from fruits and vegetables is necessary preventive medicine and for treatment for optimal disease management

A diet that includes nutrient-rich grains, fruits and vegetables is essential to preventing and managing chronic disease, including mental illness. Inexpensive, processed, calorie-dense and nutrient-poor foods are plentiful and comprise a significant portion of the American diet. Shelby County residents eat insufficient fruits and vegetables. People who consume fruits and vegetables tend to naturally eat fewer processed, empty-calorie foods. Because of the availability of food in grocery stores and restaurants, people have become disconnected from their food.

There are census tracts in Shelbyville and in the county where residents have low-access to a grocery store with a variety of nutritious foods. Some of these areas are also low-income and low-access to personal vehicles. Not all stores selling a variety of nutritious food accept WIC vouchers and SNAP.

Increasingly families do not cook and schools do provide no or only limited experiential education on cooking basics. Highly-processed and nutrient-poor/calorie-dense food in restaurants (especially fast food) and in pre-packaged foods is typical fare for busy families.

While large restaurant chains must post calories of menu items, local restaurants do not identify healthy options. Nor do they have access to dietitians who can analyze nutrition and calorie content.

Farmers Markets, road-side stands and other outlets for food produced by local growers not only supply fresh produce but also put money back into the local economy. However, for those receiving SNAP and WIC, Farmers Markets may seem or be more expensive than highly processed food.

The presence of food at meetings, break rooms, and offices makes food readily available but not necessarily a healthy option. Many jobs are fairly sedentary between sitting and the use of technology. Readily available food that is often calorie-dense, nutrient poor, processed, and pre-packaged coupled with sometimes sedentary jobs creates an environment for the development of health problems.

In collaboration with community partners and resources, Major Hospital will work to improve systems, policies, and the environment to increase healthy eating for the purpose of preventing, reducing, and optimally managing chronic disease. In addition to the following objectives, emergent opportunities promoting healthy eating will be considered over the 3 years of this plan.

- **Improving access to fresh produce in low-income, low-access areas. This is an environmental change strategy for the purpose of**
    - Piloting a community garden in a low or lower-income area with low-access to a grocery store and assessing possible other community garden locations.
    - Providing support for a Mobile Farmers Market that would have a weekly presence in low-income and low grocery store access areas (2,4,5)

CHNA Implementation Plan

Priority 1: Healthy Eating

- **Continuing to expand educational and health promotion opportunities through the Shelbyville-Shelby County Farmers Market. This change strategy impacts systems and the environment for the purpose of**
    - Increasing access to fruits and vegetables for low-income residents
    - Increasing educational and experiential opportunities at the market for children and their families to learn about the health benefits of eating fruits and vegetables
    - Continuing to provide health and wellness promotion through the Get Healthy Here Farmers Market
    - Continuing to invest in Market Bucks to promote healthy eating and to increase access to locally sourced fruits and vegetables for all residents, but especially for lower-income residents
    - Developing a farmers market on-site at the MHP Medical Center (2,6)

- **Prescribing fruits and vegetables for patients with diet-sensitive chronic health conditions who are managed through the population health clinics of Major Hospital ~ Major Health Partners. The purpose is improved disease management. This objective impacts policy and systems by**
    - Increasing consumption of fruits and vegetables by making them prescribed, affordable, and accessible through Produce Rx
    - Providing hands-on fruit and vegetable preparation for participants
    - Providing hands-on grocery store field trips for participants with a Major Hospital Registered Dietician for the purpose of learning how to shop for fruits, vegetables, and a variety of nutritious foods on a limited budget (2,4)

- **Assessing all retail stores where a variety of nutritious food is sold to identify those accepting SNAP and WIC vouchers. This objective impacts systems and the environment for the purpose of increasing access to nutritious food for low income individuals and families by**
    - Identifying barriers to accepting SNAP and WIC
    - Engaging in win-win problem-solving and support
    - Promoting public knowledge of the location of retail establishments that accept SNAP and WIC (2)

- **Collaborating with the Community Wellness Coordinator (CWC) of the Shelby County Purdue Extension Service in mandated health and wellness focus areas: policy, systems, and environmental change strategies to increase access to healthy food and physical activity for low-income residents.**

Priority 1: Healthy Eating

- Supporting and assisting CWC in administering and assessing information gleaned from the Centers for Disease Control and Prevention's CHANGE Tool (Community Health Assessment and Group Evaluation)
- Per the CHANGE Tool, defining improvement areas to guide stakeholders towards community-based strategies for creating a healthier environment
- Assisting with prioritizing identified needs and allocation of available resources (2,4,5)

- **Coordinating with and expanding upon the Central Indiana Council on Aging (CICOA) initiative to identify healthy menu options in local restaurants for the Senior Restaurant Voucher program. This objective is a systems and environmental change strategy initially for the benefit of increasing healthy food options for seniors. However, expanding the initiative allows everyone dining in a local restaurant the ability to identify healthy menu options.**
  - Approaching local restaurants not participating with CICOA about identifying healthy menu items for their customers.
    - Chef to chef conversations led by Chef Mark Weil of Major Hospital
    - Major Hospital Dietitian will calculate nutritionals of recipes provided by restaurants to help restaurants identify their healthy meals
  - Approaching local restaurants participating with CICOA about expanding the number of healthy items identified
  - Coordinating with CICOA on identifying healthy meals for all diners, not only seniors

- **Promoting healthy food options at worksites and recreation areas thru adoption of healthy food policies and access to healthy food options through concession stands and vending machines.**
  - Promoting healthy food policies at Major Health Partners and other worksites
  - Providing sample food policies to leaders of organizations and worksites
  - Promoting and providing resources for healthy vending machine options
  - Promoting and partnering with concession stands to increase healthy food options (1,2,3,5,6)

- **Promoting cooking clubs in schools and group cooking opportunities for youth in the county.**
  - Tap into the expertise of Southwestern's Food Service Director to bring cooking clubs or workshops to later elementary or middle school students.

CHNA Implementation Plan

Priority 2: Physical Activity

Physical activity is essential for optimal well-being. Physical activity is dependent on the environment as well as individual lifestyle choices.

Per research by the American Heart Association, American Lung Association, Arthritis Association and others, recommended physical activity for chronic disease prevention and optimal management is 150 minutes of moderate-intensity physical activity or 75 minutes of vigorous physical activity weekly. This might be accomplished by 30 minutes of walking 5 days a week. Even breaking down moderate-intensity physical activity into as little as 10 minute segments has health benefits. While the gold standard is 10,000 steps daily, especially for weight loss, over-all health is served by a minimum of 150 minutes of moderate-intensity physical activity each week.

Shelby County residents lead sedentary lifestyles. Increasing physical activity would impact the major causes of chronic disease and death in the county: reducing the risk for major cardiovascular disease, breast and colon cancer, and Type 2 diabetes.

Increasingly, environmental change strategies are being implemented in the county (Shelbyville especially) to increase options for and access to physical activity. Not having safe pedestrian paths or living within 15 minutes of a recreational facility increase the barriers to physical activity.

In collaboration with community partners and resources, Major Hospital will work to improve systems, policies, and the environment to support and promote physical activity for the purpose of preventing, reducing, and optimally managing chronic disease. In addition to the following objectives, emergent opportunities promoting physical activity will be considered throughout this 3 year plan.

- **Increasing walkability in Shelbyville for persons of all ages, stages, and abilities. This objective employs environmental, policy, and systems change strategies by**
    - Installing sheltered, landscaped seating units along the pedestrian paths of Progress Parkway, Lee Boulevard, and Intelliplex Drive
    - Encouraging the public to incorporate *How I Walk* recommendations into competitive or fun runs and walks
    - Collaborating with Livable Communities Coalition on emergent opportunities
    - Partnering with the City of Shelbyville in passing a Complete Street Policy to increase safe walking and rolling for all transportation modalities from feet to vehicles.
    - Partnering with the City on prioritizing recommendations from the Master Bike and Pedestrian Plan
    - Partnering with the City on an Amendment to the Commercial Standards Ordinance to require developers of large tracts of land to connect with existing sidewalks in support of accessibility to the development (1,2,4,5,6)

Priority 2: Physical Activity

- **Increasing public awareness, walking opportunities, and physician endorsement of walking for optimal health and wellness. This objective uses systems and environmental change strategies and lays the groundwork for impacting policy by**
    - Promoting Walk with a Doc April through October
        - Working towards weekly Walk with a Doc opportunities at rotating mid-day and after-work start times for the broadest reach of the community
        - Encouraging MHP employees and patients to participate in the walks
        - Incorporating *How I Walk* recommendations to encourage wheel chair passengers and those with mobility limitations to participate in Walk with a Doc
    - Working toward health providers assessing physical activity as a fifth vital sign and prescribing walking for prevention, reduction and optimal management of health conditions and chronic disease (1,2,4,5,6)

- **Promoting county-wide engagement in National Walking Day. While largely an awareness-raising opportunity, the desired outcome is a community-level change through increased walking via neighborhood or affinity walking groups.**
    - Encouraging neighborhood or community walking groups
    - Encouraging schools to design their own processes and competitions for National Walking Day with a goal of including their immediate communities in their events
    - Incorporating *How I Walk* recommendations into National Walking Day events and promotion (1,2,4,5,6)

- **Increasing physical activity for schools, their families, their communities.** This change strategy impacts the environment by
    1) Increasing the variety of robust physical activity opportunities at the elementary school level;
    2) Broadening those opportunities to include and engage school families and the school's community;
    3) Including in the school physical education curriculum an experience with bicycling as a life-long option for physical activity.
    - Nine13 Sports
        - Per the community health data and school receptivity, bringing the Nine13 Sports 4 week cycling program to elementary schools
        - Providing a community night at each school to engage family and the school's community in the physical activity program
    - Bike-driven, person-powered smoothie machine
        - Rotating bike contraption between elementary schools over the next 3 years
        - Providing bike contraption at the Nine13 Sports community evenings
        - Providing recipes for healthy smoothies by the Major Hospital Dietitian (2,6)

CHNA Implementation Plan

Priority 2: Physical Activity

- **Increasing physical activity opportunities for agencies, organizations, businesses and those they serve. This objective is a systems change that**
  1) Incorporates physical activity into organizations that typically do not include physical activity for those they serve;
  2) Increases the variety of physical activity that an organization offers to those they serve;
  3) Provides a workplace wellness opportunity thru fun physical activity.
     - Rotating a bike-driven, person-powered smoothie machine throughout county government, non-government, and nonprofit agencies, organizations and businesses
     - Providing recipes for healthy smoothies by the Major Hospital Dietitians
       - Organizations will assume expense of ingredients for the smoothies (2,6)

- **Improving awareness of and access to indoor physical activity opportunities. This objective has the possibility of impacting policy change strategies for the purpose of**
  - Promoting existing indoor free physical activity or low-cost venues throughout the county for use during inclement weather
  - Exploring a sliding fee scale for gym exercise equipment use at the Parks and Recreation Department
  - Surveying school systems to learn to what extent the public is allowed to walk in their facilities and to use their exercise equipment
  - Exploring grants to assist with Shared Use Agreements in county schools
  - Exploring how gyms might use signage to identify intervals for faster walking and/or other aerobic exercise to maximize a shorter walk and therefore decrease complaints of drudgery secondary to walking in circles at a gym (2,4,5,6)

CHNA Implementation Plan

Priority 3: Tobacco and Nicotine

Tobacco remains the leading cause of chronic disease.

21% of Shelby County Adults smoke cigarettes, cigars, and cigarillos. Tobacco use remains the number 1 cause of chronic disease across the nation and in Shelby County.

The exact number of youth smokers is unknown; however, per the most recent YRBS survey in which over 1,000 SC high school students participated, 43.9% of youth have used e-cigarettes.

Marketing promotes the nicotine delivery devices as smoking cessation tools; however, fruit and candy flavors make them popular with youth. Independent labs have found the nicotine content in the liquid used in these devices is frequently higher than labeled – in some cases up to 80% higher, even if the label promotes the product as nicotine-free.

The long-term effects of e-cigarette use are yet to be seen. E-cigarettes, cigars, cigarillos, and hookahs are beginning to be federally regulated as of July 1, 2016; however, litigation by the tobacco companies that primarily own e-cigarette devices is expected to delay the process.

Three Tobacco Summits have been held with presenters from the Indiana State Department of Health and Bringing Indiana Along/ Simon Cancer Center. A broad group of community stakeholders, including Dr. Shellman, MHP Pulmonologist and MHP respiratory therapists have participated. The focus of the first year for the action team has been education and capacity building. The group has been identifying community resources and gaps. They have been seeking broader engagement.

In April of 2017 the next Tobacco Summit will be CVS leadership to present on their process for arriving at the decision to cease selling tobacco products, the public naysayers, the benefits they have subsequently reaped as a result of their decision, lesson learned.

One of the organic developments has been an emerging group of community stakeholders who are interested in tobacco use in pregnant women and in mothers of newborns. With the leadership of OB RN Navigator, Sharon Hammond, this group will develop capacity in 2017. While none have yet been awarded, Sharon has written 2 ISDH grants to assist with an accountability program leveraging mothers not to smoke in exchange for diapers.

This group is also seeking to impact infant mortality. Per the state, Shelby County is in the top 50% of Indiana counties, but per Healthy People 2020 goals, they are close but still have work to do to lower Shelby County's infant mortality rate from 6.7 to 6 deaths per 1,000 live births. Tobacco cessation during pregnancy and after delivery is a key strategy for achieving this goal.

CHNA Implementation Plan

Priority 3: Tobacco and Nicotine

In collaboration with community partners and resources, Major Hospital will work to improve systems, policies, and the environment to support and promote prevention and treatment of tobacco and nicotine use for the purpose of preventing, reducing, and optimally managing chronic disease. In addition to the following objectives, emergent opportunities for preventing and treating tobacco and nicotine use will be considered over the 3 years of this plan.

- **Increasing capacity for tobacco and nicotine prevention and treatment work for the purpose of impacting systems, policies, and environments to prevent and reduce tobacco and nicotine use by**
    - Continuing outreach and broad engagement of multi-sector stakeholders
    - Continuing to provide community education opportunities
    - Reviewing tobacco free policies and advocating for inclusion of electronic cigarettes in those policies
    - Assessing capacity for pursuing Indiana Tobacco Prevention and Control grant
    - Developing mutually agreed upon focus areas and measurable actions among stakeholders
        - Considering outreach to public housing to provide resources for tobacco and nicotine treatment, inclusion of electronic cigarettes in tobacco-ban policies. This is a major federal policy change to be implemented by April 2018.
        - Considering training and certification for tobacco and nicotine education and cessation with youth in the Shelbyville Central School system. (1,3,4,5,6)

- **Reducing tobacco and nicotine use among pregnant women and mothers of infants for the purpose of decreasing infant mortality and respiratory illnesses among infants and small children. This objective utilizes system change strategies to align work and resources to reduce tobacco and nicotine use in this population by**
    - Building capacity by convening stakeholders regularly
    - Assessing resources and gaps
    - Developing mutually agreed upon goals
    - Aligning resources and work to achieve common goals
    - Educating the public and those served by stakeholder organizations
    - Pursuing grants as available (1,3,4,5)

- **Increasing access to tobacco and nicotine treatment and support. This objective utilizes policy and systems changes to increase referrals for tobacco and nicotine treatment.**
    - Embedding process for consent and referral to the Indiana Quit Line in the electronic medical record in order to obtain written consent at the point of provider-patient tobacco cessation conversations.

Priority 3: Tobacco and Nicotine

- Continuing free tobacco cessation classes through MHP Cardiology and through individual consultations with patients in the physician practices and via outreach
- Assessing barriers to tobacco cessation in the smaller communities of Shelby County
- Assessing viability of taking tobacco cessation class to Shares, Incorporated to provide access to adults with Intellectual and Developmental Disabilities (1,3,5)

Priority 4: Behavioral Health

Mental health and substance abuse were identified as top medical and social issues in the public CHNA conducted during the fall of 2016.

In interviews with county stakeholders for the CHNA, people reported not knowing even local treatment resources or how to help someone navigate the complex behavioral health systems.

Across rural America there is a dearth of behavioral health providers, especially psychiatrists. Shelby County is in a somewhat better position subsequent to its proximity to Indianapolis. Even so, Gallahue has a very difficult time recruiting therapists to the Shelbyville office.

Behavioral health clinicians and medical providers must refer patients outside the county for psychiatry services unless a patient is being actively treated at Gallahue. This is a hardship for many and a barrier to treatment. MHP Psychology Services must also refer patients outside of the county.

Across the nation, the primary care provider is the number one prescriber of psychotropic medications. When a patient has complexities that require additional expertise, finding a psychiatrist or psychiatric nurse practitioner is a challenge.

Major Health Partners has made a significant investment in providing behavioral health services through Major Psychology. Major Hospital uses tele-psychiatry for assessment of patients at risk of suicide to determine the appropriate level of care and services.

Increasing access to psychiatry and behavioral health services is a community conversation and no single medical or behavioral health entity has the capacity to solve this problem. Clearly in the CHNA Survey, Mental Health and Substance Abuse were primary concerns. Community leaders and existing resources must work together to identify imaginative solutions to this great and growing need.

CHNA Implementation Plan

Priority 4: Behavioral Health

In collaboration with community partners and resources, Major Hospital will work to improve behavioral health care utilizing systems and policy changes. In addition to the following objectives, emergent opportunities for preventing and treating behavioral health disorders will be considered over the 3 years of this plan.

- **Increasing access to psychiatric medication management for behavioral health practitioners, patients, and health care providers by**
    - Working toward recruitment of a Psychiatric Advance Practice Nurse
    - Equipping point persons in the MHP referral center so they may become knowledgeable about the complex mental health system in order to provide navigation and referral services for accessing mental health, substance abuse, and psychiatric care (1)

- **Improving community supportive services for mentally ill youth and their families by**
    - Partnering with Community Health Network to convene youth-serving agencies to learn about Systems of Care organization and coordination of preventive and treatment behavioral health resources for youth
    - Connect Wrap Around Coordinator for Shelby and Hancock Counties with introductions and connections to resources and key people in Shelby County. (1)

- **Equipping rural school systems with behavioral health and community resources**
    - Explore on-line format for resources so community partners may keep it up to date
    - In the interim, create paper resource files for rural schools (1)

CHNA Implementation Plan

Priority 5: Health Prevention / Promotion

Opportunities for health promotion are many and established and emergent opportunities will always be considered for their alignment with the data and the mission of Major Hospital ~ Major Health Partners. In particular, Major Hospital will focus on the following opportunities for this CHNA Implementation Plan.

The larger rural towns of Shelby County have requested health promotion in their communities. Per the data, their pressing health issues are known.

Per the literature and per report by staff at Shares, Inc., adults with Intellectual and Developmental Delays are not included in health promotion. Even though Medicaid requires an annual physical, health problems tend to be identified in crisis unless the person has an engaged advocate. Proactively identifying potential health problems is a benefit to these adults, their caregivers, Shares, their social network and Major Hospital where they are often treated in the Emergency Department.

Since an assessment question is now available regarding the age of the house in which a patient with asthma lives, data can be pulled to begin to assess the scope of the problem. The Community Health Worker from the Shelby County Health Department is also beginning to note this information. Secondary data is available on the volume of houses built prior to 1950; however, the age of the air filtration systems in these houses is not known.

Shelby Senior Services provides vital health and wellness classes to adults 60 and older. There has been turnover in personnel and a change in the evidence-based fall prevention program they provide. This has resulted in a gap in an experiential training to which some MHP physicians routinely refer their aging patients.

Community health promotion for detection of health challenges is a key intervention for early detection and optimal management of disease.

As noted earlier, community service by MHP employees is a strongly held value for Major Hospital ~ Major Health Partners. This includes providing a full time employee to lead community health initiatives and opportunities for convening community stakeholders for education, networking, and problem-solving.

In collaboration with community partners and resources, Major Hospital will work to improve systems, policies and the environment in order to provide targeted health promotion for the purpose of preventing, reducing, and optimally managing chronic disease. In addition to the following objectives, emergent opportunities promoting physical activity will be considered throughout this 3 year plan.

CHNA Implementation Plan

Priority 5: Health Prevention / Promotion

- **Targeting health issues identified in the secondary and primary data for rural communities. This objective addresses systems and environmental strategies in order to impact the particular health issues of small communities by**
    - Convening Major Hospital stakeholders to review the health data for rural communities and to begin planning what health promotion is needed for particular health issues.
    - Convening Major Hospital and community stakeholders to identify strategies for engaging the community in health education and promotion, including optimal time and location.
    - Marketing the health promotion opportunity throughout the community and through earned media. (1,2,3,4,5,6)

- **Providing health promotion for adults with Developmental and Intellectual Difficulties and their caregivers who are not employed by Shares, Incorporated. This is an environmental strategy for improving access to health education by**
    - Providing sex education annually to consumers who are sexually active or have the capacity to be sexually active to equip them with information regarding
        - Basic reproductive health and contraceptive information
        - How to recognize and minimize sexual exploitation
        - Community resources should they experience a sexual encounter or relationship that hurt or frightened them
    - Conducting a health fair to increase identification of health problems pro-actively rather than in a crisis (1)

- **Reducing asthma and other respiratory hospitalizations for pediatric and adult patients. This objective addresses environmental and policy change strategies by**
    - Convening key medical experts to discuss benefits of providing a spacer to pediatric patients when their families receive education about using an inhaler.
        - Designing trial to gather data for a defined time period to assess any benefits, including decreased hospitalizations
    - Convening key medical experts and a Shelby County Health Department representative to discuss likely relationship between exacerbated respiratory illnesses and subsequent Emergency Department visits and/or hospital admissions for inpatient or observation among patients living in 1950's and older houses without modernized air filtrations.
        - Adding question regarding age of house and status of air filtration to Emergency Department Nursing assessment to gather data for a defined period
        - Evaluating data and consider interventions (1,6)

CHNA Implementation Plan

Priority 5: Health Prevention / Promotion

- **Improving sustainability of the free evidence-based fall prevention program offered through Shelby Senior Services. Evidence-based programs require a 2 person-trained team. Training is needed for the new Health and Wellness Coordinator and on a new evidence-based program. Until recently there have been turnovers in this position. This objective addresses policy and system change strategies by**
    - Partnering a MHP employee with the Shelby Senior Services employee for the week-long training when it is next available
    - Training another team in the near future so that the fall prevention program which is heavily used by MHP physicians, especially the Sports Medicine physician, is routinely available with reduced dependency on only 2 particular providers. (1)

- **Providing public health education and health screenings through physician seminars, free targeted health events, the Get Healthy Here Farmers Market event, and other emergent opportunities.**
    - Continuing breast cancer screening campaign secondary to the high number of new breast cancer cases and the high number of breast cancers identified as Stage 1.
    - Continuing Parkinson's movement group weekly at SportWorks to help these patients and their families maintain quality of life. Exploring opportunities to promote and support Rock Steady Boxing for Parkinson's patients. (1)
    - Continuing to explore opportunities for improving linkage between physicians, patients, and evidence-based Living with Chronic Disease offered by Shelby Senior Services.
    - Continuing the CDC evidence-based Diabetes Prevention Program and pursuit of program recognition by the CDC. (1)
    - Continuing to promote flu and pneumonia vaccines among seniors. (1)
        - Exploring opportunities to bring vaccinations to small communities targeted for health education and promotion because of their burden of chronic disease, explore flu clinics in those communities.

- **Providing public education about the health challenges and strengths of Shelby County.**
    - Media articles
    - Presentations, including Bridges Out of Poverty in collaboration with SCUFFY Financial Literacy initiative for ALICE families
    - Providing community-specific information in the four quadrants of the county (2)

- **Continuing to provide a monthly forum for service providers to receive education, network, and improve processes through the Community Networking lunch meeting.**

- **Continuing to provide community leadership through MHP employees serving through local government, on boards and advisory councils and as volunteers.**

CHNA Implementation Plan

Conclusion

The priorities and strategies of the CHNA Implementation Plan address

Reach and Prevalence:

- The entire county of Shelby County and targeted neighborhoods and communities
- Community needs identified in the survey, interviews and through the health data
- Community health needs that are congruent with state and national initiatives
- Vulnerable populations and serious disease and chronic health conditions

Effectiveness of Interventions:

- Targeted needs that have a high likelihood of improving health for populations experiencing health disparity
- Partnerships and processes for sustainability of health promotion and health management programs
- Short-term benefit and capacity building for long-term outcomes

Major Hospital and Partners Capacity:

- Demonstrated commitment
- Champions for new initiatives
- Necessary leadership and resources available to launch new initiatives
- Ability to pursue grants and additional funding

A primary partner in the CHNA Implementation Plan is the *Healthy Shelby County Coalition*, the county's CDC Healthy Communities initiative. Alongside Major Hospital, the *Healthy Shelby County Coalition* is organized to take action on the objectives of the CHNA Implementation Plan. The implementation of this plan is reliant on much collaboration. The health of Shelby County depends on multi-sector partnerships in the work of improving the health and wellness of the county's residents. Health is everyone's business.

The objectives and strategies in the plan address prevention, reduction, and optimal management of chronic disease and access to health promotion and care.

Each year there will be a general review of processes and activities and a report made to the *Major Hospital Board of Directors*. Thoughtful assessment of success and failures, additional IRS definitions, emerging health data, and emergent opportunities may necessitate course redirection.

Comments and Enquiries

The Community Health Needs Assessment and Implementation Plan will be available on-line at http://www.mymhp.org.

Please address written comments on the CHNA and Implementation Plan and requests for a paper copy of the CHNA to

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317-398-5240

Addendum

2016 Community Health Needs Assessment and Implementation Plan

CHNA Community Leader Interviews: Community health stakeholders interviewed for the CHNA represented a broad cross-section of Shelby County residents.

Behavioral Health and Substance Abuse
ER Counseling: Owner/Behavioral Health Clinician
Gallahue Behavioral Health Services: Clinical Director
Shelby County Drug Free Coalition: Executive Director

Business and Industry
Plymate, Incorporated: Human Resources Director
Ryobi Die Casting USA, Incorporated: Human Resources Director
Ryobi Die Casting USA, Incorporated: Human Resources Professional
Shelby County Society of Human Resource Professionals
Seniors Helping Seniors: Owner/Service Provider

Disabilities
Livable Communities Coalition: Member
Shares, Incorporated: Life Skills Director
Shares, Incorporated: Community Employment Director
Wheels on the Ground: Founder

Faith Community
Crossroad Community Church: Pastor
First Presbyterian Church: Youth Program
Waldron Baptist Church: Youth Program

Government
City Council Member
County Council Member
Mayor, City of Shelbyville

Health
Clinical Nutrition Services of Major Hospital: Director
Healthy Partners: Director
Northwestern Consolidated Schools: Corporate Nurse
OnSite Clinics of Major Health Partners: Nurse Practitioner
Seniors Helping Seniors: Owner/Service Provider
Shelby Community Health Center: Practice Manager
Shelby Community Health Center: Women's Health Nurse Practitioner
Shelby County Health Department: Board Members
Shelby County Health Department: Local Public Health Coordinator
Shelby County Health Department: Local Public Health Nurse

Addendum

2016 Community Health Needs Assessment and Implementation Plan

Community Leader Health Interviews continued

Shelby County Health Department: Sanitarian
Shelby County Purdue Extension: Community Wellness Coordinator
Shelbyville Central Schools: Corporate Nurse
UnaVie Cardiopulmonary of Major Hospital, Disease Management: Director

Healthy Shelby County
ABM Healthcare Support Services: Director Dietary Services
ER Counseling: Private Practice Behavioral Health Clinician
Family Services and Prevention Programs: Executive Director
Gallahue Behavioral Health: Clinical Director
Healthy Partners: Director
Livable Communities Coalition: Member
Livable Communities Coalition: Member
Mainstreet Shelbyville: Executive Director
Major Foundation, Community Committee: Member
Major Health Partners: Accreditation/Safety Coordinator
Shares, Incorporated: Community Employment Director
Shelby Community Health Center: Board Member
Shelby Community Health Center: Practice Manager
Shelby Community Health Center: Women's Health Nurse Practitioner
Shelby County Drug Free Coalition: Executive Director
Shelby County Health Department: Board Member
Shelby County Health Department: Board Member
Shelby County Health Department: Community Health Worker
Shelby County Health Department: Local Public Health Coordinator
Shelby County Health Department: Public Health Nurse
Shelby County Purdue Extension: Community Wellness Coordinator
Shelby Senior Services: Executive Director
Shelbyville Central Schools: Corporate Nurse
Seniors Helping Seniors Director: Owner/Service Provider
Turning Point Domestic Violence Services: Case Manager
Turning Point Domestic Violence Services: Community Services Director
Wheels on the Ground: Founder

Hispanic/Latino Community
Bilingual Services: Owner/Operator

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2016 Community Health Needs Assessment and Implementation Plan

Law Enforcement and First Responders
City of Shelbyville Police Department, Chief of Police
City of Shelbyville Fire Department, Fire Chief

Low-income and Under-served Residents
(Note: Unsuccessful efforts were made to directly interview residents in these categories.)
Administrators and/or Nurses from all four Shelby County school systems
Shelby County Purdue Extension: Community Wellness Coordinator
Shelby Community Health Center (now Jane Pauley Community Health): Practice Manager
Shelby Community Health Center: Intake Coordinator
Population Health Clinics/ Disease Management of Major Hospital: Director, UnaVie Cardiopulmonary
Shelby County Health Department: Local Public Health Nurse
Bilingual Services: Owner/Service Provider
Waldron Baptist Church: Youth Program
First Steps: Program Director
Shares, Incorporated: Community Services Director
Shelby Senior Services: Executive Director
Family Services and Prevention Programs: Executive Director
ER Counseling: Private Practice Behavioral Health Clinician

Older Adults
Shelby Senior Services: Executive Director
ER Counseling: Private Practice Behavioral Health Clinician
Seniors Helping Seniors: Owner/Service Provider

Schools
Shelby Eastern Schools: Principal, Morristown Elementary
Northwestern Consolidated Schools: Corporate Nurse
Southwestern Consolidated Schools: Superintendent
Southwestern Consolidated Schools: Food Services Director
Shelbyville Central Schools: Corporate Nurse

Young Children and their Families
Family Services and Prevention Programs/Healthy Families: Executive Director
First Steps: Program Director
Shelby County Health Department: Public Health Nurse

Written Comments on the 2013 Community Health Needs Assessment and Implementation Plan:

No written comments were received.

Addendum

2016 Community Health Needs Assessment and Implementation Plan

Summary of 2013 CHNA Implementation Plan

Over the last 3 years, the CHNA Implementation Plan was impacted by external policies and systems changes such as the Federal Health Insurance Marketplace and the local construction of a state-of-the-art medical facility. Some community wellness initiatives for which Major Hospital was a partner dissolved during the last 3 years. Some objectives never gained traction, were put on hold, or were addressed by other systemic changes such as the Marketplace. Many goals and strategies of the previous implementation plan are so fundamental to the mission and values of Major Hospital and so intrinsic to the operations of Major Hospital ~ Major Health Partners that they are foundational to the focus of the new implementation plan.

The priorities of the 2013 CHNA Implementation Plan included:

1: Chronic Disease Prevention, Reduction, and Management

Objectives:
1) Health Prevention/Promotion
2) Community Health Collaborations
3) Childhood Obesity
4) Health Disparity
5) Employee Health

2: Community Development

Objectives:
1) Capacity Building
2) Education
3) Civic Engagement

Key accomplishments of the 2013 CHNA Implementation Plan: Chronic Disease

I Health Prevention/Promotion

- Four to five targeted health and wellness MHP and Franciscan Health physician presentations annually with an average attendance of 13 persons per event.
- Annual Get Healthy Here Farmers Market Event focusing on healthy eating, physical activity, wellness, tobacco and nicotine cessation, cancer and other health screenings. Reach: 1,500 persons of all ages and abilities.
- 2015 - Farmers Market weekly walks. Reach: 112 people of all ages and abilities.

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2016 Community Health Needs Assessment and Implementation Plan

Health Prevention/Promotion continued

- 2015 – Increased wellness resources for public at Shelby County Library
- Emergent opportunities
    - 2016 - MHP Sports Medicine Bone Health. Reach: 82 people.
    - 2016 – City of Shelbyville Employee Banquet. Reach:100
    - 2016 – Rupert's Kids Bicycle Jamboree. Reach: 54
    - 2015 - Healthy Holidays at the Shelby County Public Library. Reach: 50 people.
    - 2015 – Route for the Brave. Reach: 40 people.
    - 2014 – Waldron Fall Festival. Reach: 2300 people.

A Diabetes Education

- Diabetes education was restructured to improve accessibility and affordability.
- Bi-annual *Lifesteps* classes were added in 2015 to address nutrition, physical activity, and healthy weight: Reach: 49 people
- *Healthy Living, Healthy You* pre-diabetic classes were added in 2015 and are designed to be held on-location for worksites or other interested groups: Reach:122 persons
- Progress has been made toward becoming a certified CDC Diabetes Prevention Recognition Program: Reach:13 people during the first year July 2015 – June 2016
- Annual Diabetes Health Fair: Reach: 350 persons

B Cancer Screenings

- *Friends Forever*, MHP mammography campaign launched in 2015: Reach: 120 women screened; 6 called back; no malignancies
- Annual skin cancer screening events: Reach:193 people, 89 follow-ups, 27 biopsies, 12 malignancies
- Colon cancer screening event: Reach: 38 people, 29 colonoscopy or hemocult screening, no malignancies; exposure by 500+ people at Get Healthy Here Farmers Market event
- Annual *Pink Out Party*: Reach: 606 women provided information about cancer screening guidelines
- Ongoing lung cancer screenings: Reach:133 people, 21 follow-ups, 1 malignancy
- *Healthy Lifestyles* classes*:* Reach: 354 people
- 2016 - Men's Health event: Reach: 35

Addendum

2016 Community Health Needs Assessment and Implementation Plan

C Tobacco Cessation

- MHP free 4 session tobacco cessation treatment program: 32 persons completed the classes over the past 2 years. Many patients preferred one-on-one consultation with a Respiratory Therapist at the physician practices.
- Healthy Shelby County Tobacco Action Team launched in 2016 with 12 core participants.
- HSC Tobacco Action Team hosted 3 Tobacco Symposiums for the community in 2016 with presenters from the Indiana State Department of Health – Tobacco Prevention Network and IU Simon Cancer Center - Moving Indiana Along. Reach: 75 community stakeholders
- Major Hospital Nurse Navigator for Maternal – Child Health applied for Baby and Me Tobacco Free funding. First proposal was not awarded but will re-apply.

D Cardio-pulmonary Health

- Annual Go Red Women's Heart Health events. Reach 300 women
- Get Healthy Here Farmers Market Events in 2015/ 2016. Spirometry, Co2 analyzer, and education for 110 persons; exposure by 1,000 persons

II Community Health Collaborations

There have been many community partnerships between Major Hospital and Shelby County nonprofits, government, schools, health entities, businesses, foundations, state and local grants, and invested citizens. The county's CDC healthy communities' initiative – Healthy Shelby County – has been a key community organizer of collaborations and promoter of activities throughout the county that support health and wellness. Key collaborations have been

- 2016 - National Walking Day: Reach: 4,726 people of all ages and abilities
- 2016 – Shelbyville Parks Department offers healthy food options at their concession stands.
- 2015 – Livable Communities Coalition awarded grant for a Sidewalk Rehabilitation Revolving Loan for low-income homeowners in order to increase walkability and safety.
- 2015 - Indiana State Department of Health and American Heart Association grant to improve healthy options at Shelbyville Parks' concession stands.
- 2015 – Active Living Workshop. Reach: 50 people.

Addendum

2016 Community Health Needs Assessment and Implementation Plan

Community Health Collaborations continued

- 2015 – Bike Pedestrian Master Plan completed.
- 2014 - Get Healthy Here signs installed to increase awareness of physical activity, tobacco / nicotine free living, and healthy eating.
- 2014 - Livable Communities Coalition launched with 17 core participants.
- Community Behavioral Health (Gallahue) Suicide Prevention Training. Reach: 75 community stakeholders.
- Get Healthy Here Farmers Market Annual wellness event. Reach: 1,500 people.
- ShelbyGo – 13% of trips are medical; 7% are directly to and from MHP.

III Childhood Obesity

- Dr. Paula Gustafson of Major Pediatrics continues to educate and champion healthy eating and physical activity to prevent, reduce and optimally manage childhood obesity and a lifetime of health challenges.
- Federal mandates on school lunches and school wellness initiatives have been improving nutritional content of lunches.
- Shelbyville Central School's Wellness Committee has established rigorous guidelines for food brought into the school for parties, student meals and fundraisers.
- Healthy Families utilizes the Expanded Food and Education Nutrition Program of Purdue Extension to teach families with infants through preschoolers how to eat nutritiously on SNAP benefits.
- 2014 – *Major 1-2-3 Go* for schools. Reach: 630 youth and adults.

IV Health Disparity: Intellectually and Developmentally Disabled Adults

- Annual Shelby County Special Olympics basketball tournaments promoted healthy options at their concessions. Reach: 1,800 athletes, families, volunteers, and coaches.
- 2016 - Health Fair held for consumers and direct care staff: Reach: 30 consumers
- 2016 - Sex Education in partnership with Healthy Partners, Victims Assistance, MHP SART RN, and Adult Protective Services: Reach: 12 sexually active consumers
- 2016 - Engaged Shares in National Walking Day: Reach: 50 consumers; 3 won fitness trackers through their participation
    - Indiana Special Olympics now promotes walking and Shares has subsequently developed a walking program that uses fitness trackers.

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2016 Community Health Needs Assessment and Implementation Plan

V Employee Health

- MHP WHIP Program: Reach 1,151 employees
    - Subsequent to launching an electronic employee wellness program, 2016 had more employees participate in the WHIP program than the sum of employees participating in 2014 and 2015.
- Daily Well-being meals in Major Hospital cafeteria; sold at a value price; providing balanced nutrition with calorie and nutritional information. Metrics showed these to be the most popular meals served.
- 2016 - Major Hospital awarded *Fit Friendly Workplaces in Indiana* by the *American Heart Association*.
- Healthy Food Policies adopted by nine Shelby County worksites.

Key accomplishments of the 2013 CHNA Implementation Plan: Community Development

Shelby County has been on the move with stakeholders engaged in programs and initiatives to improve quality of life for the community: education, disabilities, physical activity, economic development, the arts, access to nutritious food, bike and pedestrian plans, downtown redevelopment plans, and more. As a stakeholder in Shelby County, Major Hospital ~ Major Health Partners has been an active participant, collaborator, and leader in improving the health of the community's environment, economy, and people. The civic engagement of MHP employees is rooted in the DNA of Major Hospital.

I Capacity Building and Education

- Healthy Shelby County hosted 6 multi-sector community leadership symposiums on community health: Reach 270 stakeholders
- Development of HSC action teams to address healthy eating, physical activity, and tobacco/nicotine free living: 40 stakeholders participating in monthly meetings and activities.
- Seven presentations on community health to local organizations and at one state conference.
- Four grants awarded to HSC or to HSC in partnership with other stakeholders: $41,500.
- Fifteen different HSC participants attended 26 community health trainings/conferences.
- Community service providers meeting with an average of 28 participants monthly.

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2016 Community Health Needs Assessment and Implementation Plan

Community Development continued

II Civic Engagement

Major Health Partners ~ Major Hospital employees are engaged in their communities through their involvement in their churches, civic organizations, and government. They sit on boards and advisory councils; hold public office; and donate to community causes. Giving back to the community is a core value of Major Hospital and it will continue to be supported and promoted.

2016 Community Health Needs Assessment ~ Implementation Plan

Determining Focus

Shelby County has several areas of community health that are of concern to residents and per the data, are below the benchmark for a healthy community. These areas of concern are also targeted by state and national priorities for improving health. The top concerns identified from the CHNA interviews and community survey are aligned with one another, with the data, and with state and national goals.

Top Social Issues: Community Leaders	**Top Health Issues: Community Leaders**
1 *Mental Health Problems	1 Unhealthy Diet and Related Health Problems
2 Insufficient Household Income	2 *Mental Health Problems
3 *Alcohol and Drug Abuse	3 Lack of Access to Health Promotion and Care
4 Breakdown of Family	4 Obesity
5 Economic Development	5 Culturally Competent Care

(*Mental Health and Alcohol and Drug Abuse may be grouped as *Behavioral Health*.)

What is health promotion? The *World Health Organization* defines health promotion as "the process of enabling people to increase control over, and to improve, their health. It moves beyond a focus on individual behavior towards a wide range of social and environmental interventions."

The top social and health concerns of the community are inter-related, multi-determined challenges. However, focusing on the top community concerns impacts all of the issues.

- Obesity is related in part to an unhealthy diet. The health problems related to obesity impact the economic health of individuals, households, employers and the community.
    - Per the County Health Rankings, 32% of Shelby County adults are obese.

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2016 Community Health Needs Assessment and Implementation Plan

Top Health and Social Issues continued

- Though not directly mentioned as a top concern, obesity is related to physical inactivity.
    - Per the County Health Rankings, 31% of Shelby County adults are physically inactive.
- Behavioral health is a health promotion and health care issue. Nutrition plays a central role in illnesses such as depression. Physical health issues develop as a result of substance misuse or may not be addressed for persons with behavioral health problems.
- The health problems that develop in relationship to an unhealthy diet, substance misuse, obesity and implied physical inactivity are **chronic diseases**.
- The economic health of the community may impact whether a household's resources are equal to the basic cost of living in the community.
- A household with insufficient financial resources may experience food insecurity and limited access to healthcare.
- Alcohol and drug misuse impacts the stability of the family as does chronic disease.
- Culturally competent care impacts access to health care and health promotion. Lack of access may also be influenced by geography, money, and time as well.

The top issues per the CHNA Community Leader Interviews may be viewed as

1 **Chronic Disease: Physical Health and Behavioral Health**
2 **Lack of Access to Health Promotion and Care**
3 **Insufficient Household Income**

Top Social Issues: Community Survey	**Top Health Issues: Community Survey**
1 Health	1 Substance Abuse
2 Education	2 Mental Health
3 Employment	3 Obesity
4 Poverty	4 Chronic Disease
5 Aging	5 Tobacco and Nicotine Use

Again, the top social and health concerns of the community are inter-related, multi-determined challenges. Focusing on the top community concerns impacts all of the issues.

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2016 Community Health Needs Assessment and Implementation Plan

CHNA Community Survey continued

- Interestingly, health was identified as the top *social* issue in the CHNA survey.
- Behavioral health (mental health and substance misuse) was identified as the top health concern.
- Both obesity and tobacco/nicotine use are primary factors in chronic disease.
    - Per the County Health Rankings, 21% of Shelby County adults smoke.
- Education and employment issues are contributing factors to households with insufficient financial resources, as are substance misuse and chronic health problems.
- The CHNA community survey revealed that lower educational attainment positively correlated with tobacco use, obesity and physical inactivity.
- Aging is a multi-faceted issue that includes health concerns, poverty, substance misuse, food insecurity, and caregiving.

Aligning the top issues from the CHNA Community Leader Interviews and the Community Survey, the top issues are congruent with secondary data.

I **Chronic Disease: Behavioral Health and Physical Health**

- Alcohol and Substance Abuse
- Mental Health
- Unhealthy Diet
- Obesity (Physical Inactivity – implied contributing factor)
- Tobacco and Nicotine Misuse

II **Poverty / Insufficient Household Resources**

- Education
- Employment
- Aging

III **Lack of Access to Health Promotion and Health Care**

Health Promotion is essential because it addresses not only programs that benefit individuals and groups but also the systems, environments, and policies that can support and sustain healthy people, a healthy environment, and a healthy economy – the key pillars of a healthy community.

Addendum

2016 Community Health Needs Assessment and Implementation Plan

Secondary Data

The top five causes of disease and death in Shelby County are

1 Cardiovascular Disease
2 Cancer
3 Chronic Lower Respiratory Diseases (Previously Chronic Obstructive Pulmonary Disease, including irreversible emphysema and bronchitis and in some cases, asthma)
4 Alzheimer's Disease
5 Diabetes

- Diabetes diagnoses and deaths have increased in the county.
- With the exception of Chronic Lower Respiratory Diseases, the top chronic diseases are primarily related to diet, sedentary lifestyle, and tobacco/nicotine use.
- Chronic Lower Respiratory Diseases are primarily though not exclusively related to tobacco/nicotine use and exposure.
- For youth, tobacco / nicotine use remain a gateway drug for other mind and mood altering substances.
- Nationally, if the trend continues, Major Depression will move-up to the second cause of chronic disease in the next several years.
- Physical inactivity, obesity, unhealthy diet, and tobacco / nicotine use are drivers of these diseases.

The top concerns identified in the CHNA interviews and survey and the top chronic diseases per the data are aligned. Behavioral health problems stand as both unique, sometimes chronic health issues and as problems that impact and are impacted by chronic health problems.

Top Health / Social Concerns	**Top Chronic Diseases**
I Chronic Disease: Behavioral and Physical Health ● Alcohol and Substance Misuse ● Unhealthy Diet ● Mental Illness ● Obesity (Physical inactivity implied) ● Tobacco and Nicotine Misuse	1 Cardiovascular Disease 2 Cancer 3 Chronic Lower Respiratory Diseases 4 Alzheimer's Disease 5 Diabetes

Addendum

2016 Community Health Needs Assessment and Implementation Plan

County data reveals several contributing factors to the community-identified concern about insufficient household income.

Top Health / Social Concerns	County Data
II Poverty / Insufficient Household Resources ● Education ● Employment ● Aging	● 63% of residents have no college degree ● 34% of working households make less than the basic cost of living in the county ● 15% of the population is 65 and older ● 7% of older adults live in poverty with some areas as high as 14% ● 48% of children under 18 live in poverty ● Low number of stores selling nutritious food that accept SNAP and WIC ● 3 census tracts in Shelbyville and 1 tract in the county that are low-income / low-access to a grocery store; 1 tract also is low-access to personal vehicles.

Socio-economic issues complicate health and the prevention, reduction and optimal management of chronic diseases – physical and behavioral. In the CHNA Community Survey, income positively correlated with tobacco use and physical inactivity. Obesity, unfortunately, cut across all income levels.

Identified Concerns Not Targeted for Focus

Through the CHNA Community Leader Interviews, the use of the previous CHNA was identified as a source for community health data. Various concerns raised in the interviews were the drivers of the inclusion of some of the data in the current CHNA. The CHNA combines secondary data with community primary survey data in identifying the community health challenges facing Shelby County.

Major Hospital will continue to collaborate with community partners on existing and emergent opportunities to impact the top health and social concerns identified by the community and as noted in the data. There are community initiatives in place to address some of the top concerns. Therefore, the following issues are not a direct focus of the 2016 CHNA Implementation Plan:

Addendum

2016 Community Health Needs Assessment and Implementation Plan

Identified Concerns continued

- Education
- Employment
- Poverty
- Substance Abuse

Guiding the focus of the CHNA plans are the science-based objectives of Healthy People 2020 that address areas of needed improvement for Shelby County's health. The Indiana State Health Improvement Plan is congruent with Healthy People 2020 and is focused on the specific needs of Indiana. The following issues are identified in these national and state plans but will not be a direct focus of the 2016 CHNA Implementation Plan. However, they are being addressed by community agencies:

- Salmonella
- Sexually Transmitted Infections
- Suicide

The 2016 CHNA Implementation Plan builds upon several areas of the previous plan. One community problem identified as a priority in the 2013 plan was Teen Pregnancy. Shelby County continues to have a high rate of teen pregnancy and of course, teen pregnancy touches on layers of issues that have been identified as community concerns. In the 2016 CHNA interviews and community survey, teen pregnancy was not noted as a top social or health concern. The current plan does not directly address teen pregnancy; however, the challenge is being addressed by several agencies and programs in the county.

Chronic Disease Prevention, Reduction, and Optimal Management

The current CHNA Implementation plan continues to focus on chronic disease prevention, reduction, and optimal management with an emphasis on Policy, Systems, and Environmental Change Strategies. When the domains of diet, physical activity, and tobacco / nicotine use are modified, chronic disease risk decreases and optimal management of an existing chronic disease increases.

The 2016 CHNA Implementation Plan differs from the initial plan developed in 2013. The current plan has a greater focus on policy, environmental, and systems changes in order to leverage broad and sustainable impact on the health and wellness of Shelby County residents and stakeholders. The previous plan was more focused on programs. While programs certainly have their place, they tend to impact fewer people in a time-limited manner.

Addendum

2016 Community Health Needs Assessment and Implementation Plan

Chronic Disease Reduction, Prevention and Optimal Management continued

The top community health concerns being addressed in the 2016 CHNA Implementation Plan are chronic disease and the primary drivers of chronic disease. The over-arching goal is to prevent, reduce, and optimally manage chronic health problems. Doing so impacts quality of life for an individual, a family, worksites, the health care system, and the county at large. Community leaders and the community at large identified chronic disease and the drivers of chronic health problems as priority concerns.

Community health cannot be improved except through the investment of multi-sector stakeholders. The CHNA Implementation Plan inherently has collaborations with multiple partners from government, schools, business and industry, non-profits, behavioral health, service organizations, and the multi-faceted health care system in Shelby County.

Major Hospital has a 3 year budget for addressing these needs. The investment may be adjusted subsequent to emergent opportunities that are aligned with the goals of the CHNA plan and/or factors that impact the envisioned goal and activity.

I Healthy Eating

A. Community Partners:

- ABM Healthcare Support Services
- Central Indiana Council on Aging
- Dugger Family Farm
- Healthy Families
- Mainstreet Shelbyville
- Shelby County Purdue Extension
- Shelby Senior Services
- Shelbyville Parks Department
- Shelbyville ~ Shelby County Farmers Market
- Southwestern Consolidated Schools
- Your Box Catering

B. The over-arching goals of the focus on healthy eating are

- To increase affordable access to fruits and vegetables for areas and populations with low-access and low-income. Disease by diet is beginning to overtake disease by tobacco use. The cheapest food choices cause diet-related chronic diseases - the top diseases in Shelby County.

Addendum

2016 Community Health Needs Assessment and Implementation Plan

Healthy Eating continued

- To increase opportunities for and access to information about healthy food options in restaurants and worksites.
- To increase healthy food awareness and cooking skills for students.

C. Activities

- Accessible Community Gardens in low-access, low-income areas
- Produce Rx program for low-income patients through MHP Disease Management
- Market Bucks
- Youth programming through the Farmers Market and schools
- Increasing purchasing power of SNAP, WIC, Senior vouchers
- Pursue USDA grant in partnership with Dugger Family Farms for a mobile farmers market
- Provide farmers market at the new MHP Medical Center

II Physical Activity:

A. Community Partners:

- City of Shelbyville
- First Fridays
- Livable Communities Coalition
- Nine13 Sports
- Northwestern Consolidated Schools
- Plymate, Incorporated
- Shares, Incorporated
- Shelby Eastern Schools
- Shelby County Athletic Club
- Shelby Senior Services
- Shelbyville Central Schools
- Shelbyville Parks Department
- Southwestern Consolidated Schools

Addendum

2016 Community Health Needs Assessment and Implementation Plan

Physical Activity continued

B. The over-arching goals of the focus on physical activity are

- To increase community walkability to reduce barriers to walking and conversely, increase opportunities for walking as the most accessible, affordable, and sustainable physical activity with researched health benefits.
- To increase and promote opportunities for physical activity for all ages, stages, and abilities.

C. Activities

- Sheltered, landscaped benches to meet national standards for increasing walkability of pedestrian paths for all ages, stages and abilities
- Cycling as part of elementary school physical education curriculum
- Walking and rolling events for all abilities

III Tobacco and Nicotine Prevention and Treatment:

A. Community Partners:

- Clarity Pregnancy Care
- Community Corrections
- ER Counseling
- Goodwill Nurse – Family Partnership
- Healthy Families
- Human Services
- Indiana Tobacco Prevention and Control
- Shelby County Drug Free Coalition
- Shelby County Health Department
- Tobacco Control Network
- Youth Assistance Program
- WIC

B. The over-arching goals of the focus on tobacco/nicotine prevention/treatment are

- To build capacity for working toward tobacco policy, systems, and environmental changes to increase tobacco and nicotine free living
- To reduce tobacco and nicotine use among pregnant women and through the first year of the infant's life to decrease immediate health risks to the unborn child and infant as well as improving the long-term health and well-being of the infant and mother
- To increase knowledge about and opportunities for tobacco use treatment – build on the CHNA 2013 plan.

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Tobacco continued

C. Activities

- Train key community organizational leaders in the first level of Tobacco Treatment Specialist to increase optimal conversations about cessation.
- Pursue ITPC capacity building grant.
- Pursue ISDH Baby and Me Tobacco Free grant.
- Provide youth education regarding point of sale tobacco marketing.
- Promote comprehensive tobacco policies that include electronic nicotine delivery devices.
- Incorporate the Indiana Quit Line into the electronic medical records in physician practices (Builds on 2013 CHNA plan)
- Program to decrease tobacco/nicotine use in pregnant women through the first year of an infant's life.
- Continue to provide community tobacco symposiums to increase awareness and engagement.

IV Behavioral Health:

A. Community Partners:

- Community Behavioral Health (Gallahue)
- ER Counseling
- Turning Point Domestic Violence Services

B. The over-arching goals of the focus on behavioral health are

- To work toward adding psychiatric services to MHP behavioral health services for the purpose of optimal management of behavioral health problems.
- To increase navigation skills within the MHP referral center with the goal of becoming an internal and a community resource for accessing behavioral health services.
- To increase capacity for multi-sector alignment for providing treatment and supportive services within the community for mentally ill youth and their families.

C. Activities

- Through the MHP Referral Center, establish connections with behavioral health providers in Shelby and surrounding counties.
- Establish processes and point persons with expertise on navigating behavioral health system.

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Behavioral Health continued

- Promote MHP Referral Center as place for assistance in accessing behavioral health care.
- Recruit Psychiatric Nurse Practitioner.

V Health Promotion:

A. Community Partners:

- Adult Protective Services
- Blue River Soccer
- Eustress Fitness
- Girls, Incorporated
- Healthy Families
- Jane Pauley Community Health Center
- Livable Communities Coalition
- Master Gardeners
- Plymate, Incorporated
- Renew Body and Spirit
- Rock Steady Boxing
- SCUFFY
- Shares, Incorporated
- Shelby County Animal Shelter
- Shelby County Athletic Club
- Shelby County Council on Aging
- Shelby County Drug Free Coalition
- Shelby County Health Department
- Shelby County Purdue Extension
- Shelby County Special Olympics
- Shelby County Victims Assistance
- Shelby Senior Services
- Shelbyville News
- Shelbyville Parks Department
- Trinity United Methodist Church Taekwondo
- Vectren
- WSVX

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Health Promotion continued

B. Health promotion builds on the 2013 CHNA plan. The over-arching goals of the focus on health promotion are

- To increase access to health promotion for vulnerable populations and per the data, for rural communities in order to prevent, reduce, and promote optimal management of health problems.
- To work toward a multi-sector aligned approach towards asthma prevention, reduction and optimal management by addressing the air quality in homes built before 1950 without modern air ventilation systems.
- To continue providing health education and prevention opportunities to the public.

D. Activities

- Per the data, provide targeted health promotion/prevention in a rural community. Engage community partners in providing comprehensive education and resources to optimize sustainability.
- Per the data, craft a sustainable approach to the challenge of homes built before 1950 without modern air filtration systems by engaging Hometown Funds, Blue River Community Foundation, Shelby County Health Department, MHP Pulmonology, MHP Pediatrics, and the ISDH Asthma Program.
- Continue providing annual Get Healthy Here Farmers Market event promoting wellness and the market.
- Continue investing in community outreach and organization for the purpose of improving community health through the CDC healthy communities initiative in Shelby County – Healthy Shelby County.
- Continue providing health fair and sex education for adults with Intellectual and Developmental Disabilities and engage them in community wellness opportunities such as National Walking Day.
- Continue partnering in health promotion and prevention opportunities for seniors, especially in ways that expand their capacity in a sustainable way such as investment in evidence-based health programs as a joint MHP – Shelby Senior Services venture.
- Continue engaging in emergent opportunities for health promotion/prevention within MHP and with community partners.
- Continue providing education via media and community presentations to increase awareness about community health strengths and challenges in Shelby County.
- Continue providing at least two annual public forums on community health for multi-sector community stakeholders to increase awareness and engagement.
- Continuing engaging an ever-broader group of stakeholders in the work of improving community health.

Addendum

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Please address written comments on the CHNA and Implementation Plan and requests for a paper copy of the CHNA to

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