

Kalamazoo County
2017 Maternal and Child Health Needs Assessment



A Vision of Maternal and Child Health for Kalamazoo County:

A community in which all children and families have an equitable opportunity to experience their best possible physical, mental, and socioemotional health.



KALAMAZOO COUNTY GOVERNMENT

In the Pursuit of Extraordinary Governance

Health and Community Services Department

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Kalamazoo County Health & Community Services is committed to providing equitable, culturally competent care to all individuals served, regardless of race, age, sex, color, national origin, religion, height, weight, marital status, political affiliation, sexual orientation, gender identity, or disability.

Introduction

During the summer of 2017, Kalamazoo County Health and Community Services Department (KCHCSD) conducted a Maternal and Child Health Needs Assessment to determine the most significant health issues facing mothers and children. The assessment incorporated community feedback and health outcome data to prioritize Maternal and Child Health issues facing our community. The three priority issues identified were: **Child/Adolescent Mental Health, Childhood Nutrition, and Prenatal Care.**

Background

Kalamazoo County Health and Community Services Department (KCHCSD), in partnership with the Michigan Department of Health and Human Services (MDHSS) and the Michigan Public Health Institute (MPHI), conducted a community-wide Maternal and Child Health needs assessment in Kalamazoo County during the summer of 2017. The goal of this assessment was to determine the most important health issues for mothers and children in Kalamazoo County. The identification of these important health topics will help to inform the development of community partnerships and coalitions to address these needs.

Health starts where we live, learn, work, and play. From the physical environment, to economic characteristics, to social networks, these social determinants of health contribute to and shape an individual's well-being. Conditions in the environment, such as access to education, health care access, transportation, residential segregation, exposure to crime, access to green spaces, and the built environment, all impact the current and future health of those residing in that environment.¹

In addition to the effect of the community, an individual's health is developed over a lifetime, starting with the future mother's health prior to becoming pregnant and continuing through the pregnancy, then into that person's infancy, childhood, adolescence, and adulthood. This life course perspective holds that each stage has a unique impact on all of the subsequent stages, and these effects can be cumulative. Throughout life and at all stages, risk factors can be reduced and protective factors enhanced, to improve current and subsequent health and well-being.^{2,3}

Particularly important to the concept of the life course perspective is the long-lasting impact of adverse childhood experiences (ACEs). ACEs are negative experiences or traumatic events that occur during childhood and that can have an impact on that individual's health, both at the

¹ *Healthy People 2020*. <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health>

² *A Life-course Approach to Chronic Disease Epidemiology* eds. Diana Kuh and Yoav Ben-Shlomo (Oxford University Press, 1997) ISBN 0 19 2627821.

³ *The implications for training of embracing A Life Course Approach to Health*. World Health Organization. (World Health Organization, 2000).

time of the trauma and in the future. Circumstances such as physical abuse, emotional abuse, mental illness, incarceration of family members, divorce, and substance use. These events, when viewed through the life course approach, have long-reaching effects on health outcomes.

Community Engagement and Health Outcome Data

An important part of a health needs assessment is to gather input from community partners and community members. KCHCSD used a variety of methods to collect community input; please see Community Outreach for additional details regarding the community engagement process.

A brief survey was created to elicit responses from community members concerning health issues among school-age youth, from Kindergarten through 12th grade. Community members were invited to answer the following questions on the survey:

1. What is the top health issue facing school aged (K-12) children in your community?
2. Do you know of any community resources that help with the issue?
3. What is something the community could do to address this issue?
4. What is your zip code?

Data was collected from June through September through intercept surveys at community events and through an online survey. A total of 1132 people responded and 1446 health related issues were identified. The top health issues included nutrition, mental health, sickness/disease, obesity, and hunger.

Other methods used include focus groups, youth artistic expression, and community input walls.

In addition to community input, population health data describing maternal and child health was summarized. See Demographics for a copy of this summary.

Stakeholder Meeting

Community input and population health data were used to help local stakeholders prioritize maternal and child health issues at a community forum in September (see the Data Discussion).

A total of 18 stakeholders representing 11 different organizations participated in the community forum. Attendees included representatives from the local hospital networks Borgess and Bronson, Western Michigan University HDReAM Program, Kalamazoo Valley Community College, Kalamazoo Regional Educational Service Agency, Kalamazoo Community Mental Health & Substance Abuse Services, YWCA/Cradle Kalamazoo, Kalamazoo Public

Schools, Communities in Schools, Kalamazoo County, and Kalamazoo County Health and Community Services Department.

Members convened to review the community input and population health data, summarize the themes shown by the data, and prioritize the health issues to address as a community.

Utilizing the data, themes, and a strategic health issues prioritization worksheet ([Appendix A](#)), members voted on their top three health issues based on the magnitude and the feasibility of addressing the issue. The three priority health issues selected included:

1. Child/Adolescent Mental Health
2. Nutrition
3. Prenatal Care

After voting, attendees divided into three small groups (one per health issue) to collectively brainstorm the impact on the life course, community assets available to address the respective health issues, potential barriers to addressing the health issue, and the importance of the health issue/why it was selected to prioritize ([Appendix B](#) and [Appendix C](#)).

The meeting concluded with the presentation of each of the three strategic issues to the members in attendance. Next steps announced will include linkage of partners to existing community organizations and coalitions addressing the respective health issues, as well as providing health department support to coalitions striving to improve health outcomes associated with the strategic health issues.

Conclusion

The Maternal and Child Health Needs Assessment process has aided local health officials and community partners in identification of the priority health issues facing Kalamazoo County mothers and children. Partnerships and community action are necessary to address the root causes of these health issues in order to foster greater health and well-being across the life course.



Together We All Do Better Your Voice Matters

MCH Strategic Issues Worksheet

Directions: This form will be used to vote on our top 3 priority strategic health issues in maternal child health. Listed below are all of the health issues we will be discussing. Please complete the **THEME** for each health issue (i.e. what are some stand-out concerns surrounding this health issue), **COMMUNITY GROUPS INVOLVED WITH HEALTH ISSUE** (any known organizations/departments currently addressing this health need), and rank the following on a scale from 1 (Low) to 3 (High):

- **MAGNITUDE** (*How significant of an issue this is in our community*)
- **FEASIBILITY** (*The extent to which our community is capable of addressing this health issue – cost, ease, maintenance, resources needed, etc.*)

Total the *Magnitude* and *Feasibility* columns for your overall health issue total. Use this as a guide for selecting your top 3 priority strategic health issues.

Health Issue	Notes	Community Groups Involved with Health Issue	Theme of Health Issue	Magnitude 1 (Low) - 3 (High)	Feasibility 1 (Low) - 3 (High)	Total
EXAMPLE: BREASTFEEDING	PERSONAL NOTES	WIC	<i>Breastfeeding rates are low, especially among women in poverty, there are few supports in our community, and our MCH system lacks the necessary partnerships for breastfeeding.</i>	① 2 3	1 2 ③	4

Health Issue	Notes	Community Groups Involved with Health Issue	Theme of Health Issue	Magnitude 1 (Low) - 3 (High)	Feasibility 1 (Low) - 3 (High)	Total
Prenatal Care				1 2 3	1 2 3	
Smoking During Pregnancy				1 2 3	1 2 3	
Maternal Mental Health				1 2 3	1 2 3	

Health Issue	Notes	Community Groups Involved with Health Issue	Theme of Health Issue	Magnitude 1 (Low) - 3 (High)	Feasibility 1 (Low) - 3 (High)	Total
Lead				1 2 3	1 2 3	
Preterm Births				1 2 3	1 2 3	
Infant Mortality				1 2 3	1 2 3	

Health Issue	Notes	Community Groups Involved with Health Issue	Theme of Health Issue	Magnitude 1 (Low) - 3 (High)	Feasibility 1 (Low) - 3 (High)	Total
Immunizations				1 2 3	1 2 3	
Child/ Adolescent Obesity				1 2 3	1 2 3	
Child/ Adolescent Mental Health				1 2 3	1 2 3	

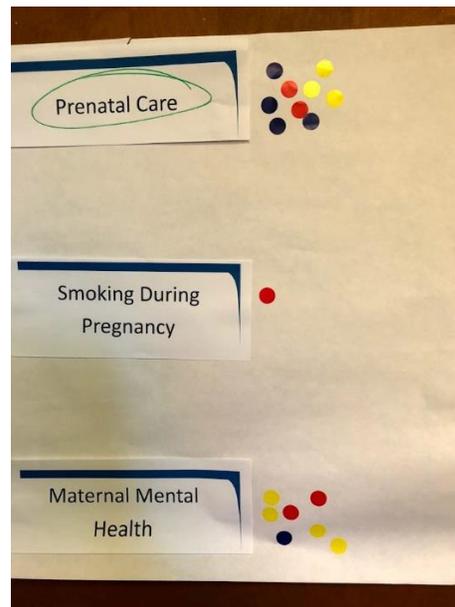
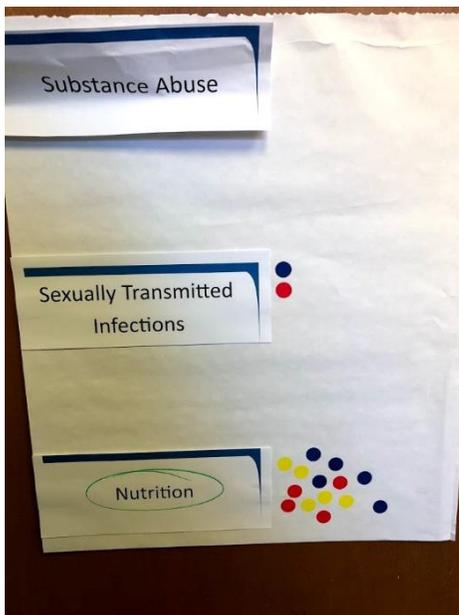
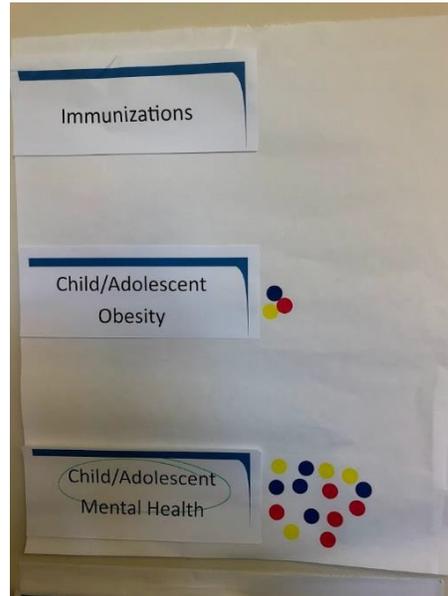
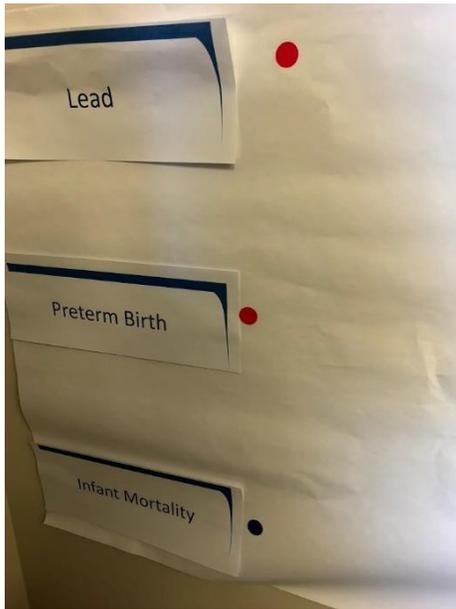
Health Issue	Notes	Community Groups Involved with Health Issue	Theme of Health Issue	Magnitude 1 (Low) - 3 (High)	Feasibility 1 (Low) - 3 (High)	Total
Substance Abuse				1 2 3	1 2 3	
Sexually Transmitted Infections				1 2 3	1 2 3	
Nutrition				1 2 3	1 2 3	

Appendix B: Group Worksheet

Strategic Issue: _____

1. How will addressing this strategic issue have an impact across the life course?
2. What assets does our community have that will support this strategic issue (consider: current activities, available resources, community support)?
3. What potential barriers are there to addressing this issue?
4. Why did you prioritize this strategic issue?

Appendix C: Forum Wall Photos



Strategic Issue: Child/Adolescent mental health

1. Life Course Impact

- MH Affects Phys. Health (Die 15 yrs sooner)
- Stress + Strain on Comm. Resources
- ACEs → Better Outcomes
- Impacts development, Education, Employment, etc.
- Build Resiliency + Skills earlier in life to ↓ risk taking behaviors

2. Community Assets

- CMH
- CIS (in school coord. care)
- Indep. Beh. Health Agencies
- Faith-Based
- Borgess (in patient Psych)
- WUHL + High Ed Instit
- Pediatricians

3. Barriers

- Stigma
- Access Issues
- \$
- ^{Lack of} Coordinated System of Care
 - how to navigate
 - who is there to help?
- Poor Match for Support

- Culturally Rel. Knowledge + comfort of Physicians

4. Why this issue?

- This is an opportunity to lift up this issue and seek a system of coord. care.
- Education staff/families this is a daily issue (70% train)
- The time is now
- More challenging issue to address than Phys. health opportunity to create ^{more of} care

Strategic Issue: Prenatal Care

1. Life Course Impact

- Full life impact
- Preterm birth affects remainder life
- Maternal Health/Nutrition pre → delivery
- 50% of pregnancies unintended
- Pregnancy affects life course of Mother + baby

2. Community Assets

- Cultural EPAGE, SHARE, Assessment from birth equity
- Great Start Collaborative looking at all families
- NFP, HBHS, Fatherhood
- Cradle
- Cradle data
- apps. Co Effective, used by home visitors, WIC
- WMed Sch. of Med. trainings Pt. experience

3. Barriers

- How to culturally competently screen for healthy behaviors
- Systemic Racism
- Access to Care
- Lack of continuity to care
- ^{Lack of} transportation data
- entering prenatal - > 24 weeks
- First visit a 10 weeks
- Distrust of system

4. Why this issue?

- Foundation of mother + child
- One key Question - do you intend to become pregnant in the next year?
 - If yes → start conversation ^{health} behaviors
 - If no → BC

Strategic Issue: Nutrition

1. Life Course Impact

- pre-conception → Adulthood
- connected to physical, mental, intellectual
- cumulative
- Community + individual economic development

2. Community Assets

- Food banks
- Double Up Bucks
- Cooking Classes
- meal programs
- WIC
- SNAP
- People Food Co-op
- Community Gardens
- Farmers Market
- Summer Food program
- FACTS classes
- Free + Reduced meals
- Take home Backpacks

3. Barriers

- Vocabulary
 - "normal" vs "healthy"
- Diversity issues
- lack of access
 - money
 - time
 - lack of transportation
- Education/Knowledge
 - preparation
- Equipment
- Policy
- Homelessness

4. Why this issue?

- Ties into many health issues



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Community Outreach

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Focus Groups

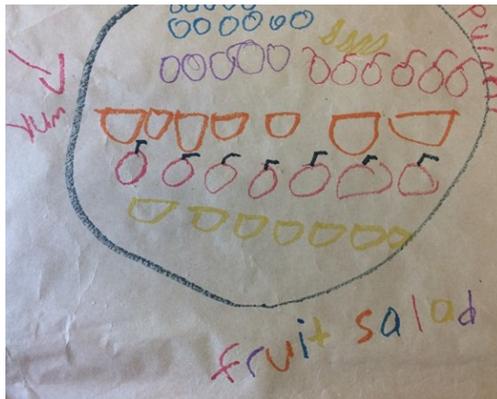
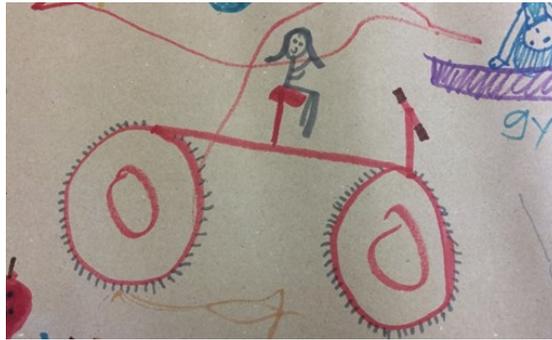
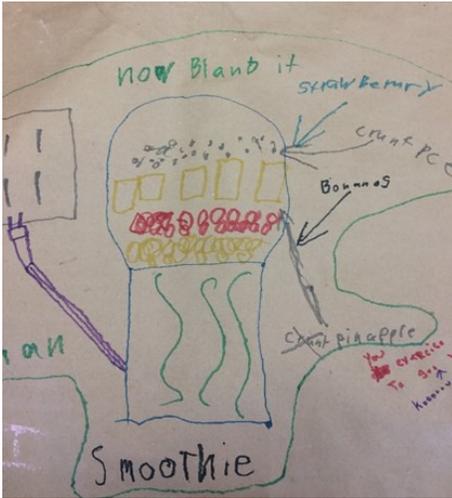
The MCH Assessment Team partnered with the 4Dad Fatherhood Initiative, Kalamazoo Youth Development Network, Communities in Schools, and OutFront Kalamazoo to facilitate discussions around children’s health needs.

Focus Group	Community Strengths	Opportunities for Improvement
Communities In Schools (N=4)	<ul style="list-style-type: none"> • A lot of kids go to the gym • Health class in high school as a resource for health education 	<ul style="list-style-type: none"> • Some kids not being as physically active as others • Mental health
Kalamazoo Youth Development Network (N=5)		<ul style="list-style-type: none"> • Increasing the amount and types of health education provided in schools • Improving communication and dialogue between youth and adults
Fatherhood Initiative (N=6)		<ul style="list-style-type: none"> • Access to affordable healthy food and health resources • Better communication and awareness of resources • More services to help fathers
OutFront Kalamazoo (N=22)	<ul style="list-style-type: none"> • OutFront Kalamazoo • Family Health Resources • Gryphon Place • Child and Family Services 	<ul style="list-style-type: none"> • More resources • Cheaper therapy • Help with transitioning

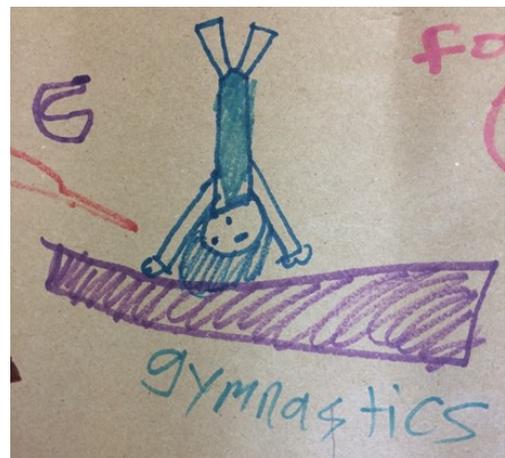
Youth Outreach

The MCH Assessment Team also partnered with the City of Kalamazoo Parks and Recreation Department to obtain feedback from school age children. Team members went to the following summer programs: Supervised Playground (LaCrone Park, Hispanic American Council, and New Horizon Village) and Camp Kzoo Early Morning Drop-off. Kids were asked to respond in written or picture format to the question:

What helps you to be healthy?



My Dad ^d loves sports
and me and him work
out and train and exercise
and race because me
and are fast.

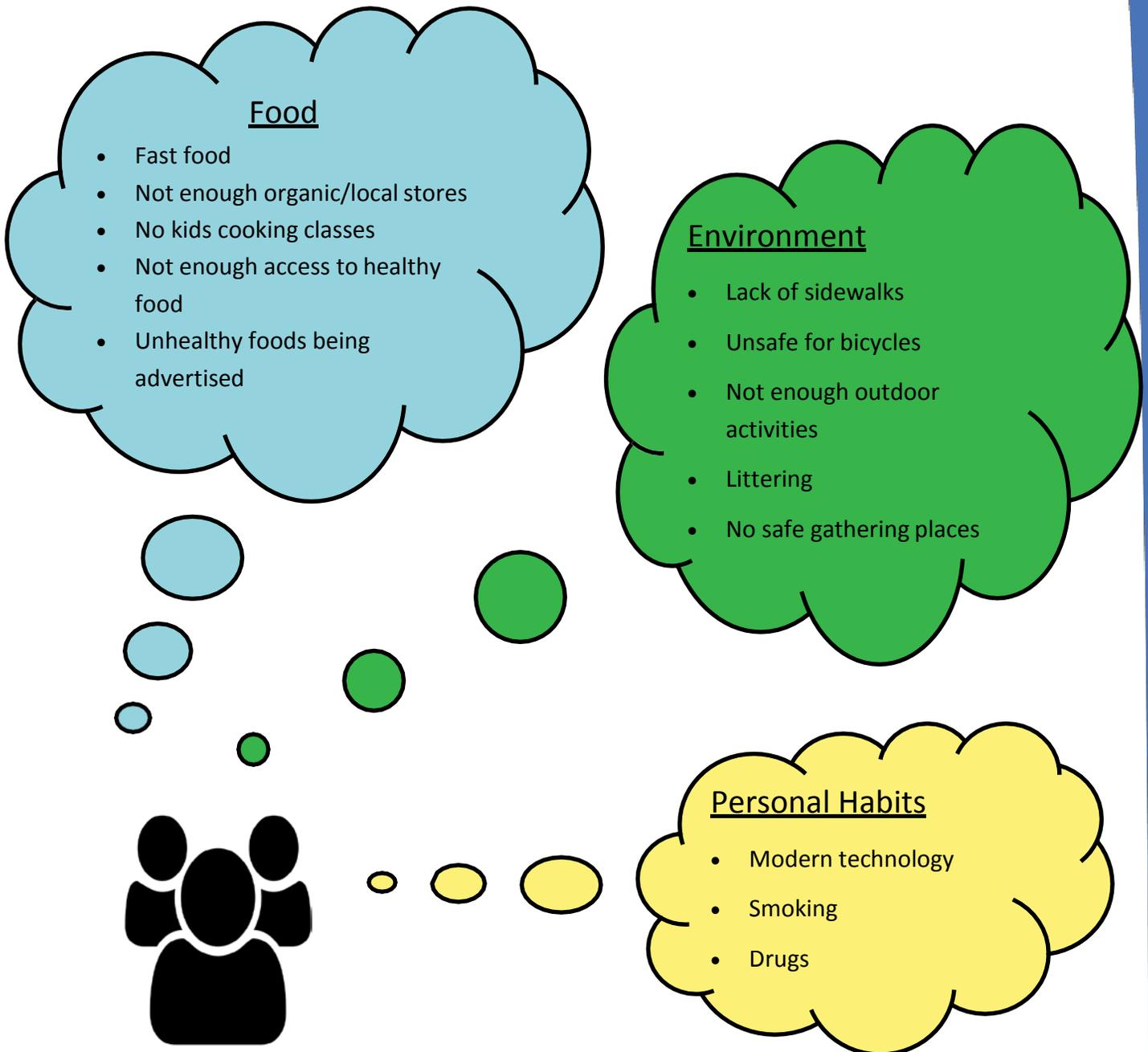


Community Input Walls

At various events, input walls were provided and community members were encouraged to answer questions such as:

What makes Kalamazoo a healthy community?

What about this community makes it HARD for children to stay healthy?



Intercept Surveys

The MCH Assessment Team attended multiple community events throughout the summer (June—September).

Air Fair, Back to School Bash, Black Arts Festival, Comstock Library, Curious Kids, Family Health Center, Parks, Galesburg Day, Kalamazoo College Volleyball Camp, KDPS Block Party, Kids Klassic, Kindleberger Park Production, Kindleberger Summer Fest, Loy Norrix vs. Kalamazoo Central Football Game, KYD Net Youth Action Friday, Lunchtime Live, Mayors Riverfront Park, Movies in the Park, National Night Out, Nature Center, Paramount Fun Fair, Pride, Ramona Park Triathlon and Health Fair, Richland Art Fair, Richland Farmer’s Market, Schoolcraft Summer Palooza, Sherman Lake, Ultimate Family Reunion, Vicksburg Library, Vicksburg Prarieview Park, Youth Fair

At each event, the MCH Assessment Team invited community members to answer the following questions:

- What is the top health issue facing school aged (K-12) children in your community?
- Do you know of any community resources that help with this issue?
- What is something the community could do to address this issue?
- What is your zip code?

Additionally, these questions were used to construct a brief online survey in order to elicit feedback from a wider audience. The online survey was publicized through a number of methods.

A total of **1132** people responded to the survey either in person or online (approximately 30% of the responses were online). The respondents were parents, caregivers, teachers, healthcare providers, or a combination of the above. A number of respondents identified more than one health issue, for a total of **1446** issues.

It is important to note that the responses given are not necessarily representative of the Kalamazoo County population.

Intercept Surveys— Top Concerns, Resources, & Improvement Opportunities

Page Number	Topic	Responses	Percent
6	Nutrition	287	19.8%
6	Mental Health	190	13.1%
7	Sickness/Disease	172	11.9%
7	Obesity	147	10.2%
8	Hunger	93	6.4%
8	Vaccinations	90	6.2%
9	Access to Healthcare	75	5.2%
9	Inactivity	65	4.5%
9	Don't Know/Good	41	2.8%
10	Dental	40	2.8%
10	Sexual Health	39	2.7%
11	Poverty	33	2.3%
10	Drugs	31	2.1%
11	Family	29	2.0%
10	Chronic Illness	28	1.9%
-	Hygiene	21	1.5%
-	Other	15	1.0%
11	Environmental	9	0.6%
11	Safety	9	0.6%
-	Bullying	8	0.6%
-	Sleep	8	0.6%
11	Home Environment	4	0.3%
-	Social	4	0.3%
-	Infant Mortality	3	0.2%
11	Neighborhood Environment	2	0.1%
-	Food	1	0.1%
-	Health Equity	1	0.1%
-	Trauma	1	0.1%

#1

Nutrition (19.8%) – Poor Diet; Lack of Nutritious Food Choices & Options

Resources	Opportunities for Improvement
<ul style="list-style-type: none"> • Loaves and Fishes • Fresh Food Fairy • YMCA • YWCA • WIC • School Lunch Programs • Meet Up & Eat Up • Farmers Markets • MSU Extension Services • Food Pantries 	<ul style="list-style-type: none"> • Community gardens • Nutrition in schools • More communication and information pertaining to available resources • Ensuring resources are accessible and affordable • More nutrition programs for kids • Increasing health options for school lunches and after school programs • More education on nutrition and healthy living

#2

Mental Health (13.1%) – Mental Illness; Emotional and Behavioral Well-being; ADD/ADHD; Trauma; Anxiety; Mental Healthcare Professionals

Resources	Opportunities for Improvement
<ul style="list-style-type: none"> • Kalamazoo Community Mental Health • ARK • KRESA • Communities In Schools • 211 • Gryphon Place • Family and Children’s Services • CHAD • Healing Center 	<ul style="list-style-type: none"> • More communication and information pertaining to available resources • More resources in schools • Eliminate stigma • Increase education on the issue and raise awareness • More community awareness • Make resources more accessible and affordable • More staffing for mental health programs and services

#3

Sickness/Disease (11.9%) – Colds & Flu; Lice; Spread of Germs	
Resources	Opportunities for Improvement
<ul style="list-style-type: none"> • Health Department • Family Health Center • Doctors • Schools 	<ul style="list-style-type: none"> • Teaching kids better hygiene skills • More sanitation in school environments • Providing parents with more information • Addressing what to do with sick kids who can't go to school • Increase education and communication during peak seasons

#4

Obesity (10.2%) – Overweight and Poor Eating Habits	
Resources	Opportunities for Improvement
<ul style="list-style-type: none"> • YMCA • Girls on the Run • WIC • Parks and Recreation • Gym Classes • Family Health Center • Sports Programs/Camps 	<ul style="list-style-type: none"> • Promote healthier food in schools • More nutrition programs • More programs that encourage activity • Decrease body-shaming/increase positive habits to form • More outreach and education on nutrition, physical activity, and general well-being • Promote free opportunities that allow kids to stay active

#5

Hunger (6.4%) – Lack of Food; Food Insecurity	
Resources	Opportunities for Improvement
<ul style="list-style-type: none"> • Loaves and Fishes • Free/Reduced School Lunch Programs • Meet Up & Eat Up • Food Pantries/Food Banks • WIC • Churches • Gospel Mission • Backpack Program 	<ul style="list-style-type: none"> • Promote programs currently in place/expand them • Homestead Programs • Reduce the stigma • Increased education and awareness on the issue • More communication and information pertaining to available resources

#5

Vaccinations (6.2%) – Lack of Immunizations Among Kids	
Resources	Opportunities for Improvement
<ul style="list-style-type: none"> • Health Department • Family Health Center • Pediatricians • Communities In Schools • Hospitals 	<ul style="list-style-type: none"> • Provide more education and information about vaccinations • Awareness for families • Make vaccinations accessible through schools • Provide affordable or free vaccinations • Raise awareness about the importance of vaccinating

Intercept Surveys— Top Concerns, Resources, & Improvement Opportunities

Access to Healthcare – Access and Affordability of Healthcare Services and Programs

Resources	Opportunities for Improvement
<ul style="list-style-type: none"> • Kalamazoo County Health and Community Resources • DHS • Family Health Center • Communities In Schools • Mobile Health Van 	<ul style="list-style-type: none"> • More accessibility to and affordability of services and programs • Transportation assistance to services and programs • More resources available in schools • Increase communication about what services and programs are available

Inactivity – Lack of Exercise and Physical Activity

Resources	Opportunities for Improvement
<ul style="list-style-type: none"> • YMCA • Parks and Recreation • Girls on the Run • Boys and Girls Club • Sports Camps • Gym Class in Schools 	<ul style="list-style-type: none"> • More free programs/resources • More activity throughout the school day • Longer gym and recess time • Forming meet-up opportunities in the community for kids to be active • Increase safety for kids to play outside • More communication and information pertaining to available resources

Don't Know/Good – Unsure of Health Concerns; No Health Concerns

Resources	Opportunities for Improvement
<ul style="list-style-type: none"> • Family Health Center • Health Department • DHS • Schools 	<ul style="list-style-type: none"> • More communication and better advertisement of services and programs that are available • Make resources more affordable • More community events and forums to create awareness

Intercept Surveys— Top Concerns, Resources, & Improvement Opportunities

Dental – Dental Hygiene; Dental Health Knowledge; Affordability of Dental Care

Resources	Opportunities for Improvement
<ul style="list-style-type: none"> Dental Van/Mobile Dentist Family Health Center Communities In Schools Schools 	<ul style="list-style-type: none"> More regular, on-site dentist visits in the schools Increase affordability of services More mobile health units in the neighborhoods Provide more health education, especially early on

Sexual Health – STDs/STIs; Sex Education

Resources	Opportunities for Improvement
<ul style="list-style-type: none"> Kalamazoo County Health and Community Services Planned Parenthood Family Health Center Schools 	<ul style="list-style-type: none"> Promote better sex education in schools More education for parents and youth More awareness and discussion about getting tested Increase outreach in community Provide more services in schools

Drugs – Drug Abuse; Access to Drugs

Resources	Opportunities for Improvement
<ul style="list-style-type: none"> Family Health Center Churches Health Department Big Brothers Big Sisters D.A.R.E Program 	<ul style="list-style-type: none"> More drug programs for youth More after school activities More education on issue More communication and involvement between parents, teachers, and schools

Chronic Illness – Asthma; Allergies; Diabetes; etc.

Resources	Opportunities for Improvement
<ul style="list-style-type: none"> Family Health Center Doctors and Health Professionals Hospitals Schools 	<ul style="list-style-type: none"> Increase awareness Provide more education Providing resources in schools

Importance of Family & Home Environment – Role of Family and Home Environment

Resources	Opportunities for Improvement
<ul style="list-style-type: none"> • YWCA • YMCA • DHS • Churches • School Counselors • Parent Support Networks 	<ul style="list-style-type: none"> • Provide more information and education for parents • Promote more resources that help parents support better home environment • Establish more networks • More home-based intervention programs

External Factors – Poverty; Safety; Environmental Concerns; Neighborhood Affairs

Resources	Opportunities for Improvement
<ul style="list-style-type: none"> • Communities In Schools • YWCA • Open Roads Bike Program • MSU Extension • Schools 	<ul style="list-style-type: none"> • More outlets for kids to be engaged with • More spaces for kids to go that are convenient and accessible • Increase outreach with families • Better resources for housing • Provide education for families and parents about personal financing • Better advertisement for resources available in the community



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Maternal/Child Health Needs Assessment



Demographic Information

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Children in Kalamazoo County

Total Population Under Age 18

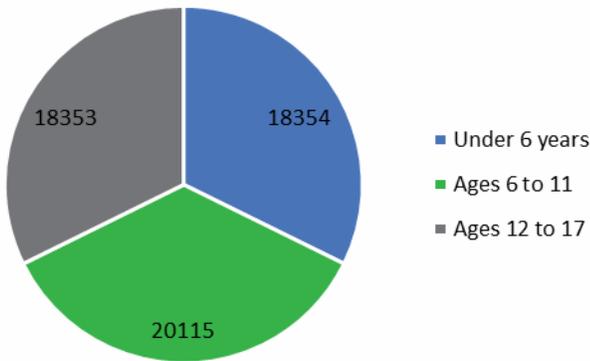
57,069

Pregnant Women	4,550
Live Births	3,179
Average Family Size	2.98

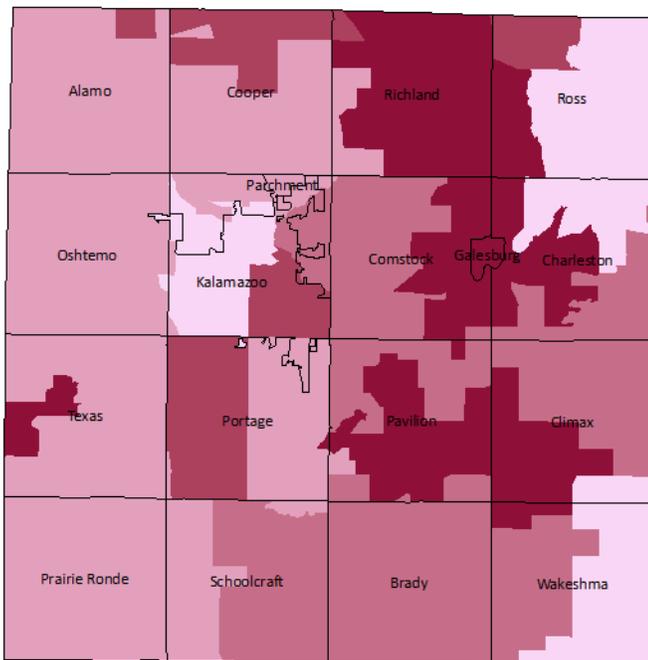
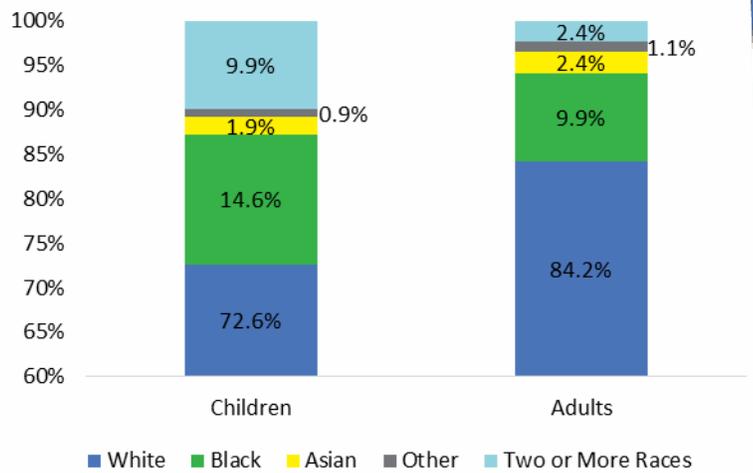
Children who live in the Cities of Kalamazoo and Portage

46.3%

Age Distribution



Racial Distribution



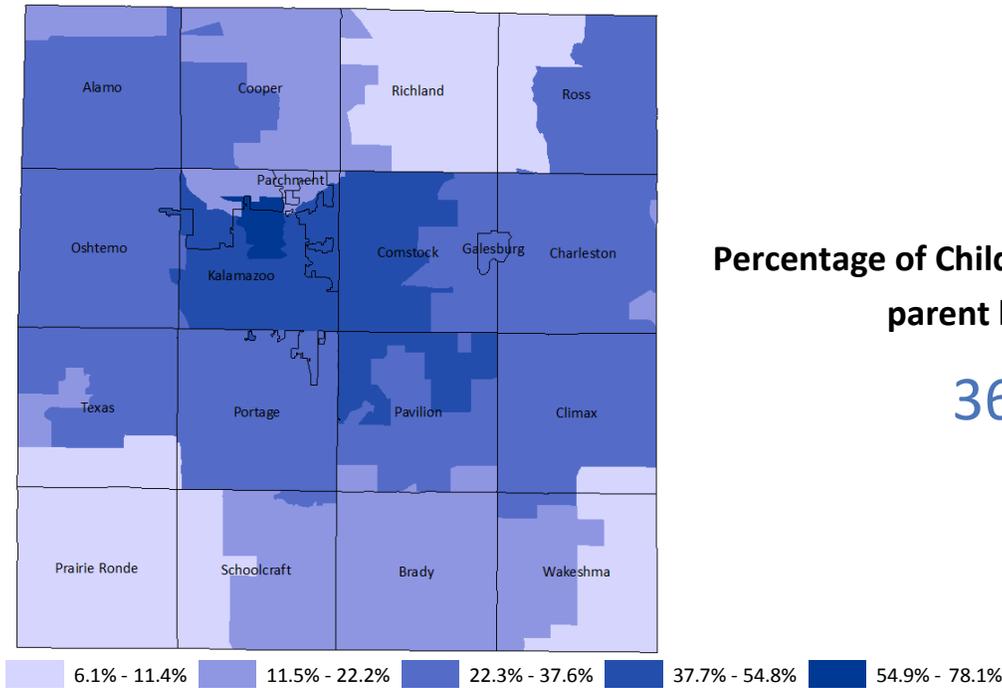
Percentage of Households with Children

28.7%

18.2% - 25.6% 25.7% - 29.8% 29.9% - 32.1% 32.2% - 33.4% 33.5% - 39.7%

Source: United States Census Bureau

Children in Kalamazoo County — Households

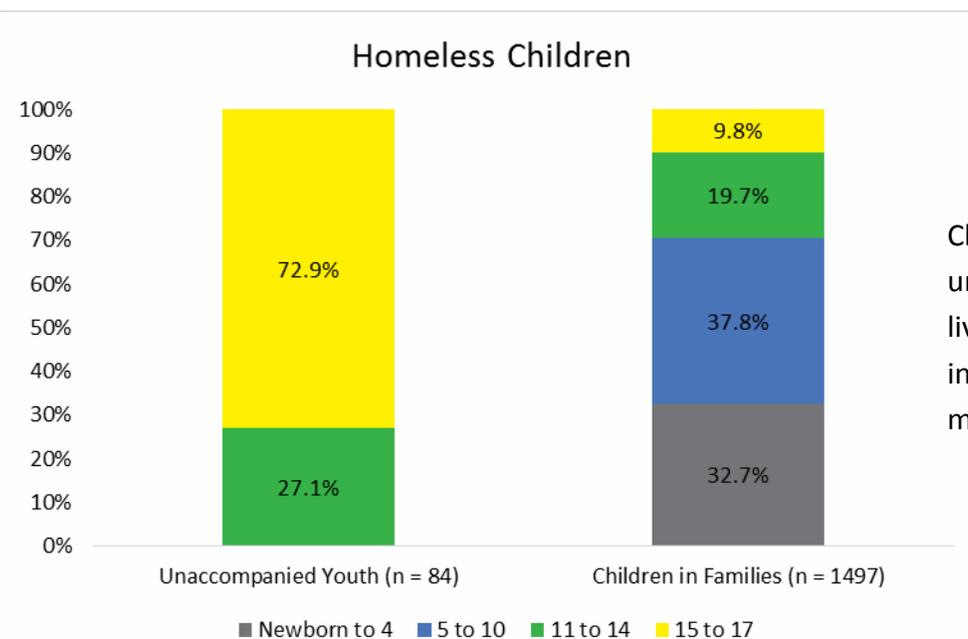


Percentage of Children in Kalamazoo County who are Homeless

2.8%

Percentage of Homeless People in Kalamazoo County who are Children

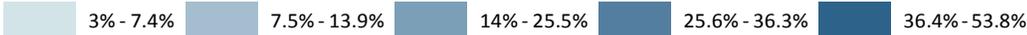
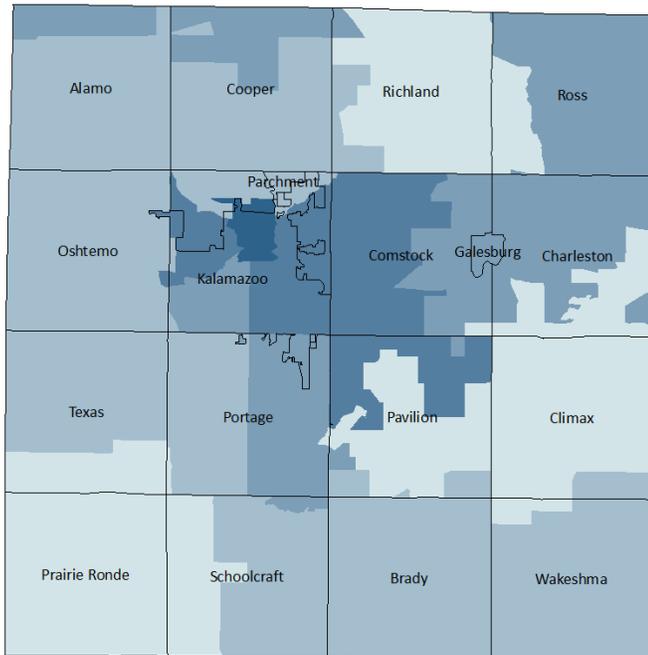
30.0%



Children who are homeless may be unaccompanied youth, who are living without parents, or children in families, who are living with members of their family.

Source: United States Census Bureau; Michigan Coalition Against Homelessness

Children in Kalamazoo County — Income and Poverty

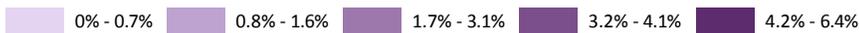
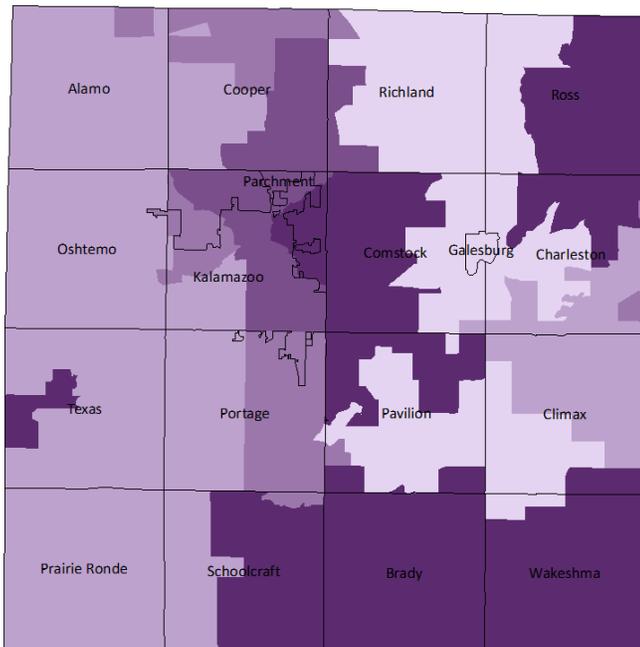


Overall Poverty Rate

20.7%

Percentage of Children who are in Poverty

20.3%



Uninsured Children

	Under age 6	Ages 6 to 17*
Michigan	3.4%	3.9%
Kalamazoo County	2.9%	2.7%

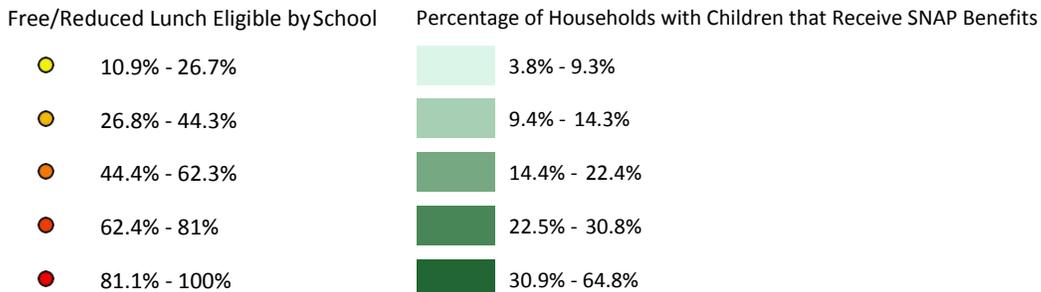
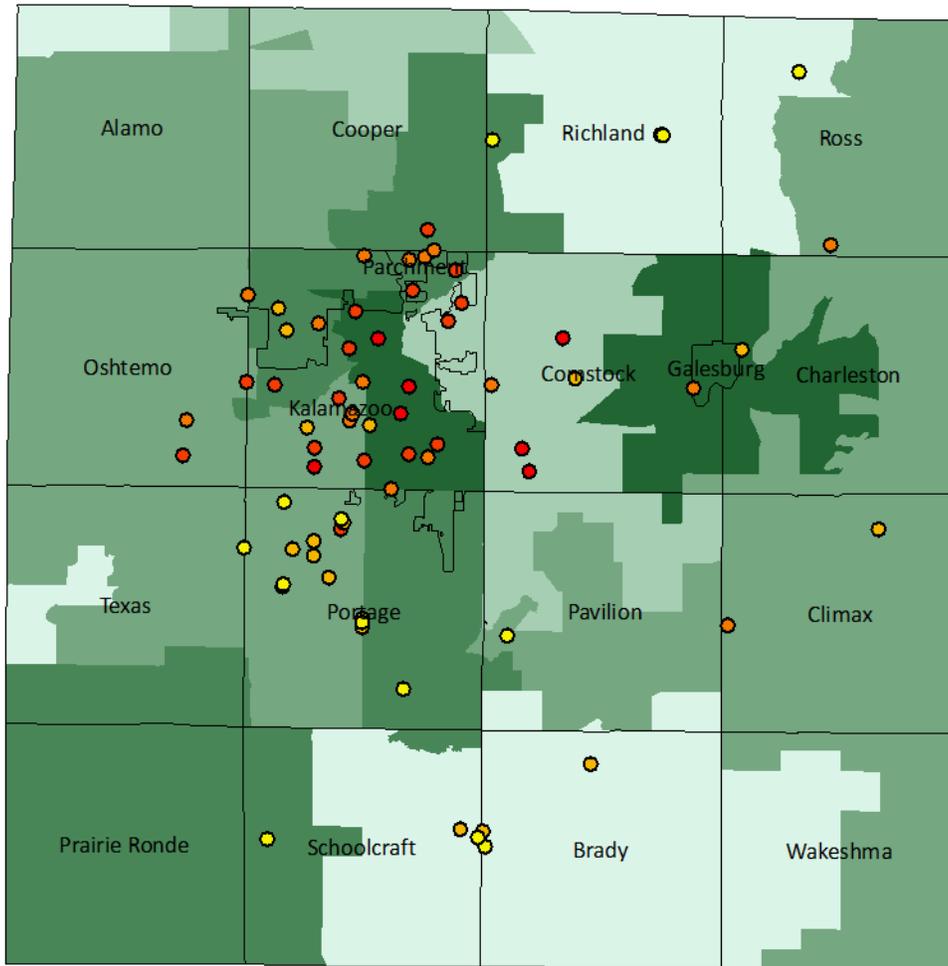
* shown in map

Source: United States Census Bureau

Children in Kalamazoo County — SNAP Benefits and Free/Reduced Lunch

Households with Children under age 18 who receive SNAP Benefits

Michigan	22.4%
Kalamazoo County	25.5%



Source: MiSchoolData.com; United States Census Bureau



Maternal and Child Health Issues in Kalamazoo County

Kim E. Kutzko, MPH



Health & Community Services Department

Life Course Perspective

Preconception/Perinatal

Infancy

Childhood

Adolescence



Timeline – health is developed over a lifetime, starting with the future mother’s health before she becomes pregnant; **today’s experiences and exposures influence tomorrow’s health**

Timing – health and health trajectories are particularly affected during critical/sensitive periods

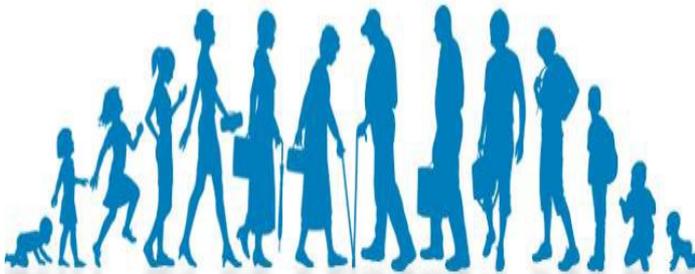
Life Course Perspective

Preconception/Perinatal

Infancy

Childhood

Adolescence



Environment – the broader environment (family, neighborhood, community and social policy) affect health and development

Example: Exposure of expectant mothers to highly stressful environments can influence birth weight of babies; lower birth weight is linked to increased risk for obesity, diabetes, and cardiovascular disease later in life.

Life Course Perspective

ACEs = ADVERSE CHILDHOOD EXPERIENCES

The three types of ACEs include

ABUSE



Physical



Emotional



Sexual

NEGLECT



Physical



Emotional

HOUSEHOLD DYSFUNCTION



Mental Illness



Mother treated violently



Divorce



Incarcerated Relative



Substance Abuse

Cumulative impact – cumulative experiences can impact future health and development

WHAT IMPACT DO ACEs HAVE?

As the number of ACEs increases, so does the risk for negative health outcomes



Possible Risk Outcomes:

BEHAVIOR				
Lack of physical activity	Smoking	Alcoholism	Drug use	Missed work
PHYSICAL & MENTAL HEALTH				
Severe obesity	Diabetes	Depression	Suicide attempts	STDs
Heart disease	Cancer	Stroke	COPD	Broken bones



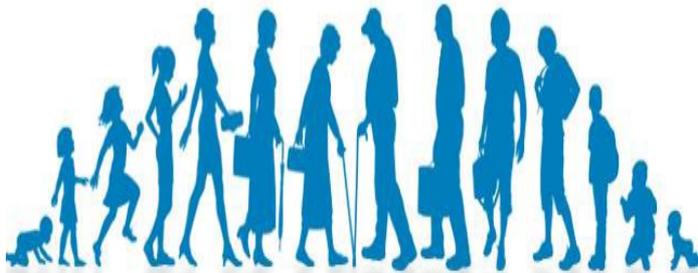
Life Course Perspective

Preconception/Perinatal

Infancy

Childhood

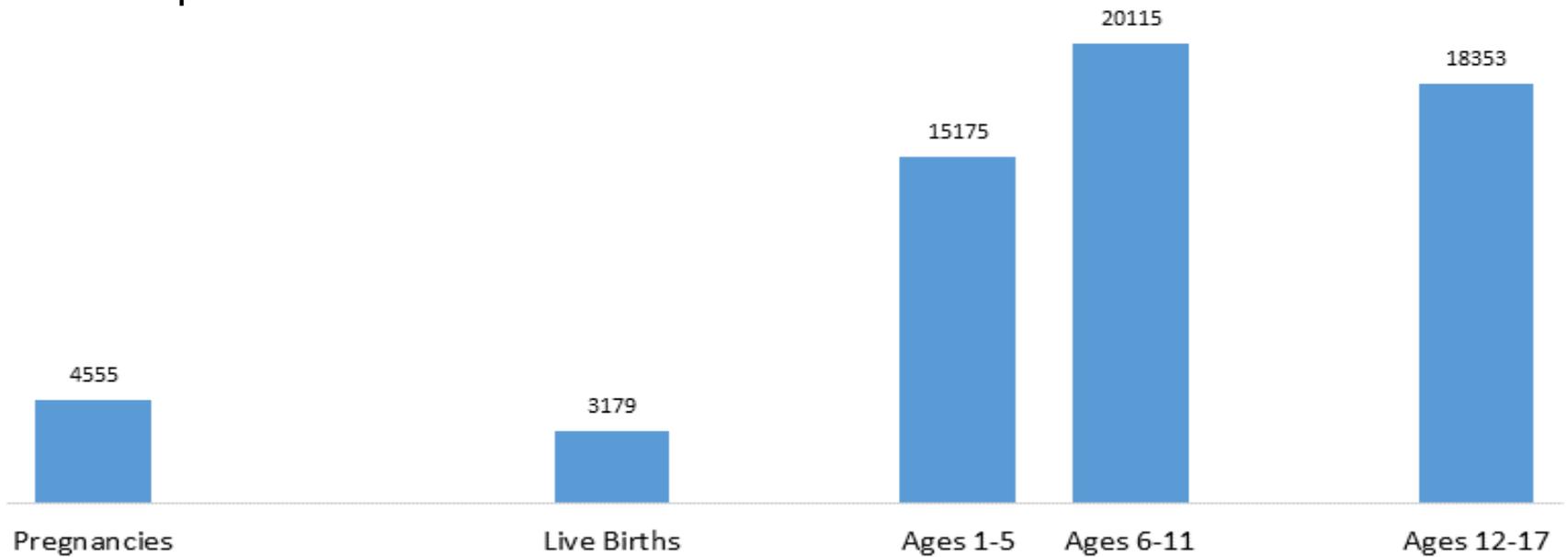
Adolescence



Lifelong development/lifelong intervention – Throughout life and at all stages, risk factors can be reduced and protective factors enhanced, to improve current and subsequent health and well-being.

– *Fine and Kotelchuck*

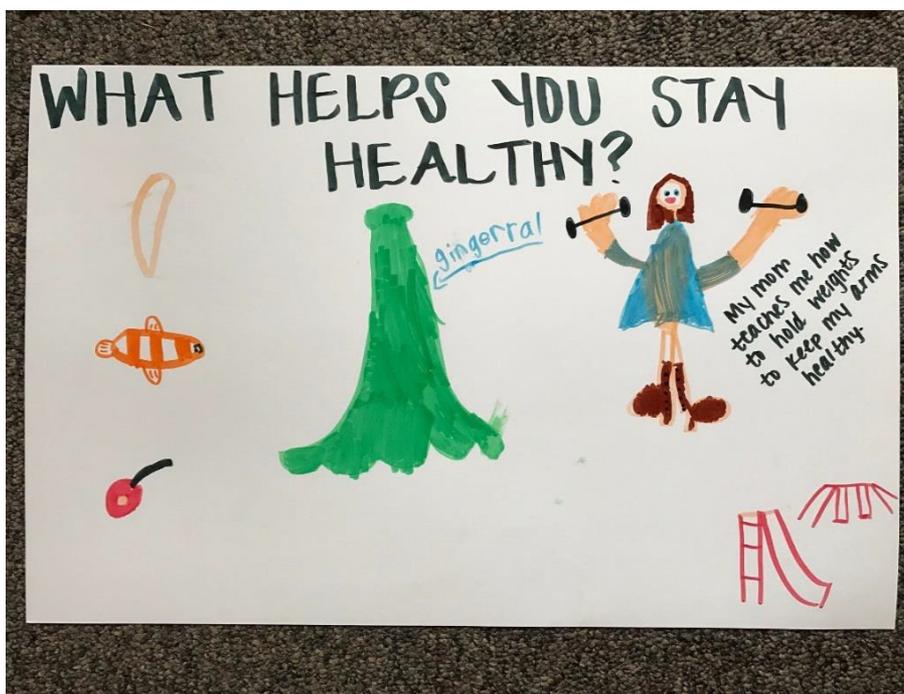
2015 Population Estimates



57,069 Kalamazoo County
Residents are < 18 years of age



Community Outreach



Community
Feedback
Issue

Prenatal Care

Prenatal visits are important for the health of both infant and mother. Health care providers can educate mothers on important health issues, such as their diet and nutrition, exercise, immunizations, weight gain, and abstaining from drugs and alcohol.

Mothers who receive late or no prenatal care are more likely to have babies with health problems including:

- Prematurity
- Stillbirth
- Neonatal and infant death

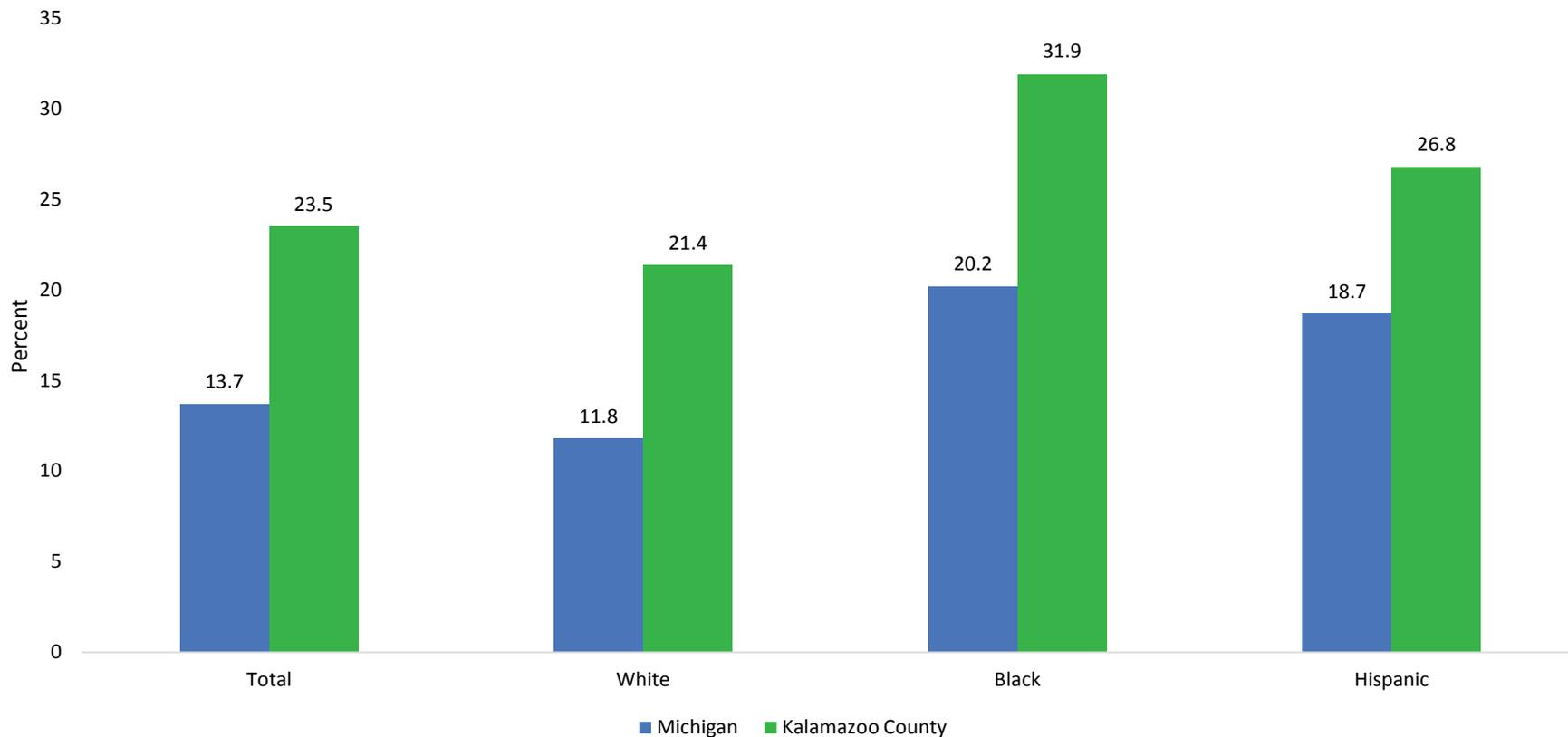
“I hate when they do those appointments when you come in there, you sit down for a long time and they come in and all they do is listen to the baby heartbeat and then you leave.”

- Focus Group Participant

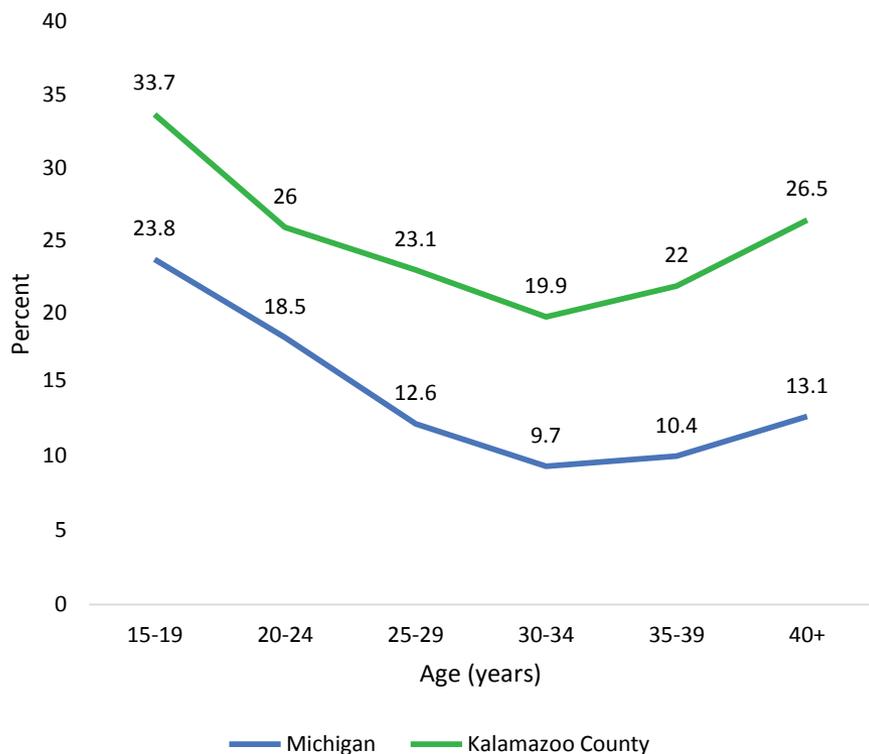
“And, every time, ‘oh, you’ve gained a lot of weight. You understand that it is only 32 pounds in the average birth?’ I didn’t want to go anymore, they need to be more positive instead of saying that.”

- Focus Group Participant

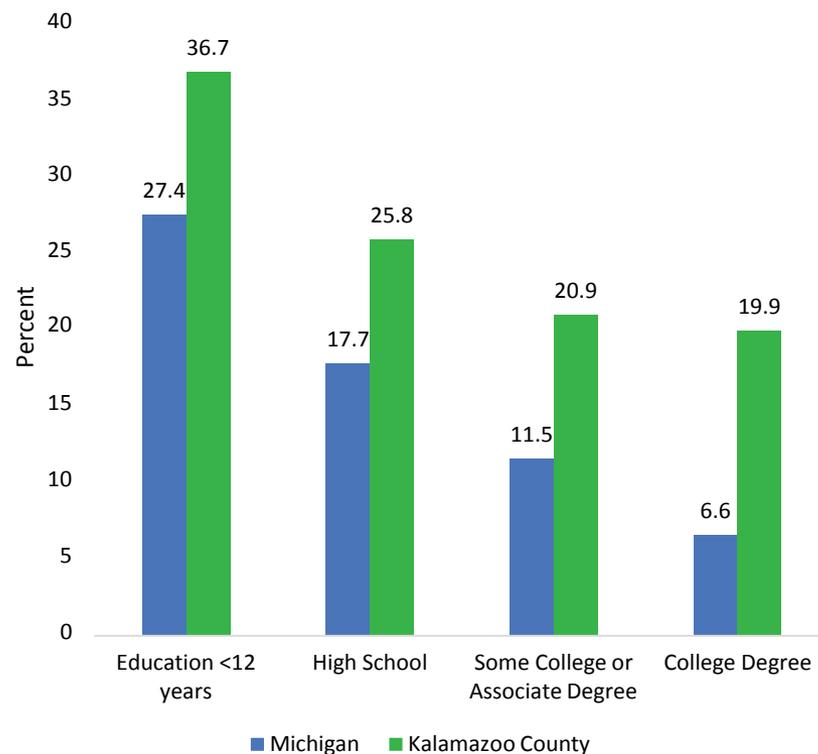
Inadequate Prenatal Care (Kotelchuck), 2013-2015



Inadequate Prenatal Care by Age of Mother, 2013-2015



Inadequate Prenatal Care by Education Level, 2013-2015



Smoking During Pregnancy

Smoking during pregnancy is associated with many adverse outcomes for babies, such as intrauterine growth restriction, premature birth, low birthweight, stillbirth, and infant mortality.

Infants whose mothers smoke during pregnancy are three times more likely to die from Sudden Infant Death Syndrome than are babies whose mothers do not smoke.

Smoking during pregnancy has also been associated with childhood asthma, early childhood obesity, ADHD, conduct problems, and substance abuse and criminal behavior when the child reaches adulthood.

“I smoke when I’m pregnant and it doesn’t do anything.”

- Focus Group Participant

“I’ve got 4 kids, um my first one, I didn’t smoke, his dad smoked, and I know this is bad, I picked up my first cigarette when I was 7 months pregnant with my second child, and they’re healthy, smart, beautiful... they have no complications at all. I smoked with my child and it was fine.”

- Focus Group Participant

Sources:

[CDC 2004](#)

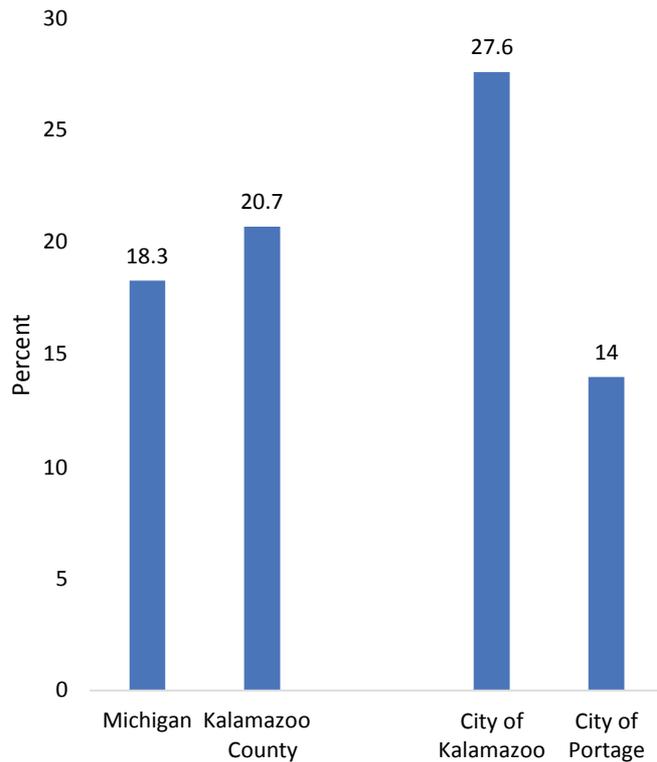
[Child Trends 2016](#)

Damashek, A et al. Using Focus Groups to Understand Racial Disparities in Infant Mortality. Presentation, May 2017. Western Michigan School of Medicine.

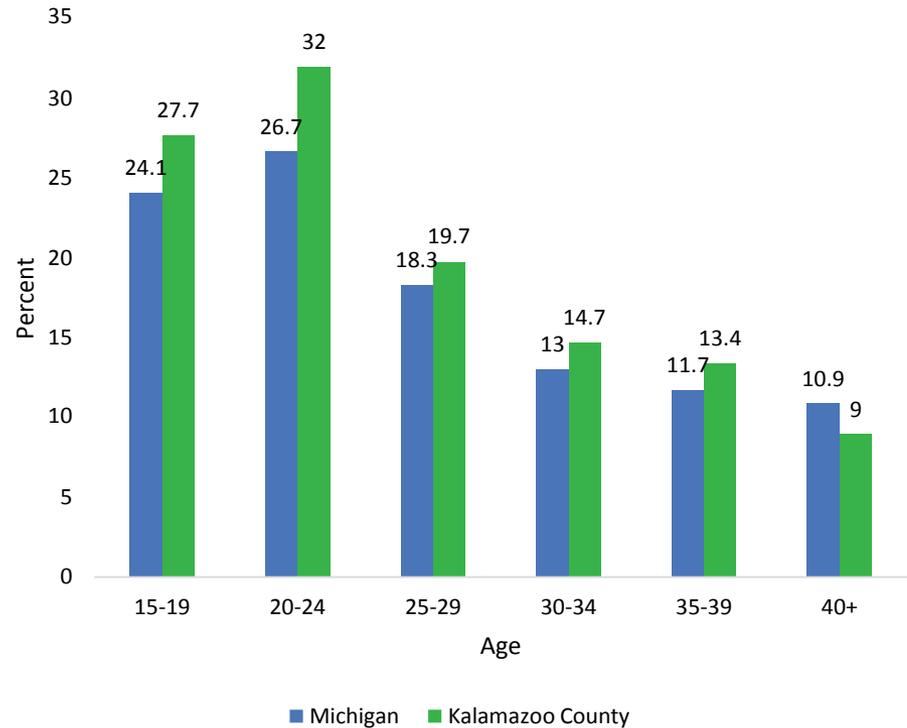
[Surgeon General 2014](#)



Percent of Mothers who Smoked During Pregnancy, 2013-2015



Percent of Mothers who Smoked During Pregnancy by Age, 2013-2015



HP 2020 Goal: 1.4%



Maternal Mental Health

The impact of maternal mental health starts at conception.

Maternal stress and anxiety during pregnancy has been associated with shorter gestation, higher incidence of preterm birth, smaller birth weight and length, and increased risk of miscarriage.

Maternal stress and anxiety during pregnancy are related to infant outcomes such as temperamental problems and increased fussiness, problems with attention, attention regulation, and emotional reactivity.

Older children of mothers who were depressed during infancy often exhibit poor self-control, aggression, poor peer relationships, and difficulty in school.

What is PRAMS?

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a CDC survey of mothers who delivered a live infant in that year; mothers are selected at random to participate in the survey. Survey topics vary but are related to maternal and infant health and wellness. The PRAMS survey is done statewide each year; however, county level estimates are not available.



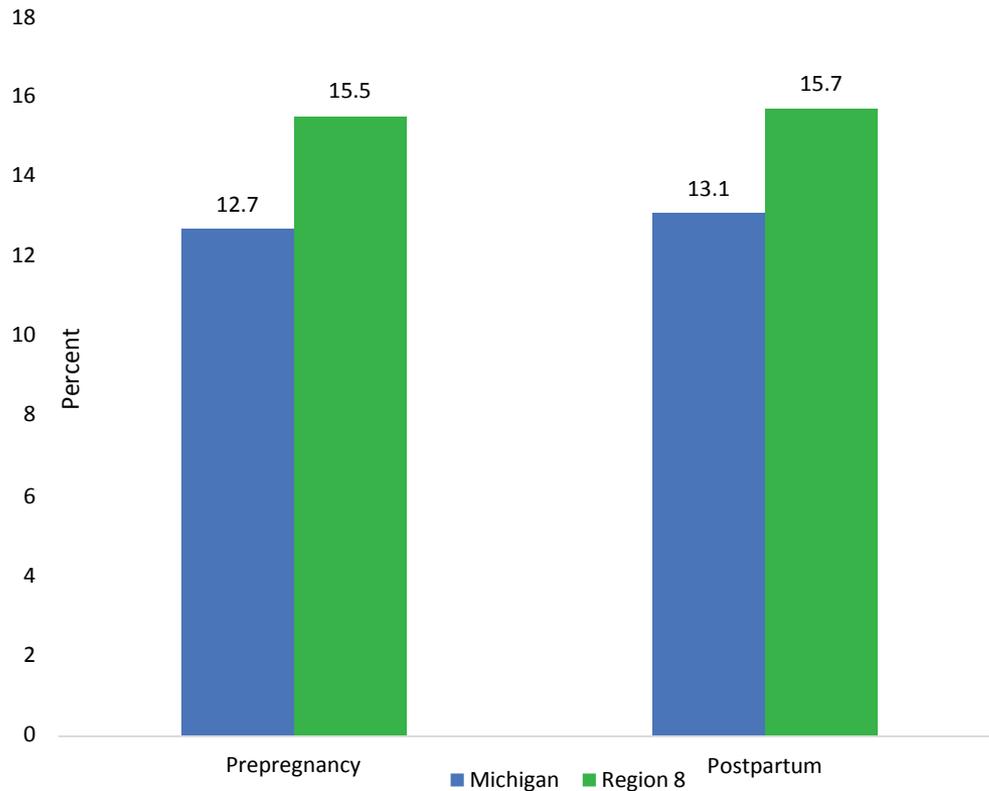
Sources:

Emory University <http://www.psychiatry.emory.edu>

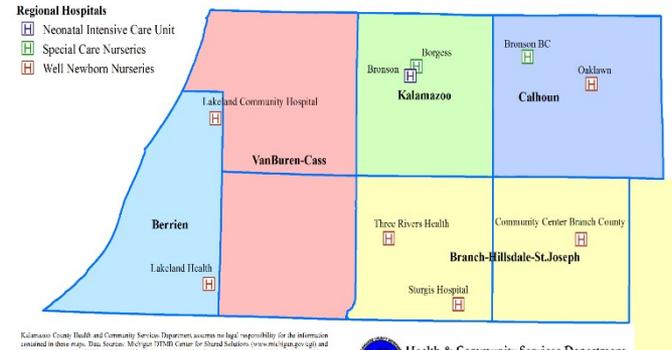
Minnesota Department of Health <http://www.health.state.mn.us/divs/cfh/na/documents/maternalmentalhealth2010.pdf>

PRAMS http://www.michigan.gov/documents/mdhhs/2017-08-21_MI_PRAMS_2014_Tables_final_598704_7.pdf

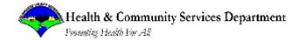
Michigan PRAMS Weighted Population Proportion of Live Births: Pre-pregnancy and Postpartum Depression 2012-14



Region 8 Health Departments & Hospitals



Kalamazoo County Health and Community Services Department assumes no legal responsibility for the information contained in these maps. Data Source: Michigan PRAMS Center for Shared Solutions (www.michiganprams.org) and 2012-2014 Generalized Michigan Birth Certificate Register (Michigan Department of Health & Human Services)

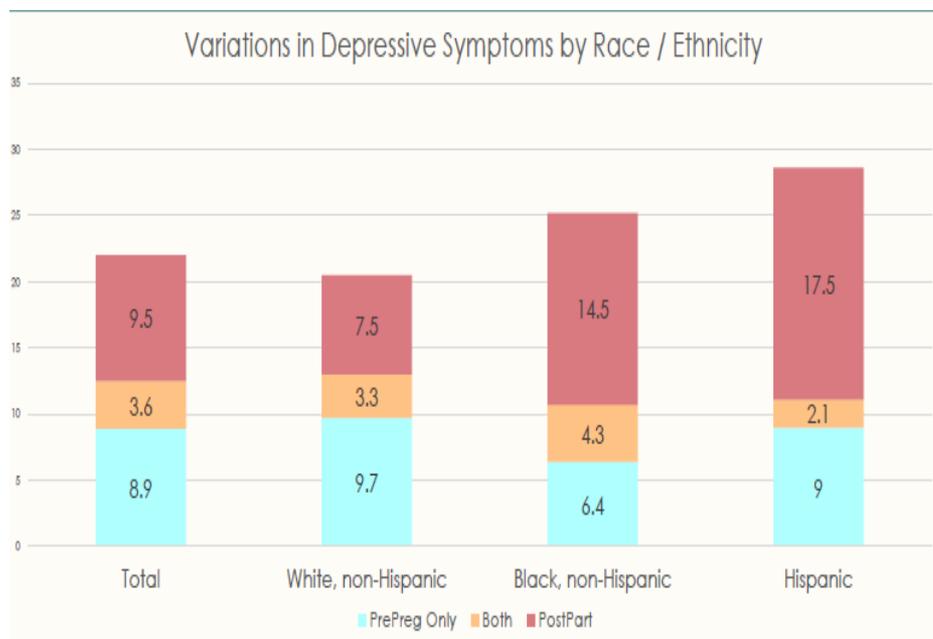


In each category, Region 8 is slightly higher than the state average. However, due to small sample size this difference may be due to chance.

Sources:
 Emory University <http://www.psychiatry.emory.edu>
 Minnesota Department of Health <http://www.health.state.mn.us/divs/cfh/na/documents/maternalmentalhealth2010.pdf>
 PRAMS http://www.michigan.gov/documents/mdhhs/2017-08-21_MI_PRAMS_2014_Tables_final_598704_7.pdf



Source: Maternal Depression in Michigan's Pregnancy Assessment Monitoring System (PRAMS), 2012-2014; Hannah Sauter, Peterson Haak, Jill Hardy, Jacob Paciorek, Chris Fussman, Patricia McKane; Michigan Department of Health and Human Services



Non-Hispanic white mothers reported the most pre-pregnancy depression and Non-Hispanic black mothers the least pre-pregnancy depression.

A small percentage of mothers reported depression both before and after pregnancy.

1 in 5 Hispanic and non-Hispanic black mothers report symptoms of PPD (both+PostPart).

Non-Hispanic white mothers had the lowest overall burden of depression around the time of pregnancy.

Lead

Lead is a potent neurotoxin, no safe level has been identified. The most important step is to prevent lead exposure before it occurs, effects of lead exposure cannot be corrected. **Lead poisoning is preventable.**

During pregnancy, lead can pass from a mother to her unborn baby. Too much lead in the body of a pregnant woman can increase risk for miscarriage, prematurity, and low birthweight.

Exposure in children can cause

- Damage to the brain and nervous system
- Slowed growth and development
- Learning and behavior problems
- Hearing and speech problems
- Decreased ability to pay attention and underperformance at school



IS YOUR HOME
LEAD SAFE?

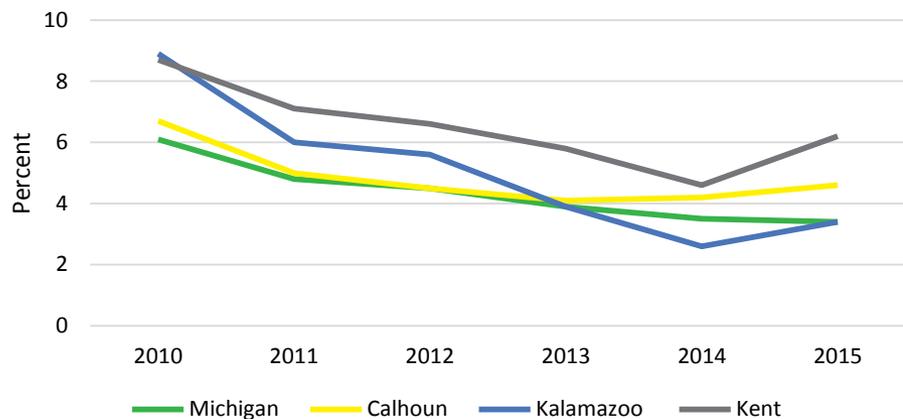
ASK YOUR DOCTOR
TO TEST YOUR CHILDREN

 KALAMAZOO COUNTY GOVERNMENT
In the Pursuit of Extraordinary Governance...

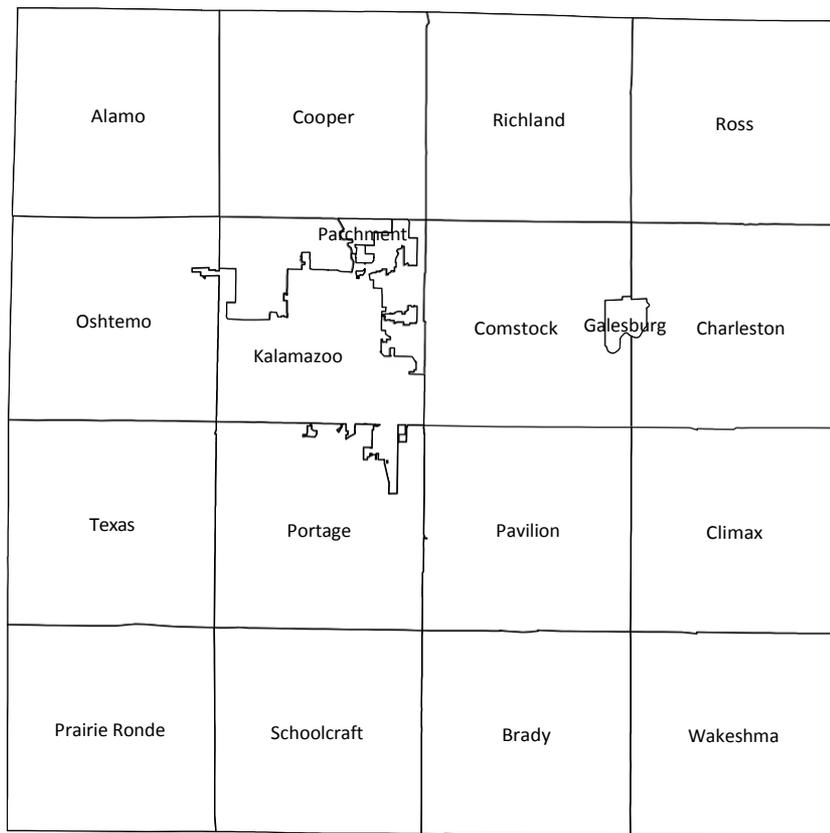
GET THE FACTS AT: WWW.MICHIGAN.GOV/LEAD

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Percentage of Children <6 years of age with Elevated Blood Lead Level > 5 mg/dL



In 2015, the percentage of children < 6 yrs with elevated blood lead levels (3.4%) was the same as the state percentage of all tested children (3.4%).



Too Few To Calculate

In 2015, there were two zip codes that had a higher percentage of children with elevated lead levels compared to the county/state average.

49001-6.8%
49007-9.0%

Historically, these zip codes have had the highest percentage of children with elevated blood levels in the county.



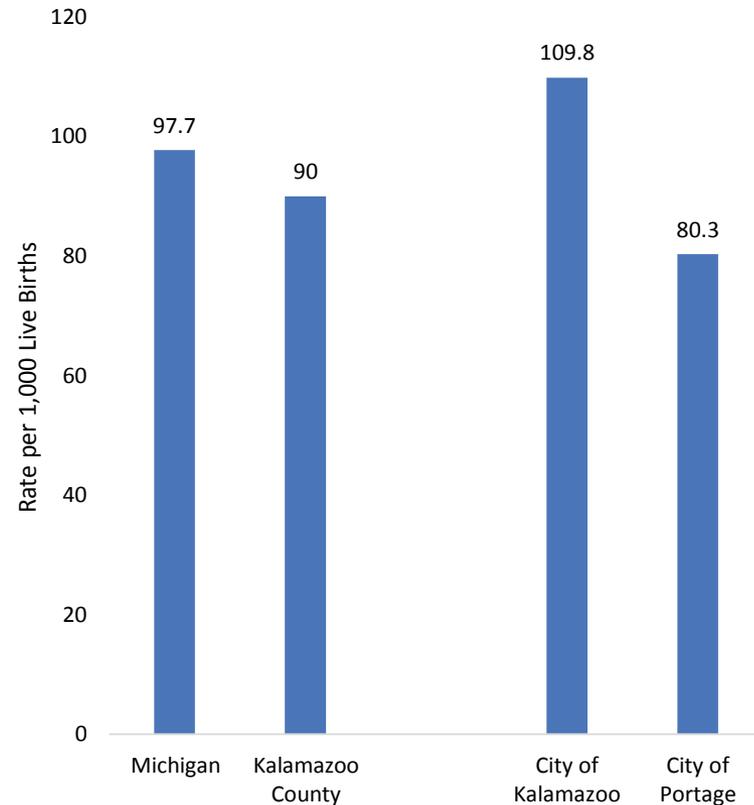
Preterm Births

Preterm births are defined as occurring at least three weeks before the due date, or before 37 weeks gestational age.

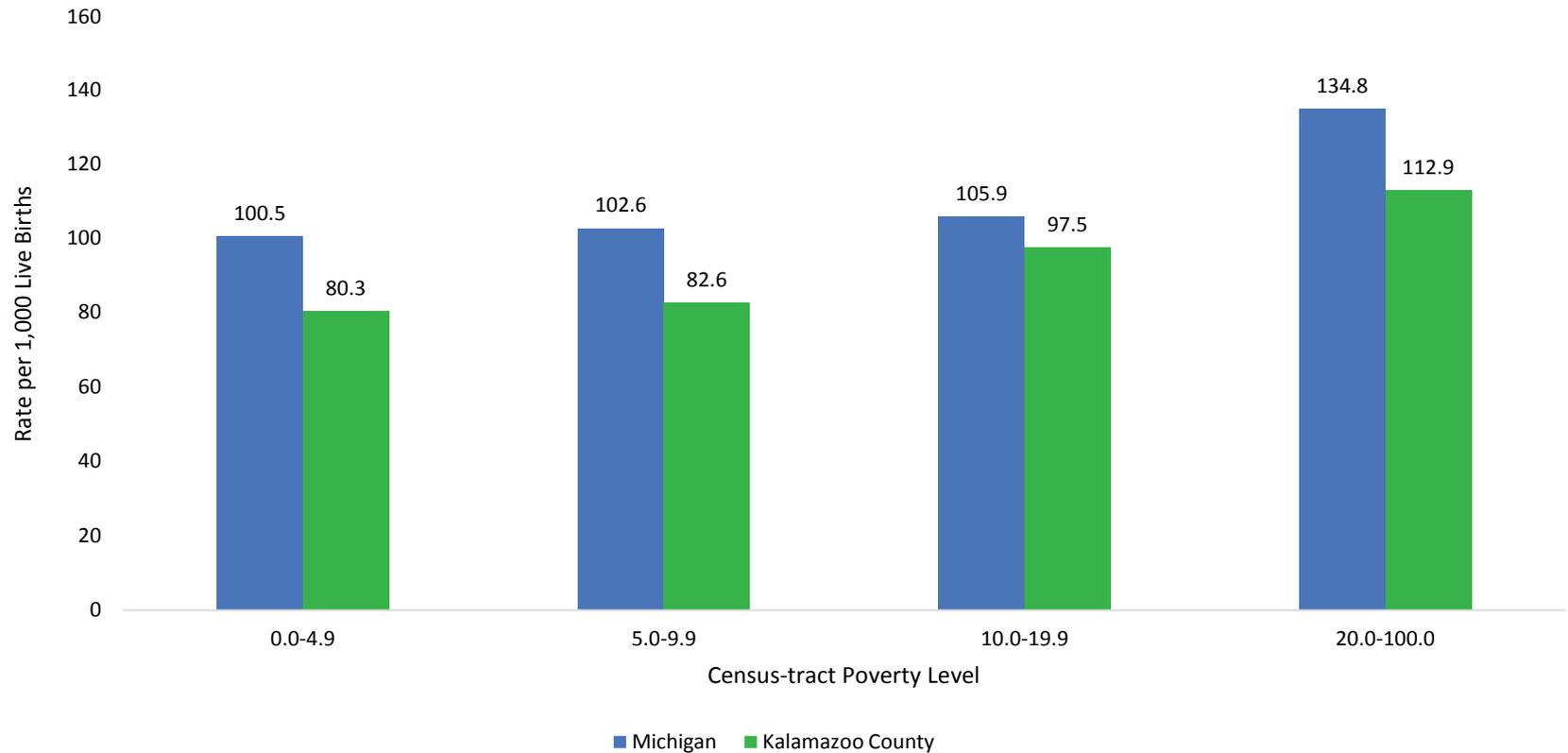
Prematurity is one of the leading causes of infant mortality, including 40% of infant deaths in Kalamazoo County.

Preterm infants have higher rates of health complications and lifelong disabilities, including learning disabilities, vision and hearing loss, diabetes, high blood pressure, and heart disease.

Preterm Birth Rate, 2013-2015



Preterm Birth Rate by Census-tract Poverty Level, 2013-2015



Sources:
Michigan Department of Health and Human Services, Birth Characteristics

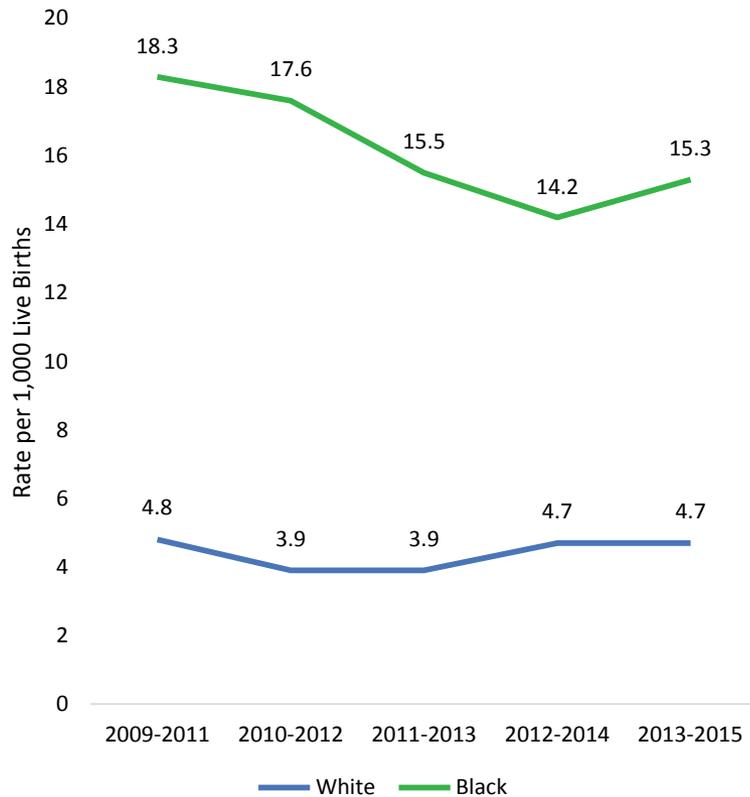
Infant Mortality

The health and well-being of children and families across the globe are measured by infant mortality rates. The US started monitoring infant mortality data in 1912.

Not only a measure of the risk of infant death, but is a marker for how well a community takes care of its most vulnerable citizens; identifying and improving the root causes of infant mortality will improve the health of the entire community.



Infant Mortality Rate by Race, 2009-2015



Causes of Infant Death Kalamazoo County 2010-2015

		Number of Deaths	Percent
Non-Natural	Sleep-related	31	25.6%
	Accident	3	2.5%
	Homicide	2	1.7%
Natural	Prematurity	49	40.5%
	Congenital Anomalies	25	20.7%
	Infection/Disease	9	7.4%
	Complications of Pregnancy/Delivery	2	1.7%



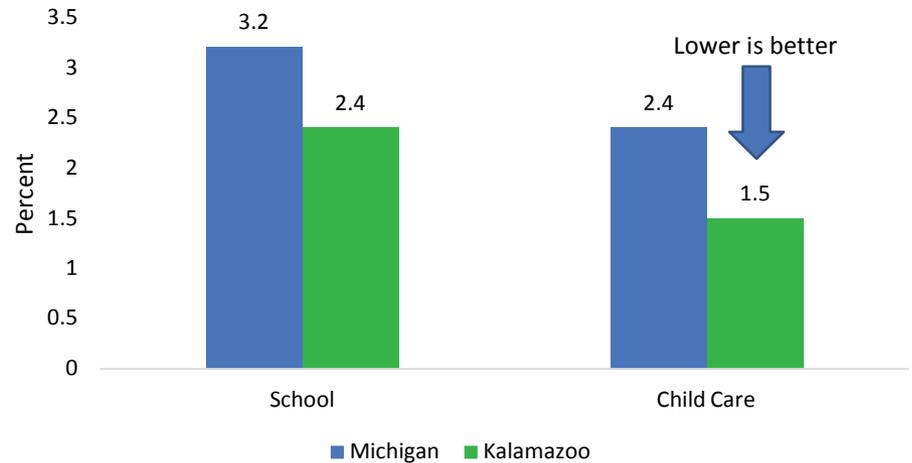
Immunizations

In general, vaccine-preventable diseases have a costly impact, resulting in doctor's visits, hospitalizations, and premature deaths. Sick children can also cause parents to lose time from work.

Immunizing individual children also helps to protect the health of our community, especially those people who cannot be immunized.

Community Feedback #5 Issue

Percent of Children with Vaccine Waivers, 2017

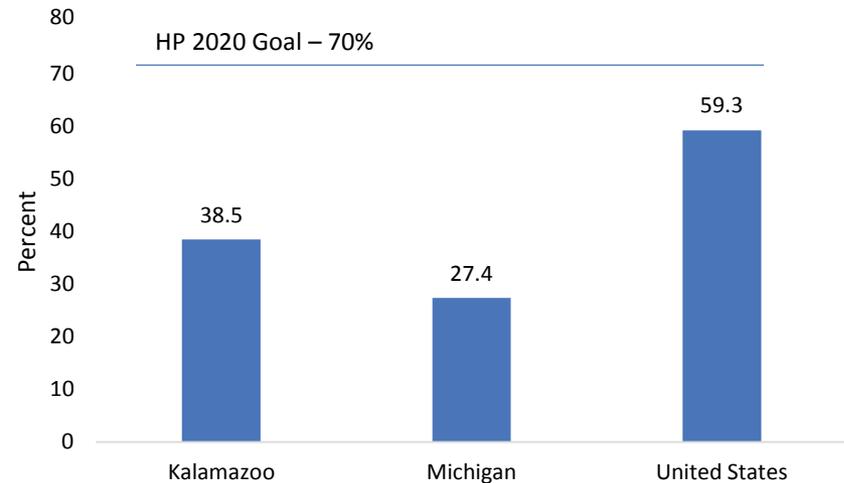


Immunizations: Influenza

Millions of children get sick with the flu each year and thousands are hospitalized. CDC estimates that since 2010, flu-related hospitalizations in children younger than 5 years old have ranged from 7,000 to 26,000 in the United States.

Children with long-term medical conditions like asthma, diabetes, and disorders of the brain or nervous system and children younger than 5 years old (and especially younger than 2 years old) are more likely to end up in the hospital from the flu.

Influenza Vaccinations, Ages 6 months through 17 years, 2016-17 Flu Season



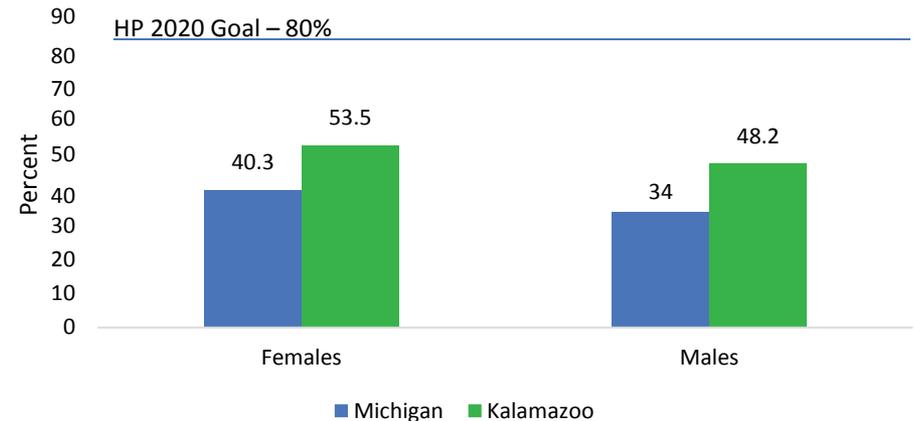
Immunizations: HPV Vaccine

14 million new HPV infections each year, and there is no cure.

Persistent HPV infections can lead to genital warts and cancers of the cervix, penis, anus, and additional genital cancers. HPV can also lead to oropharyngeal cancers.

In 2017, 12,820 new cases of invasive cervical cancer will be diagnosed and 4,210 women will die from cervical cancer.

Complete HPV Vaccination Series, Ages 13 to 17 years, 2017



Obesity

Immediate

Children with obesity are at higher risk for having other chronic health conditions and diseases that impact physical health, such as asthma, sleep apnea, bone and joint problems, type 2 diabetes, and risk factors for heart disease.

Children with obesity are bullied and teased more than their normal weight peers, and are more likely to suffer from social isolation, depression, and lower self-esteem. Obese children have more missed school days (to avoid bullying or due to illness).

Long Term

Associated with having obesity as an adult, which is linked to serious conditions and diseases such as heart disease, type 2 diabetes, metabolic syndrome, and several types of cancer.

Community
Feedback
#4 Issue

Recent scientific evidence shows that childhood is a critical period for learning/establishing both food preferences and routine levels of physical activity.

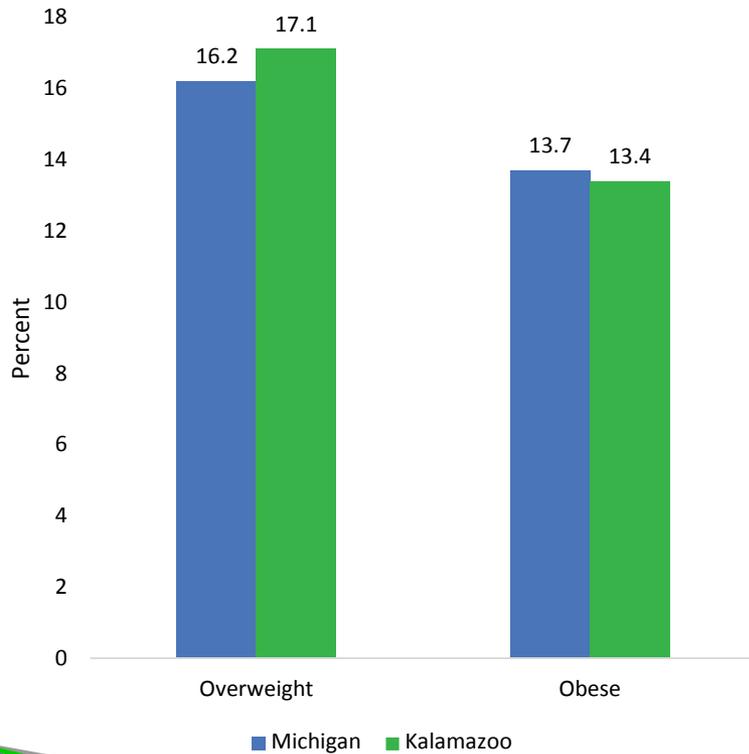


Sources:

Halfon, N et al. Associations between obesity and comorbid mental health, developmental, and physical health conditions in a national representative sample of US children aged 10 to 17. *Avad Pediatr.* Jan-Feb 2013: 6-13.

Harvard. <http://developingchild.harvard.edu/wp-content/uploads/2010/05/Foundations-of-Lifelong-Health.pdf>

WIC Overweight and Obesity for Children Aged 2-5, 2016

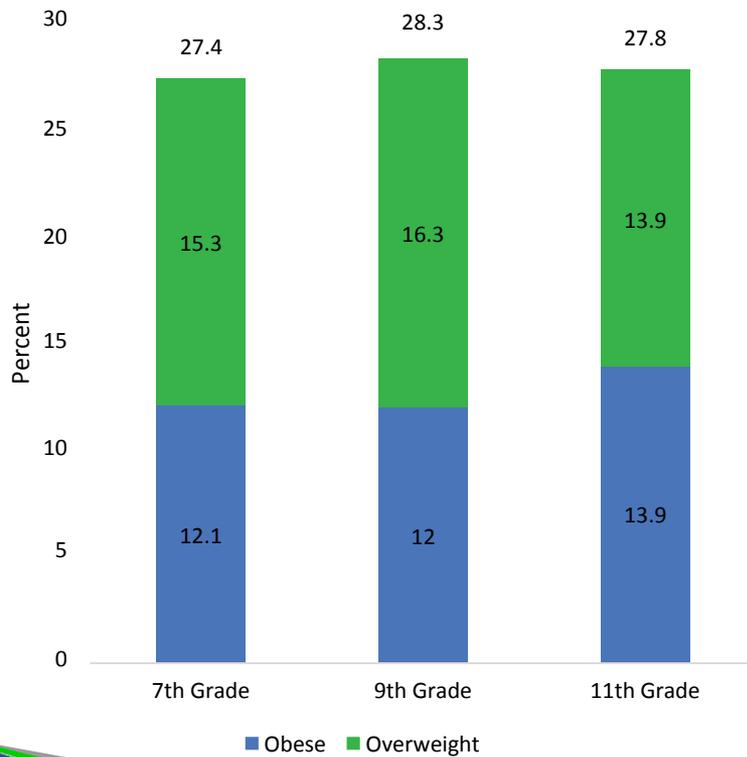


Children who are overweight or obese as preschoolers are **FIVE TIMES AS LIKELY** to be obese as adults.
(Source: CDC).

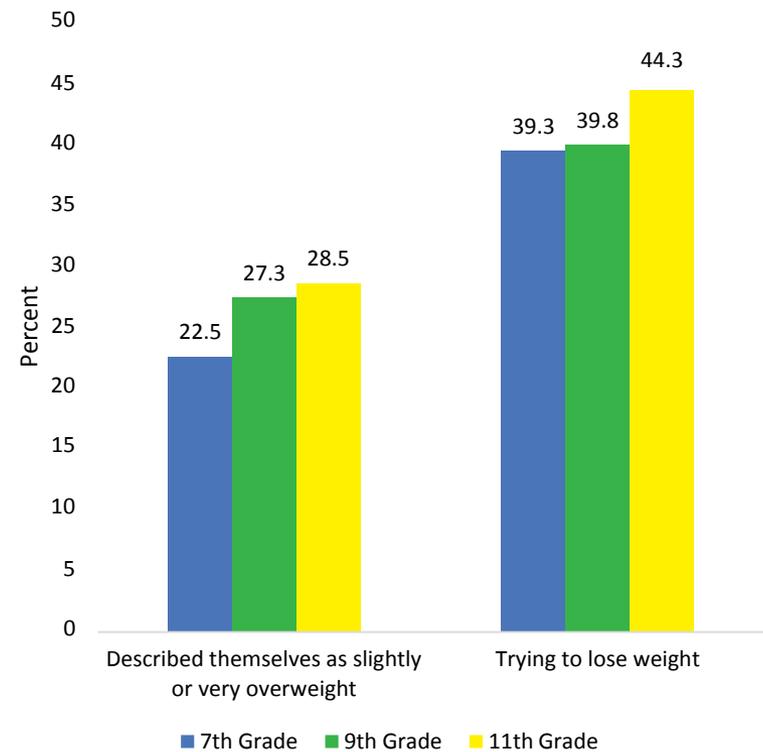


Sources:
 Kalamazoo Health and Community Services Department, Women, Infants, and Children Program

MiPHY Overweight and Obese Self-Report, 2015-2016

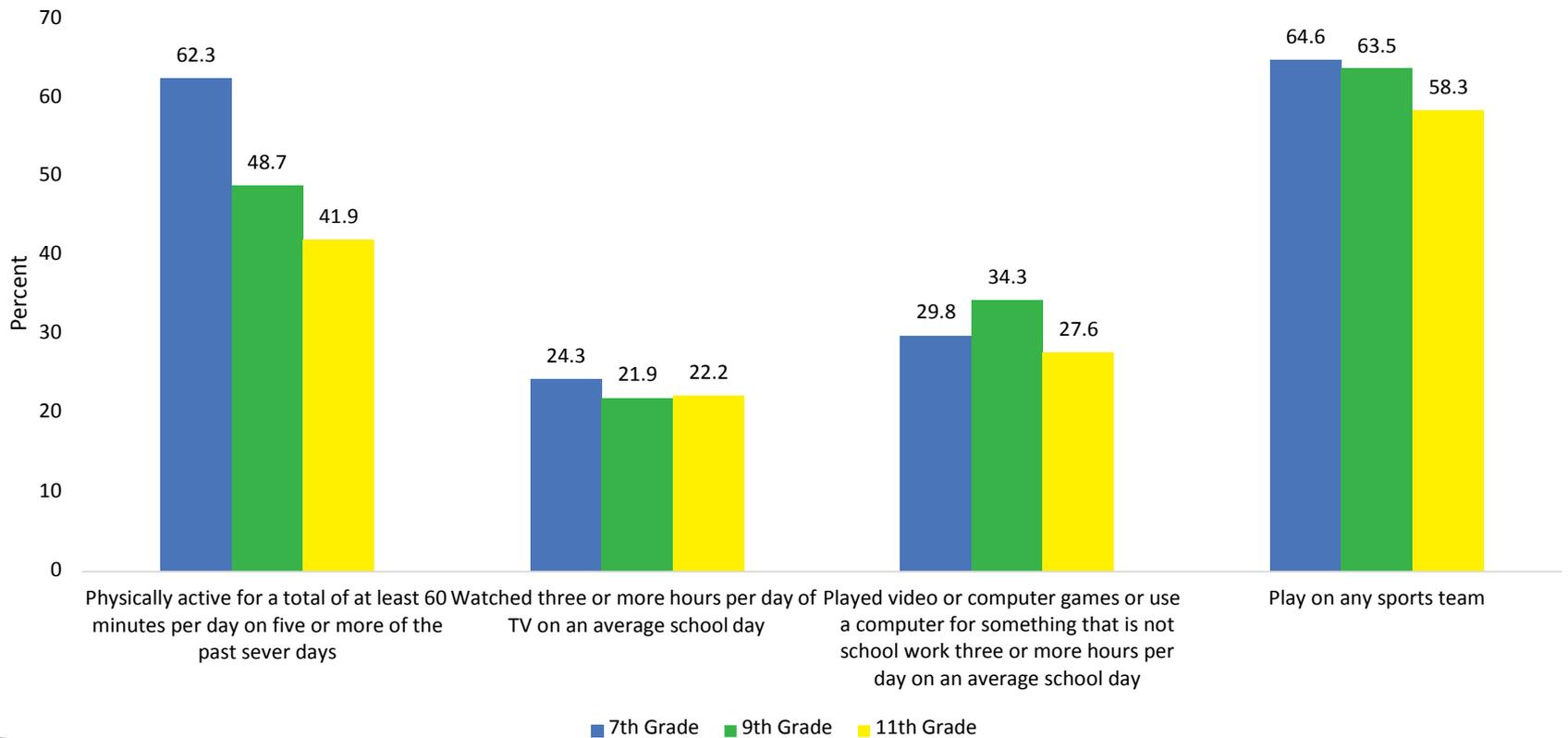


MiPHY Weight Status and Intent to Lose Weight, 2015-2016



Community
Feedback
#7 Issue

MIPHY Physical Activity, 2015-2016



Sources:
Michigan Department of Education, Michigan Profile of Healthy Youth

Mental Health

Immediate

Depression in early adolescence is linked with increased risks for negative effects on growth and development, school performance, and peer/family relationships in later adolescence. Depressed youth are more likely to use drugs or alcohol, drop out of school, or engage in promiscuous sex.

Long Term

Mental health issues are chronic health conditions—those that go on for a long time and often don't go away completely—that can continue through the lifespan.

Half of adult mental illness begins before age 14.

Youth who are depressed are at a higher risk for poor health outcomes as adults, such as poor general health, higher health care utilization, and increased work impairment due to physical health.

Community
Feedback
#2 Issue

“There’s so much focus on depression and anxiety, but it’s more than that. OCD, schizophrenia, bipolar... the ones that are hard to talk about.”

- Focus Group Participant



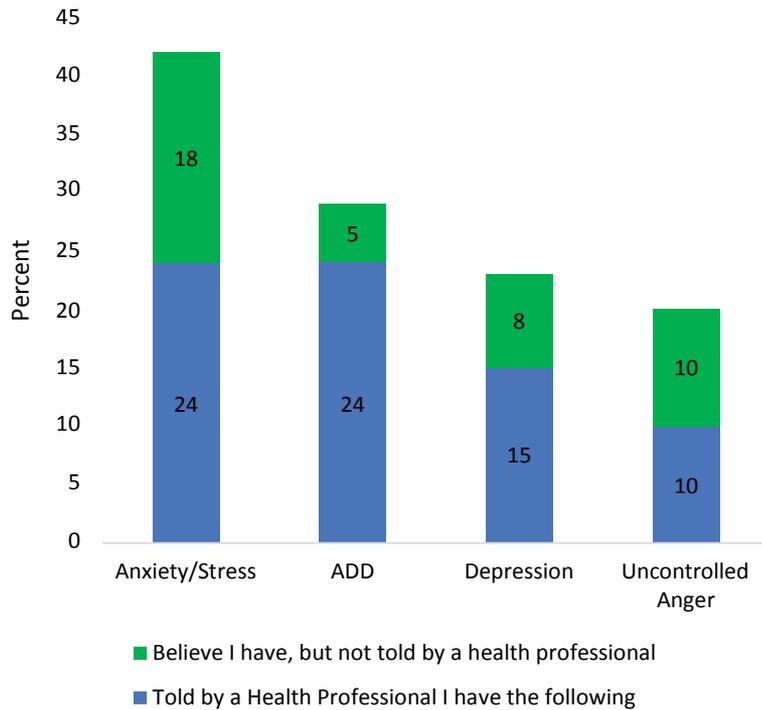
Sources:

[Child Trends](#)

Kalamazoo County Health Department Focus Group

Keenan Miller, D et al. Health outcomes related to early adolescent depression. J Adolesc Health. Sep 2007: 256-62.

2016 Bronson Methodist Hospital Youth Health Needs Assessment: Percent Reporting Mental Health Issues

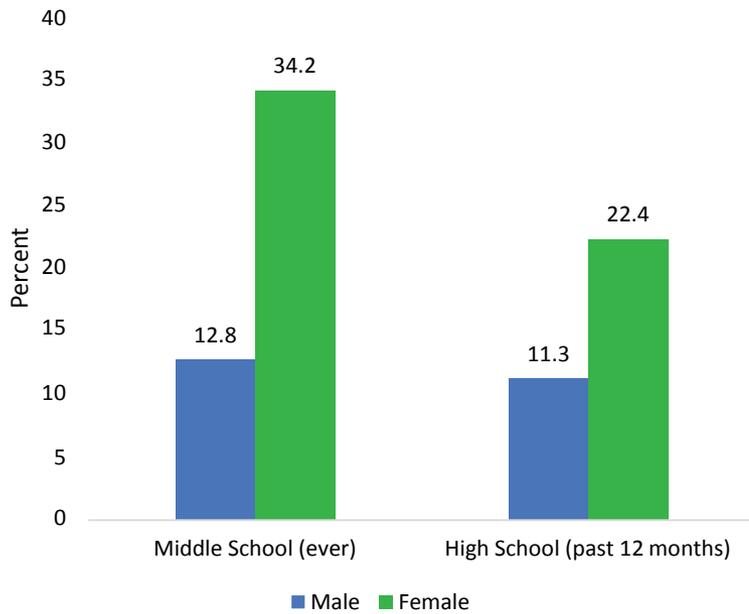


Hospitalization Rate for Psychoses < 18 years, 2009-2014

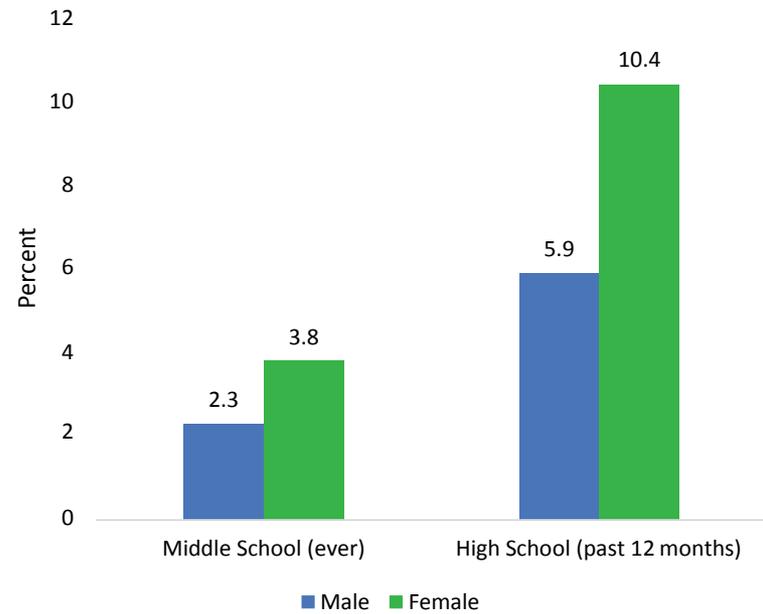


Sources:
 Bronson Methodist Hospital, Youth Health Needs Assessment, 2016
 Michigan Hospital Inpatient Database

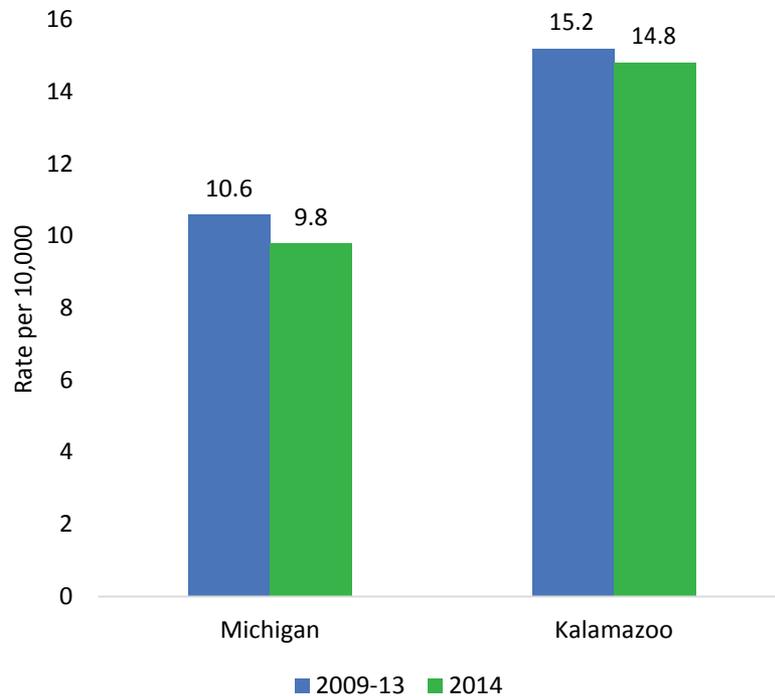
MiPHY Percent of Students who Considered Suicide Attempt, 2015-2016



MiPHY Percent of Students who Attempted Suicide, 2015-2016



Suicide Hospitalizations Age 15-19



Suicide Deaths in Kalamazoo County, 2011-2015

	< 1	1-4	5-9	10-14	15-18	Total
Firearm and Weapon	-	-	-	-	2	2
Suffocation and Strangulation	-	-	-	4	2	6
All Other Suicides	-	-	-	-	1	1

Sources:

Michigan Department of Health and Human Services, Vital Records Mortality Rate
Michigan Inpatient Hospitalization Database

Substance Abuse

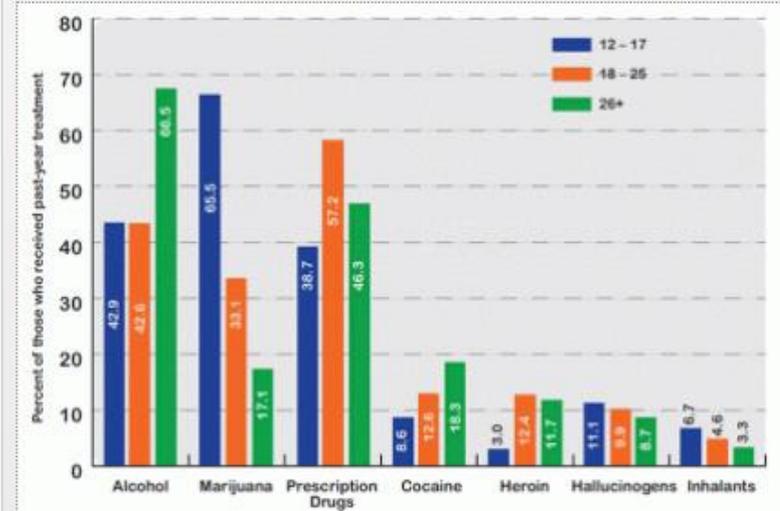
Early to late adolescence is considered a critical risk period for the beginning of alcohol and drug use.

The use of illicit drugs is associated with many other harmful behaviors (such as risky sexual behavior, delinquency-academic issues, and crime). Drug use in adolescents frequently overlaps with other mental health problems. Marijuana can cause memory problems, loss of coordination, anxiety attacks, and increased heart rate. Prescription drug abuse can have damaging effects on the brain, including addiction, and can lead to death as a result of overdose.

The SAMHSA Report found that 74 percent of adults participating in a substance abuse treatment program had initiated alcohol or drug use before the age of seventeen. Those who began at a very young age, 11 years old or younger, were more likely to have multiple substance dependencies when compared to those who waited until they were 25 years and older.

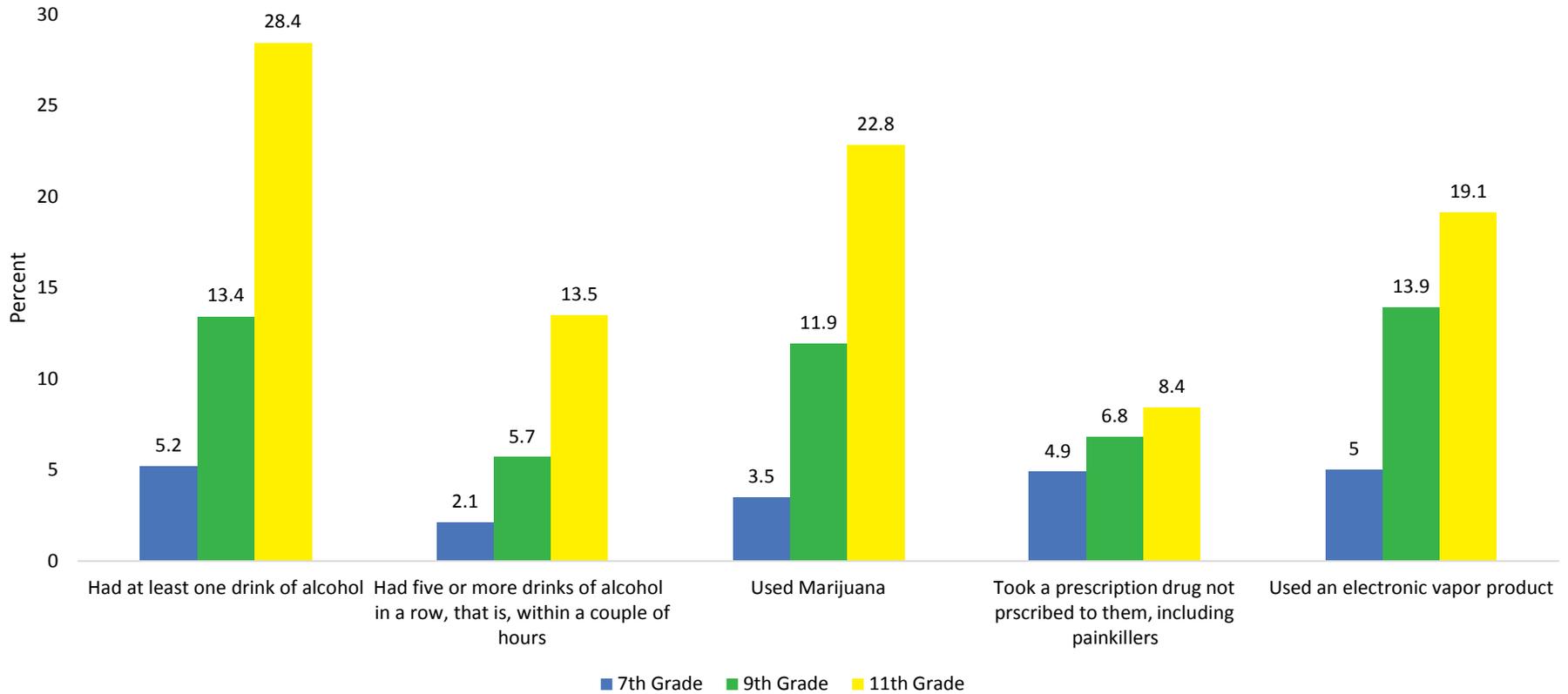
Identified Issue

Adolescents Differ from Adults in Substances Most Abused



Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2013.

MiPHY Alcohol, Drug, and Vapor Product Use During the Past 30 Days, 2015-2016



Sexually Transmitted Infections

There are more than 25 different infections that are acquired primarily through sexual activity. Some are curable (chlamydia, syphilis, gonorrhea), and some are permanent (hepatitis B, herpes, HIV, and HPV).

Gonorrhea and Chlamydia are the two most common reportable STIs. They can cause infertility, and increased risk of HIV infection.

STIs during pregnancy can lead to higher rates of infection in the amniotic sac and fluid, which can lead to cesarean section, antibiotic therapy for mother and baby, and NICU stays for the baby.

STIs are also associated with preterm birth and preterm premature rupture of membranes, which can again lead to NICU stays and lifelong health problems for the child.

Identified
Issue



Chlamydia Rankings by LHD

Local Health Dept. (LHD)	Rate* 2005-2009	Rate* 2010-2014	Rate* 2015	# Cases 2015	Ranking by 2015 Rate
Michigan	478.9	483.7	480.7	47,702	-
City of Detroit HD	1,800.00	2,028.60	1,641.80	10,839	1
Kalamazoo County HCSD	748.6	721.8	823	2,142	2
Muskegon County HD	723.3	732.6	779.6	1,347	3
Calhoun County HD	618.7	630.3	677.5	910	4
Genesee County HD	676.4	705.4	672.8	2,764	5
Saginaw County HD	666.4	687	650.8	1,258	6
Ingham County HD	664.3	662.6	618	1,768	7
Kent County HD	595.8	578.2	601.4	3,827	8
Jackson County HD	440.9	447	556.1	887	9
Berrien County HD	565.1	570.8	547.1	846	10

*Per 100,000



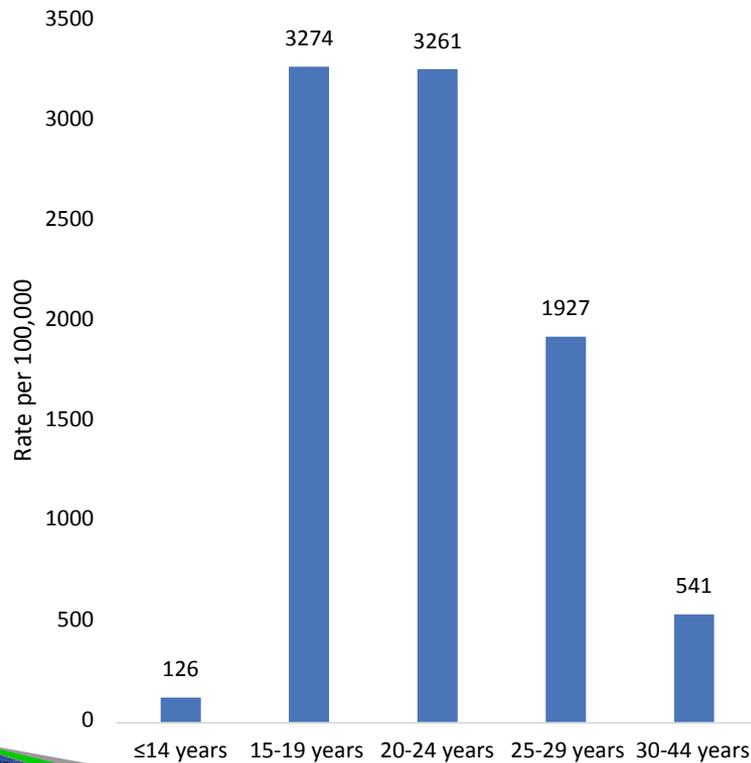
Gonorrhea Rankings by LHD

Local Health Dept. (LHD)	Rate* 2005-2009	Rate* 2010-2014	Rate* 2015	# Cases 2015	Ranking by 2015 Rate
Michigan	484.3	490.7	452.5	44,843	-
City of Detroit HD	675.3	761.1	495.1	3,269	1
Kalamazoo County HCSD	166.3	160.3	249	648	2
Muskegon County HD	148.9	150.8	237.3	410	3
Genesee County HD	206	214.8	215.4	885	4
Saginaw County HD	130.9	134.9	188.3	364	5
Ingham County HD	142.1	141.7	165.3	473	6
Berrien County HD	130.9	132.2	132.6	205	7
Calhoun County HD	148.3	151.1	128.8	173	8
Kent County HD	121.2	117.6	119.1	758	9
Washtenaw County HD	84.2	82.3	95.9	344	10

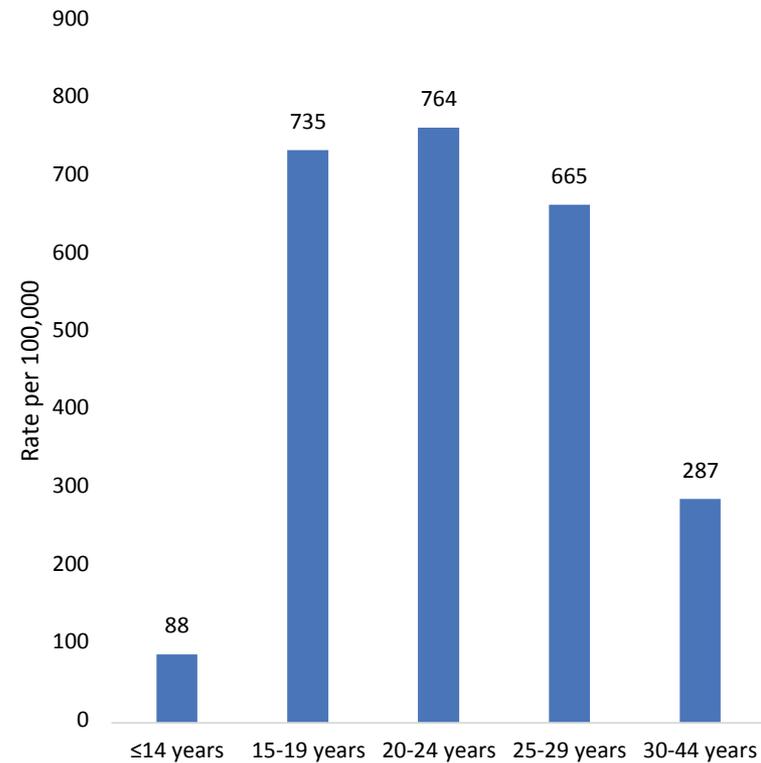
*Per 100,000



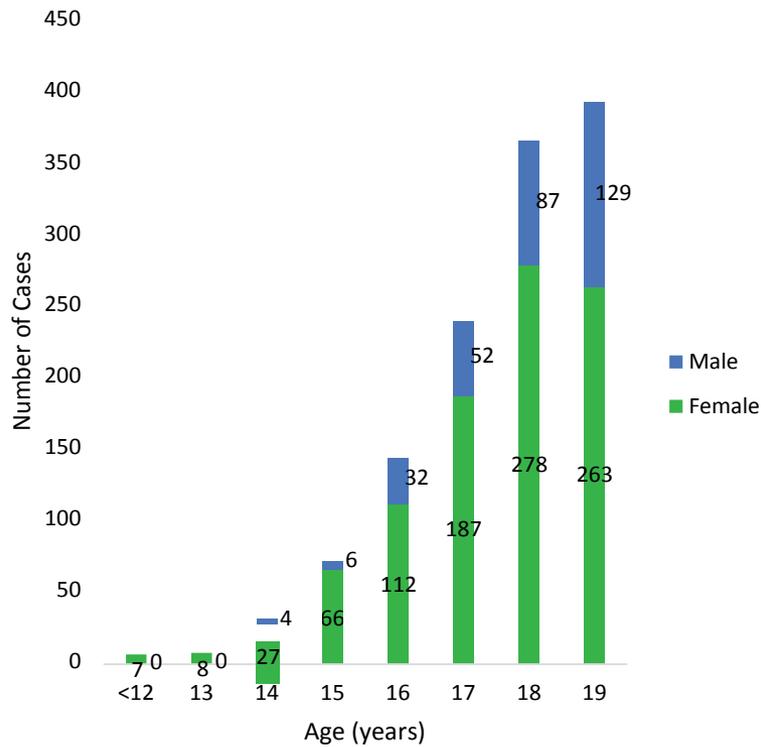
Chlamydia Rate by Age, Kalamazoo County, 2016



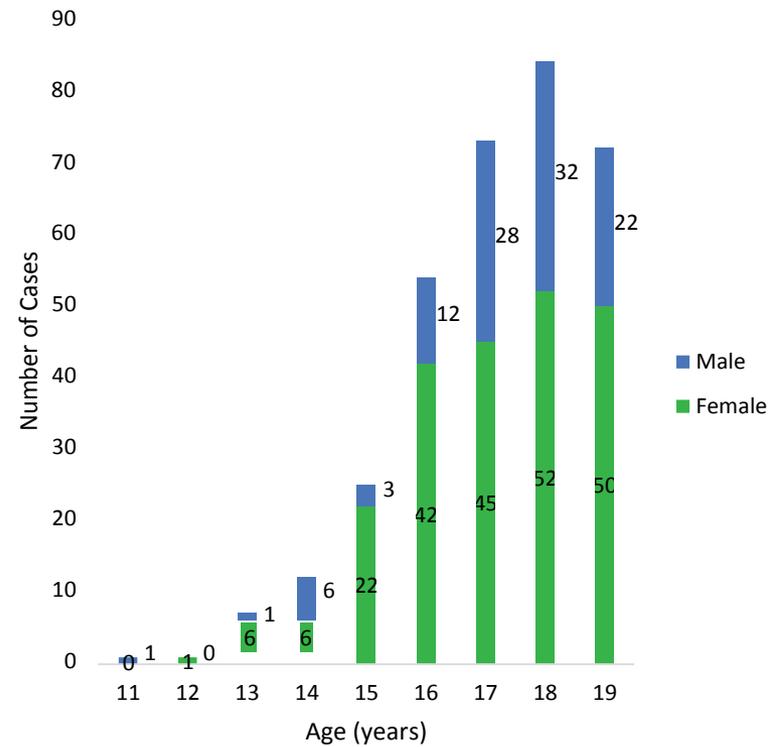
Gonorrhea Rate by Age, Kalamazoo County, 2016



Chlamydia Cases in Kalamazoo County by Age and Sex, 2015-2016



Gonorrhea Cases in Kalamazoo County by Age and Sex, 2015-2016



Nutrition

Nutritional deficiencies before pregnancy can be harmful to the developing fetus.

Inadequate nutrition during pregnancy is associated with childhood/adult obesity and hypertension and cardiovascular disease. Sugar sweetened beverage consumption during second trimester of pregnancy associated with higher child BMI at age 7.

Vitamin A and D deficiencies in early life can have adverse impacts on cognitive, motor, social-emotional, and neuro-physical development and chronic medical conditions such as osteoporosis, asthma, and diabetes.

Adults who experienced prenatal and early child under-nutrition are 10 times more likely to die from an infection compared to others.

Growing evidence links healthy eating with academic achievement.

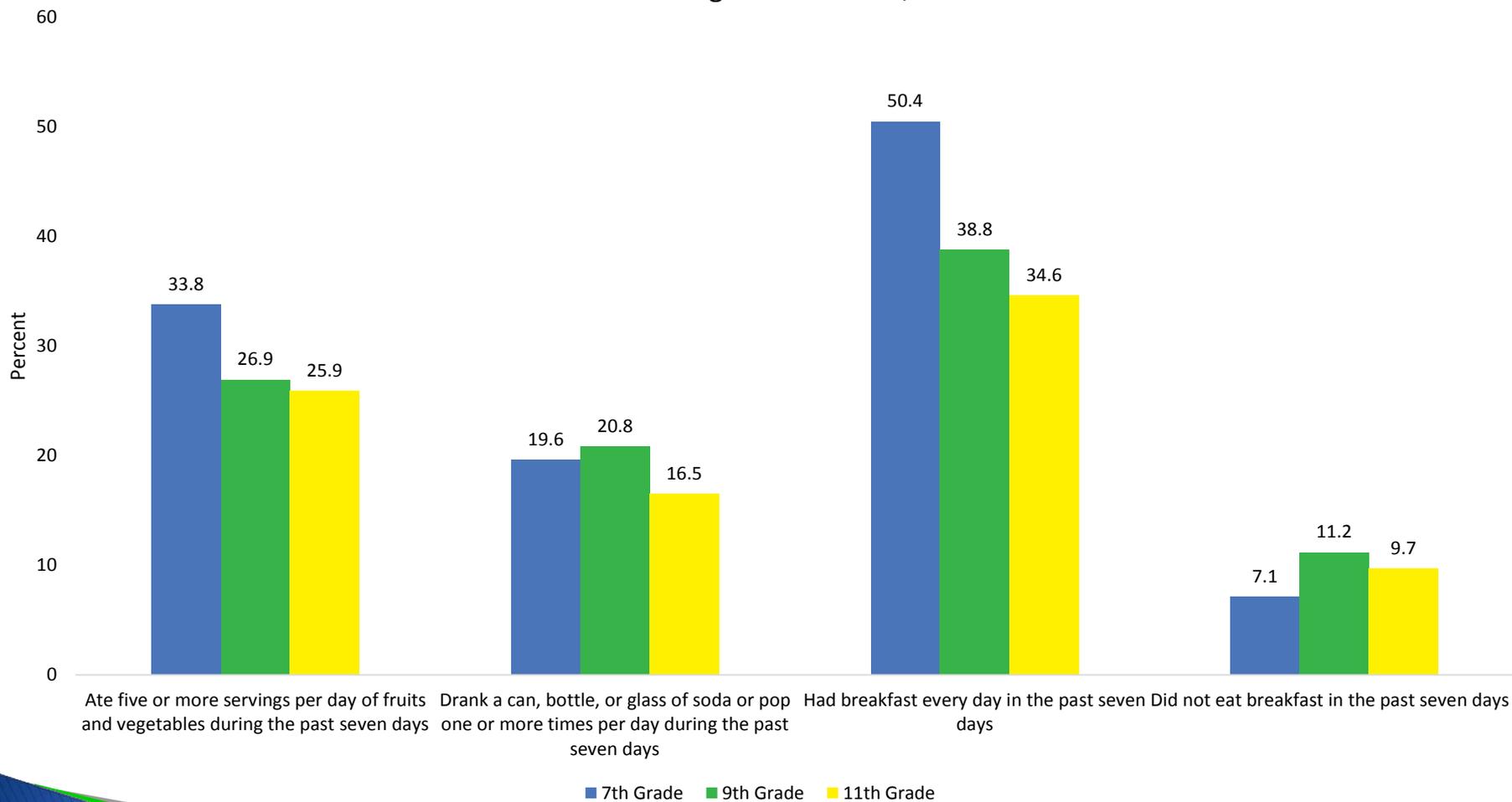
**Nutrition:
Community
Feedback
#1 Issue**

“...I think it comes down to food, what they’re eating. People are going to get what’s quick, easy, and cheap. Not always the healthiest stuff...”

- Focus Group Participant

**Hunger:
Community
Feedback
#5 Issue**

MiPHY Eating and Nutrition, 2015-2016



Sources:
Michigan Department of Education, Michigan Profile of Healthy Youth