2018

COMMUNITY HEALTH ASSESSMENT

SURVEY RESULTS

MARION COUNTY
PUBLIC
HEALTH
DEPARTMENT

Prevent. Promote. Protect.

2018 Community Health Assessment Survey Results, Marion County, Indiana

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Introduction

This report presents results from the 2018 Marion County Community Health Assessment Survey. With this survey, we investigated the health, neighborhood environment, and health-related challenges faced by Marion County residents. These survey results form part of a larger project, the Marion County 2020 Community Health Assessment (CHA).

The purpose of the CHA is to:

1. Identify and better understand issues affecting health in Marion County;
2. Provide useful data for organizations throughout the community to improve health and well-being of individuals living in Marion County;
3. Inform the Community Health Assessment Advisory Committee in the selection of priority issues to be highlighted in the final CHA report.

The final CHA report[1] will include information on issues selected as priorities by the Marion County CHA Advisory Committee, which is comprised of experts, advocates, and other community members. Based on the CHA findings, we will develop a Community Health Improvement Plan, again with significant involvement by community members. The Community Health Improvement Plan will describe how our community will address the high priority issues identified in the CHA.

The content of the CHA survey was developed by the Marion County Public Health Department (MCPHD), with input from community service organizations, healthcare providers, faculty from several universities, and other topical experts. Much of the content was drawn from national health surveys such as the Behavioral Risk Factor Surveillance System[2] (BRFSS) and the National Health Interview Survey[3] (NHIS), and from prior Marion County CHA surveys. Indiana University's Center for Survey Research conducted the data collection. The questionnaire was distributed via U.S. postal mail. The study was funded by the MCPHD and supervised by MCPHD's Dr. Virginia A. Caine, MD, Director, and Dr. Joseph Gibson, PhD, Director of Epidemiology.

In addition to informing the CHA Advisory Committee, this report provides uniquely precise and representative information about our community's health.

Methods Summary

A detailed description of the survey methods is presented in Appendix D: Methods. Here is a briefer summary:

The data was collected between January 19 and May 11, 2018, and was preceded and accompanied by promotion of the survey through the media. The voluntary, confidential, household health questionnaire was mailed to 25,000 randomly selected households in Marion County. Recipients received a series of up to four mailings: an initial letter, the questionnaire, a reminder postcard, and a second copy of the questionnaire if the first questionnaire was not returned within four weeks.

The adult with the most recent birthday was asked to complete the questionnaire for the household. If the household contained any children age 5 to less than 18 years old, the respondent was asked to

1 The final CHA report will be available at http://marionhealth.org/2020cha/

2 Centers for Disease Control and Prevention. (2019). Behavioral risk factor surveillance system. https://www.cdc.gov/brfss/index.html

3 National Center for Health Statistics. (2019). National health interview survey. https://www.cdc.gov/nchs/nhis/index.htm

identify which of those children had the most recent birthday, and answer questions about that child's health, as well.

The questionnaire is attached in Appendix C: Questionnaire. It contains 86 questions, divided into the following sections:

- Respondent Selection
- General Health
- Physical Activity
- Food
- Neighborhood Environment
- Health Care
- Chronic disease
- Health behaviors
- Questions about child
    - Child's Demographics
    - Health care
    - Health conditions
- Demographics

Of the 25,000 questionnaires mailed, 4,925 returned surveys were complete enough to include in our final dataset. The response rate was 20.3%, after adjusting for the 711 questionnaires returned by the Postal Service for being addressed to vacant homes. 100 respondents completed the Spanish-language version, the remainder being in English. 825 respondents (17% of all respondents) also completed the questions about the health of a 5 to 17 year old child in the household; 57 of those used the Spanish-language questionnaire. Of those 825, 86% reported being the child's primary caregiver.

In order to secure enough responses from self-identified Hispanic residents to produce stable statistics, we over-sampled areas of the county where Hispanic surnames are especially common. All survey mailings were sent in either English or Spanish, and all mailings contained instructions for requesting the survey in the other language. Spanish language versions of the materials were mailed to 1,751 households with Hispanic surnames in those areas. Even with that, only 223 respondents self-identified as Hispanic, so our results specific to the Hispanic population have wider confidence intervals than those for other subpopulations.

The data were weighted to account for the oversampling of addresses in some areas, and to adjust the distribution of age, gender, education, and race-by-ethnicity of respondents to match the U.S. Census Bureau 2012-2016 American Community Survey five-year population estimates for Marion County. Responses to the child health questions were weighted separately to match U.S. Census estimates for the child-response age, gender, and race distributions, using the respondent race as a proxy for the child's race.

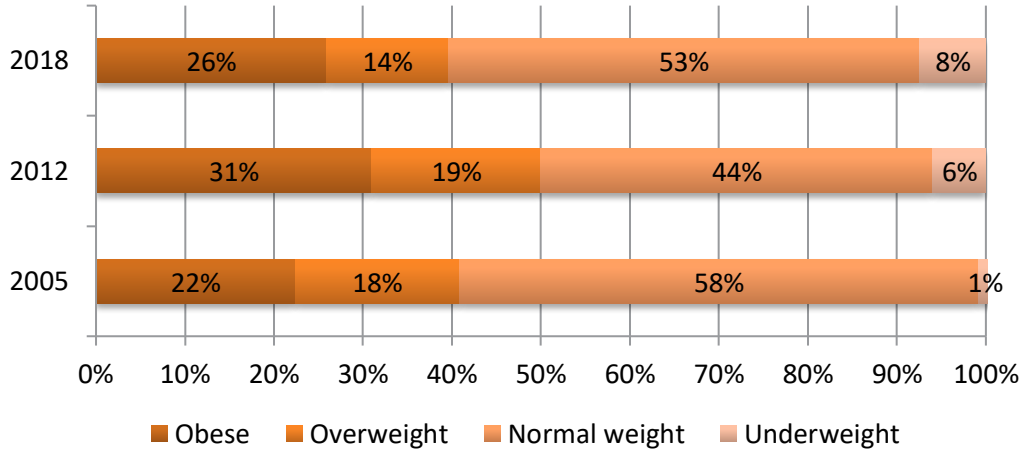
The question-specific percentages presented in this report were calculated excluding responses of "Don't know" or "Refused." At least 95% of respondents answered each question, except where noted. Some percentages may not sum to 100% due to rounding. Responses to every item in the survey are presented in Appendix A: Survey Responses.

Survey Results: Children (5 to 17 years old)

Child Weight Status

One in four (26%; 95% CI: 20.3%-31.4%) school-age children were obese in Marion County, and 14% were overweight but not obese (Figure 1).[4,5] This exceeds the percent of school-aged children obese nationally for 2015-2016 (18.5%).[6] The total proportion of children in Marion County who were overweight or obese (40%) did decrease significantly[7] from MCPHD's 2012 survey findings (50%) and was the same percent we found in our 2005 initiative measuring students in schools (40%)[8]. Of note is the number of children reported to be underweight, 8% (95% CI: 4.7%-10.3%) in 2018 compared to only 3% nationally for 2015-2016.[9]

Figure 1: Body Mass Category among 5-17 Year Olds, Marion County: 2005, 2012, 2018



Child Health Care Access

Overall, 7% (95% CI: 3.0%-10.3%) of children in Marion County had no health insurance coverage. This finding is similar to the percent of Marion County children uninsured in 2012 (6%; 95% CI: 4.3%-8.2%) and nationally in 2017 (5%).[10] About 6% (95% CI: 3.2%-8.2%) of Marion County children did not have a primary care provider. This is similar to the 2016 national rate of 4.3%.[11]

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[4] 15.9% of respondents answered "Don't know" or "Refused."

[5] Child weight categories are based on CDC age/gender specific growth charts.

[6] Hales, C. M., Carroll, M. D., Fryar, C. D., and Ogden, C. L. (2017). Prevalence of obesity among adults and youth: United States, 2015–2016. *NCHS Data Brief,* (288), 1-8. https://www.cdc.gov/nchs/data/databriefs/db288.pdf

[7] p = 0.03 (MCPHD Epidemiology DR4367)

[8] Holly K, Gibson PJ. Child Health and Wellness Initiative Results. Marion County, Indiana: Marion County Health Department; 2006:17. https://drive.google.com/file/d/0BxrAC5d0LD5OMXhibGZIQ3dqb3c/view

[9] Fryar, C. D., Carroll, M. D., and Ogden, C. L. (2018). Prevalence of Underweight among Children and Adolescents Aged 2–19 Years: United States, 1963–1965 through 2015–2016. https://www.cdc.gov/nchs/data/hestat/underweight_child_15_16/underweight_child_15_16.htm

[10] National Center for Health Statistics. (2017). Health, United States, 2017: With special feature on mortality. https://www.cdc.gov/nchs/data/hus/hus17.pdf

[11] National Center for Health Statistics (2016). Summary health statistics: National health interview survey, 2016. https://www.cdc.gov/nchs/nhis/SHS/tables.htm or https://ftp.cdc.gov/pub/Health_Statistics/NCHS/NHIS/SHS/2016_SHS_Table_C-7.pdf

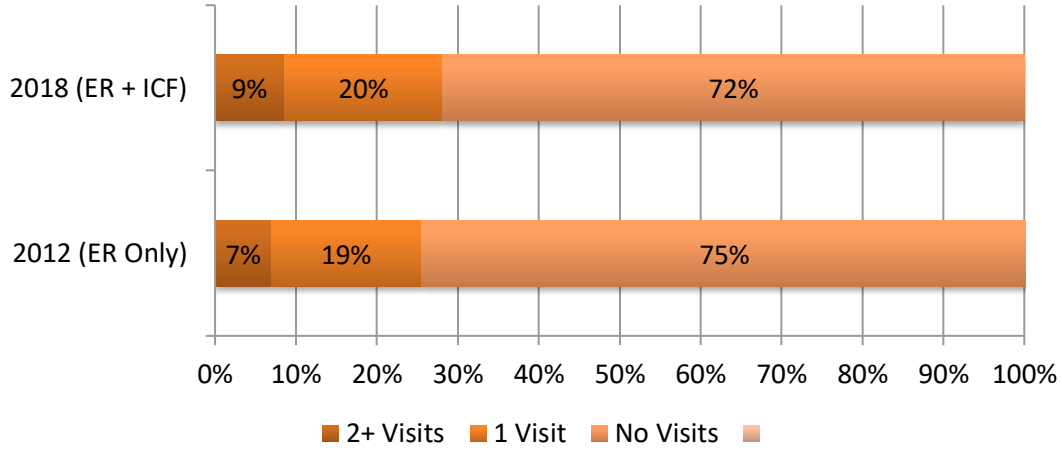
Dental Visits

Nine in ten (91%; 95% CI: 86.4%-94.6%) Marion County children were reported to have had a dental visit in the past 12 months, compared to 83% (95% CI: 79.8%-86.5%) during the 2012 CHA survey. Four in ten (42%; 95% CI: 36.7%-48.0%) were reported to have had cavities, compared to a national rate of 46% for 2015-2016.[12]

Emergency Room Use

About one in four Marion County children (28%) visited an emergency room (ER) or immediate care facility (ICF) at least once in the previous 12 months (Figure 2). Of those reporting at least one visit, 35% had visited an emergency department or immediate care facility more than once. These results are similar to those reported in the 2012 CHA survey.

Figure 2: Emergency Department or Immediate Care Facility Utilization among 5-17 Year Olds, Marion County: 2018 vs. 2012



Health Status

Adult respondents were asked if a health care provider had ever diagnosed the child with certain conditions: Asthma; attention deficit disorder (ADD) or attention deficit hyperactivity disorder (ADHD); depression or anxiety; diabetes; or hypertension (Figure 3). One in five (20%; 95% CI: 15.9%-25.0%) Marion County children had been diagnosed with asthma, a finding significantly higher than that found in 2012 (11%; 95% CI: 9.6%-12.1%) and the 2016 national rate of 10%.[11] When asked about ADD/ADHD, 16% reported having a child who had been diagnosed, a finding that once again surpasses the 2016 national rate of 9%.[11] One in ten Marion County children was reported to have been diagnosed with depression or anxiety, a finding that is similar to national findings for 2016 among youth with depression (3%) or anxiety (7%)[13] Fewer than 1.5% of children in Marion County had diabetes or hypertension.

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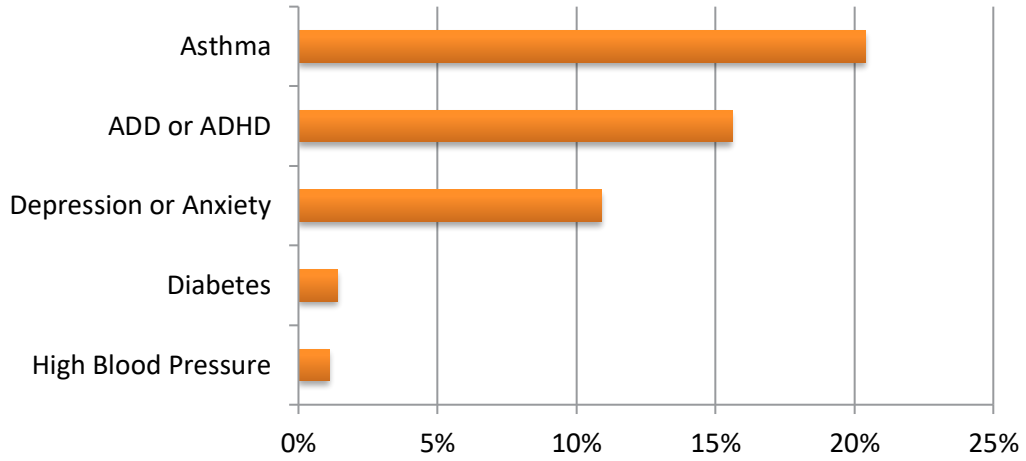
12 National Center for Health Statistics. (2018). Prevalence of total and untreated dental caries among youth: United States, 2015-2016. *NCHS Data Brief*, 307. https://www.cdc.gov/nchs/data/databriefs/db307.pdf

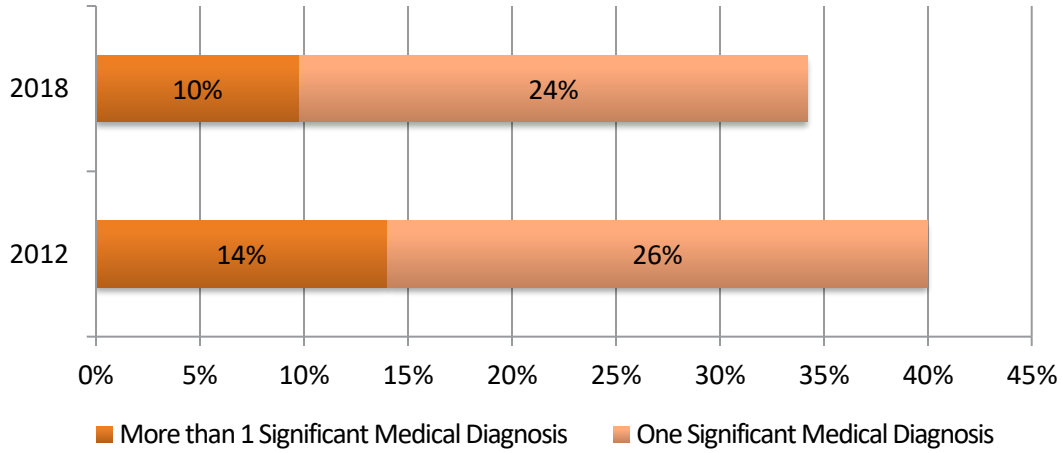
13 Ghandour, R. M., Sherman, L. J., Vladutiu, C. J., Ali, M. M., Lynch, S. E., Bitsko, R. H., and Blumberg, S. J. (2018). Prevalence and treatment of depression, anxiety, and conduct problems in U.S. children. *J Pediatr, 2019*(206); 256-267. doi https://doi.org/10.1016/j.jpeds.2018.09.021

Figure 3: Percent of 5-17 Year Olds with Certain Medical Conditions, Marion County: 2018



In all, 34% (95% CI: 26.0%-42.2%) of Marion County children were reported to have at least one of these or another significant medical condition, compared to 40% from the 2012 CHA. This includes 10% (95% CI: 6.6%-12.9%) of children with more than one significant medical condition, compared to 14% in 2012 (Figure 4).

Figure 4: Percent of 5-17 Year Olds with One or More than One Significant Medical Condition, Marion County: 2018 vs. 2012



Other Risk Factors

Screen Time

The American Academy of Pediatrics (AAP) recommends that parents avoid screen time for children under 24 months of age and limit screen time for children 2-5 years of age to no more than one hour per day spent watching television, playing video games, or having other screen time for entertainment.[14] For older children, the AAP recommends that parents and kids decide together how much time is healthy.

[14] American Academy of Pediatrics. (2018). Children and media tips from the American Academy of Pediatrics. https://www.aap.org/en-us/about-the-aap/aap-press-room/news-features-and-safety-tips/Pages/Children-and-Media-Tips.aspx

Overall, more than one in ten (12.4%; 95% CI: 7.6%-17.3%) Marion County children had no more than two hours of screen time not related to school work in 2018,[15] as compared to one in three (35%) in 2012. Nearly half (46%) of Marion County children were reported to have four or more hours per day of screen time. Average screen time unrelated to school was 3.8 hours per day, compared to 3.6 in 2012.

Physical Activity

Among Marion County children, 84% (95% CI: 79.6%-87.3%) were reported to have been physically active for at least one hour per day, compared to 94% of in 2012.This far surpasses the 2016 national estimate of 24%.[16]

Second Hand Smoke and Vapor Exposure

Nearly one in six (14%; 95% CI: 8.6%-20.3%) Marion County children were exposed to tobacco products at home with 10% living with someone who smokes cigarettes and 5% living with someone who vapes. This indicates no significant change since 2012 (17%; 95% CI: 14.0%-20.3%); however, it is significantly lower than the national estimate of 38% for 2013 and 2014.[17]

Survey Results: Adults

While the survey questionnaire was sent to randomly selected households throughout the county, persons who chose to return the questionnaire were more likely than the general Marion County population to be female, White, older, have higher incomes, and to have more years of education. Therefore, we weighted the survey responses to mimic the county's distribution of gender, race and ethnicity, age, education, and household income. We believe that any residual bias from those factors is well under one percent for almost all measures, based on our evaluation of weighting. For more information, see the Weighting section in Appendix D: Methods.

Community Environment

Adults in Marion County were asked questions to gauge their perception of the community environment. These questions explored social and environmental safety, connectedness, and predominant modes of travel.

Social and Environmental Safety

One in four Marion County adults (25%) reported having many vacant, abandoned, or rundown properties in their neighborhood, and more than one in ten (11%) indicated that they do not feel safe in their neighborhood.

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15 12.6% of respondents answered "Don't know" or "Refused."

16 National Physical Activity Plan Alliance. (2018). The 2018 United States report card on physical activity for children and youth. http://physicalactivityplan.org/projects/PA/2018/2018_USReportCard_UPDATE_12062018.pdf Washington, DC: National Physical Activity Plan Alliance, 2018.

17 James, T., Homa, D. M., Gentzke, A. S., Mahoney, M., Sharapova, S. R., Sosnoff, C. S., … Trivers, K. F. (2018). Exposure to secondhand smoke among nonsmokers – United States, 1988-2014. *MMWR, 67*(48): 1342-1346. https://www.cdc.gov/mmwr/volumes/67/wr/mm6748a3.htm

Connected Neighborhoods

Three in four (75%) Marion County adults reported living in neighborhoods with sidewalks. Of those with sidewalks: 82% were suitable for mobility aid use (e.g., wheel chairs);[18] 74% connected to major streets or neighborhoods;[19] and 72% were lit at night.[20] At least seven of ten adults in Marion County could walk to a full-service grocery or supermarket (74%); park, greenway, or playground (75%);[21] or bus stop or other public transportation (74%).[22] Similarly, 67% had safe and convenient access to a community center or library.[23]

Usual Mode of Travel

Nine of ten Marion County adults (90%) reported driving or riding in a private vehicle as their usual mode of transportation. Only 6% reported using public transportation or ride sharing services, and only 5% reported walking or biking.

Food Buying and Nutrition Awareness

Seven of ten Marion County adults reported having safe and convenient access to a full-service grocery or supermarket (74%), and nearly all shopped at either a full-service grocery (75%) or discount/warehouse center (21%).[24]

The U.S. Department of Agriculture (USDA) recommends that adults eat 2.5-3 cups of vegetables daily.[25] Only one-third (36%) of Marion County adults reported eating at least three servings of green vegetables daily; and only one in five (22%) reported eating at least three servings of orange vegetables daily. The USDA also recommends eating 1.5-2 cups of fruit per day and limiting the consumption of sodas and other sugary beverages (e.g., sweet tea, energy drinks, lemonade).[26] More than half (56%) of adults in Marion County reported exceeding two fruit servings per day; and about a third reported drinking more than two sodas (32%) or sugary beverages (27%) per day.

Most Marion County adults (81%) reported eating at least one meal prepared outside the home during the previous seven days (e.g., from a restaurant or food stand), and more than a third (39%) reported doing so three or more times. When eating at restaurants, about a quarter of Marion County adults (23%) reported that they usually look for nutrition information, and another 40% look for such information at least some of the time.

Food Security

Among Marion County adults, four in ten (42%) reported worrying about having money for nutritious food at least sometimes during the previous 12 months. About half of these individuals were usually or

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18 14.7% of respondents answered "Don't know" or "Refused."
19 13.8% of respondents answered "Don't know" or "Refused."
20 12.5% of respondents answered "Don't know" or "Refused."
21 11.9% of respondents answered "Don't know" or "Refused."
22 15.3% of respondents answered "Don't know" or "Refused."
23 12.9% of respondents answered "Don't know" or "Refused."
24 7.1% of respondents answered "Don't know" or "Refused."
25 U.S. Department of Health and Human Services, U.S. Department of Agriculture. 2015–2020 Dietary Guidelines for Americans. 8th Edition.; 2015. http://health.gov/dietaryguidelines/2015/guidelines/ . Also see https://www.choosemyplate.gov/ .
26 Ibid.

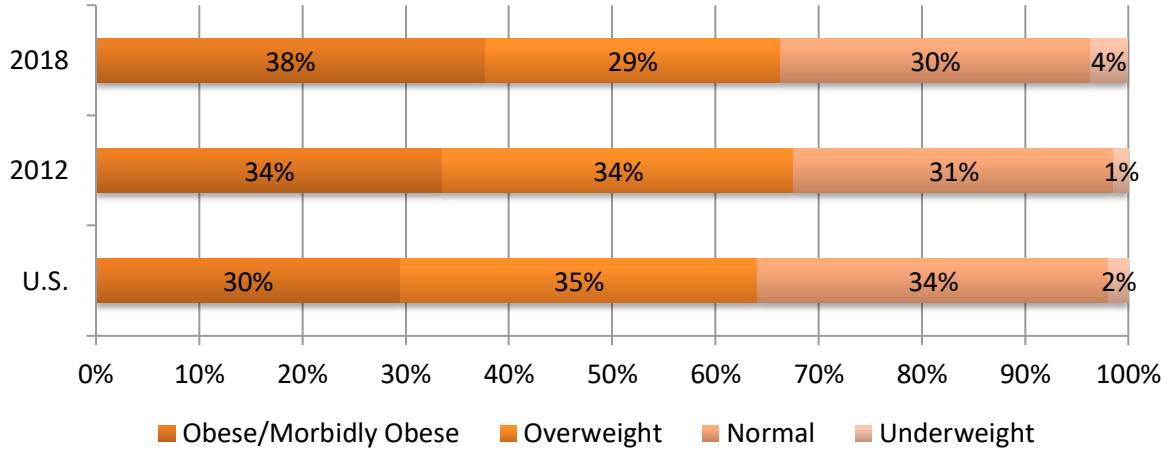
always worried. About a quarter of adults in Marion County (24%) reported using a food support program during the previous 12 months, with food supports including the federal SNAP program, food pantries, WIC, meals for seniors, or a community kitchen. Among those using any food support program, half used SNAP, and three out of eight used a food pantry, with about one-third of SNAP users also using a food pantry.

Obesity Level

The body mass index (BMI) of adults in Marion County was calculated from their self-reported height and weight. Only one-third of Marion County adults (30%; 95% CI: 27.1%-32.9%) were considered to have a healthy height-to-weight ratio, or a BMI of 18.5 to less than 25.[27] This is similar to 2012 findings and represents a slightly lower proportion than in the U.S. overall for 2016 (34%) (Figure 5).[28] Among those outside of normal range:[28]

- 4% (95% CI: 1.4%-5.9%) were underweight → Similar to U.S. (2%)
- One-third (29%; 95% CI: 26%-31%) were overweight → Lower than U.S. (35%)
- Four in ten (38%; 95% CI: 34%-42%) were obese/morbidly obese → Higher than U.S. (30%)

Figure 5: Body Mass Index of Adults, Marion County (2018 and 2012) vs. the U.S. (2016)



Physical Activity Levels

The Centers for Disease Control and Prevention (CDC) recommends that adults get at least 150 minutes of moderately intense or 75 minutes of vigorous, aerobic physical activity per week.[29] While eight of ten (83%) Marion County adults reported some moderate physical activity during the previous 30 days, only

27 Centers for Disease Control and Prevention. (2016). Defining adult overweight and obesity. https://www.cdc.gov/obesity/adult/defining.html

28 National Center for Health Statistics (2016). Summary health statistics: National health interview survey, 2016. https://www.cdc.gov/nchs/nhis/SHS/tables.htm or https://ftp.cdc.gov/pub/Health_Statistics/NCHS/NHIS/SHS/2016_SHS_Table_A-15.pdf

29 U.S. Department of Health and Human Services. Physical Activity Guidelines for Americans, 2nd Edition. Washington, DC: U.S. Department of Health and Human Services; 2018. https://www.hhs.gov/about/news/2018/11/12/hhs-releases-physical-activity-guidelines-americans-2nd-edition.html

one in three (32%; 95% CI: 29.2%-35.1%) met the guidelines.[30] This is far below the 53% of U.S. adults found to be sufficiently aerobically active in 2016.[31] When asked about non-work related screen time watching television, playing video games, or having other screen time for entertainment, nine of ten Marion County adults (89%) reported more than two hours per day. Average screen time reported was 4.7 hours per day.

Wellness and Reported Health Status

Seven of ten (69%) Marion County adults reported that their health was good or excellent. Adults in Marion County were also asked for how many days of the last 30 did they experience poor physical, mental, or oral health, or had restricted activities as a result of poor health. More than half of Marion County adults reported at least one day with poor physical (57%) or mental (53%) health; and one-third reported at least one day with poor dental health (33%) or restricted activity (39%). On average, adults in Marion County reported: 3.1 days of poor physical health; 2.1 days of poor oral health; 3.0 days of poor mental health; and 2.4 days of restricted activity.

Of all Marion County adults, 59% reported that they were employed. Among those, half (49%) spend most of their time at work sitting. More than half (54%) had a wellness program at their workplace.[32] About one in eight Marion County adults (13%) required special medical aide or equipment, compared to 8.5% nationally in 2015.[33]

Access to Health Care

Among Marion County adults 18-44 years of age, 88% (95% CI: 84.1%-91.1%) had some form of health insurance coverage. This is on par with the 2016 national rate (85.2%).[34] Insurance coverage among residents 45-64 years of age was 89% (95% CI: 86.5%-91.8%), again, a finding similar to the 2016 national rate of 91.2%.[34]

Eight of ten Marion County adults (81%; 95% CI: 78.2%-83.8%) had a regular health care provider, an increase from only three-fourths (75%; 95% CI: 72.5%-76.5%) in 2012; and the majority (97%) felt accepted or respected by their health care provider.[35]

Adults in Marion County were asked about health care utilization during the previous 12 months. More than eight in ten (82%) reported having had a healthcare visit and six in ten (64%) reported having had a dental visit.

Barriers to care: Despite a higher percentage of individuals reporting insurance coverage, more than one in five Marion County adults reported needing to visit a doctor (23%) or fill a prescription (22%) but not

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30 13.3% of respondents answered "Don't know" or "Refused."

31 National Center for Health Statistics (2016). Summary health statistics: National health interview survey, 2016. https://www.cdc.gov/nchs/nhis/SHS/tables.htm or https://ftp.cdc.gov/pub/Health_Statistics/NCHS/NHIS/SHS/2016_SHS_Table_A-14.pdf

32 16.2% of respondents answered "Don't know" or "Refused."

33 https://nccd.cdc.gov/weat/#/crossTabulation/selectYear with the following parameters. Single Year: 2015; Single location: All; Variable: Topic=Disability, Health problems requiring special equipment; No column variable.

34 National Center for Health Statistics (2016). Summary health statistics: National health interview survey, 2016. https://www.cdc.gov/nchs/nhis/SHS/tables.htm or https://ftp.cdc.gov/pub/Health_Statistics/NCHS/NHIS/SHS/2016_SHS_Table_P-11.pdf

35 7.5% of respondents answered "Don't know" or "Refused."

doing so in the previous 12 months due to cost. Further complicating access to care, 19% of adults in Marion County reported needing at least occasional help reading medical instructions.

Diagnosed Chronic Diseases

Adult in Marion County were asked if a health care provider had ever diagnosed them with certain chronic health conditions: Asthma, diabetes, high cholesterol, hypertension, heart condition, depression, or tooth decay.

- One-third of Marion County adults (34%; 95% CI: 31.4%-36.9%) had received a hypertension diagnosis. This finding is significantly higher than the 2016 national rate of 25%.[36]
- One-third of Marion County adults (32%; 95% CI: 29.4%-34.9%) had received a diagnosis of high cholesterol,[37] well above the 2015-2016 national rate of 12%.[38]
- One in four Marion County adults (26%; 95% CI: 23.3%-29.1%) had a depression diagnosis. This finding is significantly higher than the national rate of 8% for 2013-2016.[39]
- Nearly two in ten (19%; 95% CI: 16.5%-21.0%) Marion County adults had been diagnosed with asthma at some point in their life, and half of those (10%; 95% CI: 8.3%-11.6%) reported still having asthma. Nationally in 2016, 14% reported ever having had asthma and 8% still have asthma.[36]
- Among adults in Marion County, 14% (95% CI: 11.8%-15.2%) reported being told that they have diabetes.[40] This is significantly higher than the 2015 national rate of 9%.[41] Of Marion County adults with a diabetes diagnosis, more than half (59%) reported having taken a diabetes management class.[42]
- Close to one in ten (9%; 95% CI: 7.2%-10.0%) Marion County adults reported being diagnosed with a heart condition. This is similar to the 2016 U.S. rate of 11%.[36]
- More than half (53%; 95% CI: 49.5%-56.1%) of adults in Marion County reported tooth decay.

A comparison of 2018 versus 2012 responses is illustrated in Figure 6. In all, two-thirds of Marion County adults (63%; 95% CI: 59.4%-66.8%) reported being told by a health professional that they had at least one of these conditions, this is similar to the 59% (95% CI: 56.6%-60.9%) reported in 2012.[43] About one-third (35%) of Marion County adults reported two or more chronic health conditions (Figure 7).

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36 National Center for Health Statistics (2016). Summary health statistics: National health interview survey, 2016. https://www.cdc.gov/nchs/nhis/SHS/tables.htm or https://ftp.cdc.gov/pub/Health_Statistics/NCHS/NHIS/SHS/2016_SHS_Table_A-1.pdf

37 5.9% of respondents answered "Don't know" or "Refused."

38 Centers for Disease Control and Prevention. (2017). High cholesterol facts. https://www.cdc.gov/cholesterol/facts.htm

39 Brody, D. J., Pratt, L. A., and Hughes, J. (2018). Prevalence of depression among adults aged 20 and over: United States, 2013–2016. *NCHS Data Brief, 303*. https://www.cdc.gov/nchs/products/databriefs/db303.htm

40 8.8% of respondents answered "Don't know" or "Refused."

41 American Diabetes Association. (2019). Statistics about diabetes: Overall numbers, diabetes and prediabetes. http://www.diabetes.org/diabetes-basics/statistics/

42 30.7% of respondents answered "Don't know" or "Refused."

43 18.6% of respondents answered "Don't know" or "Refused."

Figure 6: Percent of Adults with Chronic Medical Conditions, Marion County: 2018 vs. 2012

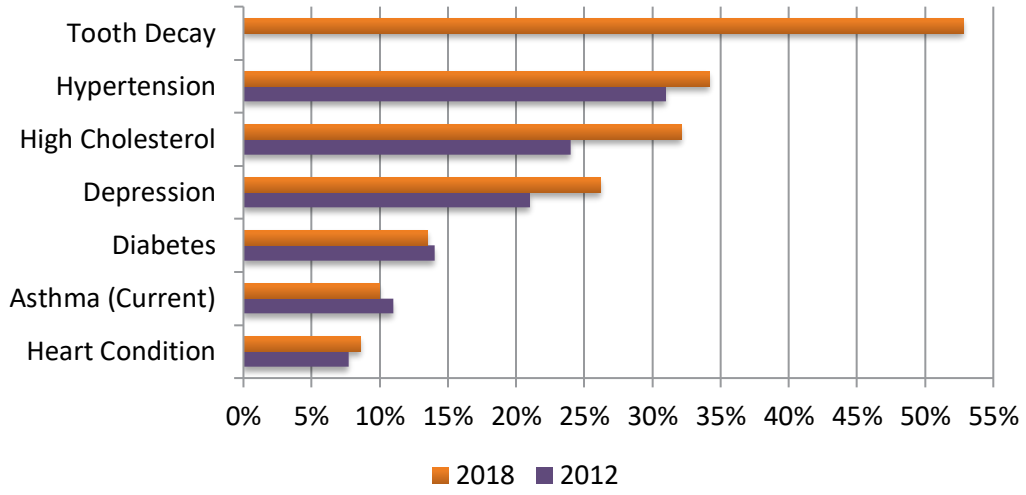
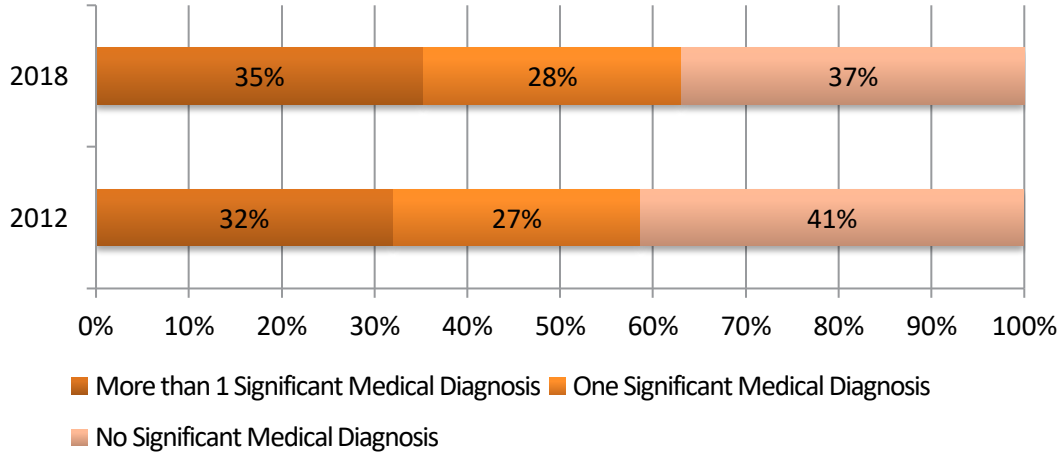


Figure 7: Percent of Adults with One or More than One Chronic Medical Condition, Marion County: 2018 vs. 2012



Health Risk Factors

Smoking

While four in ten (42%) Marion County adults reported having smoked in their lifetime, only 18% (95% CI: 15.3%-20.6%) reported being a current smoker. This result is similar to the 16% national rate in 2016,[44] and significantly lower than the 29% (95% CI: 26.5%-30.7%) of current smokers reported in the 2012 CHA survey. Of those who do smoke, more than half (56%) reported trying to quit at least once. One in twenty Marion County adults (5%) reported currently using a vaping device.

44 National Center for Health Statistics (2016). Summary health statistics: National health interview survey, 2016. https://www.cdc.gov/nchs/nhis/SHS/tables.htm or https://ftp.cdc.gov/pub/Health_Statistics/NCHS/NHIS/SHS/2016_SHS_Table_A-12.pdf

Alcohol Use

Two-thirds of adults in Marion County (62%; 95% CI: 59.1%-65.3%) reported having consumed alcohol during the previous 30 days. This represents a significant increase from only half (49%; 95% CI: 46.7%-51.1%) in 2012. Of those who reported drinking, nearly one in five (17%) reported having consumed alcohol at least ten of the previous 30 days. On average, Marion County adults reported drinking on 5.7 of the previous 30 days. Most (72%) reported drinking only one or two alcoholic beverages on each occasion. Another 14% reported having an average of three drinks per occasion. The remaining 14% each averaged four or more drinks on each occasion.[45] Those who drank alcoholic beverages reported having an average of 2.1 drinks per occasion.[45] Conversely, four in ten (40%) reported binge drinking at least once during the previous 30 days.[46] Binge drinking was defined as four or more drinks on one occasion for women or five or more for men.

Opioid Use

Of Marion County adults, just under 2% (95% CI: 1.1%-2.2%) reported having abused prescription opioids or having used heroin in the previous 12 months; and about half as many (1%) had sought, but not used, addiction assistance services due to cost or lack of access.

Household Firearms

One in four Marion County adults (27%; 95% CI: 24.9%-29.8%) reported having a handgun or other firearm in the household.[47] This indicates a small increase from the 22% (95% CI: 20.1%-23.4%) found in 2012.

Conclusions

There were a few changes in the health of Marion County children between 2012 and 2018. Notable differences included an increased amount of asthma and computer or TV screen time, and decreased physical activity. Physical activity among Marion County children is higher than among U.S. children overall, however, and exposure to secondhand smoke continues to be lower among Marion County residents than in the U.S. Especially encouraging was the decrease in children who were overweight and obese; that percentage decreased to the 2005 level of 40% after having increased to 50% in 2012. Marion County adults were generally healthier than in 2012; however, they continue to be less healthy than U.S. adults overall though. Notable changes between 2012 and 2018 included a significant increase in healthcare access and a decrease in smoking among local residents. That said, responses in 2018 indicated an increase in depression, high cholesterol, and hypertension. With the exception of high cholesterol prevalence, health among Marion County residents was poorer than among U.S. adults overall.

45 6.4% of respondents answered "Don't know" or "Refused."
46 5.4% of respondents answered "Don't know" or "Refused."
47 5.4% of respondents answered "Don't know" or "Refused."

Table 2: Better or Worse? Marion County 2018 CHA results compared to 2012 CHA, and to vs. U.S.

	Marion County 2018 CHA results versus	
	Marion County 2012 CHA	Recent U.S. data*
Children		
Healthcare Access		
Dental		
Weight		
Screen time		?
Physical Activity		
Asthma		
Secondhand Smoke		
ADD/ADHD	?	
Depression	?	
Adults		
Healthcare Access		
Weight		
Physical Activity		
Asthma		
Smoking		
Depression		
Hypercholesterolemia		
Hypertension		
Heart Disease		
Diabetes		

* See references earlier in the report for the year of each US statistic. None are from earlier than 2015.

 = 2018 CHA result was better  = 2018 result was neither better nor worse

 = 2018 CHA result was worse ? = Unknown

"Better" or "Worse" indicate a difference that was statistically significant at $p > 0.05$.

Appendix A: Survey Responses

2018 Marion County Community Health Assessment Survey Results

From January 19 through May 11, 2018, approximately 25,000 Marion County residents were sent mail surveys to assess community health needs. Most survey questions were taken from standard instruments, including the CDC's Behavioral Risk Factor Surveillance System questionnaire and the National Health Interview Survey. 4925 adults answered the survey, of which 100 completed a Spanish-language version. 917 respondents reported having at least one child from 5 to less than 18 years old in their households, and 825 answered questions about that child's health.

This report presents the results of that survey, estimating the percent of Marion County residents with various health risks, issues, or concerns. Persons who responded "Don't know" or omitted an item response are excluded from the analysis of that item. The data was weighted to reflect the age, race, ethnicity, and gender composition of Marion County. The "95% Confidence Interval" indicates the range within which the true percent is 95% likely to be; the true percent being the result we would get if every adult in the county responded to the survey.

* We have put an asterisk (*) next to the few questions where more than 5% of respondents answered "Don't know" or refused to answer each question.

Contents

Respondent Selection

	est. %	95% Confidence Interval
1. Respondent age range[1]		
0-17 yrs old	0.1	0.0 - 0.1
18-24 yrs old	10.2	7.0 - 13.5
25-29 yrs old	11.4	8.7 - 14.1
30-44 yrs old	23.3	20.6 - 26.0
45-64 yrs old	39.5	36.7 - 42.3
65+ yrs old	15.5	14.1 - 16.8
Respondent is 30 years old or older.	78.2	74.5 - 82.0
2. Respondent's gender[2]		
Male	47.6	44.4 - 50.8
Female	52.4	49.2 - 55.6

	est. %	95% Confidence Interval
3. Total number of persons in household[3]		
1	19.2	17.4 - 21.0
2	34.1	31.5 - 36.7
3	17.2	14.6 - 19.9
4 or more	29.5	26.0 - 33.0

	Persons	
Average number of persons per household	2.9	2.7 - 3.0

4, 5. Average number of persons per household, by age range[4]

	Age 0-17 years		Age 18-64 years*		Age 65 or older	
Average	0.7	0.6 - 0.8	1.9	1.8 - 2.0	0.3	0.3 - 0.3

Percent of households by number of household members within each age group

Age Group (years)	Number of household members within age group (percent of households, ±95% confidence interval)									
	0		1		2		3		4 or more	
0-17	63.7	±3.2	15.1	±2.3	11.6	±1.9	5.6	±1.7	4.0	±2.2
18-64	14.2	±1.3	21.5	±2.1	40.4	±2.9	14.4	±2.8	9.6	±3.0
65+	78.3	±2.0	13.9	±1.5	7.4	±1.1	0.3	±0.3	0.0	±0.1

General Health

	est. %	95% Confidence Interval
6. Respondent's general health[5]		
Excellent	17.4	14.8 - 20.1
Good	51.4	48.3 - 54.6
Fair	25.0	22.4 - 27.5

Poor	5.8	4.3 - 7.4
Very poor	0.4	0.2 - 0.5

7-10. Days in the past 30 days with poor physical or mental health, or restricted activities due to poor health

(percent of respondents, ±95% confidence interval)

Days	poor physical health[6]		poor mental health[7]		poor dental health[8]		restricted activity[9]	
0	42.9	±3.2	47.2	±3.2	66.7	±3.0	60.6	±3.1
1	9.2	±1.5	7.2	±1.2	7.3	±1.3	7.1	±1.9
2	11.7	±1.9	9.9	±2.0	6.1	±1.5	6.3	±1.1
3	8.8	±1.4	6.3	±1.3	3.8	±1.2	6.0	±1.5
4-5	9.0	±2.1	9.7	±1.8	5.2	±2.0	5.7	±1.1
6-9	4.5	±1.0	5.5	±1.5	2.3	±0.9	4.4	±1.6
10-19	6.8	±1.4	6.4	±1.3	3.4	±1.3	5.0	±1.1
20-29	2.1	±0.6	3.4	±1.1	1.2	±0.6	2.1	±1.0
30	4.9	±1.2	4.5	±1.5	3.9	±1.0	2.8	±1.1

	est. %	95% Confidence Interval
11. Medical condition requiring special equipment[10]	12.5	11.1 - 13.9

12. Screen hours per day, not including work[11]

0	1.0	0.4 - 1.7
1	9.6	7.3 - 11.9
2	21.6	18.9 - 24.3
3	22.3	19.7 - 24.9
4	15.0	13.2 - 16.8
5	10.4	8.4 - 12.4
6	7.4	5.5 - 9.3
7 or 8	5.4	4.3 - 6.5
9 or more	7.3	5.7 - 8.9

	est. %	95% Confidence Interval
13, 14. Body mass category[12]		
Underweight	3.6	1.4 - 5.9
Normal	30.0	27.1 - 32.9
Overweight	28.6	26.1 - 31.2
Obese	29.4	26.7 - 32.1
Morbidly obese	8.3	6.9 - 9.6
Overweight or heavier	66.3	63.1 - 69.5

Physical Activity and Work Wellness

	est. %	95% Confidence Interval
15. Any moderate physical activities in last 30 days[13]	82.7	80.0 - 85.4
16. Among those with moderate activity in past month, total time in last week doing moderate activity*[14]		
0 minutes of physical activity	1.6	1.0 - 2.1
1-149 minutes of physical activity	58.4	55.0 - 61.9
150+ minutes of physical activity	40.0	36.6 - 43.4
Physically active by WHO standards*[15]	32.2	29.2 - 35.1
17. Employment status[16]		
Employed for wages or self-employed	59.4	56.2 - 62.7
Out of work	5.9	3.7 - 8.1
Unable to work	8.0	5.8 - 10.2
A homemaker or student	8.7	6.5 - 10.8
Retired	18.0	16.4 - 19.7
18. Usual activity during employment*[17]		
Mostly sitting	49.4	45.0 - 53.7
Mostly standing	16.5	13.0 - 20.1
Mostly walking	20.2	16.6 - 23.8
Mostly doing heavy labor or physically demanding work	13.9	10.7 - 17.1
19. Workplace has wellness program*[18]	54.2	49.8 - 58.7

Food

	est. %	95% Confidence Interval
20. Usual type of food shopping store*[19]		
Supermarket/grocery store (Kroger, Aldi)	75.2	72.2 - 78.3
Discount/warehouse stores (Costco, Wal-mart, Target)	21.3	18.4 - 24.3
Convenience store (Speedway, 7-11, CVS)	0.2	0.0 - 0.3
Ethnic food stores (Bodegas, Asian Food Markets)	0.5	0.2 - 0.8
Dollar stores	2.1	1.0 - 3.1
Online grocery stores (Peapod, Netgrocer, AmazonFresh)	0.6	0.3 - 0.8
Farmer's market	0.1	0.0 - 0.2
21. Number of restaurant, take-out, or other meals prepared away from home in past week[20]		
0	19.1	16.3 - 21.8
1	20.1	17.8 - 22.4
2	21.5	18.8 - 24.2
3	16.4	13.8 - 19.1
4	10.7	8.8 - 12.6
5-7	8.4	6.4 - 10.3

8+	3.8	3.0 - 4.7

22. Looks for nutrition information at restaurants[21]

Yes, all or most of the time	22.8	20.0 - 25.5
Yes, some of the time	40.0	36.7 - 43.2
No	37.2	34.1 - 40.4

23-25. Average servings of fruits and vegetables consumed per day in the past 30 days

	Fruit[22]		Green vegetables[23]		Orange Vegetables[24]	
Servings per Day	Percent	95% Confidence Interval	Percent	95% Confidence Interval	Percent	95% Confidence Interval
0	10.5	8.5 - 12.5	10.1	8.1 - 12.1	28.6	25.6 - 31.5
1	33.2	30.3 - 36.2	33.7	30.7 - 36.6	35.5	32.6 - 38.5
2	23.5	20.6 - 26.4	20.1	17.5 - 22.7	13.8	11.4 - 16.2
3	10.7	8.9 - 12.5	10.6	8.4 - 12.8	8.5	6.8 - 10.2
4	4.0	3.0 - 5.1	5.0	3.9 - 6.0	4.1	3.1 - 5.1
5-7	5.8	4.6 - 7.1	7.0	5.7 - 8.3	4.0	3.1 - 4.9
8+	12.2	9.5 - 15.0	13.6	10.8 - 16.3	5.5	3.0 - 8.1

26, 27. Average servings of sugar-sweetened soda or drinks consumed per day in the past 30 days

	Soda (not diet)[25]		Sugared Drink[26]	
Servings per Day	Percent	95% Confidence Interval	Percent	95% Confidence Interval
0	49.9	46.6 - 53.1	58.1	54.7 - 61.5
1	18.5	15.9 - 21.0	15.2	13.1 - 17.3
2	9.8	7.9 - 11.8	9.6	7.1 - 12.1
3	7.2	4.9 - 9.4	4.9	3.4 - 6.3
4	3.4	2.2 - 4.6	2.9	1.7 - 4.1
5-7	4.0	2.7 - 5.2	3.0	1.9 - 4.0
8+	7.3	4.5 - 10.0	6.3	3.6 - 9.1

28. How often worried about money for nutritious food in past 12 months[27]

	est. %	95% Confidence Interval
Never worried	41.6	38.4 - 44.9
Rarely worried	16.5	14.3 - 18.8
Sometimes worried	22.0	19.3 - 24.7
Usually worried	10.1	7.9 - 12.3
Always worried	9.8	8.0 - 11.6

29. Food support used in past 12 months[28]

Any food assistance	23.6	20.4 - 26.8
Community kitchen	0.7	0.4 - 1.1
Food pantry	11.7	9.6 - 13.8

SNAP	13.1	10.5 - 15.7
WIC	4.9	2.8 - 7.0
Senior dining site	0.9	0.6 - 1.2
Total number of public food services used (max 5)	0.3	0.3 - 0.3
None of Above	76.4	73.2 - 79.6

Neighborhood Environment

	est. %	95% Confidence Interval
30. Usual mode of travel[29]		
Walked	3.2	2.2 - 4.2
Biked	1.3	0.2 - 2.4
Drove or rode in a private vehicle	90.0	87.1 - 92.9
Used public transportation	4.9	2.2 - 7.6
Used ride sharing services (such as BluIndy)	0.6	0.2 - 1.0

	est. %	95% Confidence Interval
31. I feel safe in my neighborhood[30]		
Strongly agree	41.1	37.9 - 44.4
Somewhat agree	38.7	35.5 - 42.0
Neither agree nor disagree	8.8	7.1 - 10.6
Somewhat disagree	8.2	6.5 - 9.9
Strongly disagree	3.1	2.2 - 4.1

32. In my neighborhood, there are many vacant, abandoned, or rundown properties*[31]		
Strongly agree	8.6	6.1 - 11.1
Somewhat agree	16.4	13.5 - 19.4
Neither agree nor disagree	7.1	5.7 - 8.5
Somewhat disagree	14.5	12.1 - 16.9
Strongly disagree	53.4	49.9 - 56.8
33. Neighborhood has sidewalks[32]	75.2	72.6 - 77.9
34. Sidewalks in my neighborhood are…		
Easy for mobility aid users to use (e.g. wheelchairs)*[33]	82.2	79.3 - 85.0
Lit at night*[34]	71.8	68.5 - 75.1
Connect to major streets or neighborhoods*[35]	73.7	70.1 - 77.4
35. Do you have safe, convenient access to a…*[36]		
Grocery or supermarket	74.3	71.6 - 77.1
Community center or library	66.8	63.6 - 70.0
Park, greenway, or playground	75.2	72.6 - 77.8
Bus stop or other transportation	73.6	70.4 - 76.7

Health Care

	est. %	95% Confidence Interval
36. Have health care coverage[37]	90.1	88.2 - 92.0

37. Have any regular health care provider[38]	81.0	78.2 - 83.8
38. Feels accepted or respected by health care provider*[39]	97.2	96.2 - 98.2
39. During the past 12 months…[40]		
Had healthcare visit	81.5	78.5 - 84.4
No doctor visit due to cost	23.3	20.2 - 26.5
Did not fill prescription due to cost	22.3	19.8 - 24.9
Had routine dental visit	63.6	60.6 - 66.7

	est. %	95% Confidence Interval
40. Needs help reading medical instructions[41]		
Never	81.1	78.2 - 84.0
Occasionally	9.9	8.1 - 11.7
Sometimes	5.4	3.7 - 7.2
Frequently	1.1	0.7 - 1.5
Always	2.5	0.4 - 4.6

Chronic Disease

	est. %	95% Confidence Interval
41-43, 45-47. Ever been diagnosed with …*[42]		
Heart Condition	8.6	7.2 - 10.0
Depression	26.2	23.3 - 29.1
Asthma (ever)	18.7	16.5 - 21.0
Asthma (currently)	10.0	8.3 - 11.6
Diabetes	13.5	11.8 - 15.2
Hypertension	34.2	31.4 - 36.9
High Cholesterol	32.1	29.4 - 34.9
Tooth Decay	52.8	49.5 - 56.1
Percent of respondents by number of those diagnosed conditions, except tooth decay*[43]		
No to all medical conditions	36.9	33.2 - 40.6
Yes to one medical condition	27.8	24.5 - 31.0
Yes to more than one medical condition	35.3	32.4 - 38.3
44. Taken Diabetes Management Class*[44]	59.1	49.5 - 68.7

Health Behaviors

	est. %	95% Confidence Interval
48-52. Smoking Questions*[45]		
Smoking: 100 Cigs Lifetime	41.5	38.3 - 44.6
Current Smoker Yes/No	18.0	15.3 - 20.6
Tried to quit but still smoking	55.9	51.2 - 60.6
Tried to quit smoking and still not smoking	14.2	11.0 - 17.4

Ever tried to quit smoking	56.1	48.0 - 64.1
Smoking: Quit for 1+ days in past year	41.0	36.0 - 46.0
Current vaper: Yes/No	5.4	3.9 - 6.9

	est. %	95% Confidence Interval
53. Days drank any alcohol in past 30 days[46]		
1	13.8	11.3 - 16.4
2	8.4	6.9 - 9.8
3	8.5	6.1 - 10.9
4-5	8.7	7.2 - 10.2
6-9	6.1	5.1 - 7.1
10-19	9.7	7.8 - 11.6
20-29	4.1	3.4 - 4.8
30	2.9	2.3 - 3.5
I have not consumed alcohol during the past 30 days	37.8	34.7 - 40.9
54. Number of drinks, on days when you drink*[47]		
1	42.4	38.2 - 46.6
2	29.7	26.1 - 33.2
3	14.0	11.4 - 16.7
4	5.6	4.2 - 6.9
5	3.0	1.7 - 4.4
6 or more	5.3	3.6 - 7.0
55. Occasions of binge drinking in past 30 days*[48]		
0	59.6	55.4 - 63.7
1	13.8	10.4 - 17.3
2	7.6	5.9 - 9.3
3	4.2	3.2 - 5.2
4	4.1	3.0 - 5.2
5	3.9	1.2 - 6.5
6 or more	6.8	5.3 - 8.3
56. Firearm in household*[49]	27.4	24.9 - 29.8
57, 58. In past 12 months…		
Abused prescription opioids[50]	1.6	1.1 - 2.2
Used heroin[51]	0.2	0.0 - 0.4
59. Sought addiction assistance unsuccessfully due to cost or lack of access[52]		
No	99.0	98.3 - 99.8
Yes, limited access to treatment centers	0.5	0.0 - 1.1
Yes, cost	0.5	0.2 - 0.7

Questions about Child

Child's demographics

The following information is about a randomly selected 5 to 17 year old child in the household, for households with any child in that age range. The results are weighted to represent all resident 5 to 17 year olds in all. There were 825 respondents, representing 16.8% of all households, reported having at least one 5 to 17 year old household member.

	est. %	95% Confidence Interval
61. Respondent is child's primary caregiver[53]	84.1	79.3 - 88.9
62. Child's age (in years)[54]		
5-8 yrs old	30.2	25.0 - 35.3
9-13 yrs old	41.3	35.6 - 47.0
14-17 yrs old	28.5	23.9 - 33.1
63. Child's Gender[55]		
Male	53.9	48.3 - 59.5
Female	46.1	40.5 - 51.7
64, 65. Child body mass category*[56]		
Underweight	7.5	4.7 - 10.3
Normal weight	52.9	46.9 - 59.0
At risk of overweight	13.7	9.6 - 17.8
Overweight	25.9	20.3 - 31.4

Health care

	est. %	95% Confidence Interval
66. Child has health care coverage[57]	93.3	89.7 - 97.0
67. Type of health care coverage, among those with any coverage*[58]		
Hoosier HealthWise/Medicaid	56.4	50.8 - 62.0
Private insurance	38.0	32.6 - 43.4
HMO	3.4	2.0 - 4.8
Something else	2.2	1.1 - 3.3
68. Does child have a personal health care provider?[59]		
No, no usual person	5.7	3.2 - 8.2
Yes, one person	86.5	82.3 - 90.7
No, more than one person	7.8	4.2 - 11.4
69. Child had routine dental visit within 1 year[60]	90.5	86.4 - 94.6

Health conditions

	est. %	95% Confidence Interval
70-72. Percent of children ever diagnosed with …[61]		
Asthma	20.4	15.9 - 25.0
High blood pressure	1.1	0.1 - 2.1
Depression or anxiety	10.9	7.3 - 14.6
ADD or ADHD	15.6	11.2 - 20.0
Diabetes	1.4	0.5 - 2.4
Cavities (ever)	42.4	36.7 - 48.0
Cavities (currently)	9.5	6.2 - 12.7
Percent of children by number of notable medical conditions*[62]		
No to all medical conditions	67.3	61.6 - 72.9
Yes to one medical condition	22.9	17.8 - 28.0
Yes to more than one medical condition	9.8	6.3 - 13.4
73. Number of emergency room visits by the child in the past 12 months[63]		
0	71.8	66.6 - 77.1
1	19.6	14.7 - 24.5
2	6.7	4.2 - 9.3
3 or more	1.9	0.8 - 3.0

Activity, smoke exposure

	est. %	95% Confidence Interval
74, 75. Child's hours of screen viewing on an average school day (not including schoolwork)*[64]		
0	4.2	2.0 - 6.5
1	8.2	5.6 - 10.8
2	22.4	17.3 - 27.6
3	19.1	14.4 - 23.7
4	15.9	11.7 - 20.1
5	9.8	5.5 - 14.0
6	7.8	4.6 - 10.9
7 or 8	7.4	4.1 - 10.7
9 or more	5.2	2.8 - 7.7

	Hours	
Average number of hours*	3.8	3.5 - 4.1

	est. %	95% Confidence Interval
76. Child is active at least 60 minutes per day[65]	83.5	79.6 - 87.3
77. Someone smokes in the home[66]	9.7	6.1 - 13.4
78. Vaping in the home[67]	4.7	2.5 - 6.9

Demographics

	est. %	95% Confidence Interval
79, 80. Race and Ethnicity*[68]		
White non-Latino	59.2	55.8 - 62.7
Black non-Latino	24.1	20.7 - 27.5
Latino	7.9	5.9 - 9.8
Asian non-Latino	2.4	1.5 - 3.2
American Indian non-Latino	0.3	0.0 - 0.5
Hawaiian/Pacific Is. non-Latino	0.1	0.0 - 0.2
Other Race/Ethnicity	1.1	0.4 - 1.9
2 or more races, non-Latino	1.4	0.7 - 2.0
81. Education level[69]		
Never attended school	0.3	0.0 - 0.8
Grade 1 though 8	2.6	0.7 - 4.5
Some High School	10.0	7.4 - 12.6
High School graduate or GED	30.8	27.5 - 34.1
Some college or technical school	28.4	25.6 - 31.3
College graduate	18.7	17.1 - 20.4
Post-graduate education	9.2	8.2 - 10.1
82. Primary language at home: [70]		
English	93.5	91.6 - 95.4
Spanish	5.1	3.2 - 6.9
Other	1.4	0.8 - 2.0
83. Household income below federal poverty guideline*[71]		
Less than 100% FPL	19.9	16.7 - 23.1
100 to <150% FPL	11.5	9.4 - 13.7
150 to <200% FPL	10.5	6.8 - 14.1
200 to <300% FPL	17.8	15.5 - 20.1
At or greater than 300% FPL	40.3	37.2 - 43.5

1 Question 1: How old are you currently?
2 Question 2: Are you male or female?
3 Question 3: How many people live in this household, including all children?
4 "Total" is from question 3 ("How many people live in this household, including all children?"). "0-17" is calculated as question 3 minus question 4 ("How many people living in your household are 18 or older?"), with negative values treated as "unknown." "18-64" is calculated as question 4 minus question 5 ("How many of these household residents are over age 65?"), with negative results treated as "unknown."
For 18-64 year olds - Note: 252 (5.1%) of the 4925 responses to that question were 'don't know' or 'refused.'
5 Question 6: Would you say that in general your health is… (Mark only ONE.)
6 Question 7: Now think about your physical health, which includes physical illness and injury. How many days during the past 30 days was your physical health NOT good?
7 Question 9: Now think about your mental health, which includes stress, depression and problems with emotions. How many days during the past 30 days was your mental health NOT good?
8 Question 8: Now think about your oral health, which includes toothaches, swelling in jaws, bleeding gums, and injury. How many days during the past 30 days was your oral health NOT good?

9 Question 10: During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?
10 Question 11: Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or special telephone? This includes occasional use or use in certain circumstances. (Mark only ONE.)
11 Question 12: How many hours in a day, on average, do you spend watching TV, videos, DVDs, playing video games, using personal electronic devices, or using the computer outside of work?
12 Question 13 ("How tall are you now without shoes? Answer in either feet/inches or meters/centimeters.") and question 14 ("14) How much do you weigh now without shoes? Answer in either pounds or kilograms.") were used to calculate body mass index.
13 Question 15: During the past 30 days, did you engage in any moderate physical activities? Moderate physical activities include brisk walking, bicycling, vacuuming, gardening or anything else that causes some increase in your breathing or heart rate? This includes both work-related and leisure activities. (Mark only ONE.)
14 Question 16: During the past 7 days, how long did you spend doing these moderate physical activities? (Add up all the time you spent in any kind of physical activity at work or during leisure time that increased your heart rate or made you breathe hard some of the time.) (Mark only ONE.)
Note: 559 (13.5%) of the 4127 responses to that question were 'don't know' or 'refused.'
15 Answered "yes" to question 15 ("Question 15: During the past 30 days, did you engage in any moderate physical activities? Moderate physical activities include brisk walking, bicycling, vacuuming, gardening or anything else that causes some increase in your breathing or heart rate? This includes both work-related and leisure activities. (Mark only ONE.)") and reported 150 minutes or more of moderate physical activity in question 16 ("16) During the past 7 days, how long did you spend doing these moderate physical activities? (Add up all the time you spent in any kind of physical activity at work or during leisure time that increased your heart rate or made you breathe hard some of the time.) (Mark only ONE.)")
Note: 656 (13.3%) of the 4925 responses to that question were 'don't know' or 'refused.'
16 Question 17: Which of the following best describes your current employment status? (Mark only ONE.)
17 Question 18: Which of the following best describes what you do at work? Would you say you are... (Mark only ONE.)
Note: 254 (9.3%) of the 2723 responses to that question were 'don't know' or 'refused.'
18 Question 19: Does your work place have on-site policies or programs to improve employee health or wellness? (Mark only ONE.)
Note: 440 (16.2%) of the 2723 responses to that question were 'don't know' or 'refused.'
19 Question 20: In a typical week, where do you do MOST of your shopping for food items? (Mark only ONE.)
Note: 351 (7.1%) of the 4925 responses to that question were 'don't know' or 'refused.'
20 Question 21: During the past 7 days, how many meals did you get that were prepared away from home in places such as full-service or fast food restaurants, food stands, grocery stores, or vending machines? By meal, we mean breakfast, lunch and dinner.
21 Question 22: Do you look for nutrition information or symbols on menu items at restaurants and fast food establishments? (Mark only ONE.)
22 Question 23: During the past 30 days, not counting juice, how many times per day did you eat fruit? Count fresh, frozen, or canned fruit.
23 Question 24: During the past 30 days, how many times per day did you eat dark green vegetables such as broccoli, romaine, spinach, or collard greens? Count fresh, frozen, or canned vegetables.
24 Question 25: During the past 30 days, how many times per day did you eat orange-colored vegetables such as sweet potatoes, carrots, pumpkin, or winter squash? Count fresh, frozen, or canned vegetables.
25 Question 26: During the past 30 days, how many times per day did you drink regular soda or pop that contains sugar? Do not include diet soda or pop.
26 Question 27: During the past 30 days, how many times per day did you drink sugar-sweetened fruit drinks (such as Kool-aid and lemonade), sweet tea, and sports energy drinks (such as Gatorade and Red Bull)? Do not include 100% fruit juice or diet drinks.
27 Question 28: In the last 12 months, how often were you worried or stressed about having enough money to buy nutritious meals? (Mark only ONE.)
28 Question 29: In the past 12 months, have you or others in your household used the following services? (Mark all that apply.)
29 Question 30: In the past week, how did you get to most places you needed to go? (Mark only ONE.)

30 Question 31: I feel safe in my neighborhood. (Mark only ONE.)
31 Question 32: In my neighborhood, there are many vacant, abandoned, or rundown properties. (Mark only ONE.)
Note: 416 (8.4%) of the 4925 responses to that question were 'don't know' or 'refused.'
32 Question 33: Does your neighborhood have sidewalks or paved paths? (Mark only ONE.)
33 Question 34A: Could someone use the sidewalks/paths using a wheelchair, walker, stroller, or other mobility aids without difficulty? (Mark only ONE.)
Note: 546 (14.7%) of the 3723 responses to that question were 'don't know' or 'refused.'
34 Question 34B-: Are there street lights that light the sidewalks/paths at night? (Mark only ONE.)
Note: 467 (12.5%) of the 3723 responses to that question were 'don't know' or 'refused.'
35 Question 34C: Do your sidewalks/paths connect to other major streets or neighborhoods? (Mark only ONE.)
Note: 512 (13.8%) of the 3723 responses to that question were 'don't know' or 'refused.'
36 Question 35A: Do you have safe and convenient access to a full service grocery or supermarket? (Mark only ONE.)
Question 35B: Do you have safe and convenient access to a community center or library? (Mark only ONE.)
Note: 634 (12.9%) of the 4925 responses to that question were 'don't know' or 'refused.'
Question 35C: Do you have safe and convenient access to a park, greenway or playground? (Mark only ONE.)
Note: 586 (11.9%) of the 4925 responses to that question were 'don't know' or 'refused.'
Question 35D: Do you have safe and convenient access to a bus stop or other public transportation? (Mark only ONE.)
Note: 753 (15.3%) of the 4925 responses to that question were 'don't know' or 'refused.'
37 Question 36: Do you have any kind of health care coverage, including health insurance, prepaid plans (such as HMOs), or government plans (such as Medicare, CHAMPUS or Medicaid)? (Mark only ONE.)
38 Question 37: Do you have someone that you think of as your personal physician or health care provider? (Mark only ONE.)
39 Question 38: Do you feel accepted or respected at your current health care provider? (Mark only ONE.)
Note: 318 (7.5%) of the 4231 responses to that question were 'don't know' or 'refused.'
40 Question 39A: During the past 12 months, have you seen or talked to a health care professional about your own health? (Mark only ONE.)
Question 39B: Was there a time in the past 12 months when you needed to see a physician, but could not because of cost? (Mark only ONE.)
Question 39C: Was there a time in the past 12 months when you needed prescribed medication, but went without because of cost? (Mark only ONE.)
Question 39D: In the past 12 months, have you seen a dentist, orthodontist, oral surgeon, or other dental specialist for any routine dental care including check-ups, screenings, or sealants? (Mark only ONE.)
41 Question 40: How often do you need to have someone help you when you read instructions, pamphlets, or other written material from your doctor or pharmacy? (Mark only ONE.)
42: Please indicate whether a physician, nurse, or other health professional has EVER told you that you had any of the following health conditions.
Question 41A: Heart Condition: Heart attack, angina, or coronary heart disease (Mark only ONE.)
Question 42: Asthma (ever and currently): Asthma (currently or in the past) (Mark only ONE.)
Question 41B: Depression: A depressive disorder (including major depression, dysthymia, or minor depression) (Mark only ONE.)
Question 43: Diabetes: Diabetes (or high blood sugar) If yes, were you told you have type 1 or type 2 diabetes? (Mark only ONE.)
Note: 435 (8.8%) of the 4925 responses to that question were 'don't know' or 'refused.'
Question 45: Hypertension: Hypertension (or high blood pressure)? (Mark only ONE.)
Question 46: High cholesterol: High blood cholesterol? (Mark only ONE.)
Note: 291 (5.9%) of the 4925 responses to that question were 'don't know' or 'refused.'
Question 47: Tooth Decay: Dental decay or cavities? (Mark only ONE.)
43 Percent of respondent reporting ever being diagnosed with heart condition, depression, asthma, diabetes, hypertension, or high cholesterol.
Note: 914 (18.6%) of the 4925 responses to that question were 'don't know' or 'refused.'
44 Question 44: Have you ever taken a course or class in how to manage your diabetes yourself? (Mark only ONE.)
Note: 320 (30.7%) of the 1044 responses to that question were 'don't know' or 'refused.'
45 Question 48: Have you smoked at least 100 cigarettes in your life time? (Mark only ONE.)

Question 49: Do you now smoke every day, some days, or not at all? (Mark only ONE.)

Question 50: During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking? (Mark only ONE.) - Note: 331 (15.5%) of the 2137 responses to that question were 'don't know' or 'refused.'

Current vaping question: Is a yes if they have ever vaped (Question 51) and have vaped 'every day' or 'some days' (Question 52).

Question 51: Have you ever used an electronic vaping device including e-cigarettes, personal vaporizers, vape pens, e-cigars, or hookah pens? (Mark only ONE.)

Question 52: Do you now use e-cigarettes or other "vaping' devices every day, some days, or not at all? (Mark only ONE.)

46 Question 53: During the past 30 days, how many days did you have at least one drink of any alcoholic beverage, such as beer, wine, malt beverage or liquor?

47 Question 54: On the days when you did drink in the past 30 days, how many drinks did you have on average? One drink would be a 12-ounce beer, a 5-ounce glass of wine or a drink with one shot of liquor.

Note: 200 (6.4%) of the 3134 responses to that question were 'don't know' or 'refused.'

48 Question 55: How many times during the past 30 days did you have 4 or more drinks (for women) or 5 or more drinks (for men) on any occasion? Please consider all types of alcohol.

Note: 169 (5.4%) of the 3134 responses to that question were 'don't know' or 'refused.'

49 Question 56: Do you keep a hand gun or other firearm in or around your home? (Mark only ONE.)

Note: 268 (5.4%) of the 4925 responses to that question were 'don't know' or 'refused.'

50 Question 57: In the past 12 months, did you use a prescription opioid for nonmedical reasons or in a manner different than your doctor prescribed? Prescription opioids include drugs such as oxycodone, hydrocodone, morphine, and fentanyl. (Mark only ONE.)

51 Question 58: In the past 12 months, did you ever use heroin? (Mark only ONE.)

52 Question 59: Was there ever a time when you needed treatment for an opioid addiction, but were forced to go without because of cost or limited access to treatment centers? (Mark only ONE.)

53 Question 61: Are you this child's primary caregiver?

54 Question 62: How old is this child?

55 Question 63: Is this child a boy or a girl?

56 Question 64 ("How tall is this child? Answer in either feet/inches OR meters/centimeters") and question 65 ("How much does this child weigh? Answer in either pounds OR kilograms") were used to calculate body mass index.

Note: 131 (15.9%) of the 825 responses to that question were 'don't know' or 'refused.'

57 Question 66: Does this child have any kind of health care coverage, including health insurance, prepaid plans such as HMOs (Health Maintenance Organization), or government plans such as Medicaid (S-CHIP, Indiana's Children's Health Insurance Program known as Hoosier Health Wise)? (Mark only ONE.)

58 Question 67: ("If yes, what type of health care coverage? (Mark only ONE.)")

Note: 83 (10.1%) of the 825 responses to that question were 'don't know' or 'refused.'

59 Question 68: Do you have one person that you think of as this child's primary physician? (Mark only ONE.)

60 Question 69: In the past 12 months, has this child seen a dentist or dental specialist for any type of routine dental care? (Mark only ONE.)

61 Question 70: Please indicate whether a physician, nurse, or other health professional has EVER told you that this child had any of the following conditions (Asthma, HBP, Depression, ADHD)?

Question 71: Has a physician, nurse, or other health professional EVER told you that this child had diabetes or pre-diabetes?

Question 72: Has a physician, nurse, or other health professional EVER told you that this child had dental decay or cavities? (Mark only ONE.)

62 Notable health conditions include those listed above (hypertension, diabetes or pre-diabetes, depression or anxiety, ADD or ADHD, or cavities)

Note: 78 (9.5%) of the 825 responses to that question were 'don't know' or 'refused.'

63 Question 73: In the past 12 months, how many times has this child been seen in the emergency room or an immediate care facility?

64 Combines question 74 ("On an average school day, how many hours does this child watch TV?") and question 75 ("On an average school day, how many hours does this child play video or computer games or use a computer for

something that is not school work? Include activities such as Xbox, PlayStation, an iPad or other tablet, a smartphone, texting, YouTube, Instagram, Facebook, or other social media.")
Note: 104 (12.6%) of the 825 responses to that question were 'don't know' or 'refused.'
65 Question 76: Does this child get 60 minutes of activity per day? Include times in physical education classes, sports, active play, dance or other sports lessons or practices, riding a bike or scooter. (Mark only ONE.)
66 Question 77: Does anyone smoke tobacco inside this child's home or vehicle including cigarettes, cigars, pipes, or hookah? Please include household residents or visitors. (Mark only ONE.)
67 Question 78: Does anyone use an electronic vaping device inside this child's home including e-cigarettes, personal vaporizers, vape pens, e-cigars, or hookah pens? Please include household residents or visitors. (Mark only ONE.)
68 Question 79: Are you of Hispanic or Latino origin, such as Mexican American, Latin American, Puerto Rican or Cuban?
Question 80: Which of these groups would you say best represents your race? (Mark only ONE.)
Note: 272 (5.5%) of the 4925 responses to that question were 'don't know' or 'refused.'
69 Question 81: What is the highest grade or year of school you completed? (Mark only ONE.)
70 Question 82: What language is primarily spoken in your home? (Mark only ONE.)
71 Question 83: For the income questions below, please think about the TOTAL NUMBER OF PEOPLE IN YOUR HOUSEHOLD. Answer the question (a-e) which corresponds to your household size. You can leave the others blank.
Note: 844 (17.1%) of the 4925 responses to that question were 'don't know' or 'refused.'

Appendix B: Advisory Board Members

Kendale Adams	Indianapolis Metropolitan Police Dept.
Brad Beaubien	Department of Metropolitan Development
Dennis B. Buckley	City of Beech Grove
Kim Ewers	Indianapolis Public Library
Brent Freeman	Indianapolis Public Schools
Anna T. Gremling	Indianapolis Metro Planning
La Keisha Jackson	Indianapolis-Marion County City Council
Chris Milhorn	Town of Speedway
Bryan Roach	Indianapolis Metropolitan Police Dept.
Greg Porter	Indiana State Legislature
Sheryl Richardson	Indy Parks Department
Katie Robinson	Indianapolis Office of Sustainability
Mike A. Terry	IndyGo
Dan Arens	Adult and Child Health
David Berman	Mental Health America of Indiana
Rick Diaz	HealthNet, Inc
Saura Erazo Fortin	Eskenazi Health Center Primary Care - Center of Excellence in Women's Health
Joyce M. Hertko	Indiana University Health Methodist Hospital
Priscilla Keith	Community Health Network
Millecent Moye	Action Health Center
Mercy Obeime	Franciscan St. Francis, MCPHD
Thomas Thaman	Eskenazi Health
Amber	Welsh Franciscan St. Francis
Anna Graves	YMCA of Greater Indianapolis
Basim Najeeb	Archdiocese of Indianapolis - Refugee & Immigrant Services
Lindsey	Rabinowitch Christian Theological Seminary
Chelsy Winters	YMCA of Greater Indianapolis
Orion Bell	Central Indiana Council on Aging (CICOA)
Jacquelyn Clency	Salvation Army
Margaret Frericks	Improving Kids' Environment
Cindy Graham	Goodwill of Central & Southern Indiana
Lynne Griffin	American Heart Association
Kim Irwin	Health by Design
Jesse Kharbanda	Hoosier Environmental Council
Stephanie Goodrid Lawson	The McKinney Family Foundation
Curtis McManus	Oasis Indianapolis
Chad Priest	Red Cross
Ellen Quigley White	Richard M. Fairbanks Foundation, Inc
Debbie	Wright Oasis Indianapolis
Tanya Bell	Indiana Black Expo, Inc.

Jarnell Burks-Craig	Minority Health Coalition of Marion County
Valerie Davis	John Boner Neighborhood Centers
Vickie Driver	Oxford Neighborhood Association
Indra Frank	Hoosier Environmental Council
Mark Fisher	Indianapolis Chamber of Commerce
Mike Huber	Indy Chamber
S. Taylor Hughes	Indy Chamber
Sue Burow McKinney	Early Learning Indiana
Maury Plambeck	Indianapolis Neighborhood Resource Center
LaTasha Sturdivant	Children's Museum of Indianapolis
Peter Thawnghmung	Chin Community of Indiana
Kelly Tingle	Rotary Club of Indianapolis
Beth White	Greater Indianapolis Progress Commission
Alan Witchey	Coalition for Homeless Intervention & Prevention
Kobi Wright	Indianapolis Capital Improvement Board
Marion Greene	IU Fairbanks School of Public Health
Paul K. Halverson	IU Fairbanks School of Public Health
Micah Kassahun	IU Fairbanks School of Public Health
Janet McCabe	IU Environmental Resilience Center
Doran Moreland	Ivy Tech Indianapolis
Robert Soltis	College of Pharmacy & Health Sciences, Butler
Jamie Palmer	Indiana University Public Policy Institute
Gregory K. Steele	IU Fairbanks School of Public Health
Jim Whitehead	American College of Sports Medicine
Sarah Wiehe	CHEP: Community Health Partnerships
Amy Wojtyna	University of Indianapolis

Appendix C: Questionnaire

Topics

Respondent Selection
General health
Physical activity, work wellness
Food
Neighborhood Environment
Health care
Chronic disease
Health behaviors
Child's demographics
Child's health care
Child's health conditions
Child's activity, smoke exposure
Demographics

Respondent Selection

1. Age
2. Gender
3. Total # of persons in household
4. # persons age 18 or over
5. # persons over age 65

General health

6. Rate your general health (poor ... excellent)
7. # days of poor physical health in past month
8. # days of poor oral health in past month
9. # days of poor mental health in past month
10. # days of limited activity in past month
11. Use special equipment (cane, special bed, ...)?
12. # hours per day watching TV
13. Height
14. Weight

Physical activity, work wellness

15. Participate in any moderate physical activities past month?
16. # hours/mins per week moderate exercise
17. Employment status
18. Level of activity at work
19. Have worksite wellness program(s)?

Food

20. Usual food shopping place (grocery/big-box/convenience/ethnic/dollar store)
21. # meals prepared away from home in past week
22. Do you look for nutrition labels or symbols?
23. # fruit servings per day
24. # dark green vegetable servings per day
25. # orange colored vegetable servings per day
26. # regular sodas consumed per day
27. # sugar sweetened fruit drinks per day
28. Experience stress over affording nutritious meals?
29. Got food aid in past year (pantry, WIC, ...)

Neighborhood Environment

30. Usual mode of transport (walk/bike/car/bus)
31. Feels safe in neighborhood?
32. Has many vacant or rundown properties?
33. Has sidewalks or paved paths?
34. Neighborhood sidewalks/paths:
    a. Smooth enough for wheelchair?
    b. Lighted at night?
    c. Connect to major streets/neighborhoods
35. Safe and convenient access to…
    a. Full service grocery or supermarket?
    b. Community center or library?
    c. Park, greenway, or playground?
    d. Bus stop or other public transportation?

Health care

36. Have health insurance?
37. Have personal health care provider?
38. Respected by health care provider?
39. Health care behaviors past 12 months..
    a. Seen by a health care provider?
    b. Did not see a physician due to cost?
    c. Did not get medication due to cost?
    d. Saw dentist?
40. Need help reading medical instructions?

Chronic disease

41. Ever diagnosed with..
    a. heart attack, angina, or heart disease?
    b. ... depressive disorder?
42. ... asthma? (if yes, do you still have asthma?)
43. ... diabetes? (if yes: type and only during pregnancy?)
44. …taken a diabetes self-management class?
45. ... high blood pressure or hypertension? (if yes: only during pregnancy?)
46. ... high blood cholesterol?
47. …dental decay or cavities?

Health behaviors

48. Smoked at least 100 cigarettes in lifetime?
49. Currently smoke?
50. Tried to quit in past year?
51. Ever used an electronic vaping device?
52. Currently use electronic vaping device?
53. # days drank alcohol in past month
54. Average number of drinks per day
55. # days with over 4 drinks (men: 5 drinks)
56. Keep a gun or firearm in home?
57. Any use of a prescription opioid for non-medical reasons (past year)?
58. Any use of heroin (past year)?
59. Did not get treatment for an opioid use disorder due to financial or access barriers?

Child's Demographics

60. # Children in household 5-18 years
61. Is respondent primary care giver for child?
62. Child's age
63. Child's gender
64. Child's height
65. Child's weight

Child's health care

66. Child has health insurance?
67. Type of health insurance
68. Child has personal physician or nurse?
69. Got routine dental care, past 12 months?

Child's health conditions

70. Has a physician ever diagnosed the child with..
    a. asthma?
    b. high blood pressure?
    c. ADD or ADHD?
71. Ever diagnosed with (pre-)diabetes?
72. Dental decay or cavities? Currently or in the past?
73. # of ER visits, past 12 months

Child's activity, smoke exposure

74. Average weekday hours watching TV
75. Average weekday hours on computer or electronic game, etc.
76. Gets 60 minutes activity per day?
77. Does anyone smoke in the home?
78. Does anyone use an electronic vaping device in the home?

Demographics

79. Respondent's ethnicity
80. Respondent's race
81. Highest level of education
82. Language spoken at home
83. Income range?
84. Permission to contact for those willing to participate in follow-up?
85. Name?
86. Email address?

Marion County Community Health Assessment

- **Who should fill out this questionnaire?** We ask that the **adult (18 years of age or older) in your household who had the most recent birthday complete this** questionnaire.
- **Instructions:** Please mark your answers clearly in the boxes using pencil or dark pen. Examples: ■ ☒ ■
- You may skip any question that you do not want to answer or if you feel that it does not apply.

We value your responses. Thank you very much for your help!

---

1 **How old are you currently?**

☐☐ Age (in years)

2 **Are you male or female?** (Mark only ONE.)

☐ Male ☐ Female

3 **Please tell me how many people live in this household, including all children.** ☐☐

4 **How many people living in your household are 18 or older?** ☐☐

5 **How many of these household residents are over age 65?** ☐☐

6 **Would you say that in general your health is...** (Mark only ONE.)

☐ Excellent ☐ Good ☐ Fair ☐ Poor ☐ Very poor

7 **Now think about your physical health, which includes physical illness and injury. How many days during the past 30 days was your physical health NOT good?**

Number of days:

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4-5 ☐ 6-9 ☐ 10-19 ☐ 20-29 ☐ 30

8 **Now think about your oral health, which includes toothaches, swelling in jaws, bleeding gums, and injury. How many days during the past 30 days was your oral health NOT good?**

Number of days:

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4-5 ☐ 6-9 ☐ 10-19 ☐ 20-29 ☐ 30

9 **Now think about your mental health, which includes stress, depression and problems with emotions. How many days during the past 30 days was your mental health NOT good?**

Number of days:

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4-5 ☐ 6-9 ☐ 10-19 ☐ 20-29 ☐ 30

10 **During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?**

Number of days:

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4-5 ☐ 6-9 ☐ 10-19 ☐ 20-29 ☐ 30

11 **Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or special telephone? This includes occasional use or use in certain circumstances.** (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know

12 **How many hours in a day, on average, do you spend watching TV, videos, DVDs, playing video games, using personal electronic devices, or using the computer outside of work?**

Hours per day:

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7-8 ☐ 9+

13 **How tall are you now without shoes?**
Answer either in feet/inches OR meters/centimeters.

Feet ☐ Inches ☐☐ Meters ☐ Centimeters ☐☐

14 **How much do you weigh now without shoes?**
Answer in either pounds OR kilograms.

Pounds ☐☐☐ Kilograms ☐☐☐

15 During the past 30 days, did you engage in any moderate physical activities? Moderate physical activities include brisk walking, bicycling, vacuuming, gardening or anything else that causes some increase in your breathing or heart rate. This includes both work-related and leisure activities. (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know } GO TO QUESTION 17

16 During the past 7 days, how long did you spend doing these moderate physical activities? (Add up all the time you spent in any kind of physical activity at work or during leisure time that increased your heart rate or made you breathe hard some of the time.) (Mark only ONE.)

☐ 150+ minutes of physical activity

☐ 1-149 minutes of physical activity

☐ 0 minutes of physical activity

☐ Don't know

17 Which of the following best describes your current employment status? (Mark only ONE.)

☐ Employed for wages or self-employed

☐ Out of work

☐ Unable to work

☐ A homemaker or student } GO TO QUESTION 20

☐ Retired

18 Which of the following best describes what you do at work? Would you say you are... (Mark only ONE.)

☐ Mostly sitting

☐ Mostly standing

☐ Mostly walking

☐ Mostly doing heavy labor or physically demanding work

19 Does your work place have on-site policies or programs to improve employee health or wellness? (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know

20 In a typical week, where do you do MOST of your shopping for *food items*? (Mark only ONE.)

☐ Supermarket/grocery store (Kroger, Aldi)

☐ Discount/warehouse stores (Costco, Wal-mart, Target)

☐ Convenience store (Speedway, 7-11, CVS)

☐ Ethnic food stores (Bodegas, Asian Food Markets)

☐ Dollar stores

☐ Online grocery stores (Peapod, Netgrocer, AmazonFresh)

☐ Farmer's market

☐ Don't know; someone else shops

21 During the past 7 days, how many meals did you eat that were prepared away from home in places such as full-service or fast food restaurants, food stands, grocery stores, or vending machines? By meal, we mean breakfast, lunch and dinner.

Meals prepared away from home in the past 7 days:

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5-7 ☐ 8+

22 Do you look for nutrition information or symbols on menu items at restaurants and fast food establishments? (Mark only ONE.)

☐ Yes, all or most of the time

☐ Yes, some of the time

☐ No

23 During the past 30 days, not counting juice, how many times per day did you eat fruit? Count fresh, frozen, or canned fruit.

Number of times per day:

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5-7 ☐ 8+

24 During the past 30 days, how many times per day did you eat dark green vegetables such as broccoli, romaine, spinach, or collard greens? Count fresh, frozen, or canned vegetables.

Number of times per day:

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5-7 ☐ 8+

25 During the past 30 days, how many times per day did you eat orange-colored vegetables such as sweet potatoes, carrots, pumpkin, or winter squash? Count fresh, frozen, or canned vegetables.

Number of times per day:

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5-7 ☐ 8+

26 During the past 30 days, how many times per day did you drink regular soda or pop that contains sugar? Do not include diet soda or pop.

Number of times per day:

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5-7 ☐ 8+

27 During the past 30 days, how many times per day did you drink sugar-sweetened fruit drinks (such as Kool-aid and lemonade), sweet tea, and sports energy drinks (such as Gatorade and Red Bull)? Do not include 100% fruit juice or diet drinks.

Number of times per day:

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5-7 ☐ 8+

28 In the last 12 months, how often were you worried or stressed about having enough money to buy nutritious meals? (Mark only ONE.)

☐ Never ☐ Rarely ☐ Some-times ☐ Usually ☐ Always ☐ Don't know

29 In the past 12 months, have you or others in your household used the following services? (Mark all that apply.)

- ☐ Community kitchen
- ☐ Women's, Infants and Children's food programs (WIC)
- ☐ SNAP (also known as food stamps)
- ☐ Food pantry
- ☐ Senior dining site
- ☐ None of the above
- ☐ Don't know

30 In the past week, how did you get to most places you needed to go? (Mark only ONE.)

- ☐ Walked
- ☐ Biked
- ☐ Drove or rode in a private vehicle
- ☐ Used public transportation
- ☐ Used ride sharing services (such as BluIndy)
- ☐ Don't know

31 I feel safe in my neighborhood. (Mark only ONE.)

- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Don't know

32 In my neighborhood, there are many vacant, abandoned, or rundown properties. (Mark only ONE.)

- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Don't know

33 Does your neighborhood have sidewalks or paved paths? (Mark only ONE.)

☐ Yes ☐ No → GO TO QUESTION 35

34 About the sidewalks/paths in your neighborhood... (Mark only ONE answer for each row.)

	Yes	No	Don't know
Could someone use the sidewalks/paths using a wheelchair, walker, stroller, or other mobility aids without difficulty?	☐	☐	☐
Are there street lights that light the sidewalks/paths at night?	☐	☐	☐
Do your sidewalks/paths connect to other major streets or neighborhoods?	☐	☐	☐

35 In your neighborhood, do you have safe and convenient access to a... (Mark only ONE answer for each.)

	Yes	No	Don't know
...full service grocery or supermarket?	☐	☐	☐
...community center or library?	☐	☐	☐
...park, greenway or playground?	☐	☐	☐
...bus stop or other public transportation?	☐	☐	☐

36 Do you have any kind of health care coverage, including health insurance, prepaid plans (such as HMOs), or government plans (such as Medicare, CHAMPUS or Medicaid)? (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know

37 Do you have someone that you think of as your personal physician or health care provider? (Mark only ONE.)

- ☐ Yes, only one
- ☐ Yes, more than one
- ☐ No, none
- ☐ Don't know

} GO TO QUESTION 39

38 Do you feel accepted or respected at your current health care provider? (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know

39 During the past 12 months... (Mark only ONE answer for each row.)

	Yes	No	Don't know
Have you seen or talked to a health care professional about your own health?	☐	☐	☐
Was there a time when you needed to see a physician, but could not because of cost?	☐	☐	☐
Was there a time when you needed prescribed medication, but went without because of cost?	☐	☐	☐
Have you seen a dentist, orthodontist, oral surgeon, or other dental specialist for any routine dental care including check-ups, screenings, or sealants?	☐	☐	☐

40 How often do you need to have someone help you when you read instructions, pamphlets, or other written material from your doctor or pharmacy? (Mark only ONE.)

- ☐ Never
- ☐ Occasionally
- ☐ Sometimes
- ☐ Frequently
- ☐ Always

41 Please indicate whether a physician, nurse, or other health professional has EVER told you that you had any of the following health conditions. (Mark only ONE answer for each row.)

	Yes	No	Don't know
Heart attack, angina, or coronary heart disease?	☐	☐	☐
A depressive disorder (including major depression, dysthymia, or minor depression)?	☐	☐	☐

Please indicate whether a physician, nurse, or other health professional has EVER told you that you had any of the following health conditions.

42 Asthma (currently or in the past)? (Mark only ONE.)

☐ Yes, I currently have asthma ☐ No
☐ Yes, I had asthma in the past ☐ Don't know

43 Diabetes (or high blood sugar)? If yes, were you told you have type 1 or type 2 diabetes? (Mark only ONE.)

- ☐ Yes, Type 1
- ☐ Yes, Type 2
- ☐ Yes, but only during pregnancy
- ☐ No
- ☐ No, but told I have pre-diabetes or borderline diabetes
- ☐ Don't know

} GO TO QUESTION 45

44 Have you ever taken a course or class in how to manage your diabetes yourself? (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know

45 Hypertension (or high blood pressure)? (Mark only ONE.)

- ☐ Yes
- ☐ Yes, but only during pregnancy
- ☐ No
- ☐ No, but I have been told I am pre-hypertensive or borderline high
- ☐ Don't know

46 High blood cholesterol? (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know

47 Dental decay or cavities? (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know

48 Have you smoked at least 100 cigarettes in your life time? (Mark only ONE.)

- ☐ Yes
- ☐ No
- ☐ Don't know

} GO TO QUESTION 51

49 Do you now smoke every day, some days, or not at all? (Mark only ONE.)

☐ Every day ☐ Some days ☐ Not at all

50 During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking? (Mark only ONE.)

☐ Yes ☐ No

51 Have you ever used an electronic vaping device including e-cigarettes, personal vaporizers, vape pens, e-cigars, or hookah pens? (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know } GO TO QUESTION 53

52 Do you now use e-cigarettes or other "vaping" devices every day, some days, or not at all? (Mark only ONE.)

☐ Every day ☐ Some days ☐ Not at all

53 During the past 30 days, how many days did you have at least one drink of any alcoholic beverage, such as beer, wine, malt beverage or liquor? (Mark only ONE.)

Number of days:

☐ 1 ☐ 2 ☐ 3 ☐ 4-5 ☐ 6-9 ☐ 10-19 ☐ 20-29 ☐ 30

☐ I have not consumed alcohol during the past 30 days
→ GO TO QUESTION 56

54 On the days when you did drink in the past 30 days, how many drinks did you have on average? One drink would be a 12-ounce beer, a 5-ounce glass of wine or a drink with one shot of liquor.

Number of drinks:

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 or more

55 How many times during the past 30 days did you have 4 or more drinks (for women) or 5 or more drinks (for men) on any occasion? Please consider all types of alcohol.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 or more

56 Do you keep a hand gun or other firearm in or around your home? (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know

57 In the past 12 months, did you use a prescription opioid for nonmedical reasons or in a manner different than your doctor prescribed? Prescription opioids include drugs such as oxycodone, hydrocodone, morphine, and fentanyl. (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know

58 In the past 12 months, did you ever use heroin? (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know

59 Was there ever a time when you needed treatment for an opioid addiction, but were forced to go without because of cost or limited access to treatment centers? (Mark only ONE.)

☐ Yes, cost

☐ Yes, limited access to treatment centers

☐ No

☐ Don't know

Children in the Household

60 How many household residents are children aged 5 years to under 18 years? Children who live with the parent half-time should be considered residents if they are currently living in the household. ☐☐

Questions About Child

If no household residents are children between 5 and 17 years of age, go to 'About You' section.

Next, we would like to ask you about one of your children between the ages of 5 and 17 years old. **Please think about your child who has had the most recent birthday.**

61 Are you this child's primary caregiver? (Mark only ONE.)

☐ Yes ☐ No

62 How old is this child?

☐☐ Age (in years)

63 Is this child a boy or a girl? (Mark only ONE.)

☐ Boy ☐ Girl

64 How tall is this child? Answer either in feet/inches OR meters/centimeters.

Feet ☐ Inches ☐☐ Meters ☐ Centimeters ☐☐

65 How much does this child weigh? Answer in either pounds OR kilograms.

Pounds ☐☐☐ Kilograms ☐☐☐

66 Does this child have any kind of health care coverage, including health insurance, prepaid plans such as HMOs (Health Maintenance Organization), or government plans such as Medicaid (S-CHIP, Indiana's Children's Health Insurance Program known as Hoosier Health Wise)? (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know } GO TO QUESTION 68

67 If yes, what type of health care coverage? (Mark only ONE.)

- ☐ Hoosier HealthWise/Medicaid
- ☐ Private insurance
- ☐ HMO
- ☐ Something else
- ☐ Don't know

68 Do you have one person that you think of as this child's primary physician? (Mark only ONE.)

- ☐ Yes, one person
- ☐ No, more than one person
- ☐ No, no usual person
- ☐ Don't know

69 In the past 12 months, has this child seen a dentist or dental specialist for any type of routine dental care? (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know

70 Please indicate whether a physician, nurse, or other health professional has EVER told you that this child had any of the following conditions. (Mark one answer for EACH row.)

	Yes	No	Don't know
Asthma	☐	☐	☐
High blood pressure (or hypertension)	☐	☐	☐
Depression or anxiety problems	☐	☐	☐
ADD OR ADHD (Attention Deficit Disorder or Attention Deficit Hyperactivity Disorder)	☐	☐	☐

71 Has a physician, nurse, or other health professional EVER told you that this child had diabetes or pre-diabetes? (Mark only ONE.)

- ☐ Yes, Type 1 diabetes
- ☐ Yes, Type 2 diabetes
- ☐ Yes, Pre-diabetes
- ☐ No
- ☐ Don't know

72 Has a physician, nurse, or other health professional EVER told you that this child had dental decay or cavities? (Mark only ONE.)

- ☐ Yes, the child currently has dental decay or cavities
- ☐ Yes, the child had dental decay or cavities only in the past
- ☐ No
- ☐ Don't know

73 In the past 12 months, how many times has this child been seen in the emergency room or an immediate care facility?

Number of visits:

☐ 0 ☐ 1 ☐ 2 ☐ 3 or more ☐ Don't know

74 On an average school day, how many hours does this child watch TV?

☐☐ Number of hours (0-24) ☐ Don't know

75 On an average school day, how many hours does this child play video or computer games or use a computer for something that is not school work? Include activities such as Xbox, PlayStation, an iPad or other tablet, a smartphone, texting, YouTube, Instagram, Facebook, or other social media.

☐☐ Number of hours (0-24) ☐ Don't know

76 Does this child get 60 minutes of activity per day? Include times in physical education classes, sports, active play, dance or other sports lessons or practices, riding a bike or scooter. (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know

77 Does anyone smoke tobacco inside this child's home or vehicle including cigarettes, cigars, pipes, or hookah? Please include household residents or visitors. (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know

78 Does anyone use an electronic vaping device inside this child's home including e-cigarettes, personal vaporizers, vape pens, e-cigars, or hookah pens? Please include household residents or visitors. (Mark only ONE.)

☐ Yes ☐ No ☐ Don't know

About You

We just have a few more questions to help us understand more about the individuals we are surveying.

79 **Are you of Hispanic or Latino origin, such as Mexican American, Latin American, Puerto Rican or Cuban?** (Mark only ONE.)

- ☐ Yes
- ☐ No

80 **Which of these groups would you say best represents your race?** (Mark only ONE.)

- ☐ White
- ☐ Black or African American
- ☐ Asian
- ☐ Native Hawaiian or other Pacific Islander
- ☐ American Indian or Alaska Native
- ☐ Other (please specify):
- ☐ Two or more races (please specify):
- ☐ Don't know
- ☐ Prefer not to answer

81 **What is the highest grade or year of school you completed?** (Mark only ONE.)

- ☐ Never attended school
- ☐ Grades 1 through 8
- ☐ Some high school
- ☐ High school graduate or GED
- ☐ Some college or technical school
- ☐ College graduate
- ☐ Post-graduate education
- ☐ Don't know
- ☐ Prefer not to answer

82 **What language is primarily spoken in your home?** (Mark only ONE.)

- ☐ English
- ☐ Burmese
- ☐ Hindi
- ☐ Spanish
- ☐ Chinese
- ☐ Arabic
- ☐ Other (please specify):
- ☐ Prefer not to answer

83 **For the income questions below, please think about the TOTAL NUMBER OF PEOPLE IN YOUR HOUSEHOLD. Answer the question which corresponds to your household size. You can leave the others blank.**

ONE person in household: Is your annual household income...

- ☐ Less than $12,060
- ☐ $12,060 - $18,089
- ☐ $18,090 - $24,119
- ☐ $24,120 - $36,179
- ☐ $36,180 or more
- ☐ Don't know
- ☐ Prefer not to answer

TWO people in household: Is your annual household income...

- ☐ Less than $16,240
- ☐ $16,240 - $24,359
- ☐ $24,360 - $32,479
- ☐ $32,480 - $48,719
- ☐ $48,720 or more
- ☐ Don't know
- ☐ Prefer not to answer

THREE people in household: Is your annual household income...

- ☐ Less than $20,420
- ☐ $20,420 - $30,629
- ☐ $30,630 - $40,839
- ☐ $40,840 - $61,259
- ☐ $61,260 or more
- ☐ Don't know
- ☐ Prefer not to answer

FOUR people in household: Is your annual household income...

- ☐ Less than $24,600
- ☐ $24,600 - $36,899
- ☐ $36,900 - $49,199
- ☐ $49,200 - $73,799
- ☐ $73,800 or more
- ☐ Don't know
- ☐ Prefer not to answer

FIVE people in household: Is your annual household income...

- ☐ Less than $28,780
- ☐ $28,780 - $43,169
- ☐ $43,170 - $57,559
- ☐ $57,560 - $86,339
- ☐ $86,340 or more
- ☐ Don't know
- ☐ Prefer not to answer

84 After we analyze the results of this survey, we may want to contact people we've surveyed to get more information about a topic. Do we have your permission to contact you for that purpose?

☐ Yes, you may contact me for more information.

☐ No → GO TO THE END OF THE SURVEY

85 What is your name?

Last: _____

First: _____

86 What is your email address, if you have one?

_____

If you would like a copy of the results, please send an email with the request: "Please send me the 2017 CHA survey results" to Epidemiology@MarionHealth.org.

We really appreciate your time and cooperation. If you have any questions about the survey, please contact Dr. Joe Gibson at 1-317-221-3355. Results of the survey will be released on the Marion County Public Health Department website. Thank you for your time.

Thank you for your help.

Please use the enclosed postage-paid envelope to return your completed survey.

You may also mail it directly to:

Indiana University
Center for Survey Research
1900 E Tenth St 3-South
Bloomington, IN 47406-7512

Appendix D: Methods

Most of this Methods appendix was provided by the Indiana University Center for Survey Research (CSR). The CSR advised the Marion County Public Health Department (MCPHD) about the survey design, provided the survey sample, printed mailed the questionnaire, collected the responses and put them into a database, and provided initial weights for item responses pertaining to adults. MCPHD revised the adult response weights to adjust for income categories, and developed weights for item responses pertaining to children. This appendix is essentially the June 2018 Methods Summary provided by the CSR, modified to reflect the weighting changes made by MCPHD.

Sample Design

A random sample of 25,000 Marion County households, drawn from an address-based sampling (ABS) frame, was purchased from Marketing Systems Group (MSG). The sample consists of residential, non-business addresses, excluding P.O. boxes, seasonal/vacation, vacant, throwback, and drop-off point addresses. These exclusions comprise a small part of the ABS frame in this county. The list of postal

addresses came with Census block group attached to the sample record, as well as several postal route codes and demographic variables.

The goal of the study was to receive at least 5,000 completed surveys, with a minimum of 300 from Hispanic households. The most recent Census numbers indicated that approximately 10% of the Marion county population is Hispanic, with approximately 7% of households being Hispanic. Given that the postal records available for sampling contained very few indicators targeting Hispanic households, Marketing Systems Group developed a strategy to increase Hispanic coverage in the overall sample. Census block groups were analyzed for likely Hispanic density and then were ranked and divided into three strata. The sample was pulled to disproportionately allocate more sample to the high and low groups to increase efficiency in reaching Hispanic households while being careful to not introduce a large design effect for overall estimates. The percent of sample allocated to stratum 1 (high Hispanic density) through stratum 3 (low Hispanic density) is approximately 28.0%, 14.5%, and 57.5% respectively.

A summary of the population and sample composition by sample stratum is below in Table 1.

Table 1: Population and Sample Counts by Stratum for the Marion County Community Health Assessment

Sample Strata	Population N	Percent of Population	Sample n	Percent of Sample
Stratum 1 - Hispanic Block Group High	26,992	6.0%	7,000	28.0%
Stratum 2 - Hispanic Block Group Medium	27,341	6.1%	3,625	14.5%
Stratum 3 - Hispanic Block Group Low	392,546	87.8%	14,375	57.5%
Total	446,879	100.0%	25,000	100.0%

One adult was randomly selected to complete the survey for each sampled address. Random selection was accomplished by asking the person with the most recent birthday to respond. The instructions for selecting the adult respondent were included in the cover letter and on the survey questionnaire itself.

Data Collection Methodology

Research Design

Through discussions with MCPHD about project goals and a review of relevant methodological literature, mail mode was selected. Although it is an expensive mode of data collection, research shows that mail surveys achieve higher response rates in general population surveys than web, telephone, or mixed mode designs with a web component (Dillman et al., 2014).

A self-administered paper survey was developed over a period of seven weeks (August – September 2017). Survey items were developed based on existing items used by MCPHD in 2012 and designed to conform to best practices in survey questionnaire design. The final questionnaire included 112 items covering topics such as health, nutrition, drug and alcohol use, healthcare, and neighborhood environment. A set of questions was included asking about the health of a child aged five to seventeen years old residing in the household. If more than one child meeting the age criteria resided in the household, the respondent selected the child with the most recent birthday. Two versions of the survey were created, one in English and one in

Spanish. Survey translations were obtained by MCPHD from an outside service. A small proportion of the sample was administered the Spanish survey.

The surveys were formatted for printing as an eight-page booklet stapled in the center. Formatting of the survey adhered to principles of "respondent-friendly" design. The front cover consisted of a graphical image and the survey title. The inside cover included informed consent elements. CSR contracted with Creative Graphics, Inc. to print the survey booklets.

Generally following the Dillman Tailored Design Method (Dillman et al., 2014), CSR created a recruitment approach which included four potential contact attempts: an advance letter, signed by the study sponsor, which stated the study purpose and that a survey would be mailed to the household soon; an invitation letter requesting that an adult member of the household complete the enclosed survey along with a letter endorsed by 13 local community organizations; a postcard thank you/reminder with an image that matched the paper survey; and a follow-up letter, again requesting participation and highlighting the importance of the data collection.

In addition to sending multiple contacts, research has shown that pre-completion token incentives (small amounts of money) are a cost-effective way to improve response rates for mail surveys (Lesser et al., 2001; Dillman et al., 2014). The decision was made to include a token incentive ($1 bill) with the first survey mailing.

Data Collection Process

All survey mailings were sent in either English or Spanish. A subset of 1,751 sample records were flagged likely Hispanic by the sample vendor and were mailed Spanish survey materials. Since the accuracy of the Hispanic indicators was not known fully and to accommodate recipients' preferences, all contacts included information in the alternate language instructing respondents to call, email, or text CSR to request English or Spanish survey materials if preferred. All letters were signed by Dr. Virginia A. Caine, MD, and Dr. Joseph Gibson, PhD. All mailings were sent using the non-profit postage rate. This was done to reduce costs and in light of minimal differences in delivery time compared to first class postage.

First mailing: advance letter: On January 9, 2018, advance letters were mailed to the 25,000 sampled addresses. The advance letter, which was folded and mailed in a business size envelope with the MCPHD logo, announced that a paper survey would be mailed to the household soon.

Second mailing: invitation letter: From January 19 through January 29, 2018, the invitation letters and a first copy of the paper survey instrument were mailed to the full sample. The mailing included an invitation letter printed on full color MCPHD letterhead, an endorsement letter containing the logos of thirteen community organizations, a $1 bill, the paper Community

Health Assessment survey, a postage-paid business reply envelope, and a large, flat outgoing envelope.[48]

Third mailing: postcard: A postcard reminder/thank you was mailed to the full sample on February 12, 2018, excluding any addresses that were marked as undeliverable after the advance letter.

Fourth mailing: follow-up letter: From March 2 through March 7, 2018, the follow-up letters and a second copy of the paper survey instrument were mailed out to 20,692 households. The mailing was sent to addresses that did not have a previous mailing returned as undeliverable and to those who had not yet sent back a completed survey. The mailing included a follow-up letter printed on full color MCPHD letterhead, an endorsement letter containing the logos of thirteen community organizations, the paper Community Health Assessment survey, a postage-paid business reply envelope, and a large, flat outgoing envelope.

Survey Processing

Paper questionnaires were returned to CSR in postage-paid envelopes provided with the questionnaire mailing. Returned, completed surveys were counted, checked for unclear marks, batched in groups of 50 surveys, and scanned into ABBYY FlexiCapture OCR software for data processing. CSR's scanning partner, DataForce (dba MJT, US), received the scanned survey images electronically, reviewed the data via ABBYY FlexiCapture data verification software to ensure quality control, and compiled the data for transmission back to CSR via a secure file transfer protocol (SFTP) program. Upon receipt, CSR technical staff imported the processed data in SQL.

We note that the data reflect what was entered by the respondent and were not edited or cleaned. However, responses that did not follow survey instructions, such as selecting more than one option for a "Mark only ONE" item, were entered as missing data. Poor handwriting and faint marks or corrections may have impacted the ability to accurately capture respondent data.

Data Security

Sample information was stored in a secure database maintained by the CSR. Collected survey data, identified only by randomly assigned case numbers and separated from sample information (except where a respondent willingly provided a name and email address for potential future follow-up), were also stored in a secure CSR server/database. The CSR databases and file server architectures limited full access to the sample information to select CSR staff.

Delivery of the survey data in the form of SAS files, along with this methodology report, to the MCPHD team by the CSR will be done via the Indiana University Slashtmp service (critical version). Immediately after files are downloaded by the client, they will be deleted from the Slashtmp site. Within the month after the data delivery, all survey data and sample information will be moved for archiving and stored for at least ten years.

Final Disposition and Response Rates

A total of 5,055 surveys were returned and processed. Of these, 11 were found to be blank and were removed from the data and 2 were removed from the data due to insufficient responses. A

[48] A cash incentive in the initial mailing has been shown to be one of the most cost-effective ways to increase survey response rates (Church, 1993).

returned survey that was completed by a respondent under 18 years of age was also removed. After excluding 116 duplicate survey returns (cases where a household returned two completed surveys), a total of 4,925 completed cases were included in the final dataset. Of the 4,925 cases, 223 self-identified as Hispanic on the survey. A total of 100 respondents completed the Spanish-language questionnaire, the remainder being in English; and 825 respondents (17% of all respondents) also completed the questions about the health of a 5 to 17 year old child in the household. Of those 825 respondents, 57 completed the Spanish-language questionnaire.

Final dispositions for all cases were classified according to The American Association for Public Opinion Research. 2016. Standard Definitions (see Table 2). The AAPOR Response Rate 1 is calculated as follows:

$$RR1 = \frac{4925}{((4925+0)+(69+0+0)+(18{,}909+386))} = 20.3\%$$

Response Rate 1 is the minimum AAPOR response rate. Other AAPOR response rates assume that all or a proportion of the "Nothing returned" and "Not delivered as addressed" cases are ineligible. Since sampled addresses were mailed to on multiple occasions and there was no indication that these addresses were ineligible (e.g., address was vacant or that there was no address at that location), we believe that it is most appropriate to treat those addresses as eligible. It is possible that a few may be ineligible, but this would be such a small number that it would be unlikely to increase the response rate in any meaningful way.

AAPOR RR1 for the Marion County Health Assessment was 20.3%. This response rate is in line with, if not higher than, response rates reported for similar surveys. In analyzing results from this survey, it is important to note that respondents may be different from nonrespondents on survey measures of interest. There are also other sources of survey error such as measurement and processing errors that should be considered when generalizing based on survey estimates.

Table 2: AAPOR Final Disposition Codes and Definitions for the Marion County Community Health Assessment

	Disposition	Count
1.1	Complete (I)	4,925
2.113	Implicit refusal/blank questionnaire returned (R)	66
2.12	Break-off (too incomplete to process) (R)	2
2.35	Non-respondent completed questionnaire	1
3.19	Nothing returned (UH)	18,909
3.314	Not delivered as addressed (UO)	386
4.3134	Vacant address- *Ineligible (excluded from AAPOR RR calculation)*	711
	Total	25,000
	RR1 = 20.3%	

Weighting

Questionnaire items pertaining to adults were weighted separately than items pertaining to children, because the selection probabilities and county demographics for adults differed from those for children.

Weighting of Adult Response Items

In the first part of this adults weighting section, we describe dataset preparations that included removal of incomplete and ineligible cases as well as missing data imputation. We then discuss two weighting adjustments. The first was a sampling weight adjustment to account for unequal probabilities of selection at the address and person levels. The second was a poststratification adjustment to U.S. Census Bureau 2013-2017 American Community Survey five-year population estimates for Marion County, Indiana. The two weighting adjustments were multiplied to calculate a preliminary final weight. This preliminary weight was then scaled or normed so that the final weights summed to the number of respondents in the dataset (n=4,925). Finally, we discuss incorporating weights and a stratified sample design in analysis of the survey data.

NOTE: Dataset preparation and weighting activities were conducted using SAS Version 9.4. American Community Survey data were obtained using DataFerrett (https://dataferrett.census.gov/).

Removal of very incomplete or invalid records

To prepare the dataset for weighting, the survey data were read into SAS, and variable and response category labels were applied. Next, 13 respondents with no survey items or only one survey item completed were deleted from the dataset, since they would be of limited value in the analysis. A 15-year-old respondent's data were also deleted, since the study's target population excluded persons younger than 18 years of age. This left a total of 4,925 cases for weighting.

Imputation of missing values in variables to be used for weighting

Next, missing data were imputed for the variables to be used in weighting. These variables were:

- Number of adults in the household
- Age
- Sex
- Hispanic origin and race
- Education
- Income category, as a percent of the federal poverty guideline per number of persons in the household (less than 100%, 100%-<150%, 150%-<200%, 200%-<300%, 300% or more)

For the weighting variables, missing data rates were low (2% or less), except for the number of adults in the household (8%), race (5.5%), and income (17.1%). As an initial step, we used logical imputation to fill in missing data. This involved using other information provided in the survey to impute the missing value. For example, we imputed that there was one adult living in the household if the respondent indicated that there was one person living in the household and did not list any children.

If we were unable to assign a value using logical imputation, data were imputed using hot deck imputation, except for income. In hot deck imputation, a donor with available data is randomly selected to provide the data for a respondent with missing data. Income category was estimated using linear regression, based number of children, adults, and elderly in the household, gender, race, education, employment and health status, cost being a barrier to getting healthcare, perception of vacancies in neighborhood, and median income and poverty percent in the respondent's census tract. Please note that the imputed values were produced solely for

weighting purposes and were not used in analysis. Once the data for the weighting variables were complete, the next step was to calculate the weighting adjustments.

Sampling Weight Adjustment

The first weighting adjustment was the sampling weight adjustment. This adjustment accounts for unequal probabilities of selection introduced at two points in the sampling process: (1) the selection of addresses as part of the original address-based sample design and (2) the selection of an adult respondent at the sampled address.

As described in the Sampling section, addresses were divided into three strata based on the proportion of Hispanic households in their Census Block Group and addresses in the higher concentration Hispanic Census Block Groups were oversampled. The strata definitions along with the population and sample counts for the address-based sample design are shown in Table 3. The probability of selection of an address within the sample stratum is defined as $\frac{n}{N}$. In order to adjust for oversampling in the higher concentration Hispanic strata and restore an equal probability address-based design, the first component of the sampling weight, AddressSelectionWt, is calculated by stratum as follows:

$$AddressSelectionWt = \frac{1}{probability\ of\ selection\ of\ address\ in\ stratum} = \frac{1}{n/N} = \frac{N}{n}$$

Table 3: Probability of Selection by Stratum for the Marion County Community Health Assessment

Block Group's Hispanic Surname Density	Population (N)	Sample (n)	Selection Probability (n/N)
Stratum 1: High	26,992	7,000	0.2593
Stratum 2: Medium	27,341	3,625	0.1326
Stratum 3: Low	392,546	14,375	0.0366
Total	446,879	25,000	

The second component of the sampling weight was an adjustment for unequal probabilities of selection due to the number of adults in the household. Since one adult within the household was selected at random to be the survey respondent, adults in one-adult households always had a probability of selection of 1 while adults in multi-adult households had a probability of selection equal to $\frac{1}{number\ of\ odults\ in\ the\ household}$. In order to correct for this, we created a weight, AdultsInHouseholdWt, that was the inverse of the probability of selection was applied as follows:

$$AdultsInHouseholdWt = \frac{1}{probability\ of\ seletion\ of\ adult} = \frac{1}{\frac{1}{number\ of\ adults\ in\ the\ household}}$$

$$= number\ of\ adults\ in\ the\ household$$

Finally, we multiplied the two components just described, the address and adult-level weighting components, to create the sampling weight, SampWeight, that returns the design to an equal-probability sample:

$$SampWeight = AddressSelectionWt * AdultsInHouseholdWt$$

The variable nSampWeight is the sampling weight after scaling or norming so that the weights sum to the original number of respondents (4,925). This is accomplished by dividing by the mean weight as follows:

$$nSampWeight = \frac{SampWeight}{mean(SampWeight)}$$

Poststratification Adjustment

After developing the sampling weight adjustment, we produced the poststratification adjustment. Most surveys tend to over represent particular subgroups such as females and older respondents who are more likely to respond to surveys. In order to correct for this bias, we adjust our count of respondents to Census population-level estimates. For county-level surveys, we adjust our respondent counts to U.S. Census Bureau 2013-2017 American Community Survey (ACS) five-year county level estimates.[49]

First, variables that were correlated with survey outcome variables and that were available in both the survey and ACS data were identified for possible poststratification. These variables were: sex, age, race/ethnicity, education, and income relative to the federal poverty guidelines. These variables are widely used in standard survey weighting adjustments.

We note here that there were some wording differences in how the survey and ACS captured variables that were used in weighting, particularly income, race, and education. For income in the ACS, respondents are instructed to report 8 components of income, such as salary, interest income, or public assistance. In the Marion County Community Health Assessment (MCHA), respondents were instructed to indicate which of five income range their total, annual household income fell within, given the number of persons in their household, up to 5 persons. For race, in the MCHA, respondents were instructed to select only one option that included a "Two or more races" option, and they were given the option to select "Don't know" or "Prefer not to answer". In the ACS, respondents were instructed to select one or more than one race from a list. The ACS list also included more detailed options for Asian and Pacific Islander categories than in the MCHA, and "Don't know" and "Prefer not to answer" options were not provided. The ACS provided more detailed categories for Hispanic origin as well. The MCHA and ACS also differed in how education was asked. For weighting purposes, the education responses listed in Table 4 were considered equivalent. While it is possible that respondents with an Associate's degree would report their highest level of education as "College graduate" rather than "Some college or technical school", we assume that it is more typical for them to report in the technical school category. Since only 5.6% of Marion County adults hold an Associate's degree according to U.S. Census data, some variability in reporting across categories should not make a large impact in the weighting adjustment.

[49] The American Community Survey is an ongoing nationwide survey conducted by the U.S. Census Bureau that collects demographic, social, and economic information on individuals residing in the United States (https://www.census.gov/programs-surveys/acs/about.html). An estimated 3.5 million households are sampled each year. This survey provides reliable population estimates for regions, states, metropolitan areas, and counties in between Census administrations.

Table 4: Education Categories, MCHA survey versus ACS

MCHA	ACS
Some college or technical school	Some college credit, but less than 1 year of college credit; 1 or more years of college credit, no degree; Associate's degree
College graduate	Bachelor's degree
Post-graduate education	Master's degree; Professional degree beyond a bachelor's degree; Doctorate degree

After identifying and recoding variables for equivalence in preparation for their use in poststratification, our next step was to compare sampling-weighted MCHA survey respondent distributions to ACS estimates. In Table 5, we compare sampling-weighted MCHA respondents (first column) to the ACS estimates (third column). As shown, female, older (65+ years of age), Non-Hispanic White, and college-educated adults were overrepresented among sampling-weighted MCHA respondents. For example, adults 65+ years of age make up only 15.6% of the Marion County adult population based on ACS estimates but they make up more than double that percent (31.2%) among the MCHA respondents.

Table 5: Percent of population per demographic category used to weight MCHA adult response items, by MCHA respondents and ACS estimates, Marion County, Indiana

	MCHA Respondents		
	Sampling Weight Only	Final Weight	ACS Estimate
Gender (71 missing values)			
Male	37.4	47.6	47.3
Female	62.6	52.4	52.8
Age in Years (105 missing values)			
18-34	14.2	34.5	34.8
35-64	54.5	50.0	49.6
65+	31.2	15.5	15.6
Race/Ethnicity (181 missing values)			
White, not Hispanic	78.7	61.4	61.5
Black, not Hispanic	14.4	25.0	25.7
Hispanic	3.5	8.2	7.9
Other, not Hispanic	3.4	5.4	5.0
Education Level (96 missing values)			
High school diploma/GED or less	22.7	43.7	43.3
Some college or vocational school	24.6	28.4	28.8
College graduate	30.4	18.7	18.6
Post-graduate education	22.3	9.2	9.2
Income as % of Federal Poverty Level (FPL) (844 missing values)			
Less than 100% FPL	7.4	19.9	19.8
100 to <150% FPL	7.9	11.5	11.5
150 to <200% FPL	8.5	10.5	10.5
200 to <300% FPL	15.3	17.8	17.8
At or greater than 300% FPL	60.8	40.3	40.5

Sources: 2018 Marion County Community Health Assessment survey (MCHA) and U.S. Census Bureau 2013-2017 American Community Survey (ACS) 5-Year Estimates. The MCHA included 4925 responses; the number of missing values per demographic item are noted above.

Initial Calculation Income Weight

We calculated initial household income category weights, $IncomeWt_{initial}$, per based on the ratio of the ACS and MCHA income category prevalences in Table 5.

$$IncomeWtinitial = \frac{ACS\ estimated\ count\ of\ adults\ in\ the\ income\ weighting\ cell}{MCHA\ sampling\ weigted\ response\ count\ in\ the\ income\ weighting\ cell}$$

Calculation of Sex-Age-Race/Ethnicity-Education Weight

We calculated a sex-age-race/ethnicity-education poststratification adjustment using weighting cells to adjust the sampling and income weighted respondent counts to match ACS estimates. Weighting cells were created by cross-classifying those four weighting variables using the categories listed in Table 5. An example of a cross-classified weighting cell is the subset of respondents with the following characteristics:

- Male
- 18-34 years of age
- White, Non-Hispanic
- High School Diploma/GED or Less Education

Within each cross-classified weighting cell, the poststratification adjustment was calculated as follows:

$$SxAgRcEdWtinitial = \frac{ACS\ estimated\ count\ of\ adults\ in\ the\ SxAgRcEd\ weighting\ cell}{MCHA\ sampling\ \&\ income\ weigted\ response\ count\ in\ the\ SxAgRcEd\ weighting\ cell}$$

Effectively, the sampling- and income-weighted respondent counts were weighted up to the corresponding ACS population estimates within the cell.

Iterative Adjustment of Poststratification Weights

We combined the sampling, income, and sex-age-race/ethnicity-education weights as $SvyWeight\_Raw_{initial}$, and applied them to the data.

$$SvyWeight\_Rawinitial = nSampWeight * IncomeWtinitial * SxAgRcEdWtinitial$$

We then examined the resulting distribution of the demographic categories from Table 5. The sex-age-race/ethnicity-education weight forced the MCHA distribution to match the ACS distribution fairly closely, but the income category distributions differed, as might be expected given the subsequent sex-age-race/ethnicity-education weighting. We iteratively adjusted the income category weights, used those in calculating new sex-age-race/ethnicity-education weights, and re-applied the result to the data, until the income category distribution using the final weights closely matched the ACS income category distribution.

Weight Combining to Produce Final Raw Weight

We combineo the sampling weight and poststratification adjustments into a final raw weight. We calculated this final raw weight as the product of the weighting adjustments:

$$SvyWeight\_Raw = nSampWeight * IncomeWt * SxAgRcEdWt$$

Weight Trimming

The distribution of the final raw weights was then examined to identify any outliers that may substantially increase the standard error of survey estimates. A commonly used criterion for identifying outliers is identifying values larger than the median weight plus six times the interquartile range (IQR) (Chowdhury, Khare, & Wolter, 2007). For this study, 1.24% of weights were identified as outliers, with the maximum weight being 44 times the mean weight, and four records' weights exceeding 30 times the mean, and another five being between 20 and 30 times the mean. No weights were trimmed.

Weight Scaling or Norming

The weight was then multiplied by the reciprocal of the mean weight in order to produce weights that summed to the number of respondents in the dataset (n=4,925).

$$SvyWeight = \frac{SvyWeight\_Raw}{mean(SvyWeight\_Raw)}$$

The resulting weight SvyWeight_Raw had values ranging from 0.02 to 44.8. However, less than 5% were above 3.0.

As seen in Table 5, when we compare the MCHA respondent distribution after applying the final weight (second column) to the population distribution using ACS estimates (third column), the estimates are very close. For example, after applying the final weight, the percent of MCHA respondents who are 65+ is 15.5%, very close to the ACS population estimate of 15.6%. No difference was greater than 0.7 percentage points.

Weighting of Child Response Items

The item responses pertaining to children were weighted using a process similar to that for adults.

Removal of very incomplete or invalid records

To prepare the dataset for weighting the response items pertaining to children, we started with the 4,925 cases used for weighting the adult item responses. Within those, 825 provided a response to the child age item, where that age was between 5 and 17 years old. These records were included in the child weight calculation. Another six cases left the child age item blank, but filled in the item "How many household residents are children aged 5 years to under 18 years?" However, those six records were missing responses to almost all other items pertaining to children, so we omitted them from the child weight calculation. This left a total of 825 cases for weighting.

Imputation of missing values in variables to be used for weighting

The following variables were used for weighting the response items pertaining the children:

- Number of 5 to 17 year old children in the household
- Child's Age
- Respondent's Hispanic origin and race
- Respondent's Education

There was no education, race, or ethnicity question pertaining to children in the questionnaire, so we used the education, race, and ethnicity of the respondent. Where those were missing, we used

the same imputed value that was used in calculating the adult response item weight. There were no missing values for child's age among the 825 cases included for weighting.

We found that the distribution of gender among children was very similar between the response sample and the reference population estimates (USCB/ACS, explained below), overall and when stratified by child age by respondent education by respondent race/ethnicity. So we did not include the child's gender as a weighting factor.

Among the 825 cases that provided a child age between 5 and 17, eleven cases responded that there were zero children ages 5 to 17 in the household, and five cases left that answer blank. For purposes of weighting, we assumed that there was one child age 5 to 17 in each of those households.

Once the data for the weighting variables were complete, the next step was to calculate the weighting adjustments.

Sampling Weight Adjustment

As in the adult weighting, we first calculated a sampling weight adjustment to account for two components of the unequal probabilities of selection. In this case, those two were: (1) the selection of addresses as part of the original address-based sample design and (2) the selection of an child age 5 to 17 years old at the sampled address. Adjustment for component (1), AddressSelectionWt, is described in the Weighting of Adult Response Items section.

The second component of the sampling weight, ChildrenAtAddressWt, was an adjustment for unequal probabilities of selection due to the number of children age 5 to 17 in the household. This calculation was conducted just as that described in the adult weighting section, except using the number of children age 5 to 17 in the household, rather than the number of adults.

Similar to how the adult sampling weight was calculated, the final sampling weight for the child weighting was calculated by multiplying the two components just described, the address and child-level weighting components, to create the sampling weight (Ch_SampWeight) that returns the design to an equal-probability sample.

$$Ch\_SampWeight = AddressSelectionWt * ChildrenAtAddressWt$$

Poststratification Adjustment

After developing the sampling weight or sampling weight adjustment, we produced the poststratification adjustment. As already described, survey respondents tended to have more years of education and higher incomes than the general population of Marion County, and their race distribution differed as well. The age distribution of the children whose information the respondents provided over-represented older children, relative to the distribution of age among 5 to 17 year olds in the county overall (see Table 6). In order to correct for this bias, we again adjusted our count of respondents to population-level estimates from the U.S. Census Bureau. Difference between ACS and MCHA wording and response categories of questions used to collect education information is described above, in the Weighting of Adult Response Items section. No available ACS data had both child age, parent education, and parent race/ethnicity. So we used race to link USCB intercensal, 2018 Marion County population estimates of child age by race proportions to 2012-2016 5-year ACS estimates of Marion County parent race be education proportions, to create USCB/ACS estimates of the cross-tabulated proportions for child age category by child/parent race category by parent education category. We compared that

to the MCHA survey cross-tabulation of child age category by respondent race category by respondent education category.

In Table 6, we compare sampling-weighted MCHA respondents (first column) to the ACS estimates (third column). As shown, without poststratification weighting, the responses over-represented older children (13 to 18 years of age), households with non-Hispanic White and college-educated adults. For example, the Census data indicates that children ages 13 t o18 make up only 36.5% of the Marion County children ages 5 to 17, but they made up 43.5% of the child-related responses in the MCHA.

Table 6: Percent of population per demographic category used to weight MCHA adult response items, by MCHA respondents and ACS estimates, Marion County, Indiana

	MCHA Respondents		
	Sampling Weight Only	Final Weight	USCB/ACS Estimate
Child Age (0 missing values)			
5-12 yrs old	56.5	63.5	63.5
13-18 yrs old	43.5	36.5	36.5
Respondent Race/Ethinicity (22 missing values)			
White or Other, not Hispanic	76.6	66.5	66.7
Black, not Hispanic	15.5	25.8	25.6
Hispanic	7.9	7.8	7.7
Respondent Education Level (18 missing values)			
High school diploma/GED or less	20.8	44.0	43.3
Some college or vocational school	20.8	29.3	29.7
College graduate	37.1	17.7	18.2
Post-graduate education	21.4	9.0	8.8

Sources: 2018 Marion County Community Health Assessment survey (MCHA) and MCPHD projections from U.S. Census Bureau (USCB) 2010 decennial census, USCB 2011-2017 County intercensal estimates, and USCB 2012-2016 American Community Survey (ACS) 5-Year Estimates. The MCHA included 4925 responses; the number of missing values per demographic item is noted above.

We calculated a age-race/ethnicity-education poststratification adjustment using weighting cells to adjust the sampling-weighted respondent counts to match ACS estimates. Weighting cells were created by cross-classifying those three weighting variables using the categories listed in Table 6Table 5. An example of a cross-classified weighting cell is the subset of respondents with the following characteristics:

- 18-34 years of age
- White, Non-Hispanic
- High School Diploma/GED or Less Education

Within each cross-classified weighting cell, the poststratification adjustment was calculated as follows:

$$PSWeight\_Child = \frac{ACS\ estimated\ count\ of\ children\ in\ weighting\ cell}{MCHA\ weighted\ respondent\ count\ in\ the\ weigting\ cell}$$

Effectively, the respondent counts were weighted up to the corresponding ACS population estimates within the cell. The poststratification adjustment is included in the final dataset as PSWeight_Child.

Weight Combining to Produce Final Raw Weight

Our next step was to combine the sampling weight and poststratification adjustment into a final raw weight. We calculated this final raw weight as the product of the two weighting adjustments:

$$Ch\_SvyWeight\_Raw = PSWeight\_Child * Ch\_SampWeight$$

Weight Trimming

The distribution of the final raw weights was then examined to identify any outliers that may substantially increase the standard error of survey estimates. A commonly used criterion for identifying outliers is identifying values larger than the median weight plus six times the interquartile range (IQR) (Chowdhury, Khare, & Wolter, 2007). For the child weights, 5 (0.1%) weights were identified as outliers, with the maximum weight being 11 times the mean weight, and three cases' weights exceeding 10 times the mean. No weights were trimmed.

Weight Scaling or Norming

The weight was then multiplied by the reciprocal of the mean weight in order to produce weights that summed to the number of respondents with qualifying children in the dataset (n=825).

$$Ch\_SvyWeight = \frac{Ch\_SvyWeight\_Raw}{mean(Ch\_SvyWeight\_Raw)}$$

The range of the resulting weight, Ch_SvyWeight, was 0.04 to 10.9. Less than 6.9% are above 3.0.

As seen in Table 6Table 5, when we compare the MCHA respondent distribution after applying the final weight (second column) to the population distribution using ACS estimates (third column), the estimates are very close. No difference was greater than 0.7 percentage points.

Analyses of the Data with Stratification and Weights

Analyses of data from the Marion County Community Health Assessment was conducted using the SAS statistical package, using the "Survey" procedures to account for stratification and weights.

The imputed values that were developed for weighting were not used in analyses of survey data.

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