The 2020 Kansas City Regional Report Card on

Physical Activity for Children and Youth

Version 2-18-21

Children's Mercy KANSAS CITY

Acknowledgements

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The 2020 Kansas City Regional Report Card on

PHYSICAL ACTIVITY FOR CHILDREN AND YOUTH

The 2020 Kansas City Report Card is the first comprehensive assessment of physical activity in children and youth in our region. The primary goal of the 2020 Report Card is to assess the levels of physical activity and sedentary behaviors living in the Kansas City area, facilitators and barriers for physical activity, and health outcomes related to physical activity. This report is heavily modeled after the U.S. Report Card on Physical Activity for Children and Youth prepared by the Physical Activity Alliance (formerly the National Physical Activity Alliance) in both methodology and reporting.

The tracking of health indicators over time is an important surveillance tactic that allows for an assessment of population-level changes in behavior. The 2020 Report Card is designed as a resource that summarizes local health physical activity statistics among children and youth in one document, and future Report Cards will be conducted at regular intervals to track changes over time. Additionally, we assigned a data quality grade to each indicator described in the Report Card, as an assessment is only meaningful if there is accurate data available. While data collected on the national level in general is collected at regular intervals and includes a sufficient, representative sample, this is often not true of local and regional data.

The Report Card is also designed as an advocacy tool that provides a call-to-action for decision-makers regarding how we, as parents, teachers, health professionals, community leaders and policymakers, can implement new initiatives, programs and policies in support of healthy environments to improve the physical activity levels and health of our children and youth. In this regard, it is a valuable supporting document for the Kansas City Physical Activity Plan which will be released in Fall 2020.

About the Kansas City Physical Activity Plan

The Kansas City Physical Activity Plan (KCPA Plan) is a set of policies, programs and initiatives designed to increase rates of physical activity in Kansas City. The KCPA Plan aims to foster a local culture that supports physically active lifestyles across the entire Kansas City Region.

The KCPA Plan has four guiding principles:

1. Equitable access to safe places for physical activity.
2. Evidence-based approaches.
3. Community-informed strategies.
4. Systems-wide policy and environmental change.

The KCPA Plan is comprised of recommendations that are organized into 10 societal sectors:

- Business and Industry
- Community Recreation, Fitness and Parks
- Early Childhood
- Education
- Faith-based Settings
- Health Care
- Mass Media
- Public Health
- Sport
- Transportation, Land Use and Community Design

Each recommendation includes evidence-based strategies and tactics specific to the Kansas City region that, if implemented, would increase opportunities for physical activity in all aspects of our lives. The first version of the KCPA Plan will be released in Fall 2020.

Visit **kcphysicalactivityplan.org** for more information.

The Kansas City Physical Activity Plan

Center for Children's Healthy Lifestyles & Nutrition

KU MEDICAL CENTER
The University of Kansas

Children's Mercy KANSAS CITY

The 2020 Kansas City Regional Report Card on

PHYSICAL ACTIVITY FOR CHILDREN AND YOUTH

Objective

The 2020 Kansas City Regional Report Card on Physical Activity for Children and Youth is the first installment of a comprehensive evaluation of the state of physical activity of the population of the Kansas City metropolitan region, with an emphasis on the activity of children and youth. The primary aim of this report is to document the regional rates of physical activity, sedentary behavior, and environmental and policy factors which affect physical activity of the population, and to establish an initial report which will be updated on a regular basis.

Overall Summary

The 2020 Kansas City Regional Report Card on Physical Activity for Children and Youth (KCPA Report Card) is a document created to characterize current regional physical activity in the Kansas City metropolitan region. The format and content of this profile is based on the National Physical Activity Plan Alliance's 2018 United States Report Card on Physical Activity for Children and Youth (National Physical Activity Plan Alliance [NPAPA], 2018), and data for the KCPA Report Card were obtained through publicly available surveillance sources. Grades were assigned in nine indicators of physical activity based on available data and subject matter expert input, along with discussion with the core workgroup members of the Kansas City Regional Physical Activity Plan (KCPA Plan). The final grades in the indicators are as follows:

- Overall Physical Activity: C-
- Sedentary Behaviors: C
- Active Transportation: F
- Organized Sport Participation: B-
- Active Play: Incomplete
- Physical Fitness: Incomplete
- Family and Peers: Incomplete
- School: Incomplete
- Community and Built Environment: C-

In addition to rating indicators of physical activity, the authors of this report assigned grades to the data upon which grades were assigned. These grades were determined by the number of quality standards data met, as well as how closely data sources aligned with indicator criteria. The data quality grades are as follows:

- Overall Physical Activity: A
- Sedentary Behaviors: B
- Active Transportation: C
- Organized Sport Participation: A
- Active Play: Incomplete
- Physical Fitness: F
- Family and Peers: Incomplete
- School: F
- Community and Built Environment: B

The KCPA Report Card includes recommendations for increasing systematic surveillance of indicators of physical activity in the region to monitor and improve efforts to increase regional physical activity. Further discussion of each indicator grade and data quality grade is provided in the following sections, as well as indicator-specific recommendations to improve regional physical activity surveillance.

Methodology

This report is based on the 2018 United States Report Card on Physical Activity for Children and Youth (NPAPA, 2018), which rated nine different indicators of physical activity for the nation. Our report focuses on the four-county area which makes up the majority of the Kansas City metropolitan area—Clay and Jackson counties in Missouri and Johnson and Wyandotte counties in Kansas. Where available, we include data from Cass and Platte counties in Missouri, which include cities and towns in the Kansas City metropolitan area. We adopted the same nine indicators as the national report and used the same rating scale (table 1). We added a second rating of data quality (table 2), which assesses the main data source based on five data quality standards as well as the match between the measure reported by the data source and the indicator standard. We obtained data from publicly available sources through internet searches and consultation with subject matter experts from August 2019 to January 2020. We created preliminary indicator grades through discussion with our main advisory committee (Jordan Carlson, Robin Shook and Elizabeth Wilson) in March 2020 and finalized indicator grades through discussion with the core workgroup members (table 3) of the Kansas City Physical Activity Plan in April 2020.

DATA SOURCES

Table 4 (page 7) displays the data sources, ratings and criteria met which inform those ratings.

The American Community Survey (U.S. Census Bureau, 2019) is conducted by the U.S. Census Bureau. The survey is conducted on an ongoing basis in communities around the United States, collecting information on social, economic, housing and demographic characteristics of communities, including mode of transport to work. The 2013-18 data profile of economic characteristics is available at the state and county levels for Kansas and Missouri, but only at the metropolitan level for Kansas City, Mo., and only provides information on transportation to work for persons 16 years or older.

The Behavioral Risk Factor Surveillance System (BRFSS; Centers for Disease Control and Prevention [CDC], 2017a) is conducted by the CDC on an annual basis and includes state and some local level data from all 50 U.S. states, the District of Columbia and three U.S. territories. The survey collects data on health risk behaviors (e.g., tobacco use, nutrition, etc.), chronic health conditions, and preventive health behaviors (e.g., health screenings). Interviews are conducted via phone calls (landline and cell phone) with adult residents, and data are weighted to be proportional to the adult population.

County Health Rankings (County Health Rankings & Roadmaps) is a program which provides data on health indicators for nearly all counties in all 50 U.S. states via a publicly accessible website. The data are compiled from state and national data sources for the indicators (e.g., National Center for Health Statistics, Behavioral Risk Factor Surveillance System and American Community Survey). Indicators on the website include health outcomes, health behaviors, clinical care, social and economic factors and the physical environment.

The Missouri County Level Study (Missouri Department of Health and Senior Services [MDHSS], 2016) surveyed over 50,000 residents of Missouri with questions regarding health care coverage and access, preventive health practices, current medications, health risk factors (including inactivity), and neighborhood factors (e.g., presences of sidewalks, resident perceptions of safety). Data were collected via phone interviews (landline and cell phone) with randomly selected residents and are weighted to be representative of the non-institutionalized adult population of the state. Data were collected in 2007, 2011 and 2016.

The National Walkability Index is available through the Environmental Protection Agency (EPA) database (EPA, n. d.), which provides a composite walkability score for census block groups based on a weighted composite of standardized values for street connectivity, land use mix and transit access. We obtained the walk index score for all census block groups in Clay and Jackson counties in Missouri and Johnson, and Wyandotte counties in Kansas. Following methods outlined in the 2018 United States Report Card on Physical Activity for Children and Youth (NPAPA, 2018), we divided walk index scores into quartiles, and categorized the top 25th percentile of scores as "highly walkable." Based on this benchmark, we determined what percent of the regional population lives in a highly walkable community (i.e., in a census block group with a walk index score at or above the benchmark score), by dividing the population in census block groups meeting or exceeding the benchmark score by the total population in all census block groups in the region.

The School Health Profiles Study (CDC, 2018) is conducted by the CDC on a regular basis and surveys schools on their health policies and practices. The study employs a sampling procedure to obtain representative samples of schools from jurisdictions that serve students in grades 6 through 12. Results are available for 43 states, 21 large urban school districts and two territories. Most schools surveyed provided responses to the survey from a principal and a lead health educator.

The Shape of the Nation (Society of Health and Physical Educators [SHAPE], 2016) is a report based on surveys distributed to physical education coordinators in all 50 U.S. states and the District of Columbia during the winter of 2015-2016. These surveys included questions about physical education policies and practices across grades K-12; the data obtained from the surveys were compiled into state-level profiles. In addition, the report includes

analyses of regulations relevant to physical education, obtained from a scan of state statutes and regulations regarding physical education. The results in the report, therefore, are applicable at the state, but not local, level.

The State of Children's Health: 2019 Community Health Needs Assessment for the Kansas City Region (CM CHNA 2019; Children's Mercy Kansas City, 2019) was conducted by Children's Mercy Kansas City (CM) in 2018. The assessment included a survey of 1,002 parents of children under the age of 18 in the total service area of CM – Wyandotte and Johnson counties in Kansas and Jackson and Clay counties in Missouri. To ensure a representative sample, stratified random sampling was used; results of the survey were weighted to be proportionate to the distribution of children in the actual population in terms of child's gender, age, race/ethnicity and household poverty status. Respondents were interviewed via landline and cell phone calls or completed the survey online. The survey included questions about the child's health, health risk and promotion factors (e.g., nutrition, tobacco exposure), and emotional and behavioral health. The CM CHNA is conducted every three years.

The Youth Risk Behavior Surveillance System (CDC, 2011, 2015, 2017b) is conducted on a biannual basis through questionnaires distributed in schools, collecting a representative sample of 9th-12th grade students. The survey includes questions about six kinds of health risk behaviors: unintentional injuries and violence, sexual behaviors, tobacco use, alcohol and other drug use, diet and physical inactivity. Results of the survey are representative at the national and state levels; representative results are also available for a few large school districts.

Abbreviations and Definitions

American Community Survey = ACS

Behavioral Risk Factor Surveillance System = BRFSS

Children's Mercy = CM

Children's Mercy Community Health Needs Assessment = CM CHNA

Comprehensive School Physical Activity Plans = CSPAP

County Level Study = CLS

Environmental Protection Agency = EPA

Incomplete = INC

Kansas = KS

Kansas City = KC

Kansas City Regional Physical Activity Plan = KCPA Plan

Kansas City Regional Report Card on Physical Activity for Children and Youth = KCPA Report Card

Missouri = MO

National Health and Nutrition Examination Survey = NHANES

National Physical Activity Plan Alliance = NPAPA

National Survey of Children's Health = NSCH

Not Available = N/A

Physical Activity = PA

Physical Education = PE

Total Service Area = TSA

Youth Risk Behavior Surveillance System = YBRSS

Table 1. Physical activity indicator grades

Grade	Interpretation	Benchmark
A	We are succeeding with a large majority of children and youth (≥ 80%).	A+ = 94-100% A = 87-93% A- = 80-86%
B	We are succeeding with well over half of children and youth (60-79%).	B+ = 74-79% B = 67-73% B- = 60-66%
C	We are succeeding with about half of children and youth (40-59%).	C+ = 54-59% C = 47-53% C- = 40-46%
D	We are succeeding with less than half, but some children and youth (20-39%).	D+ = 34-39% D = 27-33% D- = 20-26%
F	We are succeeding with very few children and youth (< 20%).	F = 0-19%
INC	Incomplete (insufficient or inadequate information to assign a grade).	

Table 2. Data quality standards and grading criteria

Data quality standards	
1.	Reported at the local level (i.e., Kansas City [KC] metro region or county-by-county)
2.	Recently reported (e.g., <3 years)
3.	Sufficient sample size
4.	Representative sample
5.	Publicly available (i.e., free and easily accessible)
Grade	**Interpretation**
A	Data meet all 5 standards
B	Data meet 4 out of 5 standards
C	Data meet 3 out of 5 standards
D	Data meet 2 out of 5 standards
F	Data meet 1 or 0 standards
INC	Incomplete (data unavailable)

Note. In indicators where the data did not match the grading criteria (e.g., available data only reported on active transport to school, but not total active transport, or data are only available for adults), the data quality grade was reduced, even if it met all five standards.

Table 3. KC Physical Activity Plan Core Working Group Members and Their Organizations

Jannette Berkley-Patton, PhD	Director, Health Equity Institute, University of Missouri-Kansas City
Carole Bowe Thompson	Project Director, Health Equity Institute, University of Missouri-Kansas City
Jordan Carlson, PhD	Director, Community Engaged Research, Center for Children's Healthy Lifestyles & Nutrition, Children's Mercy
Michelle Dake	Director, Youth Initiatives, KC Healthy Kids
Jodi Dickmeyer, MD	General Pediatrician, Children's Mercy
Rhonda Erpelding	Early Childhood Consultant
Maggie Green, MPA	Public Information Officer, Public Works, City of Kansas City, Mo.
Matthew Kleinmann, MA	Research Assistant, Weighing In, Center for Children's Healthy Lifestyles & Nutrition, Children's Mercy
Roosevelt D. Lyons	Deputy Director - Operations, Parks and Recreation, City of Kansas City, Mo.
Emily Meissen-Sebelius, MSW	Project Coordinator, Weighing In, Center for Children's Healthy Lifestyles & Nutrition, Children's Mercy
Bryce Miller	Research Assistant, Weighing In, Center for Children's Healthy Lifestyles & Nutrition, Children's Mercy
Richard Overcast	Public Health Analyst, Office of Regional Operations, Health Resources and Services Administration
Catherine Satterwhite, PhD, MSPH, MPH	Regional Health Administrator for the U.S. Department of Health and Human Services, Office of the Assistant Secretary for Health, in Region VII
Robin Shook, PhD	Director, Weighing In, Center for Children's Healthy Lifestyles & Nutrition, Children's Mercy, Chair, Kansas City Physical Activity Core Work Group
Laura Steele	Director of Education, BikeWalkKC
Shelly Summar, MSEd, RD, LD	Manager, Weighing In, Center for Children's Healthy Lifestyles & Nutrition, Children's Mercy
Reverend Eric D. Williams	Executive Director and Founder, Calvary Community Outreach Network
Elizabeth Wilson, MA	Graduate Research Assistant, Weighing In, Center for Children's Healthy Lifestyles & Nutrition, Children's Mercy

Table 4. KCPA Report Card Data Sources and Ratings

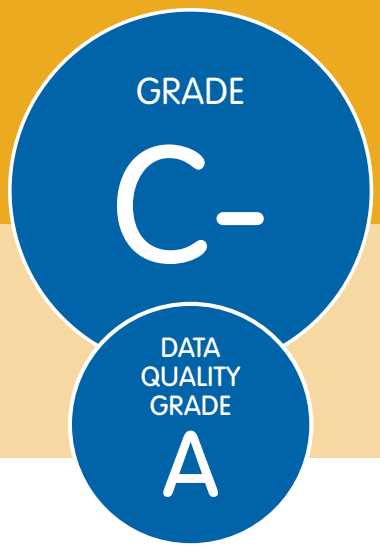
Source	Rating	Criteria Met
American Community Survey (U.S. Census Bureau, 2019)	B[1]	• Reported at the local level (i.e., KC metro region or county-by-county) • Sufficient sample size • Representative sample • Publicly available (i.e., free and easily accessible via public websites) • Recently reported (e.g., <3 years)
Behavioral Risk Factor Surveillance System (CDC, 2017a)	A	• Reported at the local level (i.e., KC metro region or county-by-county) • Recently reported (e.g., <3 years) • Sufficient sample size • Representative sample • Publicly available (i.e., free and easily accessible via public websites)
County Health Rankings (County Health Rankings and Roadmaps)	B	• Reported at the local level (i.e., KC metro region or county-by-county) • Sufficient sample size • Representative sample • Publicly available (i.e., free and easily accessible via public websites)
Missouri County Level Study (MDHSS, 2016)	A[2]	• Reported at the local level (i.e., KC metro region or county-by-county) • Recently reported (e.g., <3 years) • Sufficient sample size • Representative sample • Publicly available (i.e., free and easily accessible via public websites)
National Walkability Index (EPA, n. d.)	A	• Reported at the local level (i.e., KC metro region or county-by-county) • Recently reported (e.g., <3 years) • Sufficient sample size • Representative sample • Publicly available (i.e., free and easily accessible via public websites)
Shape of the Nation Report (SHAPE, 2016)	F	• Publicly available
The School Health Profiles Study (CDC, 2018)	B	• Recently reported (e.g., <3 years) • Sufficient sample size • Representative sample • Publicly available (i.e., free and easily accessible via public websites)
The State of Children's Health: 2019 Community Health Needs Assessment for the Kansas City Region (Children's Mercy Kansas City, 2019)	A	• Reported at the local level (i.e., KC metro region or county-by-county) • Recently reported (e.g., <3 years) • Sufficient sample size • Representative sample • Publicly available (i.e., free and easily accessible via public websites)
Youth Risk Behavior Surveillance System (CDC, 2011, 2015, 2017b)	B	• Recently reported (e.g., <3 years) • Sufficient sample size • Representative sample • Publicly available (i.e., free and easily accessible via public websites)

[1]Data only apply to residents 16 years or older

[2]Only available for counties in Missouri

2020 KANSAS CITY REGIONAL REPORT CARD ON PHYSICAL ACTIVITY

INDICATOR	GRADE	DATA QUALITY GRADE
Overall Physical Activity	C-	A
Sedentary Behaviors	C	B
Active Transportation	F	C
Organized Sport Participation	B-	A
Active Play	INC	INC
Physical Fitness	INC	F
Family and Peers	INC	INC
School	INC	F
Community and Built Environment	C-	B



OVERALL PHYSICAL ACTIVITY

Primary Criteria: Percentage of children and youth who meet the Physical Activity Guidelines for Americans, which recommend that children and youth accumulate at least 60 minutes of daily moderate-to-vigorous physical activity. (National Physical Activity Plan Alliance [NPAPA], 2018).

Key Findings:

- Approximately 42.5% of children 2-17 in the 4-county area were active at least 60 minutes on every day of the past week (Children's Mercy Kansas City [CM], 2019).
- Fewer teens (30.8%) engage in 60 minutes of daily physical activity (CM, 2019).
- The rates of children engaging in recommended overall physical activity tend to decline with age, with 58.9% of children 0-4 years old getting 60 minutes of daily activity, 43.5% of children 5-12 meeting recommendations, and only 30.8% of teens 13-17 being active 60 minutes every day (CM, 2019).
- The proportion of children meeting physical activity recommendation has declined since 2015 and 2012 surveys where 56.3% and 57.7% of children, respectively, were active one hour each day (CM, 2016; 2019).
- There are differences in physical activity by gender; boys tend to be more active than girls, with 44.7% of boys meeting recommendations compared to only 40.1% of girls (CM, 2019).

Other Considerations:

- State-level data indicate that 26.5% of Kansas and 28.6% of Missouri high school students engaged in at least 60 minutes per day of physical activity on all 7 days in the past week (Centers for Disease Control and Prevention [CDC], 2017b).
- There were no data available on children or youth engaging in vigorous activity, muscle strengthening activity or bone strengthening activity, limiting inferences beyond a broad measure of physical activity (e.g., minutes active per day).
- There were data available at the county level on the rates of adults with no leisure time physical activity. These rates range from 16% of adults in Johnson County, Kan., reporting no leisure time physical activity to over 29% of adults in Cass County, Mo. and 27% of adults in Jackson County, Mo. reporting no leisure time physical activity (see table 6).

TABLE 6

Percentage of adults reporting no leisure time physical activity	
County, State	**Percentage Estimate***
Cass County, MO	26-29%
Clay County, MO	22-24%
Jackson County, MO	22-27%
Platte County, MO	21-23%
Johnson County, KS	16%
Wyandotte County, KS	30%

*Note. Estimates are drawn from two sources for Missouri counties (County Health Rankings & Roadmaps [CHRR]; Missouri Department of Health and Senior Services [MDHSS], 2016) and one for Kansas counties (CHRR).

- Data suggest that 48.8% of adults in the Kansas City Missouri-Kansas metropolitan statistical area do engage in the recommended amount of aerobic physical activity (≥150 minutes per week) and 32.8% meet the recommended amount of muscle strengthening exercises (at least twice per week), but only 21.7% meet guidelines for both aerobic and muscle strengthening guidelines (CDC, 2017a).

Discussion of Indicator Grade

While the indicator was given a grade of C-, a grade which corresponds to 40-46% of children and youth meeting the main criteria, there was considerable variability within sub-groups, indicating that some segments of the population fare much better or worse than average. For example, while 43.5% of children ages 5-12 were physically active every day of the past week, only 30.8% of teens ages 13-17 met the guideline for daily physical activity; state-level data also indicate much lower prevalence of adequate physical activity in high school students (26.5% in Kansas and 28.6% in Missouri; CDC, 2017b). This trend has been documented at the national level with the 2005-06 National Health and Nutrition Examination Survey (NHANES) (CDC, 2005-2006)—and may be related to increased academic and social activities which displace unstructured time for physical activity. Similarly, approximately 10% more boys (44.7%) in the region were active every day than girls in the region (40.1%); much like disparities by age group, this corresponds to patterns seen in national reports (Child and Adolescent Health Measurement Initiative [CAMHI], 2016).

Other notable variability was the higher rates of children meeting recommendations in the "low income" category (51.4%) compared to those in the "very low income" (38.9%) and "mid/high income" (39.3%) categories (CM, 2019). It is unclear what factors underlie these differences, and we cannot draw strong conclusions to what may be associated with this variability.

Finally, there was variability in the rates of physical activity between the four counties surveyed by the 2019 Children's Mercy Kansas City Community Health Needs Assessment (2019 CM CHNA; CM, 2019). At the high end of the range was Wyandotte County (53.10%), a very diverse area with a high percentage of low-income households (which may relate to the findings of variability by income level). In descending order, 44.40% of Clay County, 41.00% of Jackson County, and 40.00% of Johnson County children and youth met overall physical activity recommendations.

Discussion of Data Quality Grade

The data quality grade is based solely on the data source for the key findings.

Data Source(s) for Key Findings

- The data upon which we based the grade was from the 2019 CM CHNA, which surveyed parents of children 2-17 on the number of days in the past week on which their child was physically active for one hour or longer (CM, 2019). The primary criterion for this indicator is the percentage of children meeting the Physical Activity Guidelines for Americans, which specifies that children and youth accumulate at least 60 minutes of moderate-to-vigorous physical activity per day (CDC, 2019). This recommendation further specifies that on at least three days per week, children and youth ages 6-17 should have vigorous-intensity physical activity, muscle-strengthening physical activity and bone-strengthening physical activity. While the 2019 CM CHNA measured how many days per week children accumulated at least 60 minutes of activity, it did not measure these other aspects of the Physical Activity Guidelines for Americans. Despite this discrepancy, our data source is of high quality, meeting five out of five data quality standards: it is reported at the local level (the four-county area encompassing Jackson and Clay counties

in Missouri and Johnson and Wyandotte counties in Kansas); reported in 2019; with a sample size of 1,002 parents; comprising a representative sample which was statistically weighted to represent the demographic composition of the four-county area; and publicly available via the Children's Mercy website. Given the close, though not perfect, alignment of the indicator criteria and the high quality of the data source, this data was given a quality grade of A.

Data Source(s) for Other Considerations

- The Youth Risk Behavior Surveillance System (YRBSS) is reported at the state level and is only available for high school students, limiting the scope of age groups and regional relevance of the information it provides. Therefore, while we present data from YRBSS to corroborate key findings, it does not inform the grade for this indicator (CDC, 2017b).

- The Behavioral Risk Factor Surveillance System (BRFSS) is a survey that reports data at both state and, in this indicator category, local levels (CDC, 2017a). It does not, however, survey children or youth, but rather presents data pertinent to adults in the area. We present the data collected and reported by BRFSS relating to adults meeting physical activity guidelines, but as it does not contain information about children or youth, we did not base the indicator grade on it.

- The Missouri County Level Study (CLS) is a high-quality data source, as it is reported at the county level; was most recently reported in 2016; has sufficient samples from each county; and is available on a public website (MDHHS, 2016). No equivalent survey, however, exists in Kansas, limiting its relevance to a Kansas City regional physical activity profile. Furthermore, the questions asked in the survey related only to a lack of physical activity, rather than meeting physical activity guidelines. Finally, as will BRFSS, this survey is only conducted among adults.

Recommendations:

- Harmonize local surveillance with national surveillance sources by using the same verbiage to measure physical activity (i.e., measure the number of days per week where child engages in moderate-to-vigorous physical activity).

- Local surveillance should include questions regarding muscle and bone-strengthening exercise.

- Local surveillance should include additional questions to assess disability status, in order to evaluate the presence of disparities by ability status, which have been documented in other research (NPAPA, 2018).

- Coordinate with ongoing research projects to include objective measures of physical activity (e.g., accelerometer data) in addition to parent or self-report data.

- Surveillance should ask questions that reflect the totality of the youth physical activity guidelines (e.g., strength training).

GRADE

C

DATA QUALITY GRADE

B

SEDENTARY BEHAVIORS

Primary Criteria: Percentage of children and youth engaging in 2 hours or less of screen time per day.

Key Findings:

- Of children, 5-17 in the 4-county area (Clay and Jackson Counties in Missouri, Johnson and Wyandotte Counties in Kansas) 40.7% had three or more hours of device time per school day (CM, 2019). This corresponds to approximately 59.3% of children having less than 3 hours of device time per school day.
- There was some variability in device time across the counties: Wyandotte County had a device time greater than 3 hours of 44.8%, while Clay, Jackson and Johnson Counties had device time rates greater than 3 hours, all near 40%.
- Device time greater than 3 hours increases with age; only 29.4% of school children 5-12 spent more than 3 hours on devices on an average school day, compared to 59.9% of those 13-17.
- Roughly equal proportions of boys (41.0%) and girls (40.6%) spend more than 3 hours on device time.
- There was variability in rates of device time greater than 3 hours by income: 48.1% of low-income children had greater than 3 hours of device time, compared to 42.0% of very low income and 39.7% of mid/high income children.
- Likewise, rates of device time greater than 3 hours varied by race/ethnicity: 48.0% and 47.7% of Black and Hispanic children, respectively had more than 3 hours of device time compared to 42.5% of children who were identified as "other" race/ethnicity and 37.9% of White children.

Other Considerations:

- 14.5% of Kansas and 21.1% of Missouri high school students watched television ≥ 3 hours per day (on an average school day; CDC, 2017b).
- 34.4% of Kansas and 42.3% of Missouri high school students who played video or computer games or used a computer≥ 3 hours per day (on an average school day; CDC, 2017b).

Discussion of Indicator Grade

Sedentary behaviors such as TV watching and overall time spent sitting are associated with increased risk of metabolic dysfunction (Owen, Sparling, Healy, Dunstan, Matthews, 2010), and it displaces physical activity. However, as noted in the 2018 United States Report Card on Physical Activity for Children and Youth, there

are difficulties in measuring rates of sedentary behaviors (NPAPA, 2018). Therefore, screen or device time—time spent on activities such as watching TV, playing videos games, engaged with smartphones and other electronic devices—is a proxy for sedentary behavior, as these activities displace other, more physically demanding, recreational activities. The NPAPA (2018) report card selected a cut-off of 2 hours per day of screen time, based on Canadian and Australian guidelines, as the U.S. has no official screen time recommendations for children and youth. The only available local data on this indicator specifically reported device time on an average school day greater than 3 hours. This discordance makes it difficult to compare regional rates of sedentary behavior to the national report. The data at the local level suggest that 59.3% of children spend less than 3 hours on devices on an average school day (CM, 2019), and this is lower for low-income children and Hispanic and Black children (that is, higher proportions of these groups spent more than 3 hours on devices per day). While 59.3% would indicate a grade of C+ for this indicator, given the mismatch between the data and the indicator standard and the variability by ethnicity/race and income, we lowered the grade to C.

Discussion of Data Quality Grade

The data quality grade is based solely on the data source for the key findings.

Data Source(s) for Key Findings

- The 2019 CM CHNA was the only source available at the local level for this indicator. Although it is a good quality source, meeting all five data quality standards, the question asked by the 2019 CM CHNA does not entirely align with the NPAPA (2018) report card indicator (i.e., 2 hours or less of screen time per day), which is at the very least one hour less of screen time than was assessed by the 2019 CM CHNA. For this reason, the data quality grade was assigned a B for this indicator.

Data Source(s) for Other Considerations

- The YRBSS (CDC, 2017b) is not a local data source, and since local data were available, information drawn from this source does not influence the grade assigned to this indicator. However, these data do suggest that estimates of device time in the region (40.7% of school children) are similar to or higher than rates across the state. Since this surveillance tool divided screen time into two different activities (watching TV or playing video games or doing other computer-based activities), it is unclear what the total average screen time in each state is.

Recommendations:

- Align the question wording of local surveillance of device time with NPAPA (2018) report card standards (e.g., less than 2 hours of screen time per day).
- Survey a wider age range of children, since screen time recommendations include children under the age of 5 limiting exposure to screens.
- Assess sedentary behavior through means other than self-report surveys (e.g., accelerometry, ecological momentary analysis).
- Work to reduce sedentary behaviors, such as device time, through cooperation with local community leaders.

GRADE

F

DATA QUALITY GRADE

C

ACTIVE TRANSPORTATION

Primary Criteria: Percentage of children and youth who use active transportation to get to and from places (e.g., school, park, mall, friend's house).

Key Findings:

- 5.7% of children and youth (5-17) who walk to school in the total service area (TSA) of the hospital—Johnson and Wyandotte counties in Kansas and Jackson and Clay counties in Missouri—walk to school (CM, 2019).

Other Considerations:

- There were data available at the county and metropolitan level on the rates persons 16+ who usually walked to work. These rates range from 2% of adults in Johnson County, Kan., usually walking to work to 1% in Clay County, Mo. (see table 7).

TABLE 7

Percentage of persons 16+ who usually walk to work	
Geographic Region	**Percentage Estimate***
Cass County, MO	1%
Clay County, MO	1-2%
Jackson County, MO	1-2%
Platte County, MO	1%
Johnson County, KS	2%
Wyandotte County, KS	1%
Kansas City, MO metro	2%

*Note. Estimates are drawn from two sources for Clay and Jackson counties in Missouri (MDHHS, 2016; U.S. Census Bureau, 2019) and one all other locations (U.S. Census Bureau, 2019).

Discussion of Indicator Grade

Active transportation is an important source of physical activity which can contribute to meeting the overall daily recommendations for physical activity. While active transportation may include walking or biking to school, friends' houses, parks, and other destinations, the NPAPA (2018) report cards notes that walking or biking to school is likely the most common form of active transportation. The 2019 CM CHNA assessed the mode of transportation that school children use to get to or from school, so, while there is no data available on other forms of active transportation, this measure likely captures the largest proportion of it. Therefore, we assigned the grade of F based on the low rate of walking to school (5.7%), which falls well below the cut-off point for this grade. Other data relevant to this indicator come from the state level (Missouri and Kansas), metropolitan (Kansas City, MO), and county level (from Missouri) sources which only assessed waking to work in persons 16 years or older, and therefore was not incorporated into the grade for this indicator. Nevertheless, given the very low rates of walking to work (1% to 2%), the rates of overall active transportation fall well below benchmarks.

Discussion of Data Quality Grade

The data quality grade is based solely on the data source for the key findings.

Data Source(s) for Key Findings

- The data upon which we based the grade was from the 2019 CM CHNA; rather than asking parents about active transportation methods (e.g., walking, biking, or skating to school or activities), the CHNA asked how the child generally gets to school, limiting the data we used to evaluate this indicator to only one kind of active transportation and for only one reason (i.e., only walking and only to school). Despite

this limitation, our data source is otherwise a good source, meeting five out of five data quality standards (see discussion in Overall Physical Activity section for more. Due to the substantial mismatch between our data source and the indicator criterion, we assigned a data quality grade of C.

Data Source(s) for Other Considerations

- The Missouri County Level Study (MDHHS, 2016) provides local-level data that is representative, from a sufficient sample size, and is recently reported. These data, however, only apply to persons 16 years and older, and are only available for counties in Missouri. Since this report seeks to characterize the Kansas City region, including counties in Kansas, we did not base the grade upon these data, but present them for context.

- The American Community Survey 2013–2018 (U.S. Census Bureau, 2019) provides state and county-level data for Kansas and Missouri, as well as data representative of the Kansas City, Mo., metropolitan area. While these data are recent, they are only applicable to persons 16 years and older. For this reason, we did not incorporate these findings into the indicator grade.

Recommendations:

- Improve local surveillance of all kinds of active transportation, expanding questions to assess biking and walking to destinations other than school or work.

- Partner with local organizations to measure active transportation (e.g., BikeWalkKC).

- Implement local policies to enhance active transportation (i.e., Complete Streets).

- Improve infrastructure to encourage active transportation.

GRADE

B-

DATA QUALITY GRADE

A

ORGANIZED SPORT PARTICIPATION

Primary Criteria: Percentage of children and youth who participate in organized sport and/or physical activity programs.

Key Findings:

- 60.1% of children and youth (5-17 years old) played on at least one sport team in the past year (CM, 2019).
- The most common number of sports teams played on in the past year was "none" (39.9%), followed by one (22.6%), two (18.8%), three (10.4%) and four/more (8.3%) (CM, 2019).

Other Considerations:

- 56.4% of Missouri and 58.3% of Kansas high school students played on at least one sports team in the past year (CDC, 2015; 2017b).

Discussion of Indicator Grade

Participating in organized sports not only provides opportunities for children and youth to be physically active on a regular basis, but it exposes them to activities which they may continue into adulthood. The national rates of organized sports participation indicate that around half of children meet the indicator standard (NPAPA, 2018), while regional estimates for Kansas City suggest that local rates are higher (60.1%). Unfortunately, more detailed information by demographic groups (i.e., age, gender, race, income, or county) are not currently available. It is unclear, therefore, whether national trends suggesting disparities in sports participation by family income or gender, for example, exist at the local level (NPAPA, 2018). However, based on national sources, it is reasonable to infer that children from families with higher incomes are more likely to participate in sports which require financial resources to purchase equipment and travel to meets. Furthermore, children and youth with disabilities likely have less access to sports participation (NPAPA, 2018).

Discussion of Data Quality Grade

We based the data quality grade on the data source used for the primary criteria.

Data Source(s) for Key Findings

- 2019 CM CHNA (CM, 2019) as discussed above (see Overall Physical Activity for discussion of data standards) is a high-quality data source, meeting five out of five data quality standards. Furthermore, the CHNA provided the percentage of children 5-17 that played on at least one sports team in the past year. This information matches the primary criteria for the indicator, and, taken with the otherwise high quality of the data source, merits the data quality grade of A.

Data Source(s) for Other Considerations

- The 2015 and 2017 YRBSS (CDC, 2015; 2017b) provide state-level data and only pertains to high school students. Furthermore, for Missouri, the most recent data available for this indicator were from 2015. Therefore, these data were not used when assigning a grade to this indicator. However, when comparing regional data to state-level data, it appears that the Kansas City region has at least comparable, if not slightly higher, levels of organized sports participation than state averages.

Recommendations:

- Surveillance sources should provide more detailed rates of sports participation within demographic groups.
- Increase access to sports participation, with special attention to disadvantages experienced by girls, those of lower income, geography, race/ethnicity or disability status.

GRADE
INC

DATA QUALITY GRADE
INC

ACTIVE PLAY

Primary Criteria: Percentage of children and youth who engage in unstructured/unorganized active play for several hours a day.

Secondary Criteria: Percentage of children and youth who report being outdoors for several hours a day.

Key Findings: N/A

Discussion of Indicator Grade

No data were available and so we are unable to report any findings. This indicator was also rated incomplete in the National Report Card, for the same reason. That said, as in the National Report Card, we believe that active play is an important aspect of a child's overall daily physical activity. We know that younger children typically are more active in a day (CM, 2019; NPAPA, 2018) and it is possible that the negative association between age and activity is in part due to a drop in active play. Beyond active play in general, ample research supports a positive association between outdoor time and health, both mental and physical (Gray et al., 2015; Triguero-Mas et al., 2015). For these reasons, monitoring not only the amount of active play, but also the setting (i.e., indoor or outdoor) is valuable.

Discussion of Data Quality Grade

There were no available data sources at the local level, and therefore the data quality for this indicator was given a grade of incomplete (INC).

Recommendations:

- Implement local surveillance of active play.
- Implement local surveillance of outdoor play.
- Provide resources to parents and youth that encourage active play.
- Implement or expand programs which encourage active play (e.g., recess, physical activity breaks at school).

PHYSICAL FITNESS

Primary Criteria: Percentage of children and youth who meet criterion-referenced standards for cardiorespiratory fitness.

Secondary Criteria:

- Percentage of children and youth who meet criterion-referenced standards for muscular strength.
- Percentage of children and youth who meet criterion-referenced standards for muscular endurance.

Key Findings: N/A

Data Source(s) for Key Findings: N/A

Discussion of Indicator Grade

Physical fitness is defined in NPAPA (2018) based on the National Physical Activity Guidelines for Americans (CDC, 2019) as the ability to carry out daily tasks comfortably and without undue exhaustion, as well as the ability to respond to unexpected emergencies. These standards include not only cardiorespiratory (aerobic) fitness, but also muscle strength and endurance standards, which are measured with exercise tests on a treadmill, pull-ups and grip strength. Some of these measures are assessed by Fitnessgram testing in regional schools, but our team was unable to obtain these data from the Cooper Institute. Therefore, while such data do exist, we are unable to rate this indicator, instead assigning a grade of INC.

While we are unable to report findings in this indicator, we chose to include it in our report because physical fitness is an important corollary of physical activity. While overall physical activity is the primary aspect of regional physical activity, increases in physical activity will likely increase cardiorespiratory fitness as well as muscular strength and endurance (NPAPA, 2018). It is the hope that future reports will have access to data in this indicator so that baseline physical fitness for children and youth in the region can be established and changes in these criteria can be measured over time as programs and policies that enhance physical activity are implemented.

Discussion of Data Quality Grade

The Fitnessgram tool, which assesses the cardiorespiratory fitness and muscle strength and endurance of school age children, is collected by schools in the region, but we were unable to obtain these data for regional school districts from the institution which owns these data. Since the data do exist, but they are not available to the public, we are unable to determine to what extent they meet some data quality standards (e.g., data are representative of the region), and in other cases, they fail to meet quality standards (e.g., recently reported, available at the local level, publicly accessible). For these reasons, the data quality grade for the physical fitness indicator was assigned an F.

Recommendations:

- Establish surveillance of physical fitness of local children or youth, or coordinate with existing Fitnessgram assessments to obtain local results at the school district or school level.
- Provide opportunities for local children and youth to engage in aerobic and muscle strengthening activities at sufficient intensity and frequency to improve physical fitness.
- Encourage the reporting of fitness test results.

GRADE
INC

DATA QUALITY GRADE
INC

FAMILY AND PEERS

Primary Criteria: Percentage of family members (e.g., parents, guardians) who facilitate physical activity and sport opportunities for their children (e.g., volunteering, coaching, driving, paying for membership fees and equipment).

Secondary Criteria:

- Percentage of family members (e.g., parents, guardians) who are physically active with their kids.
- Percentage of children and youth with friends and peers who encourage and support them to be physically active.

Key Findings: N/A

Discussion of Indicator Grade

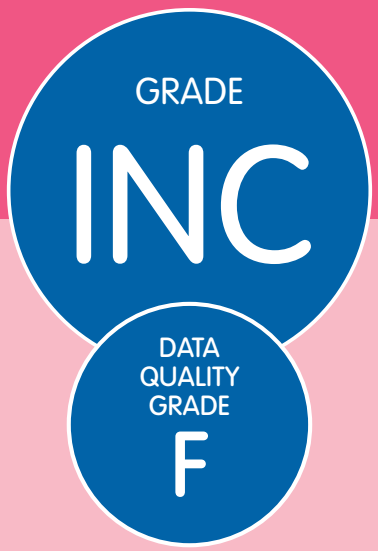
While no data are available at the local level (or national level) on rates of family and peer support and encouragement of physical activity, we include this indicator to establish a call for monitoring and improving this indicator of physical activity. Social support for physical activity is a well-established predictor of higher rates of physical activity, and among children and youth, family and peers are the most significant sources of such support (Fitzgerald et al., 2012; Loucaides & Tsangaridou, 2017). As noted by NPAPA (2018), different parenting styles are associated with higher or lower rates of physical activity in children, with more restrictive styles inhibiting physical activity. As children age, their peers become more significant sources of influence, and children with more active peers are more likely to be active themselves (Fitzgerald et al., 2012).

Discussion of Data Quality Grade

No data sources are available for any of the indicator criteria, so the data quality grade was rated INC.

Recommendations:

- Provide programing to enhance parent support and modeling of physical activity.
- Establish regional surveillance of parent and peer support for physical activity.



SCHOOL

Primary Criteria: Percentage of schools with active school policies (e.g., daily PE, daily physical activity, recess, "everyone plays" approach, bike racks at school, traffic calming on school property, outdoor time).

Secondary Criteria: Percentage of schools where the majority (> 80%) of students are taught by a PE specialist.

Secondary Criteria: Percentage of schools where the majority (> 80%) of students are offered the mandated amount of PE (for the given state/territory/region/country).

Secondary Criteria: Percentage of schools that offer physical activity opportunities (beyond PE) to the majority (> 80%) of their students.

Secondary Criteria: Percentage of parents who report their children and youth have access to physical activity opportunities at school in addition to PE classes.

Secondary Criteria: Percentage of schools with students who have regular access to facilities and equipment that support physical activity (e.g., gymnasium, outdoor playgrounds, sporting fields, multi-purpose space for physical activity, equipment in good condition).

Key Findings:

Active school policies:

- No Kansas state law requiring a certain amount of PE per week in elementary, middle or high school (Society of Health and Physical Educators [SHAPE], 2016).
- No Missouri state law requiring a certain amount of PE in high school (SHAPE, 2016).
- Missouri requires 20 minutes of daily recess in elementary school (SHAPE, 2016).
- Missouri requires a minimum 120 minutes of physical activity time (which may include PE) in elementary school (SHAPE, 2016).
- Kansas recommends recess (not required) (SHAPE, 2016).
- 100% of Missouri schools have recess requirement (state law) (SHAPE, 2016).
- Kansas requires PE credits for high school graduation (SHAPE, 2016).
- Missouri requires PE credits for high school graduation (SHAPE, 2016).
- 27.9% of Kansas and 30.9% of Missouri high school students attended daily physical education (CDC, 2011).
- 24.6 % of Kansas and 28.6% of Missouri high school students went to physical education (PE) classes on all 5 days in an average school week (CDC, 2017b).
- 0.8% of Kansas 3.1% of Missouri schools have Comprehensive School Physical Activity Plans (CSPAP) (NPAPA, 2018).

Students taught by PE specialist

- 87.0% of Kansas and 83.2% of Missouri of schools had ≥ 1 PE teacher or specialist who received professional development on PE or physical activity (PA) in the previous year (CDC, 2018).

Students offered mandated amount of PE

- 100% (presumed) no data source available.

Schools offer physical activity opportunities beyond PE:

- 47.7% of Kansas and 49.7% of Missouri secondary schools have PA breaks in classroom (CDC, 2018).
- 49.1% of Kansas and 52.0% of Missouri secondary schools have PA opportunities before the school day (CDC, 2018).
- 79.7% of Kansas and 86.4% of Missouri secondary schools have PA opportunities after the school day (CDC, 2018).
- 39.7% of Kansas and 59.3% of Missouri secondary schools offered intramural sports or PA clubs (CDC, 2018).
- 94.9% of Kansas and 85.5% of Missouri secondary schools offered interscholastic sports (CDC, 2018).
- 79.2% of Kansas and 86.0% of Missouri secondary schools have school health council that assessed availability of PA opportunities for students (CDC, 2018).
- 73.4% of Kansas and 64.9% of Missouri secondary schools had joint use agreement for shared use of school or community physical activity facilities (CDC, 2018).

Parents report children have access to physical activity opportunities beyond PE.

- N/A

School with students who have regular access to facilities/equipment that supports physical activity.

- N/A

School with students who have regular access to facilities/equipment that supports physical activity.

- N/A

Data Source(s) for Key Findings

- Shape of the Nation (SHAPE, 2016) is a national report that includes data at the state level. This report compiles results of a survey completed by physical education coordinators from states as well as a scan of legislation at the state level. The Shape of the Nation report is reported regularly, but the most recent edition is now four years old. Furthermore, this report is applicable at the state level, and therefore inferences about the Kansas City region are limited.
- YRBSS (CDC, 2017b) is a national report, recently reported, and representative at the state level. Local, county level or regional results are not available.
- The NPAPA Report Card (NPAPA, 2018) reported results at the state level within the past two years.
- School Health Profiles Study (CDC, 2018) provides information at the state level (and in some cases, but not the Kansas City region, district level) on PE, physical activity and other health education policies. These data are reported regularly, most recently in 2018.

Discussion of Indicator Grade

There is a lack of local data available for this indicator category, but there is information for both Kansas and Missouri minimum requirements for physical education. Notably, while both states require some PE credits for graduation in high school, there are no laws in Kansas requiring a minimum number of PE minutes for any grade level, and no laws in Missouri establishing minimum PE minutes in high school (SHAPE, 2016). Therefore, while it is impossible to know what the average number of PE minutes local students have per week, at least some students could spend no time whatsoever in PE for most of their education. In addition, the most recent state rates of daily PE in high school students range from 24.6 % to 28.6%, which decreased from 2011 (CDC, 2011, 2017b). These data suggest that most students do not receive daily PE, which is an important active school policy. The only other active school policy with data available is recess—the state of Missouri mandates recess in elementary

school, but the state of Kansas only recommends it (SHAPE, 2016). Therefore, students in the region may experience wide disparities in their access to recess or other forms of activity breaks. Furthermore, very few schools in either state have adopted Comprehensive School Physical Activity Plans (CSPAPs), which require collaboration among school staff to integrate physical activity into school settings before, during and after school (NPAPA, 2018). While CSPAPs ideally provide means for regular physical activity at school, they are unavailable in most schools serving students in the region.

Other criteria for this indicator provide context for the quality of PE instruction, suggesting that most PE teachers have specialized training in physical education (CDC, 2018). However, specialized training of teachers does not reflect the availability of widespread PE opportunities. Likewise, rates of physical activity breaks during the school day or physical activity opportunities before school range from 47.7% to 49.7% across both states (CDC, 2018). The possibility exists that students in the region do not benefit from either physical activity breaks or PE, given the lack of state mandates. In other regards, statewide levels of intramural sports or physical activity clubs (39.7% to 59.3%) and interscholastic sports (85.5% to 94.9%) indicate that students have opportunities for physical activity through means other than PE (CDC, 2018). These opportunities, however, may come with costs associated with equipment or club fees, creating unequal access.

Finally, most schools in both states had school health councils which assess the availability of physical activity opportunities for students (CDC, 2018); these councils may be poised to develop and implement CSPAPs, but their activities are undocumented in available data sources. Schools can also serve to increase physical activity for the broader community by establishing joint use agreements; these agreements allow shared use of physical activity facilities, typically outside school hours, by community members. In Kansas and Missouri, between 64.9 and 73.4% of schools had such agreements (CDC, 2018); however, these data are too broad to establish what rates of joint use agreements are locally.

Discussion with KCPA Plan core workgroup members highlighted that while state regulations are broad, regional schools may have much more stringent standards and provide high-quality PE and PA opportunities to students. Since no systematic surveillance of school policies or practices is at the local level, the final grade for this indicator is INC.

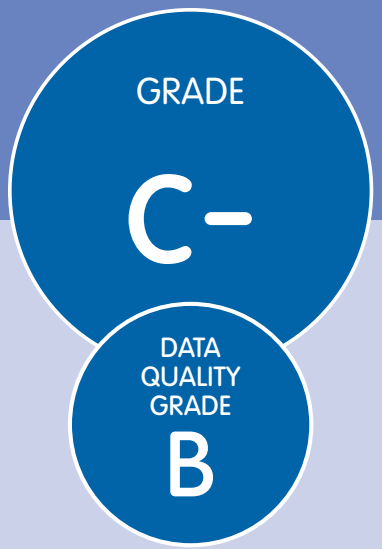
Discussion of Data Quality Grade

Data were not available at the local level, and there were no data at any level available for some criteria in this indicator. Sources available at the state and/or national level are discussed below. Due to the lack of data representative of the region, but the presence of data sources for some criteria, we assigned a data quality grade of F.

Recommendations:

Establish local surveillance of PA in schools through surveys of parents, staff and administrators; specifically, survey:

- Students taught by PE specialist.
- Students offered mandated amount of PE.
- How many schools offer physical activity opportunities beyond PE.
- Parents report children have access to physical activity opportunities beyond PE.
- Schools with students who have regular access to facilities/equipment that supports physical activity.
- Implement statewide standards for recess and PE.



COMMUNITY AND BUILT ENVIRONMENT

Primary Criteria: Percentage of communities/municipalities that report they have infrastructure (e.g., sidewalks, trails, paths, bike lanes) specifically geared toward promoting physical activity.

Secondary Criteria: Percentage of children or parents who report having facilities, programs, parks and playgrounds available to them in their community.

Secondary Criteria: Percentage of children or parents who report living in a safe neighborhood where they can be physically active.

Secondary Criteria: Percentage of children or parents who report having well-maintained facilities, parks and playgrounds in their community that are safe to use.

Key Findings:

Communities with infrastructure promoting physical activity:

- 78.1% of TSA children live in neighborhood with sidewalks (CM, 2019).
- 31.56% of KC Metro, 35.26% of Jackson County, 36.75% of KC, and 37% of Clay County residents have roads and streets with shoulders or marked lanes for bicycling in their community (MDHHS, 2016).
- 67.47% of KC Metro, 65% of Clay County, 76.6% of Jackson County, and 74.4% of KC residents have sidewalks in their neighborhood (MDHHS, 2016).

Children or parents who have facilities, programs, parks and playgrounds:

- 83% of Platte County, 90% of Clay County, 90% of Wyandotte County, 91% of Jackson County, 95% of Johnson County residents reside in a census block that ≤ .5 mile of a park, or reside in an urban census block that is ≤ 1 mile of a recreational facility, or reside in a rural census block that is ≤ 3 miles of a recreational facility (County Health Rankings & Roadmaps).
- 83-95% of total TSA residents have access to exercise opportunities (CM, 2019).

Children or parents who report living a safe neighborhood:

- 12% of TSA children live in "slightly" or "not at all" safe neighborhood (CM, 2019).
- 9% of TSA children live in neighborhoods with graffiti or vandalism (CM, 2019).
- 18% of TSA children live in neighborhoods where there is usually litter or loose garbage on the street or sidewalk (CM, 2019).
- 83.41% of KC metro, 90.23% of Clay County, 74.45% of KC, and 77.01% of Jackson County residents consider their neighborhood to be extremely or quite safe (CM, 2019).

Children or parents who report having well-maintained facilities, parks and playgrounds: N/A

Other Considerations:

- Percentage of population living in a highly walkable neighborhood; 29.7% of population in 4-county area lives in a highly walkable neighborhood. By county, there 28.1% in Clay County, 39.8% in Jackson County, 17.0% in Johnson County, and 32.2% in Wyandotte County live in a highly walkable neighborhood. (Environmental Protection Agency [EPA], n. d.).

Data Source(s) for Key Findings

- The 2019 CM CHNA (CM, 2019) health needs assessment provided data for several criteria in this indicator and is a high-quality data source, meeting all five data quality standards. Additionally, the CHNA source data are aligned criteria that these data are used to rate.

- Missouri County Level Study (MDHHS, 2016) is a high-quality source, but this source only is representative of Missouri counties, limiting our ability to make inferences about regional performance on criteria rated based on these data.

- County Health Rankings (County Health Rankings & Roadmaps) is a high-quality data source. It is publicly available, recently reported, using a sufficient sample size, and in the case of geographic criteria (e.g., percent of population living within .5 mile of a park), representative of the population.

Data source(s) for Other Considerations

- EPA Walkability Index (EPA, n. d.) data are available publicly and are tied to census block groups, and therefore considered to have a representative, sufficient sample size. The data were collected in 2010.

Discussion of Indicator Grade

The primary criteria in this indicator is the proportion of residents who report they have various kinds of infrastructure geared toward promoting physical activity. While there are relatively high rates of residents living in neighborhoods with sidewalks (78.1%; CM, 2019), far fewer residents in Missouri counties live in an area with marked bike lanes (31.5% - 37%; MDHHS, 2016). Unfortunately, there is no source at the local level in Kansas that documents availability of bike lanes.

Secondary criteria in the indicator include access to facilities such as parks or recreation centers; higher proportions of residents in the Kansas City region live close to these facilities compared to statewide estimates (County Health Rankings & Roadmaps; NPAPA, 2018), which may be due to the fact that aside from a few metropolitan areas, both Kansas and Missouri are relatively rural states. Furthermore, local sources suggest that the majority (77% - 90.2%) of residents live in a neighborhood that they consider safe (CM, 2019; MDHHS, 2016); however, this range suggests geographic disparities, which may align with racial/ethnic and socioeconomic divisions in residence. Finally, we were able to access a census-block level data source with walkability ratings (EPA, n. d.). Based on the NPAP (2018) report card cut-off for a "highly walkable" neighborhood, only approximately 41.5% of the population lives in a highly walkable neighborhood. Therefore, the overall grade for this indicator represents not only the relatively high proportion of sidewalks and safe neighborhoods, but also the lower proportions of bike lanes and walkable neighborhoods.

Discussions with subject matter experts highlighted the lack of available data on important factors that influence the use of the built environment. For example, while there are surveys detailing the number of sidewalks in a community, little data has been collected on the perceived quality of those sidewalks. Additionally, sidewalk and trail connectivity were not assessed; a well-connected trail and sidewalk system would enhance the desire of residents to use those facilities.

Furthermore, while neighborhood safety was assessed by asking parent perception of the neighborhood, safety can also refer to pedestrian safety. Pedestrian safety is affected

by traffic speed, which was not assessed by any measure nor even included as an indicator in the national report card (NPAPA, 2018). Based on these factors, it was decided to assign a grade of C-, which reflects not only the range of values documented for indicator criteria, but also the lack of criteria which are important to evaluate in this indicator (e.g., traffic safety, sidewalk and trail connectivity).

Discussion of Data Quality Grade

While there were high-quality data sources available, we were unable to obtain data for some indicator criteria (e.g., well-maintained facilities, parks and playgrounds) from any source. In addition, discussion with subject matter experts highlighted that while some aspects of safety (e.g., parent perception) were measured by the 2019 CM CHNA (CM, 2019), others (e.g., traffic or other objective measures of pedestrian safety) may not be represented by these data.

Recommendations:

- Establish local surveillance of a broader range of built environment facilities (i.e., bike lanes, trails, etc.).
- Provide information about neighborhood safety and facilities in conjunction with information about race/ethnicity and socioeconomic status of residents.
- Improve access and equity to facilities and infrastructure to support physical activity.
- Assess additional criteria in this indicator, including traffic safety regulations as well as trail and sidewalk connectivity.

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