



ACSM American Fitness Index™ 2020: Target Goals for Communities



Executive Summary

One of the most effective ways that adults and children can maintain and improve their overall health is by being physically active. With support and funding from the WellPoint Foundation (www.wellpointfoundation.org), the ACSM American Fitness Index™ (AFI) program was created in 2008. The program is designed to develop a valid and reliable measure of the health and community fitness at the metropolitan level in the United States. It also provides valuable resources to help communities focus their programming efforts as well as develop collaborative activities and partnerships with other health organizations. The overall goal of the AFI program is to help improve the health of the nation by promoting active lifestyles.

The 50 largest Metropolitan Statistical Areas (MSAs) in the U.S. were chosen as the unit of measurement because they represent the group of counties comprising the urban areas where residents live, work, and access community resources. Data come from reputable sources, and

scientific methodologies were used to increase validity and reliability. Data were identified, assessed, and scored by a national expert panel for inclusion into an index to compare each MSA's attributes with the overall U.S. values and with the other large metropolitan areas. Communities with the highest AFI scores are considered to have strong *community* fitness, a concept analogous to individuals having strong *personal* fitness.

Using the AFI data report, communities will be able to assess factors contributing to the health status of their residents. Additionally, as communities implement targeted programs to improve health status and environmental resources, they will be able to measure their progress using the relevant AFI elements. This year, for the first time, the AFI Research Team has included a **target goal for each measure**. These goals represent *high-but-achievable* standards and hopefully will inspire cities to progress toward these goals. The long-range vision for the AFI program is to provide annual updates to the rankings, so cities can monitor their progress in improving their health and active living fitness indicators.



ACSM American Fitness Index (AFI) Background and History

Background and Need for Action

One of the most effective ways that adults and children can maintain and improve their overall health is by being physically active.¹⁻⁵ For adults, regular exercise can prevent premature death, heart disease, stroke, high blood pressure, type 2 diabetes, breast cancer, colon cancer, and the risk of falls and depression. For children and adolescents, regular physical activity can decrease body fat and improve bone health, cardiorespiratory fitness, and muscular strength.

The Centers for Disease Control and Prevention has set a goal to improve health and fitness, prevent disease and disability, and enhance quality of life for all Americans through physical activity. Emerging public health research suggests that to reach this goal, we must create a culture that integrates physical activity into our daily lives.¹ To do so, community leaders and health planners must first *be aware* of their community's current health status and behaviors. These may include key indicators related to physical inactivity such as rates of obesity and chronic disease, number of health care providers, existing policies

that support a healthy community, and resources and the built environment (human-modified spaces such as homes, schools, workplaces, highways, etc.)

With support and funding from the WellPoint Foundation (www.wellpointfoundation.org), the ACSM American Fitness Index (AFI) program was created in 2008. The program is designed to develop a valid and reliable measure of the health and community fitness at the metropolitan level in the United States. It also provides valuable resources that help communities focus their programming efforts and assists communities in developing collaborative activities and partnerships with other organizations that contribute to health promotion.

The overall goal of the AFI program is to help improve the health of the nation by promoting active lifestyles. Using the AFI data report, communities will be able to assess factors contributing to the health status of their residents. Additionally, as communities implement targeted programs to improve health status and environmental resources, they will be able to measure their progress using the relevant AFI elements.

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We must create a culture that integrates physical activity into our daily lives. To accomplish this goal, community leaders and health planners must first **be aware** of their community's health status and behaviors.¹



ACSM American Fitness Index Guiding Principles for Healthy Communities

- Overall health improvement in U.S. cities requires a focus on the prevention of behavioral-linked diseases by addressing underlying behaviors and community factors.
- Physical inactivity and unhealthy diets have contributed to the rise in chronic diseases and pose a clear and present danger to our health and healthcare systems, our cities, our nation, and our future.
- All cities in the U.S., regardless of size and current health status, can make significant advances in improving the health of their residents through simple, affordable, effective steps.
- More synergy and collaboration is needed to assist U.S. cities in actively moving toward better health.

ACSM American Fitness Index Program Components

The full-edition data report for the AFI program focuses on data collection and analysis for the 50 largest Metropolitan Statistical Areas (MSAs) defined by the U.S. Office of Management and Budget using data from the U.S. Census Annual Estimates of Population. The 50 cities are listed the beginning of this report. For communities not listed in this report, ACSM has created the *My AFI Community Application Tool* (www.AmericanFitnessIndex.org) to assist in assessing their level of fitness.

The AFI program seeks to improve the health, fitness, and quality of life of citizens through three key components:

- **Data:** We collect, aggregate, and report metropolitan-level data related to healthy lifestyles, health outcomes, and community resources that support a physically active society. We disseminate the AFI data report to give an accurate snapshot of the health status and contributing factors in major metropolitan areas across the nation.
- **Resources:** The AFI Report serves as a resource for promoting and integrating research, education, and practical applications of sports medicine and exercise science to maintain and enhance physical performance, fitness, health, and quality of life.
- **Health Promotion Partners:** We help communities connect and partner with existing organizations and local, state, and national programs on physical activity and healthy lifestyles initiatives.

ACSM American Fitness Index Methodology

Why Choose MSAs Over Cities?

Defining a “city” by its city limits overlooks the interaction between the core of the city and the surrounding suburban areas. Residents outside the city limits have access to fitness-related resources in their suburban area as well as the city core. Likewise, the residents within the city limits may access resources in the surrounding areas. Thus, the metropolitan area, including both the city core and the surrounding suburban areas, act as a unit to support the wellness efforts of residents of the area. Consequently, the MSA data were used where possible in constructing the AFI. It is understood that various parts of the central city and surrounding suburban area may have very different demographic and health behavior characteristics, as well as access to community-level resources to support physical activity.

How Were the Indicators Selected for the Data Index?

Elements were included in the data index if they were:

- Related to the level of health status and/or physical activity for a community;

- Recently measured and reported by a reputable agency or organization in the metropolitan area;
- Available to the public;
- Measured routinely and provided in a timely fashion; and
- Modifiable through community effort (for example, smoking rate is included, climate is not).

What Data Sources Were Used to Create the Data Index?

Publicly-available data sources from federal reports and past studies provided the information used in this version of the data index. The largest single data source for the personal health indicators was the CDC's Selected Metropolitan/Micropolitan Area Risk Trends from the Behavioral Risk Factor Surveillance System (SMART BRFSS). The Trust for Public Land provided many of the community/environmental indicators through an annual survey conducted by the Center for City Park Excellence. The U.S. Census American Community Survey was the source for most of the MSA descriptions. Data used in the MSA description and index were also provided by the U.S. Department of Agriculture, State Report Cards (School Health Policies and Programs Study by the CDC), the Health Resources and Services Administration's (HRSA) Area Resource File, and the Federal Bureau of Investigation's (FBI) Uniform Crime Reporting Program. In all cases, the most recently-available data were used. In addition to these data sources, each year the AFI research team explores new sources for possible inclusion in the report. The data index elements and their data sources are shown in Appendix A.

How Was the Data Index Built?

Potential elements for the AFI data index were scored for relevance by a panel of 26 health and physical activity experts in 2008. Two Delphi method-type rounds of scoring were used to reach consensus on whether each item should be included in the data index and the weight it should carry in the calculations.

The Delphi method began with a draft list of elements or measures to include in the index. An expert panel was selected and a questionnaire was mailed to them for their input on the list of elements. Each participant was asked to score the elements independently on a scale from 0 to 3 (0 = not appropriate for the index; 1 = should be in the index, but of minor importance; 2 = should be in the index and is of moderate importance; 3 = should be in the index and is of high importance.) The panel members also were asked to add measures they thought should be added to the index.

The responses from the first round were summarized into a feedback version of the list and sent to the same panelists for a second round of scoring. The panelists were not asked to re-rate items for which consensus was reached on the first round of scoring. The new list of measures revealed the panelists' scores from the first round. The panelists were asked to re-score the elements on the same scale after seeing their colleagues' scores. After the second round, a consensus was obtained for all elements. A final summary report was provided to the expert panel members for their feedback.

Scores were assigned a weight of 1 (little importance), 2 (moderate importance), or 3 (high importance) to include in the data index. From this process, 30 currently-available indicators were identified and weighted for the index and 17 description variables were selected. The description elements were not included in the data index calculation, but were shown for cities for comparison purposes. Each item was first ranked (worst value = 1) and then multiplied by the weight assigned by consensus of the expert panel. The weighted ranks were then summed by indicator group to create scores for the personal health indicators and community/environmental indicators. Finally, the MSA scores were standardized to a scale with the upper limit of 100 by dividing the individual MSA score by the maximum possible value and multiplying by 100.

Summary of the scoring process:

$$\text{MSA Score}_k = \left(\frac{\sum_{i=1}^n r_{ki} w_{ki}}{\text{MSA Score}_{\max}} \right) * 100$$

r = MSA rank on indicator

w = weight assigned to indicator

k = indicator group

n = 14 for personal health indicators

n = 16 for community/environmental indicators

MSA Score_{max} = hypothetical score if an MSA ranked best on each element

The individual weights also were averaged for both indicator groups to create the total score. Both the indicator group scores and the total scores for the 50 cities were then ranked (best = 1) as shown on the Metropolitan Area Snapshots.

How Should the Scores and Ranks Be Interpreted?

It is important to consider both the rank *and* score for each city because scores for many closely-ranked cities

are very similar, indicating little relative difference among them. Also, the highest-ranked cities do not necessarily have excellent values across all indicators, nor do the lowest-ranked cities have consistently low values on all indicators.

How Were the Areas of Excellence and Improvement Priority Areas Determined?

The Areas of Excellence and Improvement Priority Areas for each MSA were listed to assist communities in identifying potential areas where those communities might focus their efforts, or alternatively celebrate their success. This process involved comparing the data index elements of the MSA to a newly-developed target goal. The target goals for the personal health indicators were derived by generating the 90th percentile from the pooled 2008-2012 AFI data. The target goals for the community health indicators were derived by calculating the average from the pooled 2008-2012 AFI data. Data indicators with values equal to or better than the target goal were considered “Areas of Excellence.” Data indicators with values worse than 20% of the target goal were listed as “Improvement Priority Areas.”

What Are The Limitations of This Project?

The items used for the personal health indicators were based on self-reported responses to the Behavioral Risk Factor Surveillance Survey and are subject to the well-known limitations of self-reported data. Because this limitation applies to all metropolitan areas included in this report, the biases should be similar across all areas, so the relative differences should be valid.

As per advice provided on the FBI Uniform Crime Reporting Program website, violent crime rates were not compared to U.S. values or averages of all MSAs. As indicated on the FBI website, data on violent crimes may not be comparable across all metropolitan areas because of differences in law enforcement policies and practices from area to area.

The Trust for Public Land community/environmental indicators only includes city-level data, not data for the complete MSA. Consequently, most of the community/environmental indicators shown on the MSA tables are for the main city in the MSA and do not include resources in the rest of the MSA.



Target Goals represent high but achievable standards, and hopefully will inspire cities to progress toward these goals.

Target Goals Methodology

Target Goals in the ACSM American Fitness Index

In the published annual reports of the ACSM American Fitness Index, comparative data are provided so that each metropolis can gauge its fitness measures in context with the U.S. value, the MSA average, and the MSA range for the 50 cities in the report. In addition to the comparative data, the AFI Research Team developed target goals that communities can use to identify specific fitness related areas for inclusion into their strategic plans. These goals would ideally represent *high but achievable standards*, and hopefully will inspire cities to progress toward these goals.

The AFI Research Team considered a number of options for creating target goals prior to recommending those listed in this report. First, the team carefully reviewed **Healthy People (HP) 2020 objectives**, targets, and benchmarking methods⁶ (see Appendix B for relevant HP 2020 Objectives). Presentation of consistent and simplified goals for communities, whether viewing the AFI or HP 2020, would be advantageous. Unfortunately, the team found that most of the AFI measures are either not included as objectives in HP 2020 or the objectives are not directly comparable. For example, HP 2020 objective PA-15, “Increase legislative policies for the built environment that enhance access to and availability

of physical activity opportunities,” is a developmental objective with no established target goals applicable to the numerous measures of the built environment and recreational facilities in the AFI report. Likewise, HP 2020 objective D-1 seeks to “reduce the annual number of new cases of diagnosed diabetes in the population...” (*incidence*), while the AFI measure is instead adult diabetes prevalence, since only prevalence data were available.

For these reasons, it was considered untenable to adopt the HP 2020 targets directly for AFI target goals. Separately, however, the AFI Research Team assessed the appropriateness of the Healthy People target-setting method. In most cases, the HP 2020 target was set at a ten percent improvement from the baseline measure for the nation. Because the AFI report includes 50 large cities, setting the target at 10 percent improvement would result in different targets for each city rather than one goal. To expect the same 10% improvement from all cities on all measures, when some cities are already performing well on some fitness measures, would not promote progress where needed and also not recognizing achievement.

The AFI Research Team also carefully investigated the possibility of using the national benchmarks established by **County Health Rankings (CHR)**, another national initiative with solid methodology and broad usefulness⁷. There is greater similarity between the AFI and CHR measures, given that much of the data for both are derived from the Behavioral Risk Factor Surveillance System. However, the CHR often reported their results

To expect 10% improvement from all cities on all measures, when some cities are already performing well on some fitness measures, does not promote progress where needed while also recognizing achievement.



The team determined that the 90th percentile provided the best balance between setting a high standard that was also clearly achievable for the personal health indicators. Of 50 cities, four or five met the initial target goal by measure in 2012.

for the same BRFSS question differently than does the AFI. For example, CHR reports the *average number of days* when physical/mental health was not good in the past 30 days, while the AFI reports the *percentage* of respondents who reported *any days* when their physical/mental health was not good. Additionally, some AFI measures are not included in the CHR, such as asthma prevalence and fruit/vegetable consumption. These differences again preclude us from directly adopting the same set of target goals for the AFI as the CHR. However, the CHR benchmarking method was assessed and found to be a suitable method that could be adopted by the AFI for creating the target goals for the fitness indicators. CHR uses the 90th percentile as their benchmarking method across measures of the CHR. This method is appealing because it enables the setting of a high, yet achievable, standard for health measures. A target goal set at the 90th percentile means that only 10 percent are performing better, yet it also means the goal is feasible given that 10% have exceeded the 90th percentile. Because the CHR utilizes multi-year data to make BRFSS health data available to counties throughout the U.S., this is the one website where nearly all counties in the U.S., regardless of size, can obtain some data to assess their own fitness index. Much commonality and consistency would be demonstrated between AFI and CHR through use of similar benchmarking methodology and data sources.

Finally, the AFI research team used the **AFI data set** consisting of the collective AFI measures of the 50 cities in the previous reports, 2008 to 2012 to establish the target goals. Large urban areas are different in many ways from smaller cities and towns across America. For this reason, the most appropriate peer group from which to derive the AFI target goals for large urban areas would be formed by these 50 large cities rather than the U.S. overall. Using the AFI data set to derive the target goals assures that an appropriate peer group was used. In addition we have complete data for the cities that were utilized to set the target goals. For each measure, the team considered using the best MSA value, mean value, median value, as well as the 90th percentile for the 50 cities in the previous reports as the potential target goals. The best

MSA value was determined to be a poor choice because only one city could hold this designation, and it therefore lacks achievability. The mean and median reflect average performance rather than exemplary performance and were therefore not initially considered viable target goals.

Personal Health Indicators

The team determined that the 90th percentile provided a good balance of setting a high standard that is also achievable for the personal health indicators. Of 50 cities, four or five will have met the initial target goal by measure. The rationale for selecting this method is also strengthened by consistency with the CHR. Therefore, this method was used for the personal health indicators.

Community Health Indicators

For the community health indicators, the team revisited the idea of using the MSA mean from the pooled 2008-2012 community health indicators. The team felt the MSA average for the community health indicators provided a useful target for the following reasons:

- The way improvements in the community health indicators are achieved is different from the way health is improved for the personal indicators. Therefore, the most useful method for measuring improvement at each level may be different.
- Community level health indicators will be changed primarily through policy, city/county government resources, and infrastructure improvements. This can vary dramatically based on the MSA's policies and available resources. For example, parkland allocation can only occur if there is available space, and creating public transportation infrastructure can take years. Therefore, the MSA average appears to be a more useful target for community health indicators, because changes in the indicator values are controlled more at the MSA level than at the individual level. Also, the MSA average may be more appropriate for community level health indicators because these values are not normally distributed.

The AFI Research Team recommends that the 2012 AFI report include target goals for each of the AFI measures.

- This methodology can be applied to the data specific to the AFI fifty-city peer group so that target goals are appropriate for large urban areas.
- Target goals can be stabilized by using five years of AFI data (2008-2012) and readjusted every five years so that cities are given sufficient time to take action and make progress.

Personal Health Indicators: Derived by generating the 90th percentile from the pooled 2008-2012 AFI data sets. The 90th percentile target goal sets a high but achievable standard, and is consistent with the method used by County Health Rankings (CHR).

Community Health Indicators: Derived using the MSA mean from the pooled 2008-2012 community health indicators. These values will change primarily through policy, city/county government resources, and infrastructure improvements, therefore controlled more at the MSA level than at the individual level.

Limitations in Application of Target Goals

The target goals were developed using pooled 2008-2012 AFI data, which includes only the largest 50 MSAs in the nation. The resulting target goals, therefore, represent relevant and potentially achievable goals for large, urban areas. However, these target goals may not be relevant or achievable for other communities in the U.S., due to fundamental differences between large urban areas and smaller or rural communities. These large MSAs, due to their population size, may have a higher demand for recreational facilities as well as more extensive financial resources, infrastructure, community organizations and governance than smaller communities. Similarly, these large cities are generally different in terms of both how

closely people live to each other (density) and to destinations such as workplaces, schools, parks, and shopping (connectivity). In addition, the relevance of certain community health indicators in urban areas, such as access to dog parks or public transportation to work may be less important in smaller or rural communities. So, it is important that individual communities be compared to communities that are similar in size and nature. In the *My AFI* Community Application Tool, guidance is provided to help communities identify appropriate peer communities for comparison that are similar to their own, rather than comparing their measures to the target goals developed for the 50 largest MSAs.

ACSM American Fitness Index 2020: Health Objectives for Communities

Personal Health Indicators

	Target Goal
Percent any physical activity or exercise in the last 30 days	82.6%
Percent physically active at least moderately	54.4%
Percent eating 5+ servings of fruits/vegetables per day	29.0%
Percent currently smoking	13.1%
Percent obese	21.3%
Percent in excellent or very good health	61.0%
Any days when physical health was not good	30.4%
Any days when mental health was not good	29.2%
Percent with asthma	6.5%
Percent with angina or coronary heart disease	2.8%
Percent with diabetes	6.4%
Death rate/100,000 for cardiovascular disease	167.1
Death rate/100,000 for diabetes	17.0
Percent with Health Insurance	91.2%

Community Health Indicators

Parkland as percent of city land area	10.6%
Acres of parkland/1,000 residents	18.6
Farmers' markets/1,000,000 residents	13.100
Percent using public transportation to work	4.3%
Percent bicycling or walking to work	2.8%
Ball diamonds/10,000 residents	1.9
Dog parks/100,000 residents	0.9
Park playgrounds/10,000 residents	2.3
Golf courses/100,000 residents	0.9
Park units/10,000 residents	4.1
Recreation centers/20,000 residents	1.0
Swimming pools/100,000 residents	3.1
Tennis Courts/10,000 residents	2.0
Park-related expenditures per capita (in dollars)	\$101.80
Level of state requirement for Physical Education classes*	2.5
Number of primary health care providers per 100,000 persons	105.6

*3 = required at three levels: high school, middle school and elementary school; 2 = required at two levels; 1 = required at only one level

AFI Target Goals: For each measure, the AFI team determined the 90th percentile for the 50 cities in the 2008 to 2012 report for personal health indicators and the average value over the same time period for the community health indicators. These target goals represent *high but achievable standards*, and hopefully will inspire cities to progress toward these goals.

How Communities Can Use the AFI 2020: Health Objectives for Communities

Since the AFI program launched in 2008, key community leaders and public health practitioners have expressed a need for target goals to guide communities in their program planning and implementation.

Modeled after the Healthy People 2000/2010/2020 documents developed by the Centers for Disease Control and Prevention, this AFI 2020 guidelines document is meant to give communities specific, measurable target goals for each of the personal health and community/environmental data indicators.

The AFI 2020 guidelines document is interconnected to the AFI data report, so communities included in the AFI data report can see the yearly progress they are making as they work towards the objective target goals. This component includes the identified target values for each of the indicators to allow communities to assess how close they are to those target values. Ultimately, this approach could lend itself to a grading system to let communities understand how close they are to the target values and which indicators are in greatest need of attention to improve their “grades.” In addition, this approach will enable the MSA to monitor improvements by comparing their values to their own previous values rather than against other communities, in order to track their progress over time.

Acknowledgment

We thank Dr. Meg Bouvier for assistance in preparing this report.

ACSM American Fitness Index Advisory Board

The AFI program would not be possible without direction from the knowledgeable volunteers who make up the AFI Advisory Board, which is comprised of experts with a vested interest in the fields of health and physical activity who volunteer their time to support the mission of the AFI program. The AFI Advisory Board was created in 2007 to assist in the development of the AFI program. The Board continues to offer guidance on the integrity of the program and ensures that the AFI data report and overall program adhere to the ACSM Guiding Principles for Healthy Communities and the goals of the AFI program by:

- translating the science to practice;
- actively participating in strategic planning for the program;
- critically reviewing all program documentation and collateral materials; and
- providing expert guidance and feedback to communities.

ACSM greatly appreciates the contributions of our AFI Advisory Board members:

- *Chair*: Walter R. Thompson, Ph.D., FACSM (Georgia State University)
- *Vice-Chair*: Barbara Ainsworth, Ph.D., FACSM (Arizona State University)
- Steven N. Blair, P.E.D., FACSM (University of South Carolina)
- Jacqueline Epping, M.Ed. (U.S. Centers for Disease Control and Prevention)
- John M. Jakicic, Ph.D., FACSM (University of Pittsburgh)
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- Angela Smith, M.D., FACSM (Children’s Hospital of Philadelphia)
- Stella Lucia Volpe, Ph.D., R.D., FACSM (Drexel University)

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Appendix A – Data Sources

Variable	Data Source	Website
Population Estimate	2009 U.S. Census	http://www.census.gov/popest/estimates.html
Age Groups	U.S. Census – 2010 American Community Survey – 1 Year Estimates	http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml
Percent male	U.S. Census – 2010 American Community Survey – 1 Year Estimates	http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml
Percent high school graduate or higher	U.S. Census – 2010 American Community Survey – 1 Year Estimates	http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml
Percent in each race groups	U.S. Census – 2010 American Community Survey – 1 Year Estimates	http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml
Percent Hispanic/Latino	U.S. Census – 2010 American Community Survey – 1 Year Estimates	http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml
Percent unemployed	U.S. Census – 2010 American Community Survey – 1 Year Estimates	http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml
Median household income	U.S. Census – 2010 American Community Survey – 1 Year Estimates	http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml
Percent of households below poverty level	U.S. Census – 2010 American Community Survey – 1 Year Estimates	http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml
Violent crime rate/100,000	FBI Uniform Crime Reporting Program – 2010	http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2010/crime-in-the-u.s.-2010/tables/table-6
Percent with disability	U.S. Census – 2010 American Community Survey – 1 Year Estimates	http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml
Percent any physical activity or exercising in the last 30 days	2010 SMART BRFSS – MSA Data	http://apps.nccd.cdc.gov/brfss-smart/SelMMSAPrevData.asp

Appendix A – Data Sources

Variable	Data Source	Website
Percent physically active at least moderately	2009 SMART BRFSS – MSA Data	http://apps.nccd.cdc.gov/brfss-smart/SelMMSAPrevData.asp
Percent eating 5+ fruits/vegetables per day	2009 SMART BRFSS – MSA Data	http://apps.nccd.cdc.gov/brfss-smart/SelMMSAPrevData.asp
Percent currently smoking	2010 SMART BRFSS – MSA Data	http://apps.nccd.cdc.gov/brfss-smart/SelMMSAPrevData.asp
Percent obese	2010 SMART BRFSS – MSA Data	http://apps.nccd.cdc.gov/brfss-smart/SelMMSAPrevData.asp
Percent in excellent or very good health	2010 SMART BRFSS – MSA Data	http://apps.nccd.cdc.gov/brfss-smart/SelMMSAPrevData.asp
Any days when physical health, was not good during the past 30 days	2010 BRFSS	http://www.cdc.gov/brfss/technical_infodata/surveydata/2010.htm
Any days when mental health, was not good during the past 30 days	2010 BRFSS	http://www.cdc.gov/brfss/technical_infodata/surveydata/2010.htm
Percent with asthma	2010 SMART BRFSS – MSA Data	http://apps.nccd.cdc.gov/brfss-smart/SelMMSAPrevData.asp
Percent with angina or coronary heart disease	2010 SMART BRFSS – MSA Data	http://apps.nccd.cdc.gov/brfss-smart/SelMMSAPrevData.asp
Percent with diabetes	2010 SMART BRFSS – MSA Data	http://apps.nccd.cdc.gov/brfss-smart/SelMMSAPrevData.asp
Death rate/100,000 for cardiovascular disease	2008 CDC Wonder	http://wonder.cdc.gov
Death rate/100,000 for diabetes	2008 CDC Wonder	http://wonder.cdc.gov
Percent with health insurance	2010 SMART BRFSS – MSA Data	http://apps.nccd.cdc.gov/brfss-smart/SelMMSAPrevData.asp
Parkland as a percent of MSA land area	2010 City Park Facts – The Trust for Public Land	http://www.tpl.org/publications/books-reports/ccpe-publications/city-park-facts-report-2011.html
Acres of parkland/1,000	2010 City Park Facts – The Trust for Public Land	http://www.tpl.org/publications/books-reports/ccpe-publications/city-park-facts-report-2011.html

Appendix A – Data Sources

Variable	Data Source	Website
Farmers' markets/ 1,000,000	USDA Farmers Markets	http://apps.ams.usda.gov/ FarmersMarkets/
Percent using public transportation to work	U.S. Census – 2010 American Community Survey – 1 Year Estimates	http://factfinder2.census.gov/ faces/nav/jsf/pages/index.xhtml
Percent bicycling or walking to work	U.S. Census – 2010 American Community Survey – 1 Year Estimates	http://factfinder2.census.gov/ faces/nav/jsf/pages/index.xhtml
Ball diamonds/10,000	2010 – The Trust for Public Land	http://cityparksurvey.tpl.org/re ports/report_display.asp?rid=10
Dog parks/100,000	2010 – The Trust for Public Land	http://cityparksurvey.tpl.org/re ports/report_display.asp?rid=12
Park playgrounds/10,000	2010 – The Trust for Public Land	http://cityparksurvey.tpl.org/re ports/report_display.asp?rid=5
Golf courses/100,000	2010 – The Trust for Public Land	http://cityparksurvey.tpl.org/re ports/report_display.asp?rid=20
Park units/10,000	2010 – The Trust for Public Land	http://cityparksurvey.tpl.org/re ports/report_display.asp?rid=18
Recreation centers/20,000	2010 – The Trust for Public Land	http://cityparksurvey.tpl.org/re ports/report_display.asp?rid=13
Swimming pools/100,000	2010 – The Trust for Public Land	http://cityparksurvey.tpl.org/re ports/report_display.asp?rid=15
Tennis courts/10,000	2010 – The Trust for Public Land	http://cityparksurvey.tpl.org/re ports/report_display.asp?rid=22
Park-related expenditures per capita	2010 City Park Facts – The Trust for Public Land	http://www.tpl.org/publications/ books-reports/ccpe-publications/ city-park-facts-report-2011.html
Level of state requirement for physical education classes	2006 – School Health Policies and Programs Study	http://www.cdc.gov/Healthy Youth/shpps/2006/report-cards/ index.htm
Number of primary health care providers per 100,000	2009 HRSA Area Resource File	http://arf.hrsa.gov/

Appendix B: AFI Indicators Matched to Most Relevant Healthy People 2020 Objective(s)

AFI Indicators	HP2020 – Best Match		HP 2020 Target
Health Behaviors	No.	Objective	
Percent any physical activity or exercise in the last 30 days	PA-1	Reduce the proportion of adults who engage in no leisure-time physical activity to 32.6% (phrased inversely to AFI)	32.6%
Percent physically active at least moderately	PA2.1	Increase the proportion of adults who engage in aerobic physical activity of at least moderate intensity for at least 150 minutes/week, or 75 minutes/week of vigorous intensity, or an equivalent combination in 2008. (The AFI indicator from BRFSS uses 60 minutes/week vigorous).	47.9%
Percent eating 5+ servings of fruits/vegetables per day	NWS14	Increase the contribution of fruits to the diets of the population aged 2 years and older.	.0.9 cup equivalents/ 1,000 calories
	NWS15	Increase the contribution of vegetables to the diets of the population aged 2 years and older.	1.1 cup equivalents/ 1,000 calories
Percent currently smoking	TU-1.1	Reduce tobacco use by adults - cigarette smoking.	12.0%
Chronic Health Problems	No.	Objective	
Percent obese	NWS-9	Reduce the proportion of adults who are obese.	30.6%
Percent in excellent or very good health		<i>No comparable HP2020 objective; may eventually be incorporated to the new Health-Related Quality of Life and Well-being area.</i>	NA
Any days when physical health was not good during the past 30 days			
Any days when mental health was not good during the past 30 days	MHMD-4	<i>Reduce the proportion of persons who experience major depressive episode: 4.2, among adults aged 18 years and older</i>	6.1%
Percent with asthma		<i>There is no HP2020 objective regarding asthma prevalence or incidence. Other asthma related objectives are RD-1 to RD-5.</i>	NA
Percent with angina or coronary heart disease		<i>There is no HP2020 objective regarding prevalence of angina or CHD. Other related objectives pertaining to risk factors and evidence-based care are in HDS-1 through HDS-24.</i>	NA

Appendix B: AFI Indicators Matched to Most Relevant Healthy People 2020 Objective(s)

AFI Indicators	HP2020 – Best Match		HP 2020 Target
Chronic Health Problems	No.	Objective	
Percent with diabetes	D-1	Reduce the annual number of new cases of diagnosed diabetes in the population. <i>(This is incidence, not prevalence.)</i>	7.2 new cases per 1,000 population aged 18-84 years
Death rate/100,000 for cardiovascular disease	HDS-2	Reduce coronary heart disease deaths.	100.8 deaths/100,000 population%
	HDS-3	Reduce stroke deaths.	33.8 deaths/100,000 population
Death rate/100,000 for diabetes	D-3	Reduce the diabetes death rate.	65.8 deaths/100,000 population
Health Care	No.	Objective	
Percent with health insurance	AHS-1	Increase the proportion of persons with health insurance.	100.0%
Number of primary health care providers per 100,000	AHS-4	Increase the number of practicing primary care providers (developmental). Objectives AHS 4.1-4.4 pertain to medical doctors, doctors of osteopathy, physician assistants, and nurse practitioners.	None set
Built Environment	No.	Objective	
Parkland as percent of city land area			
Acres of parkland/1,000	PA-15	See PA-15 below (developmental).	None set
Farmer's markets/1,000,000			
Percent using public transportation to work	PA-13	Increase the proportion of trips made by walking (developmental)	None set
	PA-13.1	Adults aged 18 years and older, trips of 1 mile or less.	
Percent bicycling or walking to work	PA-14	Increase the proportion of trips made by bicycling (developmental)	None set
	PA-14.1	Adults aged 18 years and older, trips of 5 miles or less.	

Appendix B: AFI Indicators Matched to Most Relevant Healthy People 2020 Objective(s)

AFI Indicators	HP2020 – Best Match		HP 2020 Target
Recreational Facilities	No.	Objective	
Ball diamonds/10,000	PA-15	Increase legislative policies for the built environment that enhance access to and availability of physical activity opportunities (developmental). Includes 15.1-community-scale policies, 15.2 street-scale policies, and 15.3 transportation and travel policies.	None set
Dog parks/10,000			
Park playgrounds/10,000			
Golf courses/100,000			
Park units/10,000			
Recreation centers/20,000			
Swimming pools/100,000			
Tennis courts/10,000			
Park-related expenditures per capita			
Policy Measures	No.	Objective	
Level of state requirement for physical education classes	PA-4	Increase the proportion of the Nation's public and private schools that require daily physical education for all students.	
Elementary schools	PA-4.1	Elementary schools	4.2%
Middle and junior high schools	PA-4.2	Middle and junior high schools	8.6%
High schools	PA-4.3	Senior high schools	2.3%



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