A Health Impact Assessment of a County Parks and Recreation Fitness Policy in Hillsborough County, Florida

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The opinions are those of the authors and do not necessarily reflect the views of the Florida Department of Health, ASTHO, CDC, or any of the individual stakeholders listed above.

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Introduction

In recent years, there has been a push nationwide to increase access to parks and recreational facilities in order to create healthier communities and positively affect negative health outcomes. Access and use of parks and recreational facilities have been linked to a decrease in chronic disease and an increase in positive mental health outcomes, well-being, and restorative benefits on health. As evidence continues to build demonstrating the effects of social and environmental determinants on health, improving parks, recreation centers, and the built environment to increase access to green space and physical activity opportunities is vital to improve overall population health. Addressing the determinants of health allows sectors that traditionally do not work together to form partnerships in order to tackle health inequity in their communities. Health Impact Assessment (HIA), a tool that assesses the impact of a specific plan, policy, program, or project on health, is becoming more common in the United States as local and state governments and organizations recognize its usefulness in addressing policy, systems, and environmental changes. Access to physical activity opportunities is vital to increase physical activity levels, reduce chronic disease, and improve overall mental health and well-being. Figure 1 contains the percentage of adults who engage in no leisure-time physical activity, by State. According to the figure, between 24% and 27.9% of adults in the State of Florida are sedentary in their lifestyles.

Hillsborough County, located within Tampa Bay in the State of Florida, is rich in green space, parks, ecological trails, and coastal preserves. Despite the number of city, county, and state parks and recreation centers located in Hillsborough, there are various barriers to their use. The County, with its estimated 1.3 million inhabitants (United States Census Bureau, 2015), is diverse in both its demographics and in its geography, ranging from highly urbanized inner-city environments and streetscapes to vast rural areas with large migrant farmworker populations. The Florida Department of Health in Hillsborough County (DOH-Hillsborough) approached the Hillsborough County Department of Parks, Recreation, and Conservation in August 2014 about completing an HIA to improve access to parks and physical activity opportunities for adults in a predominately Hispanic/Latino community in the Town ‘N’ Country area of the county in order to reduce chronic disease outcomes and improve overall mental health and well-being.

The proposal assessed in this HIA is the adoption (by the Director of the Hillsborough County Department of Parks, Recreation, and Conservation) of a policy permitting local businesses and

organizations to provide outdoor exercise classes in public parks at no cost to the public. The policy would be applied county-wide, but the HIA focuses on the impact of the policy and future programming at five parks and recreation centers (Morgan Woods Recreation Center, Shimberg Sports Complex, Town 'N' Country Recreation Center, Westgate Park, and Jackson Springs Recreation Center) located in the Town 'N' Country area (Figure 2). At the time of the initial proposal, an emphasis was placed on the Morgan Woods Recreation Center. This facility was closed a few years prior, and the County was planning to reopen it and have it fully functioning by August 2015. During the HIA process, a decision was made by the County not to reopen Morgan Woods and instead, to focus on funneling additional resources and programming to the Jackson Springs Recreation Center.

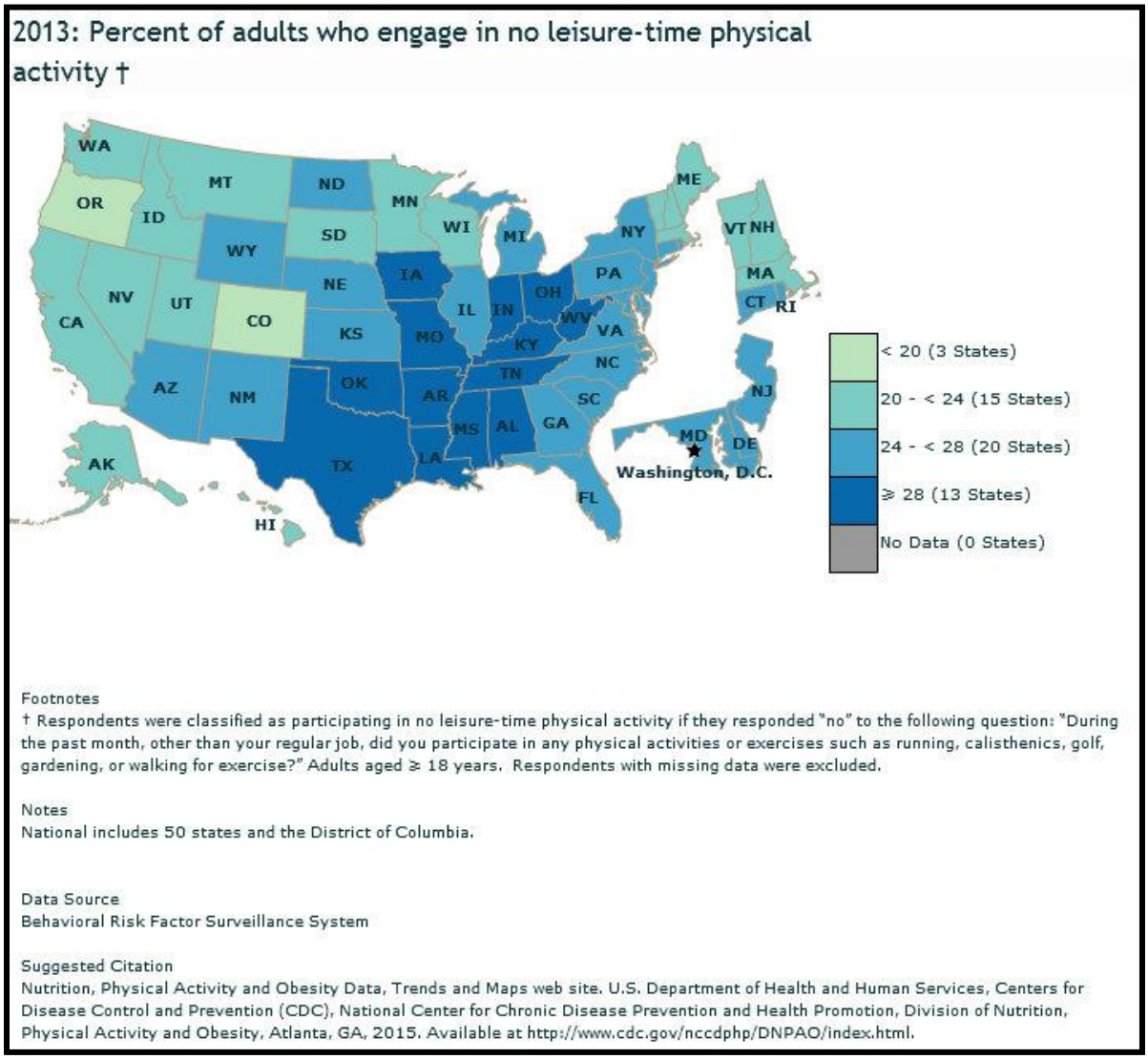

Figure 1. Percent of Adults Who Engage in No Leisure-Time Physical Activity, by State

The key partners that came together to conduct the HIA were: DOH-Hillsborough; Hillsborough County Department of Parks, Recreation, and Conservation; the University of South Florida College of Public Health; and the Partners in Obesity Prevention (POP) Coalition. POP served as the Advisory Council and was integral in the planning efforts and in providing feedback on the progress made throughout the HIA process. A complete list of Advisory Council members can be found on the HIA Contributors page of this report.

Figure 2. Target Parks in the Geographic Area

HIAs consist of six phases (screening, scoping, assessment, recommendations, reporting, and monitoring/evaluation). This report is organized according to phases and covers the time period of the HIA from August 2014 through August 2015. The Background section provides information on HIA, its use, and an explanation of the six phases. The Screening section details the initial process used to determine the feasibility of this parks and recreation-related HIA. It also describes the main partners involved and the key decision maker for the proposal. The Scoping section includes the HIA goals, research questions, health determinants and outcomes

assessed, geographic and temporal scope, vulnerable populations, and pathway diagrams. The Assessment section provides a description of the methods used and the assessment results. The results are organized by Priority Pathway and include the corresponding research questions, literature review, baseline data, and results from the community survey and focus groups conducted for each pathway. This section also includes health impact predictions, which characterize the effects of the proposed policy on each of the health determinants and outcomes. The Recommendations and Reporting section details the suggestions proposed for the Hillsborough County Department of Parks, Recreation, and Conservation regarding the policy and programming. Finally, the Monitoring and Evaluation section of the report contains an explanation of the proposed evaluation plan.

Background on HIA

According to the National Research Council of the National Academies (2011), HIA is "a systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of those effects within the population. HIA provides recommendations on monitoring and managing those effects (National Research Council of National Academies, 2011)." HIA identifies impacts on social determinants and health equity through engaging stakeholders and vulnerable populations in the process, and understanding how the potential effects of the policy, plan, program or project of focus may disproportionately affect vulnerable populations or different population groups (Bhatia et al., 2014). As stated earlier, the HIA process requires six specific phases to ensure completeness: screening, scoping, assessment, recommendations, reporting, and evaluation (Figure 3). A brief description of each phase is included in Table 1.

HIA incorporates the principles and values of Democracy, Equity, Sustainable Development, Ethical Use of Evidence, and a Comprehensive Approach to Health. This means that HIAs include input from the public throughout the process, and the results and recommendations are used to inform decision-makers. HIAs also consider vulnerable populations, address inequities and determinants of health, examine short and long-term impacts, use a transparent and rigorous evidence-based process, and incorporate factors that affect not only physical health, but also mental and social health and well-being (Bhatia, 2011).

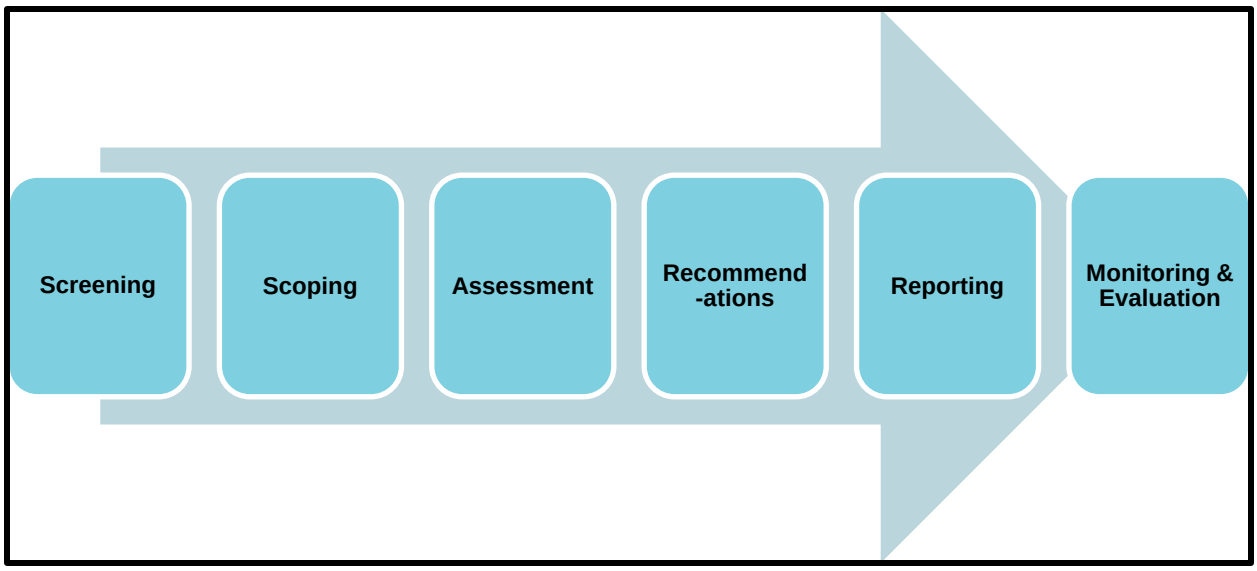

Figure 3. Phases of a Health Impact Assessment

Table 1. Description of Health Impact Assessment Phases

HIA Phase	Description
Screening	Assess the utility, value, and feasibility of the HIA
Scoping	Determine potential health effects, draft research questions, identify research methods and existing evidence to be used, conduct a stakeholder analysis, and establish the temporal scope of the HIA
Assessment	Provide baseline health conditions and characterize the expected health effects
Recommendations	Identify and prioritize recommendations with stakeholder input
Reporting	Document the process and results, and communicate the HIA to stakeholders and decision-makers
Monitoring and Evaluation	Monitor health determinants and outcomes over time and conduct process, outcome, and impact evaluations of the HIA

Screening

The Florida Department of Health provided a two-day training to DOH-Hillsborough staff and community partners in June 2014. As a result of this training, an internal workgroup from the Division of Community Health at DOH-Hillsborough met in August 2014 to discuss topics for an HIA. It was proposed to contact the Parks and Recreation Departments for Hillsborough County and the Cities of Tampa, Temple Terrace, and Plant City to determine their interest in examining a policy to provide free outdoor fitness classes in local parks. The idea was to replicate or expand upon a current initiative that the City of Tampa's Downtown Partnership has had in place for numerous years, which provides free yoga, Zumba, and Tango classes in one of the parks in downtown Tampa. After reaching out to the various agencies, the Hillsborough County Department of Parks, Recreation, and Conservation expressed interest in the proposal to conduct an HIA to assess the health impacts of a policy permitting local businesses and organizations to provide outdoor exercise classes to adults in public parks at no cost to the public. It was determined that there was a value and need for an HIA, and that conducting the HIA was feasible. Appendices A and B contain the Screening Worksheets completed during this process. The Key Decision Maker for the HIA proposal is the Director of the Hillsborough County Department of Parks, Recreation, and Conservation.

Scoping

The Scoping Phase outlines the goals of the HIA, the research questions, methodology for the assessment, the geographic and temporal scope, the determinants of health and health impacts to be assessed (pathways diagram), a description of the impacted population (with vulnerable groups identified), a stakeholder analysis, timeline, and work plan.

DOH-Hillsborough began Preliminary Scoping in August 2014, and in November 2014, met with the Director of the County Division of Recreation to determine the geographic location for the proposed HIA and to discuss the importance of considering chronic disease, mental health, and well-being outcomes in their programming. To determine possible geographic areas of focus, demographic information for the County was analyzed at the Census Tract Level. The tracts with the highest rates of poverty and lowest levels of educational achievement were identified. Census Tracts with predominantly minority (Black/African American and/or Hispanic/Latino)

populations were also included in the analysis. Specific areas within the County were identified as being most vulnerable and this information was presented to the Director of the Recreation Division. It was decided that Town 'N' Country, in the western part of the County, would be the focus area for four reasons: 1) this region of the County contains a large Hispanic/Latino population, 2) it has a considerable population who have Limited English Language Proficiency, 3) the area contains pockets of high poverty and low educational achievement, and 4) the Parks and Recreation Department was planning to reopen the Morgan Woods Recreation Center located in Town 'N' Country by August 2015 and the HIA would help guide its programming.

Four other parks and recreation centers were also selected for inclusion in the HIA due to their proximity to Morgan Woods: Shimberg Sports Complex, Westgate Park, Town 'N' Country Recreation Center, and Jackson Springs Recreation Center. The Census Tracts identified for this HIA were: 12057011603, 12057011605, 12057011610, 12057011612, and 12057011613; however, for purposes of survey and focus group recruitment, participants were required to live within Zip Codes 33615 and 33634. Tables 2 and 3 contain the demographic information for the selected area in Town 'N' Country. Figure 4 provides data on the Limited English Language Proficiency levels in the area, further demonstrating the vulnerability of the population selected for the HIA.

Table 2. Race and Ethnicity of Target Population

Census Tract	Total Population Count	% White (Non-Hispanic)	% Black (Non-Hispanic)	% Hispanic	% Other (Non-Hispanic)
Florida State	19,361,792	56.6	15.4	23.3	4.8
Hillsborough County	1,279,668	52.4	15.7	25.7	6.4
12057011603	4,276	53.4	5.2	39.2	2.2
12057011605	6,377	31.1	4.5	62.0	2.3
12057011610	5,245	29.6	4.2	65.5	0.6
12057011612	6,808	40.8	4.7	48.1	10.6
12057011613	5,590	40.4	6.8	51.5	1.3

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates

Table 3. Income, Education, Sex, and Age of Target Population

Census Tract	% Population in Poverty	% Adults with < HS Education	% Male	% Female	Median Age in Years
Florida State	16.7	13.5	48.9	51.1	41.2
Hillsborough County	17.2	12.9	48.8	51.2	36.2
12057011603	6.6	5.1	50.7	49.3	40.4
12057011605	14.8	25.0	48.2	51.8	39.9
12057011610	23.9	15.6	49.0	51.0	37.7
12057011612	14.0	14.7	49.5	50.5	39.8
12057011613	22.4	20.6	49.1	50.9	42.5

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates

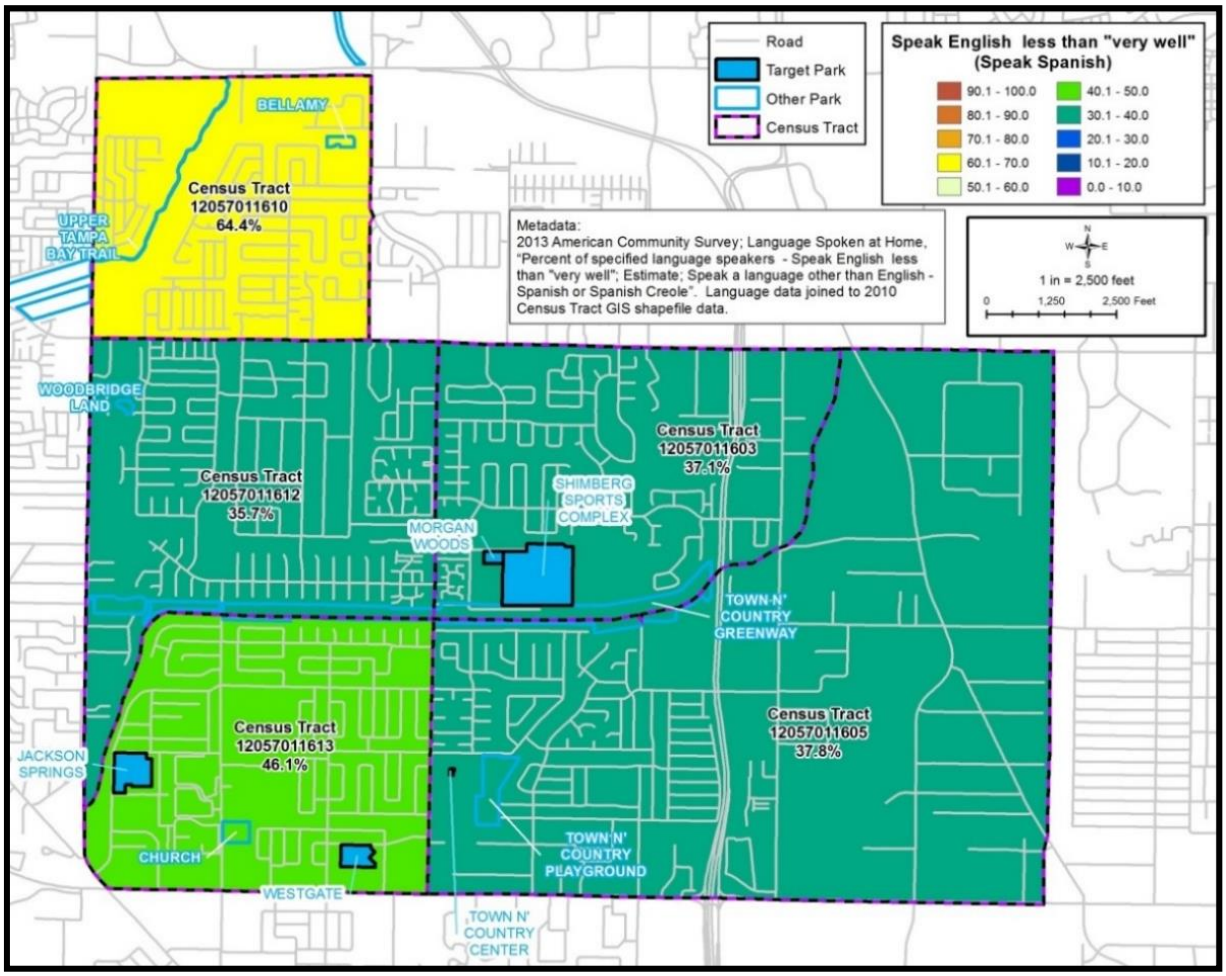

Figure 4. Map of HIA Geographic Area and Limited English Language Proficiency

An HIA Advisory Council was formed and first met in January 2015 to provide training on the purpose and methods of HIA, and also to finalize the Scoping Phase. The Advisory Council consisted of the Partners in Obesity Prevention (POP) Coalition, the HIA Research Team, the Hillsborough County Parks, Recreation, and Conservation Department, and additional partners who also had interest in the HIA. At the January meeting, the Town 'N' Country HIA was introduced and the scoping activities were facilitated by representatives from the HIA Research Team. The Advisory Council reviewed the Stakeholder Analysis and the Pathway Diagram (Figure 5). A comprehensive pathway diagram was also introduced for discussion and review, and then a second diagram with a narrower scope was presented. The reasoning for excluding certain pathways was discussed. There was a consensus to focus on chronic disease, mental health, and well-being due to the expertise of those on the Advisory Council, and also because of the importance of incorporating health in Parks and Recreation-related policies and programming. The pathway diagram depicts the outcomes of the proposed policy, including its effects on the determinants of health (Immediate Outcomes) and the Intermediate and Long-Term Health Outcomes. These determinants and outcomes are also portrayed in Figure 6.

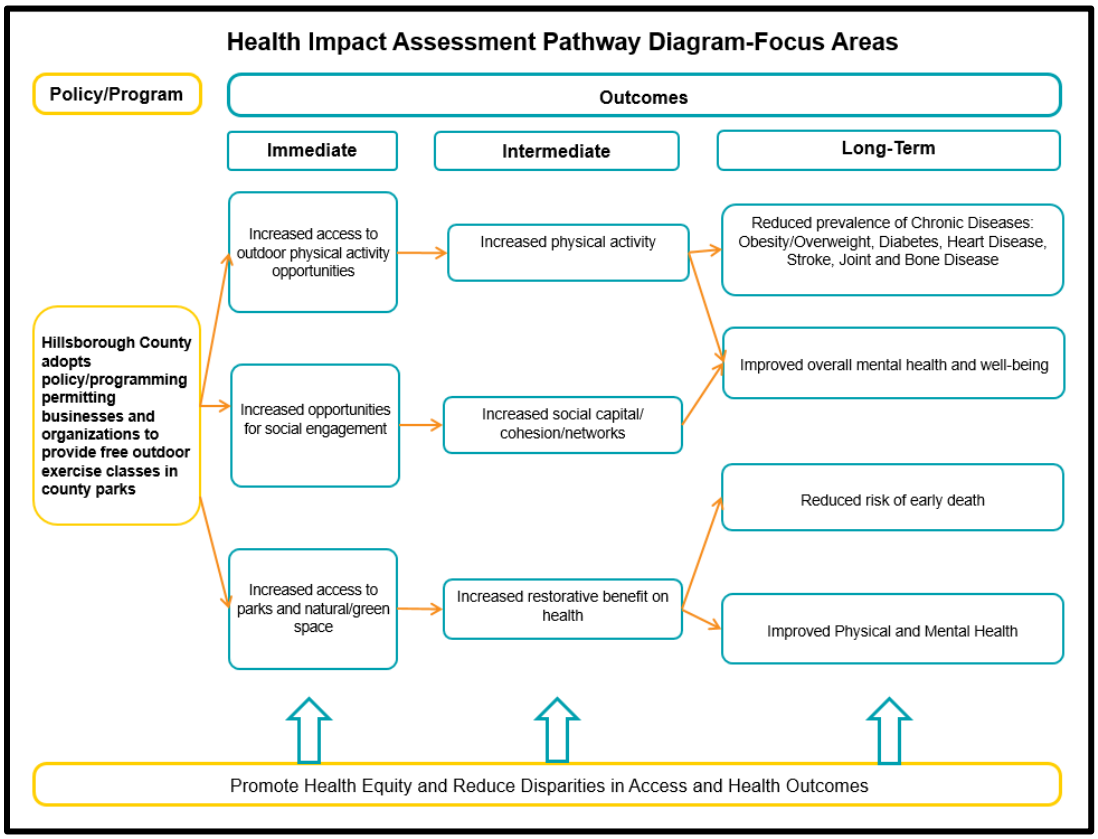

Figure 5. Pathways Diagram with Priority Areas and Linkages

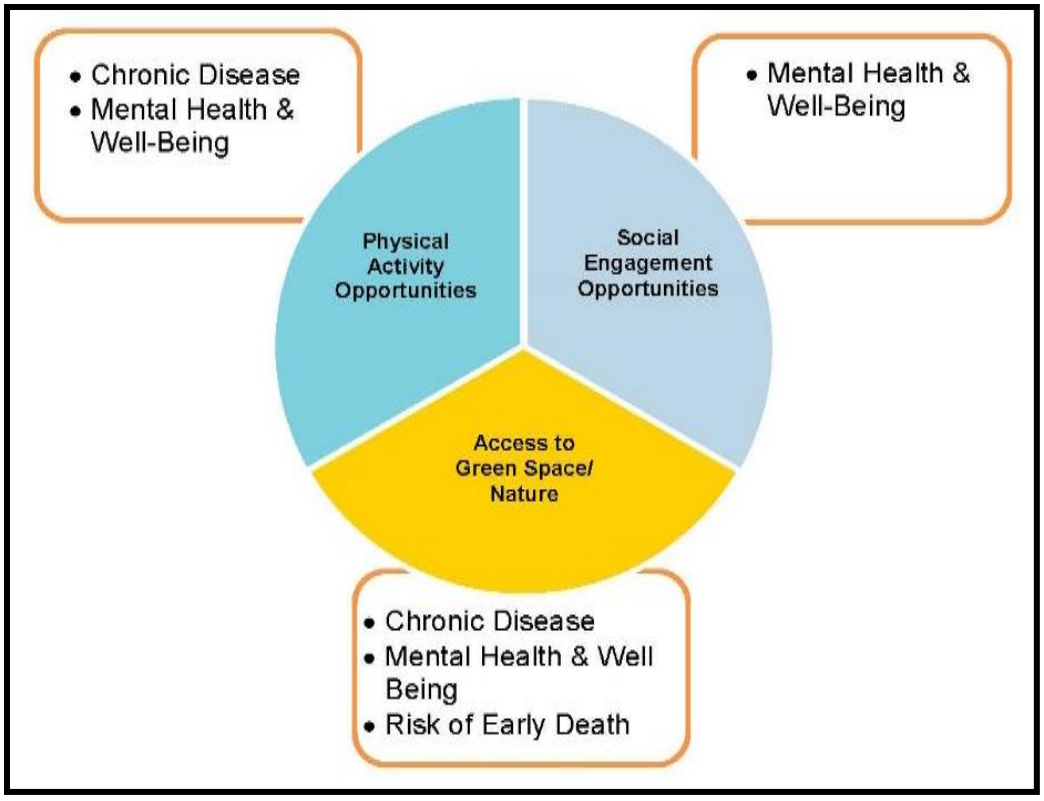

Figure 6. Selected HIA Health Determinants and Outcomes

A Timeline and Work Plan were also reviewed during this meeting and changes were made to these documents. The goals of the HIA were presented to the Advisory Council. It was stressed that this was the health department's first HIA, and that it would serve as an introduction so that health department staff, partners, government agencies, and community members could use the opportunity to become familiar with the HIA process and utility.

The goals of the HIA include:

- Involve diverse stakeholders and community members in the HIA process
- Build capacity for stakeholders and DOH-Hillsborough to conduct HIAs
- Highlight the impact of a physical activity parks and recreation policy/program on health
- Include health in the decision-making process of the proposed parks and recreation policy/program
- Introduce the importance of HIA to the Hillsborough County Department of Parks, Recreation, and Conservation for use in future county plans, policies, and projects

The overarching research questions for the HIA are:

- What is the impact of the Hillsborough County Department of Parks, Recreation, and Conservation adopting a policy and programming permitting local businesses and organizations to provide outdoor exercise classes in public parks at no cost to the public?
- How would this policy affect the health of the population within the targeted geographic location, specifically racial and ethnic minorities, and those with higher levels of poverty and lower levels of education and English Language Proficiency?

The prioritized research questions according to Priority Pathway are detailed in Table 4.

Table 4. Prioritized HIA Research Questions

Research Questions	Priority Area
How accessible are physical activity opportunities for residents in Town 'N' Country, and how would this change as a result of an implemented parks policy?	• Access to Physical Activity
What are the current levels of physical activity for residents within the Town 'N' Country area, and how would these levels change as a result of an implemented parks policy?	• Access to Physical Activity
What is the current prevalence of chronic disease in the Town 'N' Country area, and how would this prevalence change as a result of an implemented parks policy?	• Access to Physical Activity • Access to Parks and Green Space
What is the current mental health status and level of well-being in the Town 'N' Country area, and how would these change as a result of an implemented parks policy?	• Access to Physical Activity • Access to Social Engagement Opportunities • Access to Parks and Green Space
How involved are Town 'N' Country residents in their community, and how would this change as a result of an implemented parks policy?	• Access to Social Engagement Opportunities
What are the current levels of perceived social cohesion in the community, and how would these levels change as a result of an implemented parks policy?	• Access to Social Engagement Opportunities
How much green space and tree coverage exists in the Town 'N' Country area?	• Access to Parks and Green Space

What effect does nature have on residents in the Town 'N' Country area, and how would this effect change as a result of an implemented parks policy?	• Access to Parks and Green Space
What are the levels of premature mortality in the Town 'N' Country area, and how would these levels change as a result of an implemented parks policy?	• Access to Parks and Green Space

Assessment

Methods

The Assessment Phase began in February 2015 and continued through July 2015. It consisted of a literature review of current peer-reviewed and grey literature resources available for each pathway linkage for the pathway diagram. In addition, the Assessment Phase incorporated a collection of baseline secondary data already available through other resources such as the United States Census Bureau, Florida CHARTS, and the Environmental Protection Agency's (EPA's) EnviroAtlas. Primary data was collected through an HIA Community Survey (n=173) and focus groups with residents in the Town 'N' Country area. GIS mapping was also included as a part of the HIA analysis. The Assessment results were presented to the Advisory Council in July 2015, and health impact predictions were determined. Preliminary recommendations were also presented and discussed at this meeting.

Demographics of Survey and Focus Group Respondents

The primary target group for the HIA was adult (ages 20-64) Hispanics/Latinos, with an emphasis on participation from Hispanics/Latinos with lower levels of income and educational achievement, and Limited English Language Proficiency. Of the 173 survey respondents included in the analysis, 104 identified as Hispanic or Latino (60.12% of survey respondents). Tables 5-11 depict the demographic breakdown of survey respondents who participated in the community survey. Hard copies and electronic versions of the survey were administered; however, the survey respondents receiving the electronic version were more likely to be White Non-Hispanic, have a higher income, speak English as their primary language, and have a higher education level than respondents who received the paper version of the survey.

Table 5. Survey Respondent Sex

Sex	Frequency	Percent
Female	128	73.99 %
Male	43	24.86 %
Other	2	1.16%
N=	**173**	100.0%

Table 6. Survey Respondent Race (Not Including Ethnicity)

Race	Frequency	Percent
White	105	60.69%
Black or African American	24	13.87%
Other	19	10.98%
No Response	17	9.83%
Two or More Races	6	3.47%
Asian	2	1.16%
American Indian or Alaskan Native	2	1.16%
Native Hawaiian or Pacific Islander	0	0.00%
N=	**173**	

Table 7. Survey Respondent Age (N=173)

20-24 Years Old	25-34 Years Old	35-44 Years Old	45-54 Years Old	55-64 Years Old
9 (5.20%)	64 (36.99%)	43 (24.86%)	26 (15.03%)	31 (17.92%)

Table 8. Primary and Secondary Languages of Survey Respondents

	English	Spanish	English/ Spanish	Other
Primary Language (N=163)	88 (53.99%)	64 (39.26%)	5 (3.07%)	6 (3.68%)
Secondary Language (N=78)	41 (52.56%)	27 (34.62%)	0 (0.00%)	10 (12.82%)

Other Primary: Creole (1); English/Creole (1); French/Creole (1); German (1); Portuguese (1); Romanian (1)
Other Secondary: Creole/French (1); English/Italian (1); English/French (1); French (2); German/Polish/French (1); Gujarati (1); Portuguese/English (1); Sign Language (1); Spanish/American Sign Language (1)

Table 9. Educational Attainment of Survey Respondents (N=170)

Never Attended/ Only Kindergarten	Grades 1-8	Grades 9-11	Grade 12 or GED	College 1-3 Years	College 4 Years or More
1 (0.59%)	4 (2.35%)	13 (7.65%)	38 (22.35%)	55 (32.35%)	59 (34.71%)

Table 10. Income Level of Survey Respondents (N=173)

$0-14,999	$15,000-19,999	$20,000-24,999	$25,000-34,999	$35,000-49,999	$50,000-74,999	$75,000 or more	Unknown / Not Sure	No Response
22 (12.72%)	15 (8.67%)	9 (5.20%)	14 (8.09%)	31 (17.92%)	25 (14.45%)	21 (12.14%)	27 (15.61%)	9 (5.20%)

Table 11. Survey Respondent Household Size (N=170)

1-2 People	3-4 People	5-6 People	7 or More People
54 (31.76%)	78 (45.88%)	36 (21.18%)	2 (1.18%)

Three focus group sessions were held during July 2015. Recruitment methods included mailing flyers to targeted residential addresses surrounding the five selected parks, and outreach at local community-based organizations and the public library in the area via flyers, presentations,

and emails. Two sessions were conducted in Spanish and one in English with 11 total participants. Figure 7 contains the demographic information for the focus group participants.

Sex	Age	Hispanic	Race	Primary Language
•10 females •1 male	•30-39: 1 •40-49: 3 •50-59: 2 •60+: 4 •Unknown: 1	•Yes: 9 •No: 2	•White: 7 •Other: 2 •No Response: 3	•Spanish: 9 •English: 2

Figure 7. Focus Group Participant Demographics

Results

The results of the Assessment Phase are organized by Priority Pathways, which correspond to the comprehensive HIA Pathway Diagram (Figure 5). The three Priority Pathways include: A) Access to Physical Activity Opportunities, B) Access to Social Engagement Opportunities, and C) Access to Parks and Green Space. The results include the corresponding research questions, the rational for the linkages selected, a review of supporting literature, and a compilation of baseline data (both primary and secondary) collected from existing sources and from the community surveys and focus groups. In addition, the results section includes GIS maps created using ArcGIS and the impact predictions for each determinant or outcome.

Priority Pathway A: Access to Physical Activity Opportunities

The research questions for Priority Pathway A include:

- How accessible are physical activity opportunities for residents in Town 'N' Country, and how would these change as a result of an implemented parks policy?
- What are the current levels of physical activity for residents within the Town 'N' Country area, and how would these levels change as a result of an implemented parks policy?
- What is the current prevalence of chronic disease in the Town 'N' Country area, and how would this prevalence change as a result of an implemented parks policy?
- What is the current mental health status and level of well-being in the Town 'N' Country area, and how would these change as a result of an implemented parks policy?

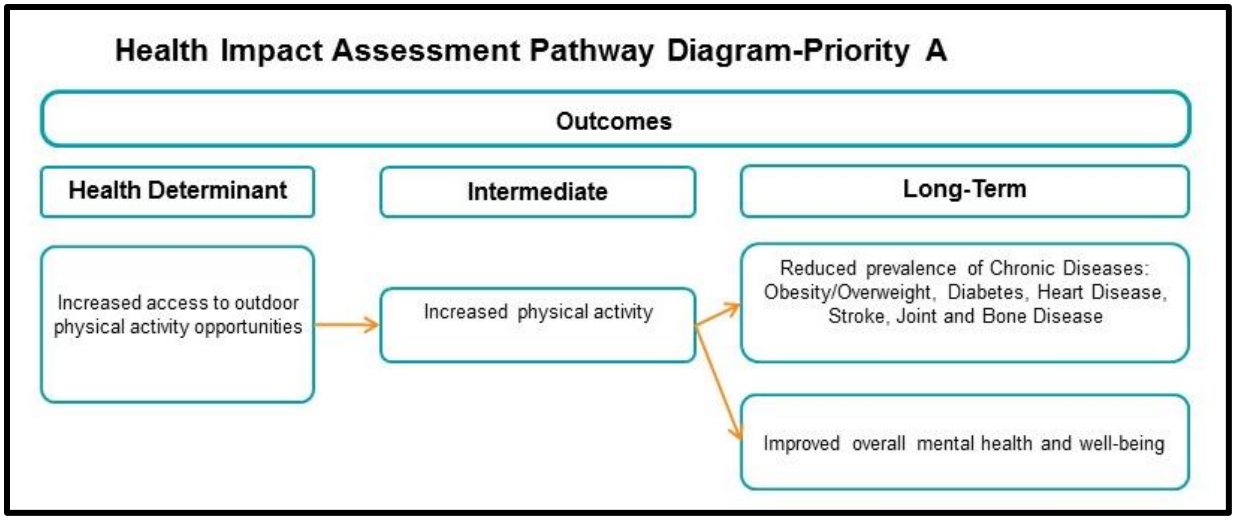

Figure 8. Priority Area A Pathway Diagram (Access to Physical Activity Opportunities)

Rational:

The creation of a policy permitting businesses to provide outdoor fitness classes at county parks and recreation facilities at no cost to the public would likely increase access to outdoor physical activity opportunities for residents in the Town 'N' Country area of Hillsborough County. Increasing access to physical activity opportunities would likely increase physical activity levels for residents that participate in the fitness classes. An increase in overall physical activity levels can reduce the prevalence of chronic diseases, such as overweight, obesity, diabetes, heart disease, stroke, and bone and joint disease. An increase in physical activity levels can also improve overall mental health and well-being. Figure 8 demonstrates these linkages.

Literature Review:

In 1994, the Surgeon General published a report titled, *Physical Activity and Health: A Report of the Surgeon General*, linking physical activity with positive health effects. Additional evidence has amassed since its publication, including a number of proven practices to increase access to physical activity opportunities (Centers for Disease Control and Prevention [CDC], 2011a). It is widely understood that regular physical activity can improve a myriad of health outcomes such as: overweight, obesity, cardiovascular disease, diabetes and metabolic syndrome, cancer, bone and muscle health, mental health and mood, ability to carry out everyday activities, occurrence of slips and falls among the elderly, and risk of early death (CDC, 2011a; CDC, 2015). Participation in the recommended levels of physical activity is essential for promoting a

healthy lifestyle. It is estimated that physical inactivity, or being sedentary, accounts for approximately 6% of the total global burden of disease, as well as 9% of premature mortality worldwide (Lee et al., 2012). Being overweight, obese, or sedentary is responsible for one in ten deaths in the United States (Danaei et al., 2009).

Although the health benefits of increased physical activity are understood, providing access to physical activity opportunities can remain a somewhat complex task. In order to be active, people must have access to opportunities and know that these activities exist (CDC, 2011a). Strong evidence exists linking improved access to places for physical activity with increased physical activity levels and improved physical fitness (The Robert Wood Johnson Foundation [RWJF] & The University of Wisconsin Public Health Institute [UWPHI], 2015). An active living approach in planning can increase access to places for physical activity by creating environments that encourage physical activity. A few examples include: improving access to outdoor recreational facilities (i.e. parks and green spaces), building or improving infrastructure to support recreation (such as sidewalks and trails), and improving access to public transportation and personal safety in areas where people could be physically active (CDC, 2014). Improvements in streetscapes, such as lighting and sidewalk coverage and connectivity, are also scientifically supported to increase physical activity, while potentially reducing obesity rates and stress (RWJF & UWPHI, 2015).

There is evidence that suggests that parks offering a greater number of amenities and organized activities have higher usage than other parks (Cohen et al., 2010; West, Shores, & Mudd, 2012). Providing more amenities and facilities at parks and recreation centers, in addition to childcare, will also likely increase physical activity levels (Cohen et al., 2007). In addition to creating active living environments, providing fitness programs and classes in the community setting, such as yoga, Zumba, and Tai Chi, is scientifically supported to increase physical activity and fitness. These community-based classes can also potentially improve mental health (RWJF & UWPHI, 2015).

Research has shown that inequities in access to physical activity locations are higher in populations of lower socioeconomic status (SES) than those of higher SES (RWJF & UWPHI, 2015). An examination by Cohen et al. (2007) details the contribution of public parks to physical activity in urban low-income minority communities of Los Angeles. Results suggest that parks are very important for facilitating physical activity in minority populations; however, there is a

lack of awareness of the existence of parks and recreational facilities noted among low-income households. It is suggested that collaborative promotional strategies and enhancing existing parks and recreation centers to include additional and varied facilities and amenities like trails, playgrounds, rest rooms, and sports fields are more likely to attract larger numbers of people to the parks, and also increase levels of moderate-to-vigorous physical activity (National Recreation and Parks Association [NRPA], 2010).

Parks, trails, and recreation facilities can provide important health benefits to those who access them, including providing venues for physical activity and promoting healthy lifestyles. Parks and recreation facilities are also known to help reduce stress and improve mental health and well-being (CDC & National Parks Service, 2015). The outdoor environment significantly increases the benefits of physical activity. In a literature review by Mitchell (2013), physical activity in natural environments was associated with greater levels of stress reduction than in non-natural environments (Mitchell, 2013).

A strong correlation exists between proximity to parks, with use of parks and levels of physical activity. Those living within half a mile of a park, or within walking distance, are more likely to participate in physical activity at parks than residents living one or more miles away (NRPA, 2010). Several studies have found correlations between proximity of residence to parks and positive health indicators associated with physical activity (Bensenyi et al., 2014; Cohen et al., 2007; Maas, van Dillen, Verheij, & Groenewegen, 2009; NRPA, 2010; Pereira et al., 2012; Rundle et al., 2013; van den Berg, Maas, Verheij, & Groenewegen, 2010). Mytton, Townsend, Rutter, and Foster (2012) found that people who lived near green space were more likely to report participating in the recommended levels of physical activity (Mytton et al., 2012). Short walking times to a park or recreation opportunities was associated with more physical activity (Kaczynski & Hendersen, 2007). Residents in neighborhoods closer to parks have reported lower BMI than those living farther away and higher utilization rates (Cohen et al., 2007; Rundle et al., 2013).

Determinant: Access to Physical Activity Opportunities

The determinant examined in this Pathway is access to physical activity opportunities. A review of businesses and governmental agencies in the Town ‘N’ Country area, Zip Codes 33615 and 33634, revealed that various gyms (with group fitness classes), martial arts studios, cross fit locations, and dance studios exist within this geographic area, but all have a cost associated

with them to participate. The only low-cost or free options identified within the area were located at County agencies. A local Community Commons building houses a regional library and a senior center. Westgate Park (a target park for this HIA) is located next to the commons and shares a parking area. The library offers limited indoor fitness classes for free such as yoga, meditation, and the health department's Get Into Fitness Today (GIFT) program during daytime hours only. The Senior Center (open to residents 50 years and older) offers a few classes for free, while others cost, on average, between one and two dollars per class. These classes are typically offered during daytime hours only. The Town 'N' Country Recreation Center (also included as one of the target parks in this HIA) has a few classes that require a fee to participate, while others may be free, but are only offered to the senior population. None of these locations offer any fitness classes outside, despite having outdoor county land available, with amenities such as a walking trail, covered gazebo, running track, playground, etc.

Table 12. Desired Classes for Outdoor Fitness Opportunities (Survey Respondents)

Class Type	Frequency (N=114)	Class Type	Frequency (N=114)
Yoga	**46**	Stretching/Restorative Exercises	5
Zumba	**41**	Adults/Kids Joint Classes	5
Jogging/Running	13	Cycling	5
Dancing	11	CrossFit/Cross Training	4
Bootcamp	10	Swimming	4
Tai Chi	9	Basketball	3
Walking	9	Kick Boxing	2
General Exercise/All Types	8	Soccer	2
Aerobics/Calisthenics	8	Volleyball	2
Pilates	6	Football	1
Strength/Conditioning/Toning	6	Pick-Up Sports	1
Cardio	6	Tennis	1
Group Activities	6		

Source: HIA Community Survey, 2015

The HIA Community Survey included questions to gauge interest in possible outdoor fitness classes at the five target parks in Town 'N' Country. Questions were asked related to types of

fitness classes desired, price point for classes, barriers to using the parks, and ways to make the parks more accessible. The top three locations for future fitness classes, as selected by survey respondents (N=140), were the Town 'N' Country Recreation Center (75.00%), Jackson Springs Recreation Center (44.29%), and Morgan Woods Recreation Center (37.14%). However, 25.00% said that they would use Westgate Park, 20.00% the Shimberg Sports Complex, and 14.29% responded that they would use other parks in the Town 'N' Country and surrounding areas. Results for the types of classes desired are listed in Table 12. Yoga and Zumba were the most desired classes from both the survey and focus groups.

68.42% (117) of survey respondents (N=171) said that they would participate in outdoor fitness classes if they were offered by the County, 13.45% (23) said that they would not participate, and 18.13% (31) were not sure if they would participate. For those that said that they would not participate, a few key reasons for not participating included: the weather/heat (7), time (5), safety/security issues (2), not living near a park (2), not interested (1), needing someone to go with (1), and exercising at home (1). For the survey respondents that said that they do not exercise in general, the reasons for not exercising include: not having enough time (49.12%), being too tired (33.33%), not having a place to exercise (31.58%), it costing too much (29.83%), not having childcare while exercising (26.32%), other reasons (8.77%), unknown (8.77%), and not needing to exercise (5.26%).

Focus group participants were provided the opportunity to comment on their reasons for not using the five target parks and recreation centers. These reasons included:

- Not knowing that the parks/recreation centers existed
- Needing additional information about activities available at parks and recreation locations and the schedule of activities (not enough promotion of activities)
- Not having desired activities available at parks/recreation centers
- Safety and security issues (lack of up-keep of parks/trails and police presence)
- Fear (to go alone)/not a lot of people present in the parks
- Lack of time
- Lack of transportation
- Assuming the parks and recreation centers were for children and teenagers only (not viewing them as places that provide services for adults)
- Lack of bathrooms and water fountains
- The heat and lack of shade

- Not having an instructor to give classes (and to make sure people are safe)

Survey and focus groups participants also answered a question related to park accessibility, and what would make it easier for them to use the parks. Table 13 contains the responses from the survey participants.

Table 13. Ways to Improve Park Accessibility (Survey Respondents)

What Would Make it Easier to Use the 5 Selected Parks and Recreation Centers?	Frequency (N=159)	Percent
Safer Area	55	34.59%
If The Park Was Closer to My Home	53	33.33%
Better Lighting	47	29.56%
Easier to Get There (Sidewalks/Public Transit)	37	23.27%
Childcare	34	21.38%
I Don't Know/I Am Not Sure	25	15.72%
Other	24	15.09%

Source: HIA Community Survey, 2015

The "Other" responses included: needing more activities of interest for adults (8); time (4); weather and heat/shady playground (2); location open to the public (allow use of Town 'N Country Recreation Center for kids' activities and reopen Morgan Woods Recreation Center) (2); walkable sidewalks (1); safe and toddler-friendly playgrounds (1); having someone to go with (1); better knowledge of facilities in areas (1); and free parking (1).

The ability to pay for classes was also examined. Figure 9 contains the answers to the questions asked during the focus groups. The responses demonstrate the need for free or low-cost physical activity opportunities at public parks and recreation facilities in the Town 'N' Country area. Survey participants answered the same questions regarding a reasonable price to pay for classes if they were offered by the County Parks and Recreation. The results (N=135) indicate that 43.7% suggested that a reasonable price to pay per class is between $0 and $2, with 17.04% requiring classes to be free, 26.67% one to two dollars, 31.11% three to four dollars, and 25.19% five dollars or more. However, research team staff observed a response bias when administering the surveys, which was also present during the focus group sessions. The type of response bias observed was related to social desirability (people wanting

to present themselves in a favorable light). In this case, it was seen as socially undesirable to admit to wanting or needing services for free. The research team determined that a cultural component was coming into play for the price point question and creating a response bias.

Is cost a barrier to attending exercise classes?	What is a reasonable price to pay per class for outdoor fitness classes?
•Definitely! •YES! •A resounding YES! •Cost is a big factor for a lot of people	•Preferably free •It can't be very high and also depends on how many days a week you are going to go (to fitness classes)

Figure 9. Price Point and Cost for Fitness Classes (Focus Group Respondents)

The survey and focus group results were presented at the HIA Advisory Council meeting in July 2015. Figure 10 details a group exercise that was carried out during this meeting. After the results were presented, a list of barriers to using the parks was presented based on the assessment results. Group feedback and input were requested, and additional barriers were added to the list. Advisory Council members were then given two voting stickers each, and were asked to vote on the two greatest barriers to using the parks for exercise. The main barriers included: safety issues (lighting, crime, sense of safety); not having a facilitator/ instructor or group activities offered at the parks; and not knowing that the parks existed or the activities/events occurring at the parks.

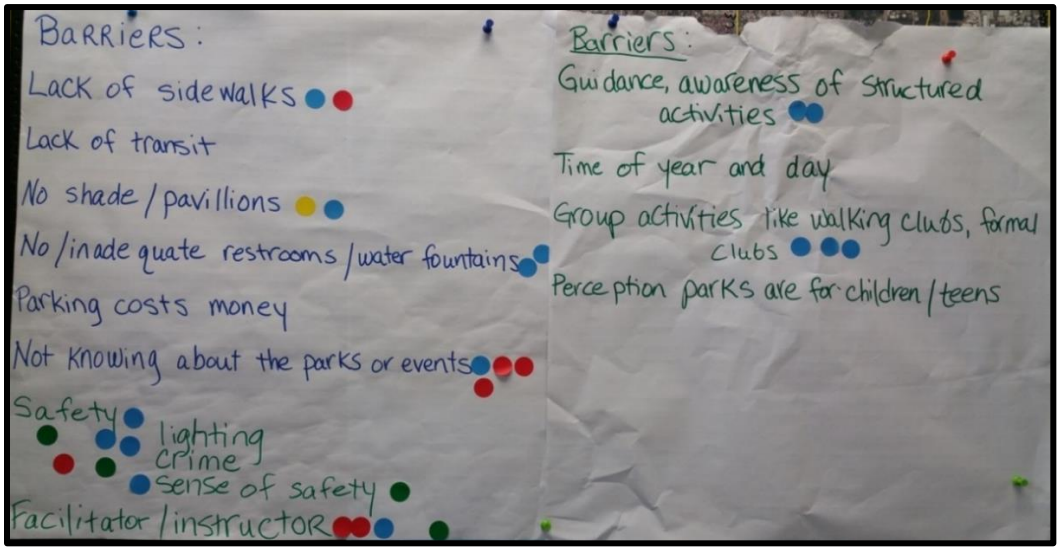

Figure 10. Barriers to Exercise at Parks and Recreation Centers in Town 'N' Country

According to the literature (Bensenyi et al., 2014; Cohen et al., 2007; Maas et al., 2009; NRPA, 2010; Pereira et al., 2012; Rundle et al., 2013; van den Berg et al., 2010; Mytton et al., 2012; Kaczynski & Hendersen, 2007), proximity to parks affects access. The results of the survey indicated that 47.93% of respondents said that they live close enough to walk to one or more of the five target parks selected for this HIA (Westgate Park, Jackson Springs Recreation Center, Town 'N' Country Recreation Center, Shimberg Sports Complex, and Morgan Woods Recreation Center). Figure 11 is a map of the Town 'N' Country area that was created using GIS software. It includes an analysis of the estimated percentage of the residential population that lives within 500 meters of a park entrance (for the five target parks only). The areas depicted in yellow are residential, and those in orange are residential locations within the 500-meter boundary. Additional parks are located within the geographic area and are included on the map, but the calculations to determine the residential population within 500 meters of these parks were not included. Of the 28,086 estimated population for the target area, approximately 19.1% of people live within 500 meters walking distance from a target park entrance.

Impact Prediction:

The proposed policy would likely increase access to physical activity opportunities for residents with lower incomes and/or within walking distance to the park. By allowing businesses to provide outdoor fitness classes in County parks, the number of physical activity opportunities in the area would increase. Offering classes at a very low cost to the public or for free would increase access in addition to providing classes that are culturally appropriate such as Zumba. Addressing other barriers to exercise and parks utilization (such as: providing a group fitness instructor, increasing shade, improving safety/security, providing additional facilities/amenities at the parks, improving the advertisement of activities offered, etc.) would also increase access to the target parks. The proposed policy would have a moderate impact on a medium number of people in the Town 'N' Country area of Hillsborough County in regards to increasing access to physical activity opportunities and places, and would provide access for vulnerable populations such as Hispanics/Latinos and people with lower incomes.

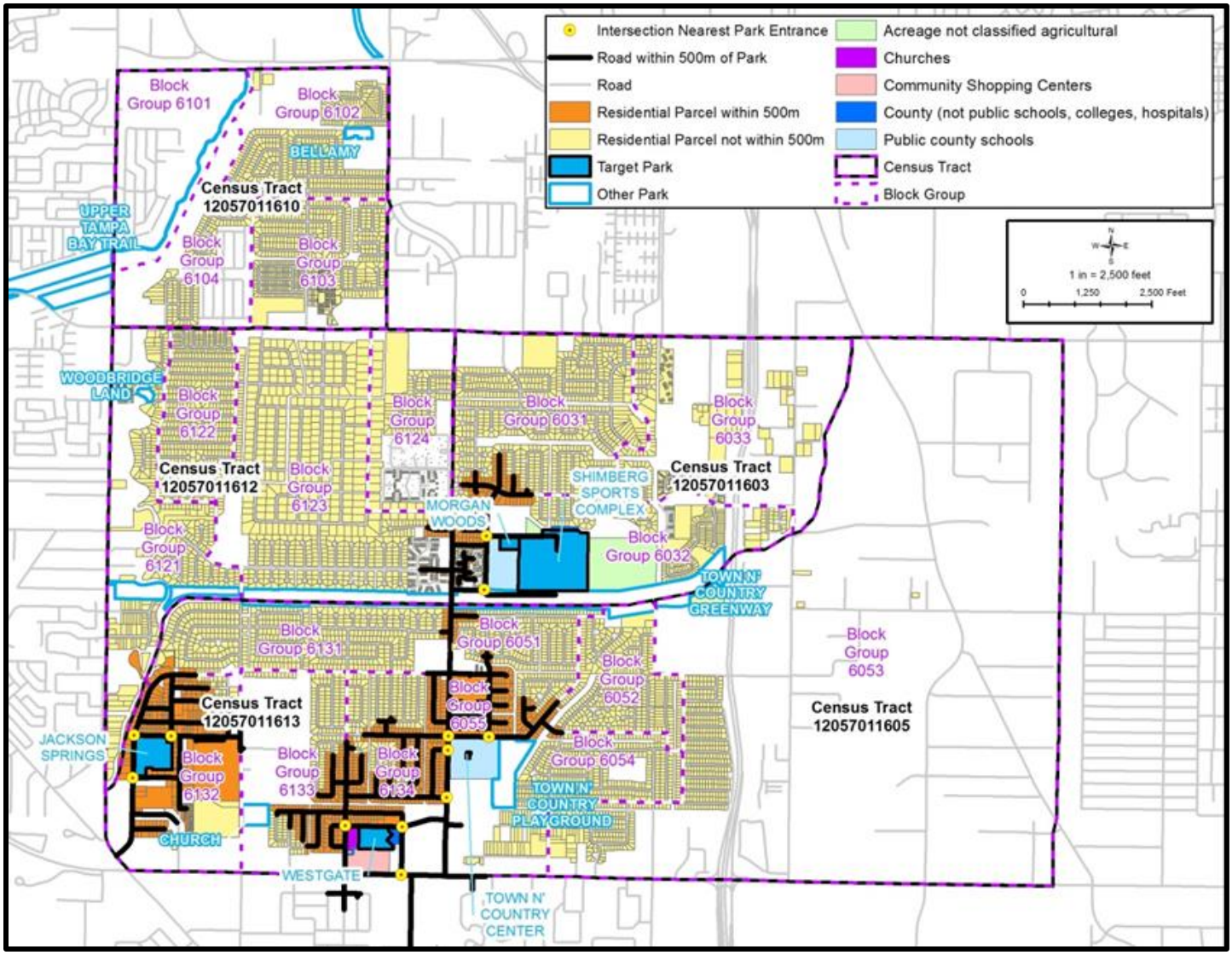

Figure 11. Residents within 500 Meters Walking Distance to Target Parks and Recreation Centers

Outcome: Physical Activity Levels

Increasing access to physical activity opportunities has shown to increase physical activity levels in those with access. Current Hillsborough County exercise levels (Florida CHARTS, 2013) indicate that Hispanics/Latinos are the most sedentary (31.9%) as compared to White and Black Non-Hispanics (26.8% and 25.9% respectively), and Females in all race/ethnic categories are more sedentary than Males (data for Black Non-Hispanic Males is not available). The percentage of adults who meet aerobic recommendations is lowest for Hispanics/Latinos (46.3%), followed by White Non-Hispanics (53.9%) and Black Non-Hispanics (55.3%). Black Non-Hispanic Females and Hispanic Males in particular have the lowest percentage of adults

meeting the aerobic requirements (44.1% and 44.9% respectively). Table 14 contains physical activity level data for Hillsborough County, segregated by Race, Ethnicity, and Sex.

In addition to race, ethnicity, and sex contributing to physical activity levels, educational achievement and income also play a role. Tables 15 and 16 contain data for Hillsborough County. The data demonstrate that as income or educational achievement increases, levels of physical inactivity (being sedentary) decrease and the percentage of adults meeting aerobic requirements increases.

Table 14. Physical Activity Levels for Adults in Hillsborough County, Florida, by Sex and Race/Ethnicity

	Florida	Hillsborough County	White (Non-Hispanic)	Black (Non-Hispanic)	Hispanic
Adults Who Are Sedentary	27.7%	28.0%	26.8%	25.9%	31.9%
Female	30.0%	33.6%	29.2%	36.3%	38.2%
Male	25.3%	21.7%	24.1%	-	24.2%
Adults Who Meet Aerobic Recommendations	50.2%	51.8%	53.9%	55.3%	46.3%
Female	48.6%	48.0%	52.4%	44.1%	47.4%
Male	52.0%	56.3%	55.7%	-	44.9%

Source: Florida CHARTS, 2013 (-) Information not available

Table 15. Physical Activity Levels for Adults in Hillsborough County, Florida, by Education Level

	Hillsborough County	< High School	High School/ GED	More than High School
Education Level				
Adults Who Are Sedentary	28.0%	56.2%	30.3%	20.3%
Adults Who Meet Aerobic Recommendations	51.8%	28.1%	52.3%	57.5%

Source: Florida CHARTS, 2013

Table 16. Physical Activity Levels for Adults in Hillsborough County, Florida, by Income

	Hillsborough County	<$25K	$25K-49K	$50K+
Income Level				
Adults Who Are Sedentary	28.0%	38.4%	32.6%	16.8%
Adults Who Meet Aerobic Recommendations	51.8%	41.7%	48.1%	63.7%

Source: Florida CHARTS, 2013

Residents in the Town 'N' Country area were asked about their physical activity levels as part of the HIA Community Survey (Figure 12). Of those that responded, 70.99% stated that they participated in some form of exercise in the past 30 days, with 16.06% exercising on average 0-1 days, 50.36% exercising 2-3 days, 27.01% exercising 4-5 days a week, and 6.57% participating in physical activity 6 or more days. An assumption can be made that the majority of survey respondents reflect a subpopulation within the Town 'N' Country area that are more likely to access available services and be physically active than the general Town 'N' Country population. The main types of activities that survey respondents currently participate in are: walking (73.76%), running/jogging (27.66%), Yoga/Tai Chi/Pilates (19.15%), dancing/Zumba (18.44%), participation on a sports team (5.67%), and 21.99% participate in other types of exercise such as: cycling/biking, swimming, weight lifting/strengthening, exercise at the gym, cardio, at home exercise, etc.

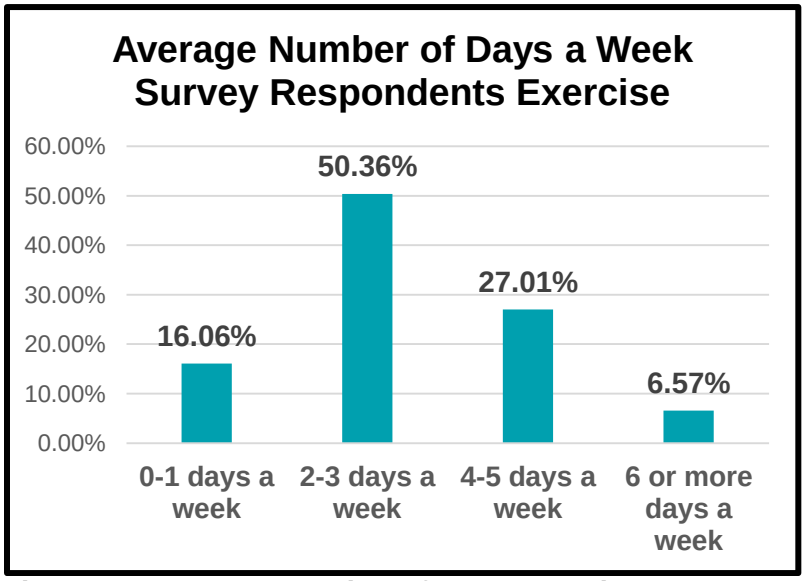

Figure 12. Average Number of Days a Week Survey Respondents Exercise

Impact Prediction:

An increase in access to physical activity opportunities would likely have a moderate impact on physical activity levels for a medium number of people in the target area. Town 'N' Country residents who participate in the proposed fitness classes offered would increase their physical activity levels. However, residents of lower income, lower educational achievement, Hispanics, and females would be most positively affected if a policy was adopted to provide free outdoor fitness classes at county parks and recreation centers in the area.

Health Outcome: Chronic Disease Prevalence

Chronic disease such as overweight, obesity, diabetes, cardiovascular disease, and arthritis were included as outcomes for this HIA. An increase in physical activity levels can have a positive effect on chronic disease outcomes. Secondary county-level data are included in this section in addition to primary chronic disease data that were collected as a part of the HIA Community Survey. Tables 17-20 include data from the Behavioral Risk Factor Surveillance System (BRFSS) as compiled on the Florida CHARTS website. Table 21 provides the chronic disease prevalence reported among the HIA Community Survey respondents.

Table 17 provides an overview of Hillsborough County data (Florida CHARTS, 2013) for adults who are at healthy weight, overweight, or obese. Black Non-Hispanics have the lowest overall percentage of adults who are at a healthy weight (only 18.3%) as compared to White Non-Hispanics (33.5%) and Hispanics (32.0%). Overall, a higher percentage of Hillsborough County females (36.8%) are at a healthy weight compared to males (25.3%), and Black Non-Hispanic Males suffer most disproportionately, with only 17.4% of Black Male adults being at a healthy weight. Black Non-Hispanic adults have the largest percentage of adults who are either overweight or obese (45.4% overweight and 35.9% obese), with Black Females experiencing the highest rates of overweight (55.6%) and Black Males with the largest percentage of adults who are obese (46.7%).

Table 17. Overview of Obesity and Overweight in Hillsborough County, Florida

	Florida	Hillsborough County	White (Non-Hispanic)	Black (Non-Hispanic)	Hispanic
Adults Who Have a Healthy Weight	35.0%	31.0%	33.5%	18.3%	32.0%
Female	41.4%	36.8%	39.5%	19.2%	35.2%
Male	28.4%	25.3%	27.4%	17.4%	28.8%
Adults Who Are Overweight	36.4%	38.2%	38.1%	45.4%	35.8%
Female	30.0%	33.1%	31.0%	55.6%	29.8%
Male	42.9%	43.2%	45.4%	35.3%	41.7%
Adults Who Are Obese	26.4%	29.3%	26.5%	35.9%	30.3%
Female	25.3%	27.8%	26.7%	25.1%	31.6%
Male	27.5%	30.8%	26.3%	46.7%	29.0%

Source: Florida CHARTS, 2013

Diabetes prevalence for Hillsborough County (12.4%) ranks higher than the State of Florida (11.2%). Hispanics fare worse, experiencing the highest prevalence of Diabetes (17.6%) as compared to White Non-Hispanics (10.0%) and Black Non-Hispanics (13.7%). Female Hispanics have the highest prevalence (18.1%) overall. In regards to pre-Diabetes, White Non-Hispanics have the highest prevalence (8.2%) while Hispanics have the lowest (4.0%). However, 9.9% of Black Non-Hispanic Females have been diagnosed with pre-Diabetes. Table 18 contains an overview of Diabetes for the County.

Table 18. Overview of Diabetes in Hillsborough County, Florida

	Florida	Hillsborough County	White (Non-Hispanic)	Black (Non-Hispanic)	Hispanic
Adults Who Have Ever Been Told They Have Diabetes	11.2%	12.4%	10.0%	13.7%	17.6%
Female	10.1%	11.1%	7.4%	14.5%	18.1%
Male	12.3%	13.7%	12.7%	12.9%	17.1%
Adults Who Have Ever Been Told They Have Pre-Diabetes	7.1%	7.0%	8.2%	6.2%	4.0%
Female	7.1%	33.1%	8.0%	9.9%	3.6%
Male	7.4%	6.7%	8.4%	2.1%	4.5%

Source: Florida CHARTS, 2013

Table 19 contains an overview of cardiovascular disease in Hillsborough County. White Non-Hispanics have the highest prevalence of adults who have ever been told they have hypertension (41.0%) and also the highest prevalence of adults who have been told they had coronary heart disease, heart attack, or stroke (12.1%) when compared to Black Non-Hispanics and Hispanics. Overall, the subpopulations with the highest hypertension prevalence are White Non-Hispanic Males (42.8%) and Black Non-Hispanic Females (41.9%). The group with the highest prevalence of cardiovascular disease (coronary heart disease, heart attack, or stroke) is Black Non-Hispanic Males (15.8%).

Table 19. Overview of Cardiovascular Disease in Hillsborough County, Florida

	Florida (%)	Hillsborough County (%)	White (Non-Hispanic) (%)	Black (Non-Hispanic) (%)	Hispanic (%)
Adults Who Have Ever Been Told They Have Hypertension	34.6	36.3	41.0	38.9	28.1
Female	32.1	34.8	39.3	41.9	26.9
Male	37.2	37.9	42.8	35.3	29.5
Adults Who Have Ever Been Told They Had Coronary Heart Disease, Heart Attack, or Stroke	10.3	10.5	12.1	10.1	8.7
Female	8.8	11.0	14.3	5.1	9.8
Male	11.9	10.0	9.8	15.8	7.6

Source: Florida CHARTS, 2013

The health situation of arthritis for adults in Hillsborough County is detailed in Table 20. Prevalence of adults who have ever been told they have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia is included. White Non-Hispanic adults have the highest prevalence (29.0%) of some form of arthritic disease, which is higher than the percentages for the State (26.0%), County (22.8%), Black Non-Hispanics (17.0%), and Hispanics (16.4%). The subpopulation with the highest reported prevalence are White Non-Hispanic Females (39.2%).

Table 20. Overview of Arthritis in Hillsborough County, Florida

	Florida (%)	Hillsborough County (%)	White (Non-Hispanic) (%)	Black (Non-Hispanic) (%)	Hispanic (%)
Adults Who Have Ever Been Told They Had Some Form Of Arthritis, Rheumatoid Arthritis, Gout, Lupus, or Fibromyalgia	26.0	22.8	29.0	17.0	16.4
Female	29.8	28.7	39.2	19.1	18.0
Male	22.0	16.5	18.3	14.6	14.6

Source: Florida CHARTS, 2013

Town 'N' Country residents that participated in the HIA Community Survey were asked questions about whether or not they suffer from certain chronic diseases. Of those that responded, 17.58% reported being told by a healthcare professional that they have high blood pressure, 5.49% reported having a heart problem, 12.65% reported having high blood sugar, and 39.05% reported being diagnosed as overweight or obese (Table 21).

Table 21. Self-Reported Chronic Disease Prevalence (Survey Respondents)

	Yes	No	Don't Know/ Not Sure
High Blood Pressure (N=165)	17.58%	75.76%	6.67%
A Heart Problem (N=164)	5.49%	89.02%	5.49%
High Blood Sugar (N=166)	12.65%	81.33%	6.02%
Overweight/Obese (N=169)	39.05%	57.99%	2.96%

Source: HIA Community Survey, 2015

Impact Prediction:

The proposed parks policy would likely decrease prevalence of chronic disease in those who participate in the classes if participants partake in classes on a regular basis and meet the

required physical activity recommendations to reduce chronic disease. There would be a high impact on early adopters (on few) who participate in the classes, but a low impact on overall community prevalence rates of chronic disease. If access to physical activity opportunities (providing free or low-cost classes) targets Hispanics/Latinos, Black Non-Hispanics, and people of lower socioeconomic status, then there should be an overall moderate impact on chronic disease reduction for the specified subpopulations.

Health Outcome: Mental Health and Well-Being

The indicators included for the Mental Health and Well-Being Outcome include: the percentage of adults who have ever been told they have a depressive disorder (Table 22); self-reported overall health status (Table 23); self-reported mental and physical health status (Table 24); number of days feeling stressed, worried, nervous or anxious (Table 25); and number of days feeling sad, irritated, helpless, and unhappy (Table 25).

According to Florida CHARTS, White Non-Hispanics (18.6%) and Hispanics (18.2%) have the highest prevalence of diagnosed Depression as compared to Black Non-Hispanics (15.5%). Hillsborough County Females (23.3%) have higher rates of depression when compared to Males (12.6%). Table 22 contain these rates.

Table 22. Adults Who Have Ever Been Told They Have a Depressive Disorder in Hillsborough County, Florida

	Florida (%)	Hillsborough County (%)	White (Non-Hispanic) (%)	Black (Non-Hispanic) (%)	Hispanic (%)
Adults Who Have Ever Been Told They Have a Depressive Disorder	16.8	18.1	18.6	15.5	18.2
Female	21.2	23.3	28.9	16.8	18.6
Male	12.1	12.6	7.7	13.9	17.8

Source: Florida CHARTS, 2013

Table 23 includes the County data for self-reported overall health status by race/ethnicity, education level, and income. Disparities are observed for Hispanics, and those with lower education levels and income. Overall, 19.8% of Hillsborough County residents stated that their

health was either poor or fair, and 80.2% stated that their health was good to excellent. 28.9% of Hispanics rates their health as poor or fair compared to Non-Hispanic Whites (19.4%) and Non-Hispanic Blacks (12.3%). Those with lower educational achievement and income level also experience worse overall health. 45.6% of respondents with less than a high school diploma rated their health as poor or fair, compared to 21.5% with a high school diploma or GED and 13.8% for those with greater than a high school diploma. 42.4% of respondents earning less than $25,000 rated their health as poor or fair, 20.9% earning between $25,000 and $49,999, and 8.0% for those earning $50,000 or more reported their health as poor or fair.

Table 23. Self-Reported Overall Health Status in Hillsborough County, Florida

	Poor or Fair (%)	Good to Excellent (%)
Hillsborough, Overall	19.8	80.2
Race/Ethnicity		
Non-Hispanic White	19.4	80.6
Non-Hispanic Black	12.3	87.7
Hispanic	28.9	71.1
Education Level		
<High School Diploma	45.6	54.4
High School Diploma/GED	21.5	78.5
<High School Diploma	13.8	86.2
Income		
<$25,000	42.4	57.6
$25,000-$49,999	20.9	79.1
$50,000 or more	8.0	92.0

Source: Florida CHARTS, 2013

The HIA Community Survey contained questions related to self-reported mental and physical health status (Table 24). 12.86% rated their mental health (including mood and ability to think) as poor or fair, and 14.04% rated their physical health (including ability to carry out daily activities) as poor or fair.

Table 24. Self-Reported Mental and Physical Health (Survey Respondents)

	Poor or Fair	Good to Excellent
Rate Your Mental Health, Including Mood and Ability to Think (N= 171)	12.86%	87.13%
Rate Your Physical Health, Including Ability to Carry Out Daily Activities (N=171)	14.04%	85.96%

Source: HIA Community Survey, 2015

Table 25 includes data from the HIA Community Survey for self-reported mental health status (number of days during the week feeling stressed or anxious, and number of days during the week feeling down or depressed). Approximately 58.96% of respondents reported feeling stressed or anxious either 2-4, 5-6, or 7 days a week. Only 41.04% felt stressed or anxious 0-1 days a week. For the self-reporting of feelings of depression, 68.24% felt down and unhappy 0-1 days a week, 19.41% felt this way 2-4 days a week, 6.47% 5-6 days a week, and 5.88% felt down and depressed 7 days a week.

Table 25. Survey Respondent Self-Reported Mental Health Status (Stress, Anxiety, and Depression)

	0-1 days a week	2-4 days a week	5-6 days a week	7 days a week
How Many Days a Week Do You Feel Stressed, Worried, Nervous, or Anxious? (N=173)	41.04%	27.75%	17.34%	13.87%
How Many Days a Week do You Generally Feel Sad, Irritated, Hopeless, or Unhappy? (N=170)	68.24%	19.41%	6.47%	5.88%

Source: HIA Community Survey, 2015

Impact Prediction:

It is predicted that there would be a high impact on those that participate in fitness classes and that continue to attend classes, but a low impact on improving overall community mental health,

health status, and well-being. Vulnerable subpopulations, such as Hispanics and people with lower income and education level, would see the greatest improvement in mental health and well-being if free or low-cost outdoor fitness classes were offered in the area.

Priority Pathway B: Increased Opportunities for Social Engagement

The research questions for Priority Pathway B include:

- How involved are Town 'N' Country residents in their community, and how would this change as a result of an implemented parks policy?
- What are the current levels of perceived social cohesion in the community, and how would these levels change as a result of an implemented parks policy?
- What is the current mental health status and level of well-being in the Town 'N' Country area, and how would these change as a result of an implemented parks policy?

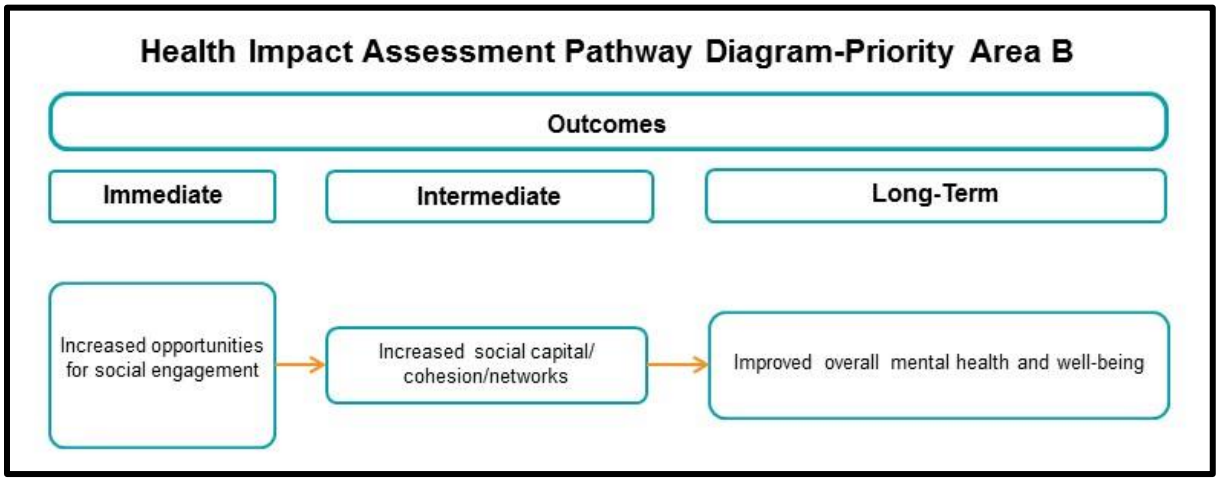

Figure 13. Priority Area B Pathway Diagram (Access to Social Engagement Opportunities)

Rational:

The creation of a policy would likely increase opportunities for Town 'N' Country residents to engage with each other by going to the park for fitness classes. By increasing the amount of time that people interact socially in public space, it is expected that people will grow their social capital and networks, while also increasing social cohesion among residents. Increased social

capital and cohesion have a positive effect on mental health and well-being and would help to reduce stress levels in those engaged in fitness-related classes in the county parks. Figure 13 demonstrates these linkages.

Literature Review:

Social integration, networks, and support refer to the degree in which people are interconnected within social environments. These principles are considered to be key to health, in addition to social relationships at the collective level. According to Lantz and Pritchard (2010), social cohesion is defined as the "extent of connectedness and solidarity among groups in society or the degree of trust, familiarity, values, and network ties shared among groups (including neighborhoods)." Social capital refers to the social benefits and resources that result from strong social ties and social cohesion. Social cohesion can be measured by the strength of social networks, connections, and trust of others, and social capital by the participation in community or voluntary organizations (community engagement) and voter turnout and registration (civic participation). Engaged and active communities are known to contribute positively to population health (Lantz & Pritchard, 2010).

In general, social networks create social supports that buffer against stressors that are harmful to health (CDC, 2011b), and social support is important for reducing stress and improving mental well-being. Among minorities, this is even more apparent. Among Hispanics and immigrants, social support has been linked to lower depression and anxiety, as well as less comorbidities (Kiang, Grzywacz, Marín, Arcury, & Quandt, 2010; Shobe, Coffman, & Dmochowski, 2009; Valencia-Garcia, Simoni, Alegría, & Takeuchi, 2012).

Parks play a significant role in facilitating and promoting social interactions. Proximity to parks and green space has been associated with greater social support and cohesion, particularly among low-income, urban residents (Bedimo-Rung, Mowen, & Cohen, 2005; Maas et al., 2009). Neighborhoods with more green space have reported greater amounts of social cohesion than other neighborhoods (Sugiyama, Leslie, Giles-Corti, & Owen, 2008). Among ethnic minorities, the opportunity to meet other people, as well as encourage and help others, has been reported as one of the most important reasons for park use (Tinsley, Tinsley, & Croskeys, 2002). Qualitative interviews of visitors of a large urban park in New York City have cited that parks serve as an avenue for meaningful social interactions, something that may be difficult in such a large city (Krenichyn, 2006). Important to note is that, in low-income public housing, homes

located near copious amounts of green space have less reported crime and violence (Bedimo-Rung et al., 2005).

Determinant: Social Engagement Opportunities

In order to determine how involved residents are in their community, questions on the HIA Community Survey asked respondents about their membership in a neighborhood association, community group, or civic organization, and the frequency in which they attend faith-based services. Figure 14 contains the results from these survey questions. Of those that responded, 75.14% do not participate in any form of community group, but 52.91% do attend church, mosque, temple, or some other form of faith-based services on a regular basis (at least once per week or 2-3 times month). Approximately, a third (31.98%) of respondents do not attend any faith-based services at all during the year, and 15.12% attend approximately 2-5 times a year. These results indicate that survey respondents are not very involved in the community, but that faith-based services provide a greater avenue for social engagement opportunities over some other form of community group. Other engagement opportunities may be present in the community, but were not measured in the survey with local residents.

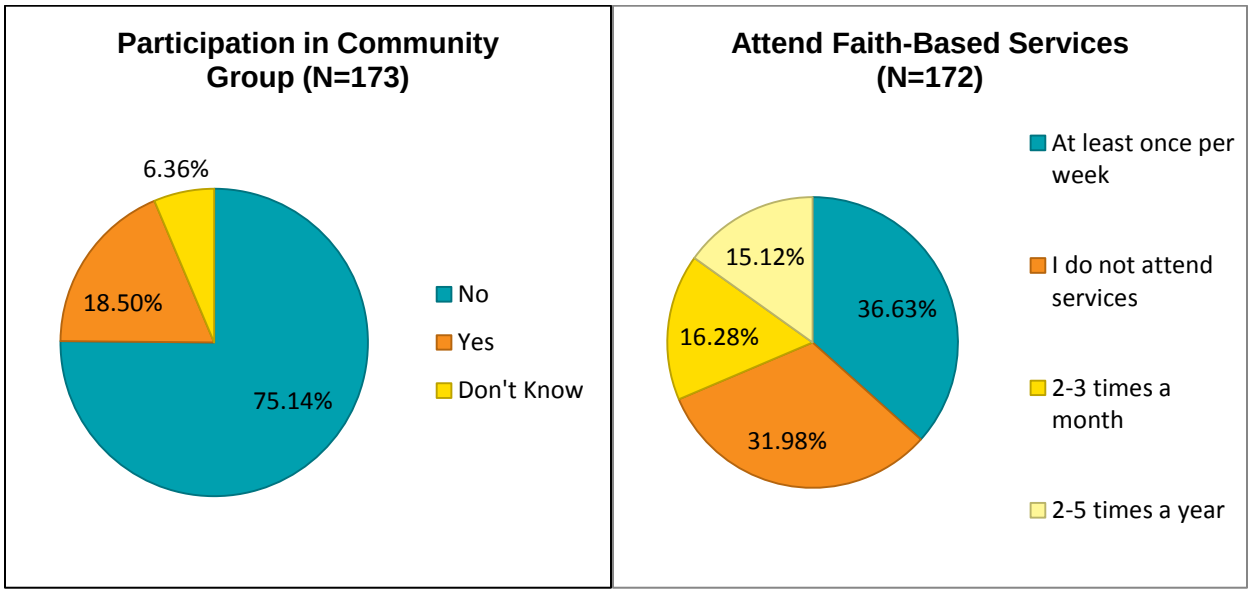

Figure 14. Self-Reported Community Involvement (Survey Respondents)

Impact Prediction:

It is likely that access to social engagement opportunities would increase if a policy to allow free fitness classes in the parks was implemented. Local residents that participate in the classes

would increase their opportunities for social engagement with others in the neighborhood. Residents would interact with others in the park setting and also possibly on their commute if they walk or bike to the park to participate in the fitness classes. It is established that parks increase social interaction, cohesion, and capital, and therefore, it is predicted that a medium number of people would likely be highly impacted if a parks policy and programming were implemented.

Outcome: Social Capital/Cohesion

The HIA Community Survey administered to Town 'N' Country residents included questions on community connectedness, in addition to interpersonal trust and perception of safety from crime. Approximately half (53.49%) of respondents felt only somewhat connected to their community and 34.30% did not feel at all connected. Figure 15 demonstrates that most people in the community do not feel very connected to their community, which can be interpreted as a low level of social cohesion. For the question related to trust (Figure 15), 41.42% of respondents stated that they do feel that people in their neighborhood can be trusted, 37.87% were not sure, and 20.71% of respondents felt like they cannot trust their neighbors. These values show a low level of trust in neighbors, which also signifies poor social cohesion in the community. Finally, survey participants were asked to comment on their perception of safety from crime and violence in the neighborhood (Figure 16). Unfortunately, only 7.65% felt extremely safe, although 47.06% felt quite safe. In addition, 35.53% felt slightly safe, 5.29% did not feel safe at all, and 6.47% were not sure.

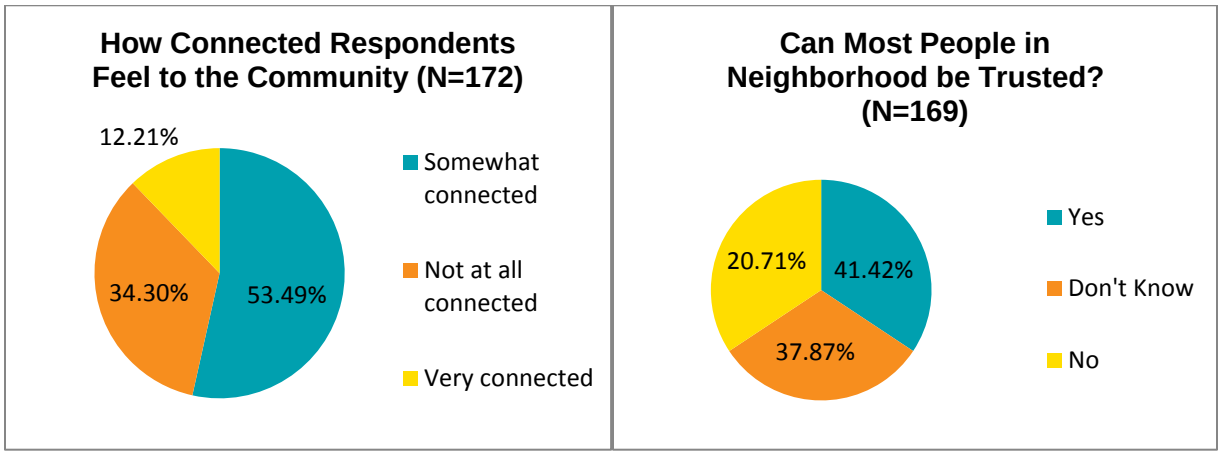

Figure 15. Self-Reported Community Connectedness and Trust (Survey Respondents)

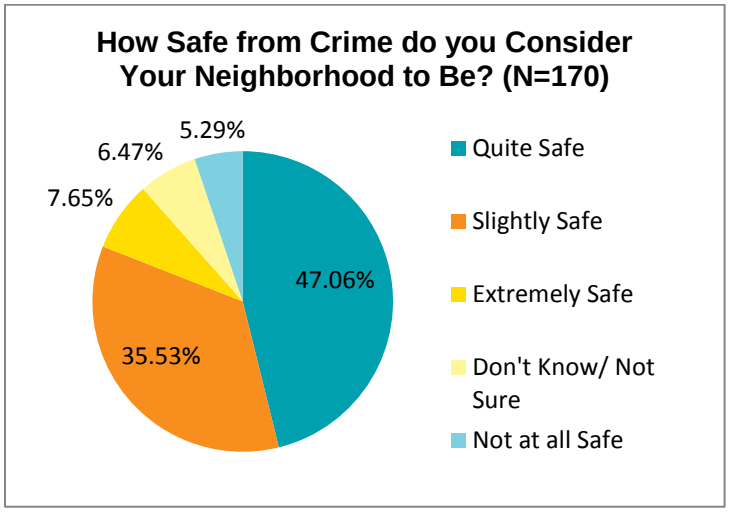

Figure 16. Self-Reported Perception of Neighborhood Safety (Survey Respondents)

In addition to the community survey results, the focus group sessions also provided very useful data. For instance, a key theme brought up throughout the sessions had to do with safety and security issues and people being afraid to go to the parks alone to exercise due to poor upkeep of some of the parks and trails, lack of a police presence, and not a lot of people utilizing the parks in general. In addition, there was a concern by the older participants that they did not want to go to the park alone to exercise, or without an instructor, because they were worried about their health situation and the possibility of a medical emergency occurring while at the park exercising. The community survey included a question for respondents to select measures that would make it easier to use the parks, and 34.59% of respondents selected that they would need "a safer area" in order to access the parks. An additional key theme that resulted from the focus group sessions was the idea that providing fitness classes in parks is seen as a socialization opportunity. Participants stated that they would like group classes, with instructors, to motivate them to go to the park, so they can socialize with others, and so that they can feel safer while doing so.

Figure 17 is a map that includes data from the Hillsborough County Sherriff's Department. Each of the red dots represents a violent or non-violent crime. The orange areas on the map depict the households that are within 500 meters walking distance to a park entrance for the five target parks. There are clusters of crime located within the orange areas that are within walking distance to the Jackson Springs and Town 'N' Country Recreation Centers.

Not feeling safe affects people's behaviors, and results in less walking through these areas. The walkability of these areas, if assessed, could help determine other safety and security related improvements that are needed in the area.

Impact Prediction:

It is predicted that social capital, cohesion, and networks are likely to increase, specifically for those that participate in the parks fitness class programming. There would be a high impact on the users of the parks, compared to non-users. It is expected that the fitness classes would experience attrition, and thus, the participants that maintain participation in the programming would experience a greater increase in social capital, social cohesion, and networks.

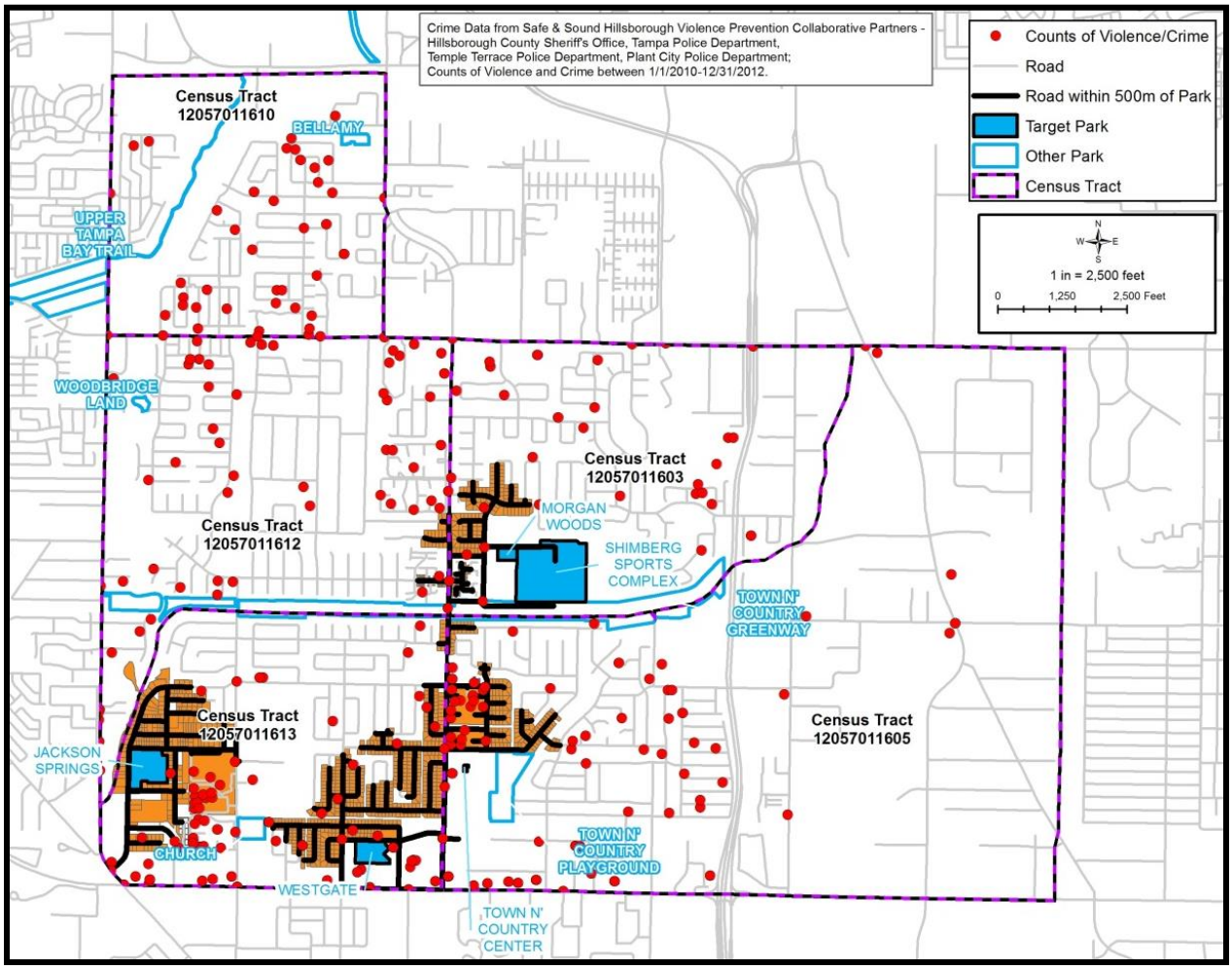

Figure 17. Counts of Crime and Violence in Target Area of Town 'N' Country (2010-2012)

Health Outcome: Mental Health and Well-Being

Improved social cohesion in a community due to increases in community connectedness, social support networks, etc. can improve mental health and well-being of residents. Mental health and well-being data were presented and discussed in the Pathway A: Access to Physical Activity Opportunities section of this report. Please refer to pages 31-33 for details on the mental health and well-being outcome data.

Impact Prediction:

Increased social cohesion, capital, and networks have a positive effect on mental health and well-being. A parks policy allowing free or low-cost fitness classes in county parks would increase opportunities for residents to engage with each other socially and increase each other's social capital as well as improve the community's social cohesion. It can be predicted that there would be a large positive impact on the residents that participate in the fitness classes in terms of mental health and well-being, but only a small impact on population-based mental health and well-being for the target location in Town 'N' Country.

Priority Pathway C: Increased Access to Parks and Natural/Green Space

The research questions for Priority Pathway C include:

- How much green space and tree coverage exists in the Town 'N' Country area?
- What effect does nature have on Town 'N' Country residents, and how would this effect change as a result of an implemented parks policy?
- What are the levels of premature mortality in the Town 'N' Country area, and how would these levels change as a result of an implemented parks policy?
- What is the current prevalence of chronic disease and mental health status in the Town 'N' Country area, and how would these change as a result of an implemented parks policy?

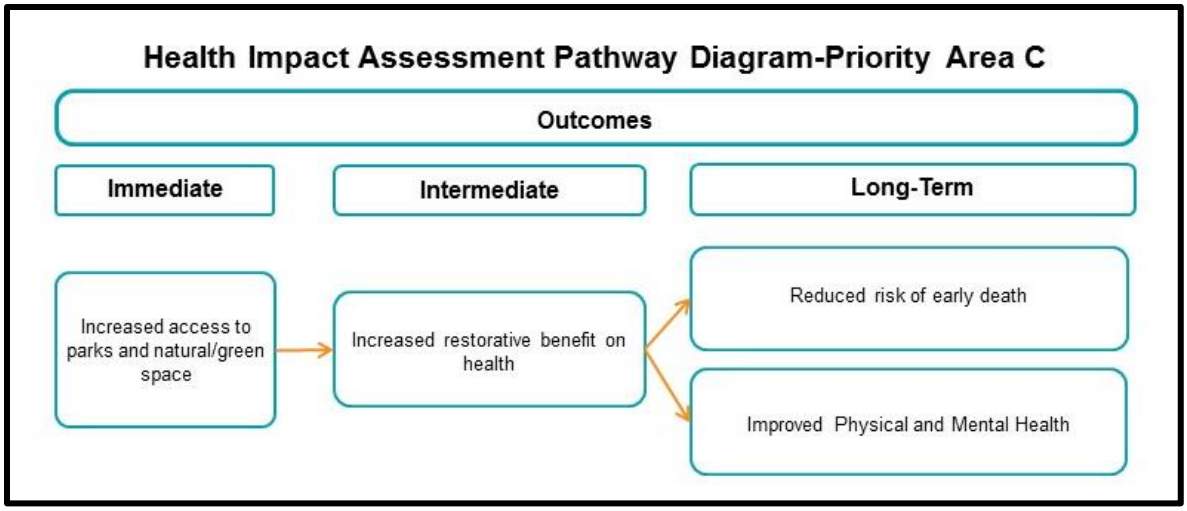

Figure 18. Priority Area C Pathway Diagram (Access to Parks and Green Space)

Rational:

The creation of a policy permitting businesses to provide outdoor fitness classes at county parks and recreation facilities at no cost to the public will increase access to parks, nature, and green space. Exposure to parks and nature acts as a restorative function on health, which can improve overall mental and physical health and decrease the risk of premature mortality. Figure 18 demonstrates the linkages between access to green space, restorative health benefits, and improvement in physical and mental health, as well as premature mortality.

Literature Review:

Parks are beneficial as a platform to promote exercise, but they are also used as an avenue for visitors to relax and unwind. A review revealed that frequently visiting parks can create a sense of wellness by allowing people to feel rejuvenated from stress, and also allows people to "get away" from the day's events and experience aesthetic stimulation (Bedimo-Rung et al., 2005; Krenichyn, 2006; Tinsley et al., 2002). People with greater amounts of stress have been found to spend longer amounts of time in parks than those with lower stress levels, further emphasizing parks as a restorative medium (Orsega-Smith, Mowen, Payne, & Godbey, 2004). Among park visitors who were experiencing stress and headaches prior to their visit, 87% and 52% experienced reductions in stress and headaches, respectively, and 40% reported feeling more well balanced (Hansmann, Hug, & Seeland, 2007).

The surrounding green space in neighborhoods also has restorative benefits, and a closer proximity to green space in residential areas has positive impacts on health and well-being,

particularly during stressful life events (Van den Berg et al., 2010). Perception of greenness of neighborhoods may have impacts on mental health and well-being. Residents who perceived their neighborhoods as green were more likely to report significantly better physical and mental health (Sugiyama et al., 2008).

Engaging in outdoor physical activity can alleviate a myriad of physical and mental health issues. Exercising outdoors is found to have a greater impact on reducing tension, anger, and depression than exercising indoors (Thompson Coon et al., 2011). The landscape of the environment can also influence the restorative benefits of outdoor physical activity. Physical activity in natural environments with more greenspace results in lower blood pressure, stress, and depression (Pretty, Peacock, Sellens, & Griffen, 2005). In fact, a study by Hartig, Evans, Jamner, Davis, & Garling (2003) revealed increases in blood pressure after walking in urban environments (Hartig et al., 2003). Various studies have also found an inverse relationship of decreased all-cause mortality with increased exposure to green space, with mortality due to cardiovascular disease being especially significant (Mitchell & Popham, 2008; Villenueve et al., 2012; Van den Berg, Wendel-Vos, Poppel, Kemper, van Mechelen, & Maas, 2015; Gascon et al., 2015). Mitchell & Popham (2008) also noted that the disparity in all-cause and cardiovascular disease mortality related to lower income was lower for populations that lived in areas with the most green space, and the disparity greater for those with lower income living in areas with less green space (Mitchell & Popham, 2008).

Determinant: Green Space and Parks

The United States Environmental Protection Agency's (EPA's) EnviroAtlas (2015) includes Tampa Bay as a target community. The EnviroAtlas is a repository of environmental health-related data for the area. GIS maps were created for the percent tree coverage (Figure 19) and percent green space (Figure 20) (by census block) for the Town 'N' Country area. According to the EnviroAtlas, green space is defined as land that is covered by vegetation, including trees, lawns, gardens, crop land, and forested wetlands. Tree coverage includes the land that is covered in trees, such as street trees, parks, urban forests, and single trees on various properties. Overall, Town 'N' Country is lacking in tree coverage. The majority of the area has between 21- 40% tree coverage, with some areas as low as 0-20% coverage and as high as 41-60% coverage. Green space coverage for the area is better, with the majority of census blocks having between 41-60% or 61-80% green space.

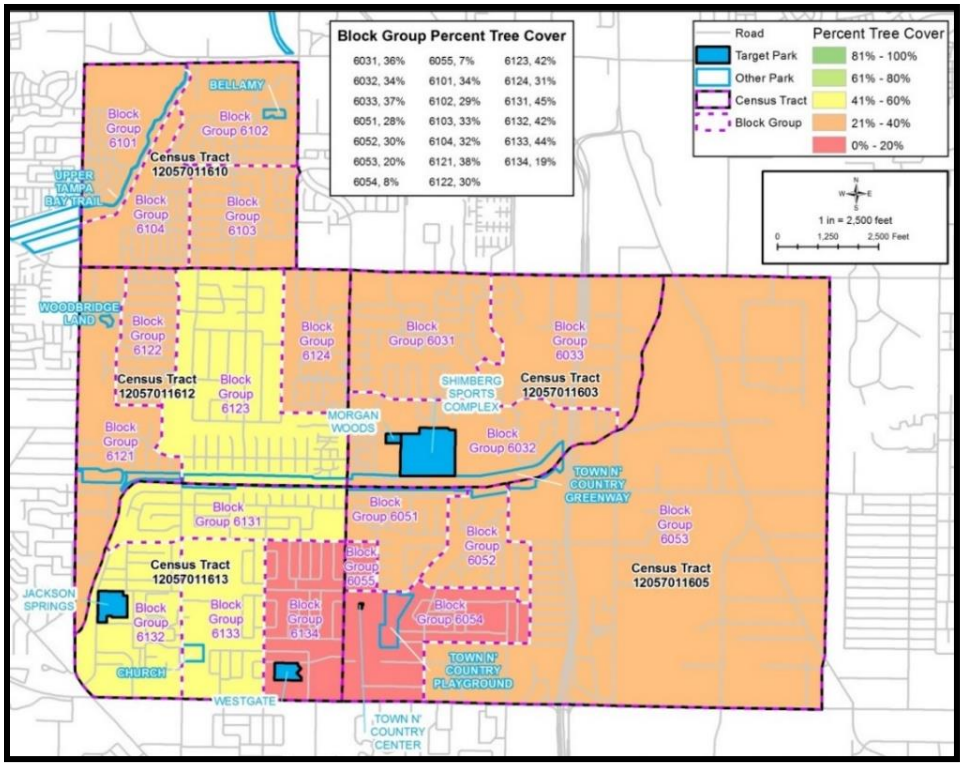

Figure 19. Percent Tree Cover in Target Area of Town 'N' Country

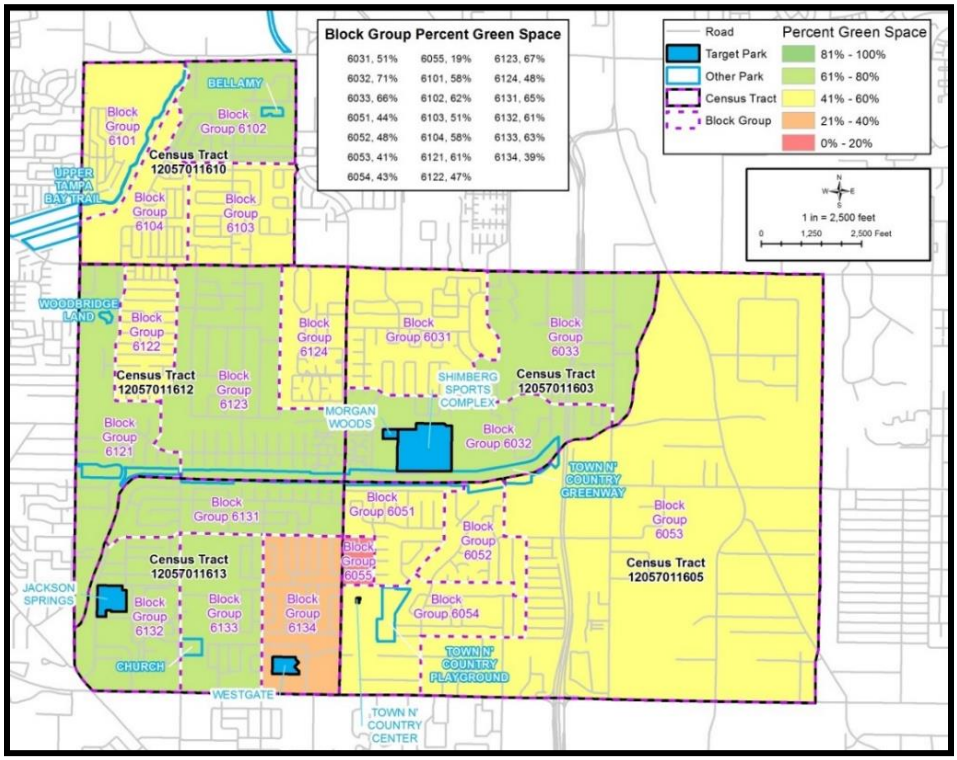

Figure 20. Percent Green Space in Target Area of Town 'N' Country

Health Outcome: Restorative Benefit on Health

Focus group participants were asked how it makes them feel to be outside in nature. The comments were all positive and included reference to nature contributing to positive physical and mental health. The key responses included:

- Good!
- Wonderful
- Being in nature makes you healthy and feel good
- Nature helps me a lot
- It is good to be around the ecology, flora, fauna, etc.
- It makes me feel happy and content
- Good because you are getting healthy (mind and body)
- I love it!
- It makes you feel good because you interact with nature, breathe pure air, can have a picnic, etc.
- Everything that one does outside in fresh air is good for health

Impact Prediction:

The evidence suggests that the restorative benefit of being outside in nature would likely increase for those that access the parks for fitness-related classes. The impact would be high for the residents that go to the park, but there would be a low overall effect for the total Town 'N' Country population. Residents who experience higher levels of stress would also greatly benefit from the proposed parks policy and programming.

Health Outcome: Risk of Early Death

Premature mortality is defined as the years of potential life lost before age 75, or deaths that could be prevented. According to the RWJF & UWPHI 2015 County Health Rankings, the age-adjusted years of potential life lost rate for Hillsborough County in 2014 was 7,004 per 100,000 population, which was higher than the State rate of 6,893 per 100,000. According to Florida CHARTS, the top ten major causes of death in the county in 2014 were due to: cancer, heart disease, chronic lower respiratory disease, unintentional injuries, stroke, diabetes, Alzheimer's disease, suicide, septicemia, and chronic liver disease/cirrhosis (Table 26). The Age-Adjusted Death Rate, 3-Year Rolling Rate (per 100,000) for coronary heart disease, heart disease, stroke, and diabetes are included in Table 27.

Table 26. Major Causes of Death in Hillsborough County, Florida

Cause of Death	Deaths	% of Total Deaths	Crude Rate Per 100,000	Age-Adjusted Death Rate Per 100,000	3-Year Age-Adjusted Death Rate Per 100,000
All Causes	**9,950**	**100**	**763.7**	**745.8**	**748.3**
Cancer	2,227	22.4	170.9	163.9	166.8
Heart Disease	2,193	22	168.3	163.7	169.1
Chronic Lower Respiratory Disease	594	6	45.6	45.2	44.2
Unintentional Injuries	574	5.8	44.1	43.4	45.6
Stroke	460	4.6	35.3	34.8	33.7
Diabetes Mellitus	309	3.1	23.7	22.6	22.1
Alzheimer's Disease	275	2.8	21.1	21.3	21.7
Suicide	185	1.9	14.2	13.7	13
Septicemia	171	1.7	13.1	12.7	12.8
Chronic Liver Disease and Cirrhosis	153	1.5	11.7	10.5	10.2
Pneumonia/Influenza	152	1.5	11.7	11.6	11.5
Kidney Disease	148	1.5	11.4	11.1	11
Parkinson's Disease	103	1	7.9	8.2	7.5
Homicide	67	0.7	5.1	5.1	5.4
AIDS/HIV	57	0.6	4.4	4	4.4

Source: Florida CHARTS, 2014

Table 27. Age-Adjusted Death Rate, 3-Year Rolling Rates (per 100,000)

	Florida	Hillsborough County	White (Non-Hispanic)	Black (Non-Hispanic)	Hispanic
Coronary Heart Disease	100.9	102.5	104.2	96.3	77.4
Heart Disease	154.5	169.1	168.8	181.7	125.2
Stroke	32.1	33.7	32.6	44.1	27.4
Diabetes	19.6	22.1	19.3	42.3	21.2

Source: Florida CHARTS, 2012-2014

Impact Prediction:

It is predicted that there would be a likely positive impact on premature mortality. The risk of early death would decrease for those who participate in the outdoor fitness classes on a regular basis. In addition, it is predicted that the effect would be greater for people with underlying chronic health conditions and for those that experience higher levels of stress on a daily basis.

Health Outcome: Physical and Mental Health

Exposure to parks, nature, and green space can improve physical and mental health outcomes due to the restorative benefit and stress reduction nature has on the mind and body. The key physical and mental health data indicators and results were presented in the Pathways A: Access to Physical Activity Opportunities section of this report (pages 27-33).

Impact Prediction:

It is predicted that engaging in physical activity in a natural setting (in parks) would improve physical and mental health because exercise improves fitness, but also because nature has a restorative benefit on health. The Town 'N' Country residents that participate in outdoor fitness classes would be greatly impacted in a positive manner, but the impact on overall physical and mental health of the community would be small.

Recommendations and Reporting

The HIA Advisory Council drafted recommendations for the Director of the Hillsborough County Department of Parks, Recreation, and Conservation based on the results of the assessment. These recommendations have been grouped according to the three determinants of health included in this HIA: access to physical activity opportunities; access to social engagement opportunities; and access to parks and green space.

Recommendations to Promote Access to Physical Activity Opportunities:

- Consider adopting a policy allowing outdoor fitness classes at County parks and recreational centers free of charge
- Signs for recreational activities should be posted in English as well as Spanish (and advertise if instructor is bilingual)

- Signs for recreational activities should be advertised in family-owned stores, restaurants, and supermarkets, and in public agencies to ensure those that do not use the internet are aware of parks and recreation-related activities
- As soon as feasible, and with the input of the residents, install additional covered pavilions, bathrooms, water foundations, and other amenities in and around the following facilities: Town 'N' Country Recreation Center, Jackson Springs Recreation Center, Westgate Park, and Shimberg Sports Complex
- Consider re-opening Morgan Woods Park to provide fitness classes for adults, and allow joint-use of Webb Middle School track and field at the Town 'N' Country Recreation Center location
- Partner with the local YMCA, Senior Center, and Library to provide outdoor programming in the target parks and recreation center locations
- Provide child care so that parents, guardians, and adult family members can participate in programmed fitness classes
- If feasible in the future, install outdoor fitness equipment in at least one of the parks with higher usage (this would be determined by working with residents)
- Form a citizens' advisory committee in the Town 'N' Country area to assist with these changes

Recommendations to Promote Social Engagement Opportunities:

- Organize community-oriented, culturally appropriate activities in the parks to build a sense of safety and community
- Ensure that recreational activities are culturally appropriate and inclusive (with bilingual instructors if possible)

Recommendations to Promote Use of Parks and Access to Green Space:

- Signage/wayfinding indicating the presence of the parks should be more prominent in and around the neighborhood
- Work with the citizens' advisory committee to perform a sidewalk/walkability audit within 500 meters of the target parks' entrances
- Plant mature shade trees in and around areas where people congregate
- Install toddler-friendly playgrounds that include benches, shade, and landscaping
- Provide free parking (if applicable), and work with the transit agency to ensure the parks are accessible by transit

Communications and Reporting

This report will be shared with the Director of the Hillsborough County Department of Parks, Recreation, and Conservation. A meeting will also be scheduled in order to present the results and recommendations of the HIA, and to discuss the importance and utility of HIA for future use in the County. Abbreviated formats of the report will be developed (i.e. executive summary briefs, fact sheets, etc.) in both English and Spanish and shared via various platforms, such as websites, email, hard copy distribution, and social media.

Monitoring and Evaluation

The monitoring and evaluation of this HIA is not included in this report due to the temporal scope of the project. However, a process evaluation will be carried out to determine how well the HIA was conducted and to determine the lessons learned. An impact evaluation will occur after the process evaluation by tracking whether or not the recommendations were implemented by the decision-maker. An outcome evaluation to examine the proposed immediate, intermediate and long-term outcomes is currently outside of the scope and resources for this project.

References

Bhatia, R. (2011). *Health impact assessment: A guide for practice.* Oakland, CA: Human Impact Partners.

Bhatia, R., Farhang, L., Heller, J., Lee, M., Orenstein, M., Richardson, M., & Wernham, A. (2014). *Minimum elements and practice standards for health impact assessment: Version 3.* Retrieved from http://hiasociety.org/wp-content/uploads/2013/11/HIA-Practice-Standards-September-2014.pdf

Bedimo-Rung, A.L., Mowen, A.J., & Cohen, D.A. (2005). The significance of parks to physical activity and public health: A conceptual model. *American Journal of Preventive Medicine, 28(2S2*), 159-168.

Besenyi, G.M., Kaczynski, A.T., Wilhelm Stanis, S.A., Bergstrom, R.D., Lightner, J.S., & Hipp, J.A. (2014). Planning for health: A community-based spatial analysis of park availability and chronic disease across the lifespan. *Health & Place, 27,* 102-105.

Centers for Disease Control and Prevention. (2011a). *Strategies to prevent obesity and other chronic diseases: The CDC guide to strategies to increase physical activity in the community.* Retrieved from http://www.cdc.gov/obesity/downloads/PA_2011_WEB.pdf

Centers for Disease Control and Prevention (2011b). *Principles of community engagement-second edition: Social networks and health.* Retrieved from http://www.atsdr.cdc.gov/communityengagement/pce_social_health.html

Centers for Disease Control and Prevention. (2014). *Healthy places: Physical activity*. Retrieved from: http://www.cdc.gov/healthyplaces/healthtopics/physactivity.htm

Centers for Disease Control and Prevention. (2015) *Physical activity and health.* Retrieved from http://www.cdc.gov/physicalactivity/basics/pa-health/index.htm

Centers for Disease Control and Prevention & National Park Service. (2015). Parks, trails, and health workbook. Washington, DC: National Park Service. Retrieved from http://go.nps.gov/parkstrailshealth_workbook

Cohen, D. A., McKenzie, T. L., Sehgal, A., Williamson, S., Golinelli, D., & Lurie, N. (2007). Contribution of public parks to physical activity. *American Journal of Public Health, 97(3),* 509-514. doi: 10.2105/ajph.2005.072447

Cohen, D. A., Marsh, T., Williamson, S., Derose, K. P., Martinez, H., Setodji, C., & McKenzie, T. L. (2010). Parks and physical activity: why are some parks used more than others? *Preventive Medicine, 50 Suppl 1*, S9-12. doi: 10.1016/j.ypmed.2009.08.020

Danaei, G., Ding, E.L., Mozaffarian, D. Taylor, B., Rehm, J., Murray, C.J., & Ezzati, M. (2009). The preventable causes of death in the United States: Comparative risk assessment of dietary, lifestyle, and metabolic risk factors. *PLoS Medicine*, *6(4),* e1000058. doi: 10.1371/journal.pmed.1000058

Gascon, M., Triguero-Mas, M., Martínez, D., Dadvand, P., Rojas-Rueda, D., Plaséncia, A., & Nieuwenhuijsen, M.J. (2015). Residential green spaces and mortality: A systematic review. *Environment International, 86,* 60-67.

Hansmann, R., Hug, S.M., & Seeland, K. (2007). Restoration and stress relief through physical activities in forests and parks. *Urban Forestry & Urban Greening, 6(4),* 213-225. doi: http://dx.doi.org/10.1016/j.ufug.2007.08.004

Hartig, T., Evans, G.W., Jamner, L.D., Davis, D.S., & Garling, T. (2003). Tracking restoration in natural and urban field settings. *Journal of Environmental Psychology, 23,* 109–123.

Kacyzynski, A., & Henderson, K. (2007). Environmental correlates of physical activity: A review of evidence about parks and recreation. *Leisure Sciences, 29(4),* 315-354. doi:10.1080/01490400701394865

Kiang, L., Grzywacz, J.G., Marín, A. J., Arcury, T.A, & Quandt, S. A. (2010). Mental health in immigrants from nontraditional receiving sites. *Cultural Diversity and Ethnic Minority Psychology, Vol. 16, No. 3,* 386–394. doi: 10.1037/a0019907

Krenichyn, K. (2006). 'The only place to go and be in the city': Women talk about exercise, being outdoors, and the meanings of a large urban park. *Health & Place, 12,* 631–643.

Lantz, P.M., & Pritchard, A. (2010). Socioeconomic indicators that matter for population health. *Preventing Chronic Disease, 7(4).* Retrieved from http://www.cdc.gov/ pcd/issues/ 2010/jul/09_0246.htm.

Lee, I.M., Shiroma, E.J., Lobelo, F., Puska, P., Blair, S.N., & Katzmarzyk, P.T. (2012). Effect of physical inactivity on major non-communicable diseases worldwide: An analysis of burden of disease and life expectancy. *Lancet, 380(9838),* 219-229. doi: 10.1016/s0140-6736(12_610319

Maas, J., van Dillen, S.M.E., Verheij, R.A., & Groenewegen, P.P. (2009). Social contacts as a possible mechanism behind the relation between green space and health. *Health & Place, 15,* 586-595.

Mitchell, R. (2013). Is physical activity in natural environments better for mental health than physical activity in other environments? *Social Science and Medicine, 91(0),* 130-134. doi: http://dx.doi.org/10.1016/j.socscimed.2012.04.012

Mitchell, R. & Popham, F. (2008). Effects of exposure to natural environment on health inequalities: An observational population study. *Lancet 372,* 1655-60.

Mytton, O. T., Townsend, N., Rutter, H., & Foster, C. (2012). Green space and physical activity: An observational study using Health Survey for England data. *Health Place,* 18(5), 1034-1041. doi: 10.1016/j.healthplace.2012.06.003

National Recreation and Parks Association. (2010). *The benefits of physical activity provided by park and recreation services: The scientific evidence*. Retrieved from http://www.nrpa.org/uploadedFiles/nrpa.org/Publications_and_Research/Research/Papers/Godbey-Mowen-Research-Paper.pdf

National Research Council. (2011). *Improving health in the United States: The role of health impact Assessment.* Retrieved from http://www.nap.edu/catalog/13229/improving-health-in-the-united-states-the-role-of-health

Orsega-Smith, E., Mowen, A.J., Payne, L.L., & Godbey, G. (2004). The interaction of stress and park use on psycho-physiological health in older adults. *Journal of Leisure Research 2004, 36 (2),* 232-256.

Pereira, G., Foster, S., Martin, K., Christian, H., Boruff, B.J., Knuiman, M., & Giles-Corti, B. (2012). The association between neighborhood greenness and cardiovascular disease: An observational study. *BMC Public Health, 12,* 466.

Pretty, J., Peacock, J., Sellens, M., & Griffen, M. (2005). The mental and physical health outcomes of green exercise. *International Journal of Environmental Health Research, 15(5),* 319-337. doi: 10.1080/09603120500155963

Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute. (2015). *County health rankings & roadmaps: Access to places for physical activity*. Retrieved from http://www.countyhealthrankings.org/policies/access-places-physical-activity

Rundle, A., Quinn, J., Lovasi, G., Bader, M. D., Yousefzadeh, P., Weiss, C., & Neckerman, K. (2013). Associations between body mass index and park proximity, size, cleanliness, and recreational facilities. *American Journal of Health Promotion, 27(4),* 262-269. doi: 10.4278/ajhp.110809-QUAN-304

Shobe, M.A., Coffman, M.J., & Dmochowski, J. Achieving the American dream: Facilitators and barriers to health and mental health for Latino immigrants. *Journal of Evidence-Based Social Work, 6(1),* 92-110. doi: 10.1080/15433710802633601

Sugiyama, T., Leslie, E., Giles-Corti, B., & Owen, N. (2008). Associations of neighborhood greenness with physical and mental health: Do walking, social coherence and local social interaction explain the relationships? *Journal of Epidemiology and Community Health, 62(e9).* doi:10.1136/jech.2007.064287

Thompson Coon, J., Boddy, K., Stein, K., Whear, R., Barton, J., & Depledge, M.H. (2011). Does participating in physical activity in outdoor natural environments have a greater effect on physical and mental wellbeing than physical activity indoors? A systematic review paper. *Environmental Science &. Technology, 45,* 1761–1772.

Tinsley, H.E.A., Tinsley, D.J., & Croskeys, C.E. (2002). Park usage, social milieu, and psychosocial benefits of park use reported by older urban park users from four ethnic groups. *Leisure Sciences: An Interdisciplinary Journal, 24(2),* 199-218, doi: 10.1080/01490400252900158

United States Census Bureau. (2015). *State and county quick facts*. Retrieved from: http://quickfacts.census.gov/qfd/states/12/12057.html

Valencia-Garcia, D., Simoni, J.M., Alegría, M., & Takeuchi, D.T. (2012). Social capital, acculturation, mental health, and perceived access to services among Mexican American women. *Journal of Consulting and Clinical Psychology, 80(2),* 177–185. doi:10.1037/a0027207.

Van den Berg, A.E., Maas, J., Verheij, R.A., & Groenewegen, P.P. (2010). Green space as a buffer between stressful life events and health. *Social Science & Medicine, 70,* 1203-1210.

Van den Berg, M., Wendel-Vos, W., van Poppel, M., Kemper, H., van Mechelen, W. & Maas, J. (2015). Health benefits of green spaces in the living environment: A systematic review of epidemiological studies. *Urban Forestry & Urban Greening, (14),* 806-816.

Villeneuve, P.J., Jerret, M., Su, J.G., Burnett, R.T., Chen, H., Wheeler, A.J., & Goldberg, M.S. (2012). A cohort study relating urban green space with mortality in Ontario, Canada. *Environmental Research, 115,* 51-58.

West, S. T., Shores, K. A., & Mudd, L. M. (2012). Association of available parkland, physical activity, and overweight in America's largest cities. *Journal of Public Health Management and Practice, 18(5),* 423-430. doi: 10.1097/PHH.0b013e318238ea27

Appendix A.

HIA Screening Worksheet

(Adapted from the Appendix 1: British Columbia Health Impact Assessment Checklist, British Columbia Ministry of Health, Vancouver, Canada)

Will the Option Have an Impact On	Possible Impact	Explanation/ Information Required
1. The creation of income and/or wealth? *Will specific income groups or communities be impacted positively or negatively?*		Unknown
2. The distribution of income and/or wealth? *Will specific income groups or communities be impacted positively or negatively?*		The goal is to target parks in an area that have health and income disparities first. The intent is to persuade the Hillsborough County Parks Department to adopt a policy of allowing free outdoor fitness classes in these areas which will affect high need communities most.
3. Employment opportunities for individuals and/or communities? *What is the impact on the nature and distribution of jobs and/or working conditions?*		Uncertain at this time.
4. **Learning opportunities, particular for young people and/or unemployed?** *Will training/education support tomorrow's jobs?*		Unknown
5. Healthier beginnings for children? *This includes meeting their basic physical needs, building self-esteem and developing a sense of connectedness with others.*		The policy would provide access to physical activity and social engagement opportunities and access to parks and natural/green space for adults.
6. **The number and quality of healthy personal connections, such as those with friends, families, colleagues and community groups (as distinct from professional support services)?** *Will it segregate or isolate individuals or groups?*	X	The policy would provide access to social engagement opportunities, which improves social cohesion/social support networks. The proposed policy shouldn't segregate or isolate individuals or groups since it is a county-wide policy, and will recommend focusing first on disparate populations.
7. **Physical safety and security among individuals and communities?**	X	Increased access to social engagement opportunities and increased utilization of parks impact rates of crime and violence (reduces violence and improves security).
8. People's sense of control over their own lives in the decision making affecting their income, working and living conditions, support systems, local government programs, services and/or resources?	X	Increased control for various opportunities for recreation, to engage with neighbors and to be more physically active. This policy would also act as an incentive to participate in such activities which would improve participants' quality of life at no cost.

9. Physical and/or mental health?	X	Increased access to physical activity and social engagement opportunities and access to parks and natural/green space impact both physical and mental health.
10. The provision of fair equitable and respectful access to government programs, services and or/resources?	X	The proposed policy will apply to all County parks located throughout the county.
11. The environment? *Will the environmental changes affect health?*	X	Increasing physical activity opportunities and access to parks and natural/green space impacts health.

Appendix B.

HIA Screening Checklist

Essential Screening Questions	Yes/No/ Unknown	Supporting Facts/Rationale
Value of and need for HIA *Does the decision have the potential to affect, directly or indirectly (positively or negatively) health outcomes via environmental or social determinants of health?*	Yes	Key Decision- the adoption (by the Director of the Hillsborough County Parks, Recreation, and Conservation) of a policy permitting local businesses and organizations to commit to providing outdoor exercise classes in public parks at no cost to the public. Environmental and social determinants of health- physical environment (access to physical activity opportunities); social support networks/social cohesion; access to parks and natural space; and individual behaviors (physical activity). These health determinants can affect health outcomes such as: prevalence of obesity/overweight, diabetes, heart disease, stroke, joint and bone disease, depression, overall well-being, mental health, stress, and risk of early death.
Could these impacts create or exacerbate social disparities?	Unknown	Proposed policy would be county-wide, but focus on bringing exercise classes to disparate neighborhoods and areas with high health disparities. It is anticipated that the results will reduce inequities in access to parks and programming.
Are the proposal's impacts to health potentially significant in terms of number of people impacted and/or the magnitude, breadth, and immediacy of impacts?	Yes	Potentially significant in the number of people impacted-Hillsborough County is a large county (1.3 million people) with parks located throughout county. Immediacy of impacts-policy has an immediate effect on access to physical activity and social engagement opportunities, access to parks and natural/green space, and utilization of parks, which impact health outcomes.
Are the health impacts unknown, uncertain, or controversial?	No	Health impacts can be predicted assuming behavior follows the literature review that demonstrates making physical activity more accessible will influence the number of people who reach the recommended daily activity levels and the duration of physical activity. Access to green space and social engagement opportunities also impact health in a positive way.
Could HIA recommendations potentially improve the impact that the plan, policy, or program has on health?	Yes	Findings and recommendations resulting from the HIA could affect county policies regarding access to opportunities for physical activity.

Feasibility of conducting an HIA *Are the leadership, resources, and technical capacity available to conduct an analysis?*	Yes	DOH-Hillsborough staff and partners participated in a 2-day HIA training hosted by DOH-Hillsborough in June 2014. Staff with assessment, research methods, data analysis, and evaluation experience who attended this training will be involved in the HIA.
Do data and research methods exist to analyze health impacts of concern associated with this decision?	Yes	Health and demographic indicators available on Florida CHARTS, US Census Bureau databases; mixed-methods qualitative and quantitative research methods exist for primary data collection. Most needed health and demographic data is available at the county or zip code level. Utilization rates and interest will be gauged using surveys and focus groups.
Which stakeholders have interest and/or capacity to participate in an HIA (scoping, research, communication)?	Yes	DOH-Hillsborough; Hillsborough County Parks, Recreation, and Conservation; Partners in Obesity Prevention Coalition; Homeowners Associations; local community-based organizations in target area
Receptiveness of the decision-making process *Is there a pending decision regarding the project, plan, or policy?*	Yes, but the timeframe is flexible	The Parks Department has provided some classes at their recreation centers and parks for a fee for several years. DOH-Hillsborough approached their leadership about possibly offering outdoor classes that would be free to the public and to work together on an HIA to prioritize the parks and populations served.
Has a final decision about the proposal been made?	No	
Are there policy/legal requirements mandating the consideration of direct and/or indirect health impacts?	No	
Is there sufficient time and is it feasible to analyze the project before a decision is made?	Yes	Timeframe to complete an Intermediate HIA is sufficient (September 2014-June 2015); It is feasible to analyze the project before a decision is made (no current decision pending and no current deadline for decision).
Are stakeholders requesting an HIA to inform the decision-making process?	Yes	DOH-Hillsborough is a stakeholder and is the entity proposing the HIA.
Is the decision-making process open to HIA and/or recommendations for changes to design, mitigations, and alternatives?	Yes	The decision-maker is the county parks and recreation department.

Adapted from: FDOH Healthiest Weight and Florida Institute for Health Innovation HIA-Screening Checklist

Appendix C.

Community Survey Survey #_____

Date: _____

A) EXERCISE

1) During the past 30 days, other than your regular job, did you participate in any physical activities or exercise such as walking, running, Zumba, soccer, etc.? ***If "No," Skip to Question 5.***

____Yes ____ No ____ I don't know/I am not sure

2) In the past month, what type of exercise did you participate in? (Check all that apply)

____ Walking ____ Dancing / Zumba ____ I play on a sports team
____ Running / Jogging ____ Yoga / Tai Chi / Pilates ____ Other (Please list):_____

3) On average, how many days a week do you exercise?

____ 0-1 days ____ 2-3 days ____ 4-5 days ____ 6 or more days

4) Where do you exercise? (Check all that apply)

____ A private gym, club, or studio
____ Inside my house
____ Outside in my neighborhood
____ Parks and Recreation facilities
____ I play on a sports team
____ Other (please list): _____

After Answering Question 4, Please Skip to Question 6.

5) If you do not exercise, why not? (Check all that apply)

____ I'm too tired
____ I don't have time
____ It costs too much
____ I don't have a place to exercise
____ I don't need to exercise
____ I don't have childcare while I exercise
____ I don't know/I am not sure
____ Other (please list): _____

B) HEALTH

6) In the following table, please check one answer per question. Has a doctor, nurse, or other health care provider ever told you that:

	Yes	No	I Don't Know/ Not Sure
You have high blood sugar			
Your blood pressure is high			
You have a problem with your heart			
You are overweight or obese			

1

7) How many days a week do you feel stressed, worried, nervous, or anxious?

____ 0-1 days a week
____ 2-4 days a week
____ 5-6 days a week
____ 7 days a week

8) How many days a week do you generally feel sad, irritated, hopeless, or unhappy?

____ 0-1 days a week
____ 2-4 days a week
____ 5-6 days a week
____ 7 days a week

		Poor	Fair	Good	Very Good	Excellent
9)	**In general, how would you rate your mental health, including mood and ability to think?**	1	2	3	4	5
10)	**In general, how would you rate your physical health, including ability to carry out daily activities?**	1	2	3	4	5

C) COMMUNITY INVOLVEMENT

11) Do you belong to a neighborhood association, community group, or civic organization?

____ Yes ____ No ____ I don't know/I am not sure

12) How often do you go to church, temple, mosque, or services at other faith-based organizations?

____ At least once per week
____ 2-3 times per month
____ 2-5 times per year
____ I do not go to church, temple, mosque, or services at other faith-based organizations

13) How connected do you feel to your community?

____ Very connected ____ Somewhat connected ____ Not at all connected

14) Generally speaking, would you say most people in your neighborhood can be trusted?

____ Yes ____No ____ I don't know/I am not sure

15) How safe from crime do you consider your neighborhood to be?

____ Extremely safe
____ Quite safe
____ Slightly safe
____ Not at all safe
____ I don't know/ I am not sure

D) PARKS AND RECREATION

16) Check the names of the park and recreation centers that you have used or visited in the past 6 months (check all that apply)

____ Morgan Woods Park
____ Shimberg Sports Complex
____ Town 'N' Country Recreation Center
____ Westgate Park
____ Jackson Springs Park
____ I have not used or visited any parks or recreation centers
____ Other(s) (Please specify):_____
_____

17) How often do you go the park(s) and/or recreation centers?

____ At least once per week
____ 2-3 times per month
____ Once a month
____ 2-3 times per year
____ I don't go to the park or recreation centers

18) Do you live close enough to walk to any of the parks or recreation centers?

____ Yes ____No ____ I don't know/I am not sure

19) What would make it easier for you to use the park(s)? (Check all that apply)

____ Safer area
____ Better lighting
____ Childcare
____ Easier to get there (sidewalks/public transit)
____ If the park was closer to my home
____ I don't know/I am not sure
____ Other (please list):_____

20) If outdoor fitness classes were offered at the parks, would you participate?

____ Yes ____ No ____ I don't know/I am not sure

If you would not participate in outdoor fitness classes, why not? (Please describe):
_____

If You Selected "No" for Question 20, Please Skip to Question 24.

21) What types of outdoor fitness classes would you want to see offered at the parks? (Please list):
_____

22) If these types of classes were offered, what do you consider a reasonable price to pay per class?

____ $0 ____ $1-$2 ____ $3-$4 ____ $5 or more

23) At which park(s) would you attend outdoor fitness classes? (Check all that apply)

____ Morgan Woods Park
____ Shimberg Sports Complex
____ Town 'N' Country Recreation Center
____ Westgate Park
____ Jackson Springs Park
____ Other park(s) (Please specify):_____
_____

3

E) DEMOGRAPHIC INFORMATION

24) What is your sex?

____Female ____ Male ____ Other

25) How old are you?

____ 20-24 ____ 25-34 ____ 35-44 ____ 45-54 ____ 55-64 ____ Other

26) What is your race? (Check all that apply)

____ White
____ Black or African American
____ American Indian or Alaska Native
____ Asian
____ Native Hawaiian or Pacific Islander
____ Two or More Races
____ Other
____ No Response

27) Are you Hispanic, Latino/a, or of Spanish Origin?

_____Yes _____ No _____ No Response

28) What is your primary language? (Please list):_____

Please list any additional languages that you speak: _____

29) How many people live in your household?

_____ 1-2 _____ 3-4 _____ 5-6 _____ 7 or more

Please fill in the number of people that live in your household for each age group:

Under the Age of 20____ # Aged 20-64____ # Aged 65 and up____

30) What is your yearly household income from all sources?

____ $0 to $14,999
____ $15,000 to $19,999
____ $20,000 to $24,999
____ $25,000 to $34,999
____ $35,000 to $49,999
____ $50,000 to $74,999
____ $75,000 or more
____ I don't know/I am not sure

31) What is the highest grade level or year of school you have completed?

____ I never attended school or I only attended kindergarten
____ Grades 1-8 (Elementary)
____ Grades 9-11 (Some high school)
____ Grade 12 or a GED (high school graduate)
____ College 1 year to 3 years (some college or technical school)
____ College 4 years or more (college graduate)

32) What is the zip code where you live?

____ 33615 ____ 33634 ____ Other

33) Which neighborhood do you live in? (Please list): _____

Appendix D.

Focus Group Questions

1. Let's take a second to think about the different parks in your neighborhood, those in Tampa, or anywhere else in Hillsborough County.

   If you go to any parks or recreation centers here in Tampa or Hillsborough County, what do you use them for?

2. If you do not go to parks or rec centers, why not?

3. In general, when you spend more time outside at home, in your neighborhood, or at the parks, how does it make you feel?

4. Now let's take a look at the map in front of you. On it you can see a map of the Town N Country Area. You can also see that 5 parks and rec centers highlighted. These include Jackson Springs Rec Center, Westgate Park, Town N Country Rec Center, Shimberg Park, and Morgan Wood Rec Center.

   a. On this sheet of paper, I have the five parks and rec centers listed here. I want to know which of these 5 parks and rec centers do you use? When I call out each park, please raise your hand if you have been to this park in the last 6 months?

   b. What types of activities or exercise do you do there? Please also explain who you normally do these with (by yourself, with family, friends, etc.)

   c. If don't use any of these 5 parks and rec centers, why not?

5. You have talked about what you do at these 5 parks and rec centers, and also a little bit about why some of you don't go to the parks.

   So, in general, what would make it easier for you to use the 5 parks and rec centers on this list?

6. The Hillsborough County Department of Parks and Rec are considering offering outdoor fitness classes.

   What types of exercise classes would you attend if outdoor group fitness classes were offered at these parks?

7. In general, does the cost of recreational fitness classes or gym memberships cause you not to participate in them?

8. If outdoor exercise classes were offered at any of these 5 parks and rec centers, what would be a reasonable price for you to participate in these classes?

Appendix E.

GIS Mapping: Data Sources and Methods

Figure	Map Name	Data Sources & Methods
Figure 4	Map of HIA Geographic Area and Limited English Language Proficiency	2013 American Community Survey; Language Spoken at Home, “Percent of specified language speakers - Speak English less than "very well"; Estimate; Speak a language other than English - Spanish or Spanish Creole”. Language data joined to 2010 Census Tract GIS shapefile data.
Figure 11	Residents within 500 Meters Walking Distance to Target Parks and Recreation Centers	The 2014 Florida Department of Revenue Hillsborough County residential (single family, apartments, condominiums, institutions, etc.) parcel data for the Census Blocks were extracted. The total number of housing units for each Census Block was then calculated by summing the housing unit attribute. The number of residents per unit was calculated by dividing the number of residents for each census block by the number of housing units per census block. ArcGIS Network Analyst was used to find a distance from each park entrance along road centerlines up to 500 meters. All parcels within 20 meters were coded as “in”, some were also added after a visual inspection. The number of residents within the 500 meter distance was then calculated by multiplying the “people/housing unit” by the sum of the number of “in” housing units.
Figure 17	Counts of Crime and Violence in Target Area of Town ‘N’ Country (2010-2012)	Safe & Sound Hillsborough Violence Prevention Collaborative Partners - Hillsborough County Sheriff's Office, Tampa Police Department, Temple Terrace Police Department, Plant City Police Department; Counts of Violence and Crime between 1/1/2010-12/31/2012.
Figure 19	Percent Tree Cover in Target Area of Town ‘N’ Country	Percent of the Block Group area from EnviroAtlas 1-Meter Land Cover classified as forest or woody wetland.
Figure 20	Percent Green Space in Target Area of Town ‘N’ Country	Percent of the area of the block group classified as forest, grass/herbacious, emergent wetlands, or woody wetland.