

Health Impact Assessment of Playground and Recreational Space on Bibb County Public School Campuses

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Abstract

Introduction: Most chronic illnesses can be prevented by individuals participating in healthy behaviors. The socio-cognitive theory explains how human behaviors are influenced and influence their environment. The Health Impact Assessment takes into account this reciprocal determinism and provides a strategy to assist in predicting health outcomes of community decisions.

Methods: An intermediate health impact assessment was used to assess the outcomes of Bibb County, GA, public schools allowing the public to use campus playground and recreation space after school hours. The US Census, the University of Wisconsin County Health Rankings, the Online Analytical Statistical Information System, Google maps, and a walking survey were used to determine if Bibb County would benefit from an HIA and if so, what would be the potential benefits.

Results: Bibb County residents were reported to have a lower per capita income compared to the rest of the state and high reports of violent crime. In addition, Bibb County had high age-adjusted mortality rates for major cardiovascular disease. Self-reported physical activity rates were also low in Bibb County. Bibb County has approximately 54 listed public recreational parks. Opening public school outdoor facilities will provide 41 more locations for Bibb County residents to receive physical activity.

Conclusion: Increasing the prevalence of physical activity in communities can increase the overall well-being of a community. The Joint Use Agreement is a process that is commonly used when developing a partnership via policy for the community to use public school facilities.

Introduction

Meeting the physical activity recommendations developed by the American College of Sports Medicine reduces the risk of developing cardiovascular disease, hypertension, stroke, osteoporosis, type 2 diabetes, obesity, colon cancer, breast cancer, anxiety and depression (Thompson, 2010). These recommendations have been made for approximately 20 years (Thompson, 2010) on an individual and clinical setting (Horton, M, 2010), but preventable mortality rates persist (Lloyd-Jones D, et al., 2010). These mortality rates affect a large population and research suggest efforts to increase healthy behaviors should be considered on a community level (Horton, M, 2010, and Lloyd-Jones D, et al., 2010).

The health impact assessment (HIA) uses the socio-cognitive theory to assess how human behavior can both, influence and be influenced by personal factors and their social environment (Horton, M, 2010, and Glanz, K., Rimer, B.K., & Viswanath, K., 2008). The HIA is a process of steps that result in community data collection to guide recommendations aimed to improving the health of the overall community (Horton, M, 2010). This intermediate HIA was performed to identify the health benefits of including Macon-Bibb County public school outdoor campuses for use as recreational spaces to increase the communities opportunity for physical activity.

Methods

This HIA was conducted as a capstone project for a student enrolled into a Master's of Public Health Program. An intermediate HIA was chosen due to the time and resources available to the student and Georgia's North Central Health District (NCHD) .

Screening was completed to determine if the HIA would benefit Bibb County. Using the University of Wisconsin's County Health Rankings and Roadmaps (CHR) it was determined that Bibb County, GA, ranked the lowest with regards to Health Outcomes within NCHD.

Scoping was used to determined the aim of the HIA, to decrease physical activity barriers by using public school campuses for public recreational space and that a student associated with the NCHD would perform an intermediate HIA.

Assessment was performed using several methods. The U.S. Census, CHR and Georgia's Online Analytical Statistical Information System were used to collect population data. Google maps was used to locate parks and schools and a walking survey was used to collect information about the recreational campuses. The collection of this information was used to determine how the population could be influenced.

Results or Outcomes

Population Demographics

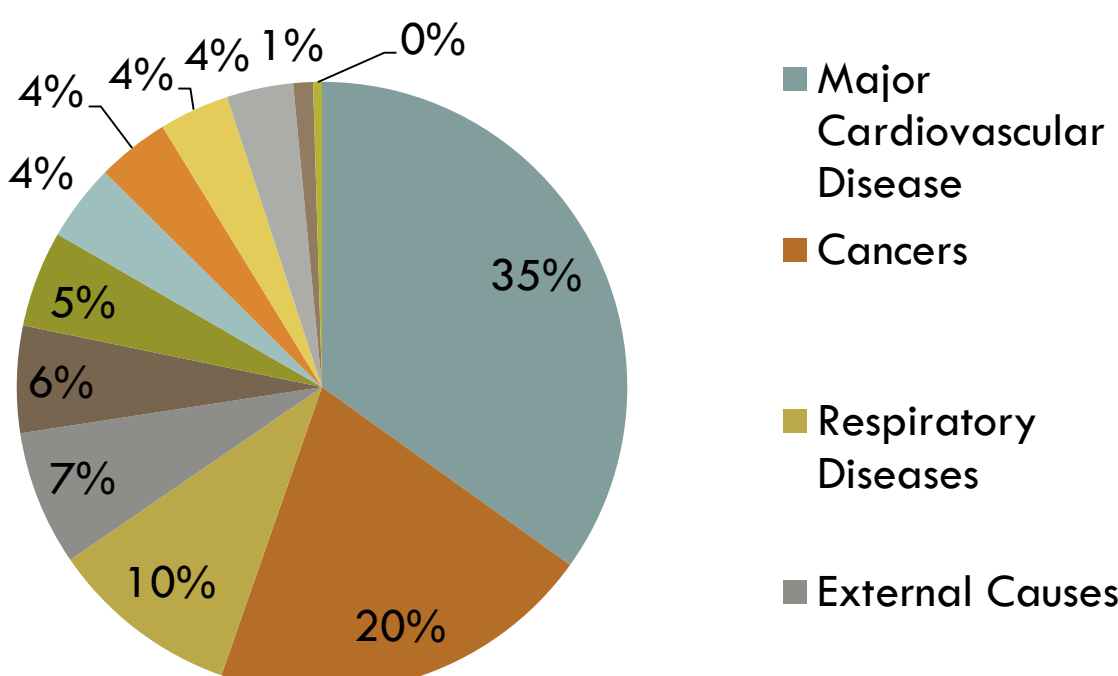
- Total population: 155,524
 - African Americans: 53%
 - Caucasian: 42%
 - Other: 5%
- Average income per capita: 20,982
 - 25% living in poverty
 - 45% of children living in poverty
- Violent crime reports: 40%



Burghard Elementary

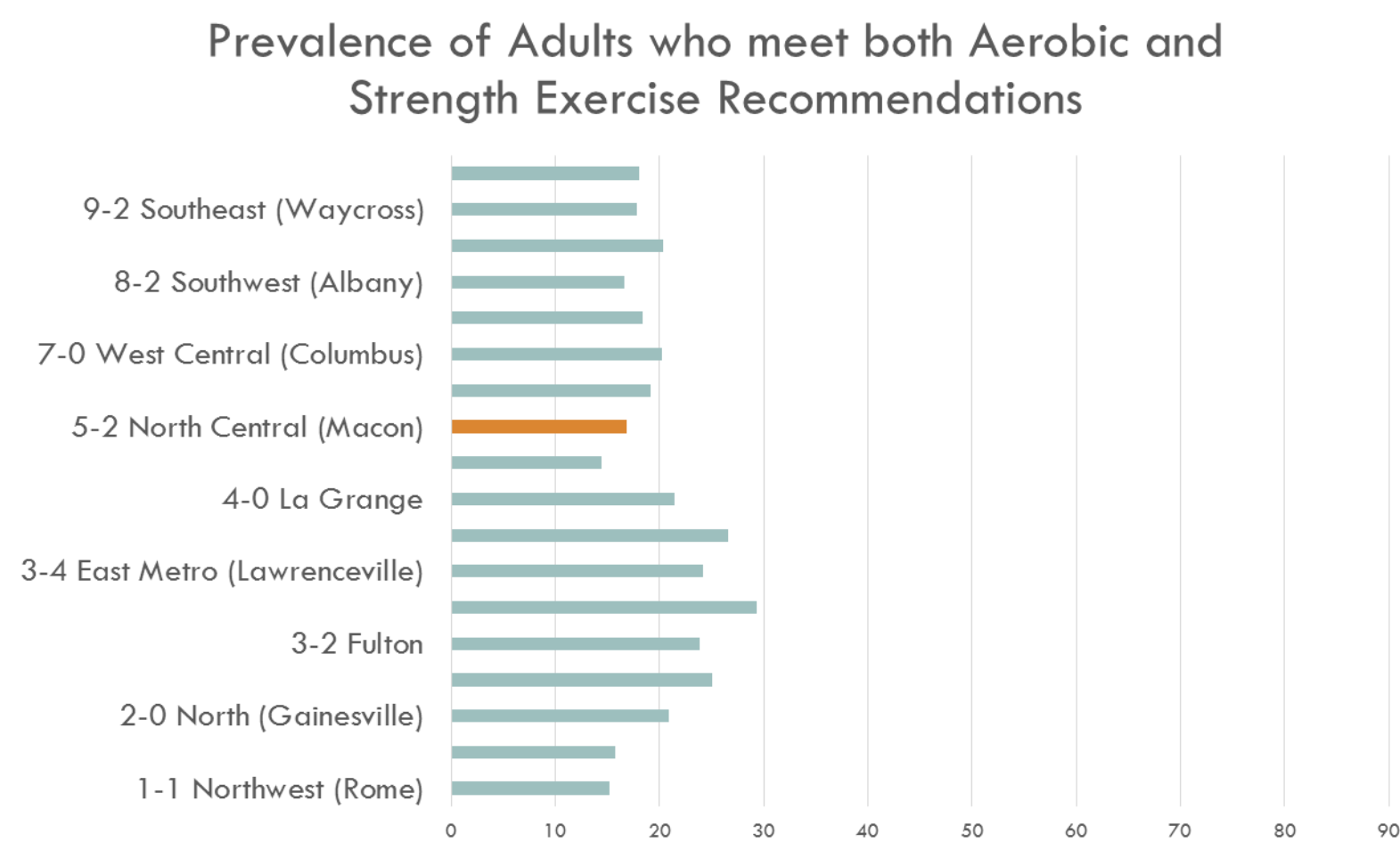
Health Profile

Bibb Co. Age Adjusted Mortality Rates

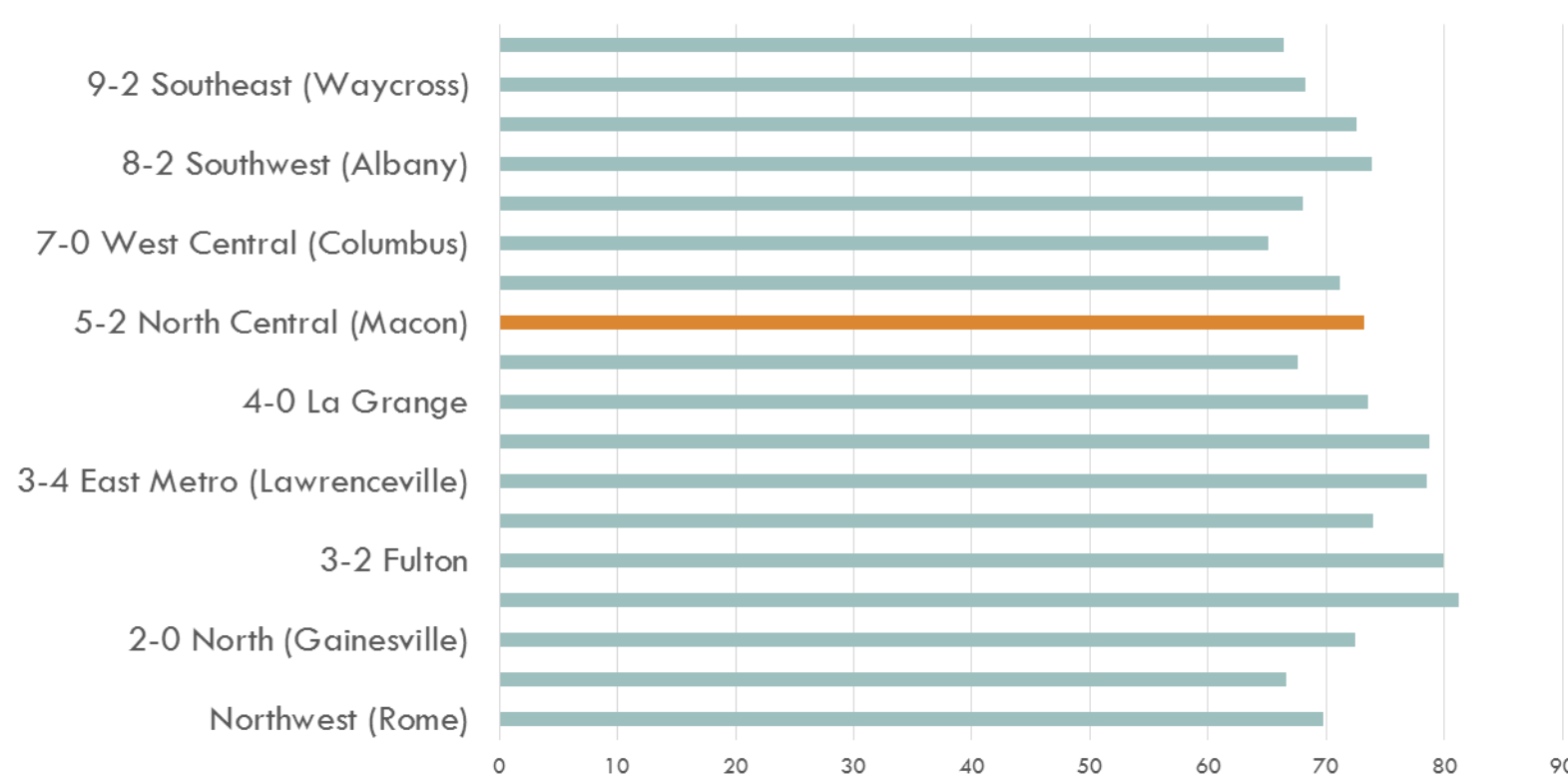


- Major cardiovascular disease is the leading cause of mortality in Bibb County
- 78% of the age adjusted mortality rates in Bibb County are associated with sedentary lifestyles.

Prevalence of Physical Activity in Bibb County



Prevalence of Adults who did NOT Exercise in the past 30 days



- 16.8% of the NCHD residents meet the criteria for achieving physical activity recommendations
- 73.2% of the NCHD residents report not exercising in the past 30 days

Recreational Profile of Bibb County



Ballard-Hudson Middle School



Northeast High School

Recreational Space and Equipment			
	Parks	Schools	Total
Walking Trails	18	11	29
Playgrounds	41	24	65
Black Tops	28	15	43
Tennis Courts	44	28	72
Baseball	23	10	33
Softball	24	7	31
Football	1	9	10
Swimming	9	0	9
Biking	4	0	4
Campuses	54	41	95

Conclusions and Recommendations

Conclusion:

Bibb County residents have multiple barriers preventing them to achieve the recommended physical activity guidelines proven to improve health. Barriers include low income, unemployment, low education and lack of locations to exercise or be physically active. Increasing physical activity locations increases the resources Bibb County residents have for achieving 150 minutes of physical activity a week. An increase of physical activity within a community leads to a an increase in a communities overall health including a lower prevalence of chronic diseases and lower violent crime rates. Currently there are no formal agreements between the public school system and the county's parks and recreation department.

Recommendations

Developing a formal policy to open public school campuses to the public will allow for duties and liabilities to be shared and dispersed among the two organizations. Joint Use Agreements are common legal contracts used to share school and community property (Joint Use Agreement).

References

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