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An Inventory of Community Wellness Programs in Biddeford, Maine

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An Inventory of Community Wellness Programs in Biddeford, Maine

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Spring 2015

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Table of Contents

Executive Summary	4
Project Summary	4
Process Overview	4
Findings and Conclusions	5
Recommendations	6
An Inventory of Community Wellness Programs in Biddeford, Maine	7
Problem Statement	7
Capstone Questions	8
Literature Review	9
Wellness and the Community	9
Personal, Social and Environmental Barriers	10
Analytical Framework	11
Personal Barriers	13
Social Barriers	13
Environmental Barriers	14
Common Barriers	14
Methods	14
Key Informant Interviews	15
Stakeholder Interviews	15
Data management and analysis	16
Findings	18
Population Demographics and Health Statistics	18
Overview and Limitations	19
Assessment of Wellness Activities	20
Chronic Conditions	21
High-Risk Population	29
Physical Activities	36
Recommendations and Conclusion	43
Seven Habits of a Highly Effective Wellness Community	43

Conclusion 47

References 49

Appendix A 55

Appendix B 59

Appendix C 64

Executive Summary

Project Summary

Wellness begins where we live, work and play. Developing and implementing programs that eliminate behavioral risks and promote the adoption of healthy lifestyle choices will only be effective long-term if individuals have easy access to affordable nutrient-rich foods and regular physical activities, particularly aerobic activities such as walking, jogging and biking in their communities. This capstone project is an introductory exploration to identify Biddeford's existing wellness programs, activities and services and the intended audience they serve and to ascertain possible barriers, gaps and opportunities in the community's wellness efforts.

The definition of wellness used during this inventory assessment is broad and included physical, mental and spiritual wellness, with branches extending into the environmental, economic and social realms of the community. Due to the project's short duration, limitations were necessary. This assessment focused on programs and services administered by city agencies and other non-profit organizations and excluded contributions by the for-profit wellness and workplace wellness sectors. In addition, it sought to include only those stakeholders recommended by key informants. As a result, many social service organizations were not included and unfortunately, consideration of issues surrounding behavioral health, an important determinant of health, was limited.

This report highlights wellness initiatives from the perspective of two population segments: those with chronic condition, or those who may be at risk for chronic conditions, and high-risk populations, which this project defines as those living below the federal poverty level who engage in behaviors that potentially lead to avoidable health problems. The rationale was that these groups require extensive resources and that it would be easier to identify gaps in community wellness support for these populations.

Process Overview

Semi-structured interviews using open-ended survey questions were conducted with key informants and stakeholders. Key informants provided an overview of Biddeford's wellness efforts and recommended stakeholders and programs to include in this project. In several instances key informants also represented stakeholder organizations that were directly responsible for providing wellness programs and services.

Key informant and stakeholder interviews. Key informants were chosen either because they held leadership positions within Biddeford's wellness community or had extensive knowledge of the community. Key informants were asked to define the concept of wellness and then given the broad holistic definition of wellness if their definition was limited to physical health. They then recommended stakeholder groups. Stakeholders interviewed were directly responsible for the day to day administration

of wellness activities and services. A list of key informants and stakeholders and a copy of the survey questions may be found in Appendix A.

Data management and analysis. The data were analyzed by common themes such as physical activities, nutrition, and chronic conditions. Three major categories *personal, social, and environmental* provided a framework to view gaps and barriers. Lastly, a community-wide lens was then applied using global concepts such as community engagement, strategic planning, and coordination between stakeholder groups. (MeCDC website, ND; Cleland, et al. 2014).

One outgrowth of the analysis process was the evolution of inventory categories, which started with traditional domains such as physical activity and nutrition, and grew to incorporate categories identified by stakeholders such as parenting skills and youth development. Additional domains captured social service organizations' focus on affordable housing, food assistance, job development and job readiness skills.

Findings and Conclusions

Local health data not available. Although not surprising, it was a bit disconcerting to find that local health data was generally not available. No stakeholder interviewed knew the rates of obesity, the number of smokers or which chronic conditions were most prevalent in the City of Biddeford. Such lack of information limits an organization's ability to provide relevant health initiatives. Moreover, lack of data limits the capacity to evaluate community health and wellness programs. Stakeholders are unable to establish benchmarks, monitor and evaluate a program's impact on community wellness without having some baseline information. Biddeford's current prevention programs have demonstrated limited reach and, with no data to support their impact, these programs suffer greater sustainability challenges as they complete with providers' changing priorities, lack of funding and diminished community support. Acquiring access to local health data, including those behavioral risk factors affecting the Biddeford community, and making the information available to stakeholders, will allow them to set priorities, target their efforts and evaluate their progress towards meeting community needs.

Most chronic disease prevention programs are state driven. The State of Maine has determined that tobacco use, obesity and substance abuse are Maine's priority health issues (Maine State Health Improvement Plan 2013-2017). Local representation of state-affiliated organizations, with their limited staff, limited resources, and their county-wide focus, appear to concentrate their efforts on changing policy as the best means to create wide-spread change. Success of these policy efforts and their programs rely heavily on buy-in, adoption and promotion from local stakeholders. As a result, successes of these efforts are mixed. In Biddeford, public policy efforts to create tobacco-free spaces have been largely successful. However, there is only one smoking cessation program available to the public and it is not actively promoted. Thirty one percent of Biddeford Middle School students are exposed to

secondhand smoke (Maine Integrated Youth Health Survey 2013), yet there appears to be no campaign that informs parents and students of the deleterious effects of secondhand smoke. In fact, there appears to be no ongoing anti-smoking effort at all.

Need for sustained, local, coordinated effort to address wellness initiatives. Biddeford engages in community wellness with community stakeholders to tackle specific health concerns, but they do not have one person or an office designated within City Hall that is charged with monitoring the community's health status and evaluating current initiatives. This is largely due to costs and Biddeford is amenable to adding a position if funding were available. With the state so focused on their priority health agenda and with the Center for Medicare and Medicaid so concerned with costs incurred from chronic conditions, it is surprising that there is no mandate and financial support for a local position within a city or town to monitor a community's health status and evaluate current practices.

Healthy Maine Partnerships, which in York County is known as the Coastal Healthy Communities Coalition (CHCC), functions as the conduit for Maine CDC initiatives. However, they have no ability to monitor and evaluate the effectiveness of their programs on Biddeford's community. The role of Biddeford's health officer is to serve as a liaison to the Maine CDC in the event of a potential health threat or medical emergency.

Recommendations

To paraphrase Stephen Covey's title, *Seven Habits of Highly Successful People*, presented here are the Seven Habits of a Highly Effective Wellness Community. Wellness results from the habit of making good healthy choices continually over time. This is true for individuals, neighborhoods and communities

1. A community-defined, collaborative wellness strategy based upon local community data
2. Access to accurate timely information about community health status and wellness resources
3. Access to affordable high quality foods
4. Free access to low-barrier physical activity in neighborhoods; with the priority in LMI neighborhoods.
5. Low-cost or free health screening and lifestyle assessment
6. Low-cost or free wellness coaching
7. Community wellness evaluation and strategy refinement

An Inventory of Community Wellness Programs in Biddeford, Maine

Enthusiasm and support for community-based wellness programs have grown as the effectiveness of these programs to improve health and encourage healthier lifestyles among participants has proven successful. According to the Centers for Disease Control, chronic conditions such as heart disease, cancer, stroke, diabetes and arthritis affect millions of Americans and are responsible for 75 percent of health care costs today (National Center for Chronic Disease Prevention and Health Promotion, 2009, p. 1). Research findings on community-based wellness programs have demonstrated that “well designed Interventions can change behavior and reduce both the incidence and severity of disease” (Garcia, et al., 2009), resulting in lower associated costs to businesses and communities where these strategies have been implemented (Centers for Disease Control, 2009). In 2008, the Trust for America’s Health reported that community-based wellness programs were so effective that the return on investment would yield \$5.60 for every dollar spent in a 5-year period (Levi et al., 2008).

Reflecting this research, a major focus of the Patient Protection and Affordable Care Act (ACA) is dedicated to preventing chronic diseases and improving public health. Title IV of the ACA provides incentives for the initiation of preventative wellness strategies and programs into the workplace and to high-risk populations. These incentives include:

- prevention of chronic diseases in Medicaid recipients (Section 4108);
- grants to states, local and community-based organizations to implement, evaluate and disseminate evidence-based community preventative health activities (Section 4201);
- requirement that the director of the Centers for Disease Control provide technical assistance to employers to assist them with developing and evaluating company wellness programs (Section 4303);
- development of individual wellness plans to at-risk populations (Section 4206); and
- grants to small businesses to start comprehensive workplace wellness programs (Section 10408) (Source: Patient Protection and Affordable Care Act (2010))

Problem Statement

Community-based wellness and prevention initiatives have the potential to reduce the incidence of disease, encourage healthier lifestyles and improve the quality of life of community members. They may do this by introducing programs, services and activities designed to increase

physical activity, promote sound nutrition, and encourage the manifestation of healthy habits. Because the promotion of prevention and wellness involves a host of factors including social, economic, cultural, and environmental, communities may be particularly effective at developing and implementing these strategies. According to Healthy People 2020, the community approach to wellness is comprehensive, involving non-traditional health care settings such as schools, worksites, and the community-at-large. Moreover, they assert that health and quality of life are also dependent upon a community's systems and policies and not just a community's medical system. The health status of an individual is determined by multiple levels of influence: personal, organizational/institutional, environmental and policy (Healthy People 2020). A community's health status is a reflection of the health status of its members. This capstone project will conduct an inventory of community wellness programs in Biddeford, Maine and identify perceived barriers and gaps in current services and activities and offer recommendations for addressing them.

Capstone Questions

This capstone explores the City of Biddeford's health status from a wellness perspective by asking: What types of services or programs, infrastructure, or conditions exist that promote wellness and help prevent the onset of disease? What is missing? What are the environmental, social and personal barriers that may prevent someone from participating in a program or physical activity? Specific questions are:

1. Which wellness activities, programs or services are being offered?
2. How are these wellness programs, activities, services provided and organized?
3. Who do these programs serve and who isn't being served?
4. What are the "gaps" in wellness programs, activities and services currently being offered? What are the barriers?
5. How might these wellness programs and services be better organized to reach a majority of the population living or working within the City of Biddeford?

Literature Review

The push towards community-based wellness and prevention initiatives as a strategy to reduce the incidence of chronic disease has gained momentum within the public health community. This current thrust may be attributed to the Affordable Care Act (ACA) and its emphasis on non-medical means to prevent the onset of these diseases. Additionally, research has substantiated that social capital and social networks positively impact health outcomes for vulnerable populations and reduce the risk of illness (Aday, 2001; (Eilers, 2007). Local communities reflect the cultures and values of their residents and are in the best position to create opportunities that increase social capital and social networks (Aday, 2001). The literature is replete with examples that community-based programs produce feelings of connectedness among participants and promote a sense of belonging and being a part of the community. One study that focused on the efficacy of a wellness education program aimed at people suffering from severe chronic mental illness, determined that “Community-building is an important component of community-based wellness education interventions relating to self-worth, self-esteem and other motivational factors.” (Van Metre, 2011). Another study of African-American women with type 2 diabetes found a positive correlation between high levels of family support for exercise and high levels of physical activity (Komar-Samardzija, et. al., 2011). “The presence of a support network is a basic component of health and wellbeing, and community support, friendships, and other relationships are important source of adaptive coping, a fundamental component of recovery” (Swarbrick, 2006). Communities have the potential to positively impact and empower their resident: “Health education, and more particularly successful health education, is nothing more than community empowerment. It enables each individual, within a community, to take control of his/her own life and well-being” (van Wyk, 1999, p. 29).

Wellness and the Community

Wellness is a broad concept. Although definitions may differ, there appears to be a general consensus that wellness (1) includes a holistic view of an individual that incorporates physical, mental, social and spiritual well-being (Whipple, et. al., 2011); (2) is an on-going process, and a way of life (Henderson and Armah 2010; Barwais, 2013) and (3) is multi-dimensional (Hettler, 1976; Schueller, 2009) and (4) is self-directed, requiring individual responsibility to make informed choices in order to achieve optimal levels of well-being (Hettler,

1976). Hettler's Six Dimensions of Wellness theoretical framework includes: occupational, intellectual, physical, social, spiritual, and emotional (Hettler, 1976). The National Wellness Institute defines wellness as "... an active process through which people become aware of, and make choices toward, a more successful existence" (National Wellness Institute, n.d.). Rachelle (2014) defines wellness as a state of being; the "optimum state of health and well-being that each individual is capable of achieving".

According to the Institute of Medicine's framework for assessing the valuation of community-based prevention, community-based prevention interventions are beneficial for three reasons. First, they serve the entire population of the community and are not dependent upon access to the health care system. Second, strategies directed at the entire population of a community may potentially reach persons of all risk levels. Third, Interventions may be designed to accommodate environmental and social conditions that are outside the boundaries of clinical services (Pronk et al., 2013).

The wellness literature has many studies that demonstrate the efficacy of programs designed to target a specific health issue of a particular population, such as an obesity prevention program for overweight or obese school age children (Hendrie, 2012) or programs to increase physical activity levels in persons with diabetes (Komar-Samardzija, 2012). However, fewer studies have analyzed comprehensive community-based wellness strategies. "Shape Up Somerville" was one program designed to prevent obesity in at-risk first to third grade children. This intervention included a multi-level approach involving the school, parents, local businesses and the community at-large. It consisted of a nutrition component, a walking program, a school health curriculum and community outreach. The success of this program is credited to the strong level of support, its link to the community and its wide-ranging approach to involve all aspects of the child's lifestyle (Economos 2007; Garcia et al., 2009).

Personal, Social and Environmental Barriers

People are influenced by their environments and perhaps more so than we realize. According to Dr. Risa Lavizzo-Mourey, President and CEO of the Robert Wood Johnson Foundation, "We know that a child's life expectancy is predicted more by his ZIP code than his genetic code." (Lavizzo-Mourey, R. 2012.) People living in lower socio-economic neighborhoods generally have poorer health when compared to persons living in higher socio-

economic neighborhoods (IOM, 2012). A person's behavioral choices tend to reflect the options available within the local community. Social and environmental barriers may exist which would adversely affect the outcomes of a particular prevention program, if the barriers were not considered prior to the intervention. For example, participants in obesity prevention programs may have limited success if they do not have easy and affordable access to fresh fruit and vegetables, as well as access to safe walking paths or sidewalks so they may increase their daily levels of physical activity.

The literature suggests a relatively broad spectrum of factors that may influence participation as well as the success of community-based wellness programs and worksite wellness programs. How these factors are categorized and their contextual organization explained depend upon the framework used. For example, the social ecological model incorporates a multi-level approach to examining interrelationships between the individual and their social, physical and policy environments (Mehtälä et. al., 2014). Categories for this model typically include individual/intrapersonal, interpersonal, organizational, community, societal and policy levels (Mehtälä et. al., 2014; Vella et al., 2014).

Since this capstone seeks to provide a general overview, it is useful to streamline the socio-ecological framework. Upon further review and consideration of all listed factors, three super categories were chosen: personal, social and environmental. Adoption of this framework maintained the multi-level view and provided the ability to suggest cross-sectional linkages. The study, "Perceived personal, social and environmental barriers to healthy eating among young overweight and, obese Saudi women" (Al Farwan, 2011), demonstrates the use of these three domains in research.

Analytical Framework

This capstone explores health status from a wellness perspective by asking "How can we effectively decrease the incidence of chronic disease and promote healthier lifestyle choices in our community?" and "What types of services or programs, infrastructure, or conditions are needed?" Many community wellness initiatives have been informed by relatively broad public health efforts to cultivate healthy communities, which result in policy and statewide plans such as Maine's Healthy People 2010 and Healthy People 2020 and through nationally developed resources such as the CDC's Community Guide and the Federal Wellness Resource Guide.

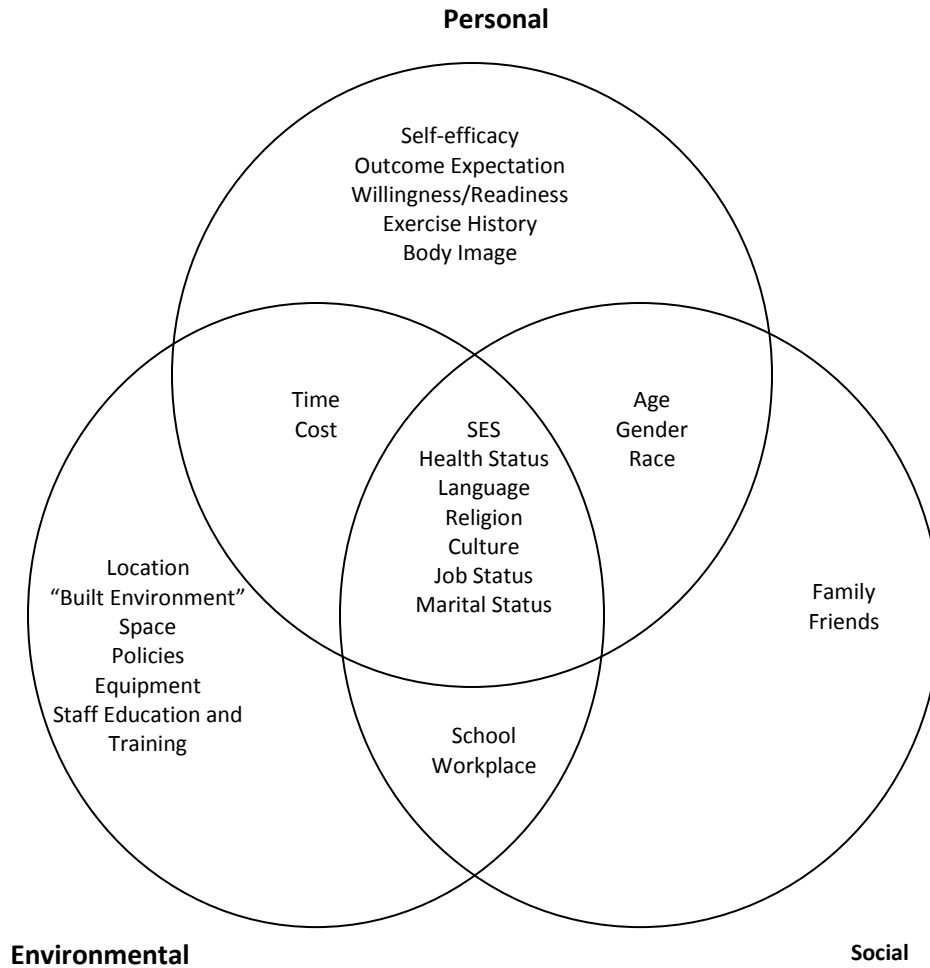
These tools are available to provide information and to assist communities and employers with the establishment of local or worksite wellness programs and activities.

While state and federal agencies may lend support to a community's success, strategic planning, coordination, implementation and monitoring a community-based prevention and wellness program require a local commitment to improve the community's health status. Identifying programs and services, and distinguishing their respective population segments from Biddeford's wider population helped to pinpoint barriers, expose gaps and highlight opportunities.

Although, perhaps not as precise as the social ecological model, a broader, multi-level framework may be constructed. This framework has three domains: personal, social and environmental. These classifications are sufficiently extensive yet distinct domains, which are commonly used and understood to describe, identify and define categorical relationships. Furthermore, elements within one domain may be shared with another or may be common to all domains. Although some frameworks call for finer delineations, such as physical – with applications for assessment of someone's physical reality or as it applies to the "built" environment, social-cultural, economic and political environmental factors (IOM, 2012), these micro-categories may be too finite for such a small area as the City of Biddeford.

These domains and their key elements are depicted in the Venn diagram presented in Figure 1. This framework has helped guide development of my interview questions and helped to frame the analysis.

Figure 1:



Personal Barriers

This domain includes such factors as self-efficacy, self-esteem, outcome expectation, willingness/readiness, exercise history, body image.

Social Barriers

This domain includes family and friends as stand alone factors, with school and work shared with the environmental domain and age, gender and race shared with the personal domain.

Environmental Barriers

This domain includes physical location, architecture commonly referred to as the “built environment”, space, policies and regulatory environment, equipment accessibility and appropriateness, and staff education and training. Time and cost are elements shared with the personal domain and school and work with the social domain.

Common Barriers

Socio-economic status (level of education, income, employment status), health status, language, religion, culture, employment status, marital statuses are factors common to all domains.

Methods

Semi-structured interviews using open-ended survey questions were conducted with key informants who provided an overview of Biddeford’s wellness efforts and recommend stakeholders and programs to include in this project. Several key informants played dual roles as informants and as stakeholders since they were also responsible for providing wellness programs and services. Interviews with these individuals began with broad-based generalized questions about the wellness community at-large, and then continue with the stakeholder survey questions designed to elicit specific information about the stakeholder’s particular programs or services.

The researcher used several popular tools to inform and guide the development of the inventory process. These tools included The Centers for Disease Control’s “Community Health Assessment and the Group Evaluation (CHANGE) Tool’s “Five Sectors’ classifications”, which was used to determine the sectors of stakeholder groups. The five sectors included are the Community-At-Large Sector, Community Institution/Organization (CIO) Sector, Health Care Sector, School Sector, and Work Site Sector. The CHANGE Tool’s provided a survey for each stakeholder group. These questions were used as a guide when preparing and developing survey questions used for this project. Additionally, the researcher also referred to the University of Kansas’ Work Group’s Community Tool Box, Chapter 3, Section 8, Identifying Community Assets and Resource. This tool provided definitions of community assets, a sample listing of possible assets and resources, and suggestions on how to map assets. Although this tool is less sophisticated than the CHANGE tool, it is also less intensive and complicated. It’s easy to read format is accessible to lay persons or other non-technical staff. (Work Group for Community

Health and Development, 2012)

Previously, during the months of December and January of 2013, the researcher engaged in informal preliminary telephone conversations with some stakeholders as a means to guide this study and explore the issues and stakeholders' receptivity to the project. Six stakeholders were contacted, including the city and town administrators from each community, a past mayor from the City of Biddeford, the Saco/Biddeford Chamber of Commerce and Volk Packaging. The former mayor and government administrators were not included in the formal survey process. However, the local Chamber of Commerce was included as a key informant, since these organization plays a prominent role in the community.

The researcher submitted a "Request for Determination of Research Involving Human Subjects" to the University of Southern Maine's Institutional Review Board and consent was obtained to conduct the survey.

Key Informant Interviews

Key informant interviews provided an overview of wellness programs and activities currently available in the City of Biddeford and they identified stakeholders most responsible for these activities. Key informants were chosen either because of their position within Biddeford's wellness community or for their extensive knowledge of the community.

A board-based view of wellness, as a holistic concept that includes physical, mental, and spiritual elements, was used during the interview process. Key informants were given this holistic definition of wellness and stakeholder groups were recommended.

Stakeholder Interviews

The purpose of stakeholder interviews was to narrow the focus to the actual programs, policies, facilities and environmental conditions that exist. Those individuals directly responsible for the day to day administration of these activities and services were surveyed. These stakeholders represent organizations already serving the City of Biddeford and were interviewed based on key informant recommendations. Initially, interviews with stakeholders representing the CDC CHANGE Tool's five community sectors were sought. However, the scale of this project was reduced, eliminating the for-profit and work site sectors.

A list of key informants and stakeholder organizations, along with a copy of the their respective survey questions may be found in Appendix A.

Data management and analysis

The data were first analyzed by common themes (e.g. physical activities, nutrition, chronic conditions) and then three major categories: *personal, social, and environmental* provided a framework to view gaps and barriers. Finally, a community-wide lens was applied using overarching concepts such as community engagement, strategic planning, coordination between stakeholder groups, information dissemination, marketing and promotion, stakeholder empowerment/apathy, funding, and partnerships. (MeCDC website, ND; Cleland, et al. 2014).

During the analysis process, the organizations were divided into two broad categories: general community organizations and social welfare organizations. General community organizations primarily serve the general public, although they may offer programs for target populations. Social welfare organizations provide programs and services specifically to high-risk populations. Both of these groups contribute significantly to Biddeford's health status, and it is necessary to include these groups to depict the full picture of wellness.

The inventory categories started with traditional forms of promoting wellness, such as physical activity and nutrition, and included other important categories identified by stakeholders such as parenting skills and youth development. Additional categories included captured social service organizations' focus on affordable housing, food assistance, and job readiness skills.

Table 1: Examples of factors used to analyze physical activities

Type of program	Intended Population	Time	Length of program	Related Costs	Location	Barrier	Gaps
Cardio, high or low impact	Working Adults	Before work (5-8:30am)	On-going	Free	Accessible by public transportation	Personal (self-efficacy, commitment, fitness level, or ability level)	Program not available
Strength/toning	Adults	Mornings (8:30am-11am)	# of weeks	Cost of program	Parking available	Social (family commitments)	Population not being served
Mind-body	Stay-at home moms	Mid-mornings to afternoon	seasonal	Included with membership	Accessible by walking, biking	Environmental (time, cost, location, limited space)	
	Active Older Adults/seniors	After work (5:30pm+)	An event	Membership plus cost			
	Young children/Toddlers (0-5)	Evenings/nights		Cost of equipment			
	Youth sports (ages 5+)	After School		Cost of clothing			
	Teens	Weekends		Scholarships available			

Findings

Population Demographics and Health Statistics

Demographics impact a community's health status. Aging populations and poorer communities tend to demonstrate poor health outcomes. After reviewing Biddeford's demographics, it appears that Biddeford is a middle-age town with slightly more children than seniors. Over the past few years, Maine has been fretting about the rise in its senior population and what that might mean to Maine's economy. From Biddeford's vantage point, seniors enjoy the lowest levels of poverty (6.3%), while children under 18 endure the highest levels (16.7%) (U.S. Census, Table S1702, 2010).

According to the U. S. Census Bureau's American FactFinder, 2010 Demographic Profile, Biddeford's total population is 21,722. Children under 18 years make up 20% of the population, 18-64 years are 65% of the population and 15% of the population is 65 years and over. The median age in Biddeford is 38.3 years. (U.S. Census, 2010, Table DP-1) Biddeford's median income is \$44,645. (U.S. Census, Table DP03, 2009-2013)

When looking at poverty from a family perspective, slightly over nine percent of Biddeford families live below the federal poverty level and out of those, 17.7% have children under 18 years. However, a significant percentage – 33.9% of all families living in poverty – is single women with children; 6.3% of whom worked full-time year-round while 68.4% did not work at all. (U.S. Census, Table S1702, 2009-2013).

The effects of these demographics on the overall population are meaningful for several reasons. As a rule, women earn less than men. Therefore finding a job that pays a livable wage in Biddeford is harder for women than it is for a man, potentially, making the climb out of poverty more difficult and their need for assistance prolonged. Single women are over-represented in low-wage service jobs which frequently have inflexible schedules making it difficult for single moms to participate in their children's school activities or to transport them to and from after school activities (Entmacher, et al. 2014). Several stakeholders have noted that lower socio-economic parents are less involved in their children's activities. Perhaps this is one reason.

Women living in poverty suffer high rates of depression, which may diminish their feelings of self-efficacy and affect their ability to demonstrate positive parenting behaviors. Children from these households are more likely to have cognitive issues, behavioral problems,

develop chronic conditions such as obesity and demonstrate poor academic performance (Pettersen & Albers, 2001; Gross, Velazco, Briggs, & Racine, 2013).

Actual health statistics for the City of Biddeford are unavailable. The closest available data was York County aggregate data, which may not be reflective of the City of Biddeford. Therefore, no information is presented.

Overview and Limitations

The City of Biddeford is fortunate to have a dedicated community of stakeholders committed to improving the quality of life of all Biddeford residents. Each organization I met with offered an extensive array of services, programs and activities, despite limited resources. All organizations collaborated and supported other stakeholder programs and initiatives, and most had developed close working relationships. Additionally, some stakeholders were very aware of programs offered by other community stakeholder groups and aimed not to compete with them. This practice may or may not be beneficial to Biddeford residents since it restricts or limits the availability and accessibility of programs and services potentially provided.

The format for this assessment will begin with a summary overview of each segment, highlighting stakeholder contributions followed by relevant issues, barriers and gaps. The majority of barriers and gaps identified are based upon the experiences, observations and knowledge shared by stakeholders.

This wellness inventory assessment is an initial attempt to explore Biddeford's wellness landscape and provide at best a snapshot of related programs. It is hoped that this report, despite its limitations, will act as a springboard to discuss Biddeford's health status and begin the process of forming a citywide wellness strategy. In addition, to organize the discussion of Biddeford's community wellness efforts, this assessment focuses on two of Biddeford's most vulnerable populations: those with chronic conditions, and high-risk populations. The rationale was that these populations require extensive resources and that it would be easier to identify gaps in services and/or barriers to these services. Lastly, physical activity, a key determinant of health will be the final category explored. Because of its enormous impact on health and the quality of life, physical activity in Biddeford was viewed as a stand-alone category, potentially influencing all population spheres.

Limitations. This assessment is necessarily limited in several ways. First, it examines

only activities, programs and services from city agencies and other non-profit organizations and excludes for-profit wellness programs, services and activities. Including these entities may have filled some identified gaps or reduced some barriers, so the research findings presented here identifies a reduced variety and specialization of activities identified. A greater loss is that it omits the private sector's contributions as community stakeholders, and supporters of community-based wellness initiatives and activities. Second, many social service organizations provide valuable services to high-risk populations but were outside the scope of this assessment; this report cannot fully assess service gaps. However, the report does highlight some gaps and issues mentioned by stakeholder organizations or observed in this context. Third, because there is little local data on health and behavioral risk factors, it is difficult to determine if the primary prevention programs and initiatives are targeting the greatest risks confronting Biddeford residents, and if secondary management programs were aligned with Biddeford's most prevalent chronic conditions. Fourth, not all population segments are represented. Community wellness includes individuals working in the community as well as residents. Although several Biddeford companies offer worksite wellness programs, services and opportunities and have adopted wellness-related policies and stakeholder's programming initiatives, their contributions as a market segment have not been included due to the constraints of this project. It is not because they lack importance as contributors to wellness.

Assessment of Wellness Activities

City of Biddeford. Like most small towns and cities, the City of Biddeford is stumbling in the dark. Without knowing the health status and behavioral risk factors affecting its community members, providing solutions for health problems is tantamount to guessing. The closest available source is aggregate data at the county or public health district level. No stakeholder I interviewed was able to tell me which chronic condition or conditions were most prevalent in Biddeford and no one knew the city's rates of obesity, smoking or substance abuse.

Does aggregate York County or York County Public Health District accurately reflect Biddeford's health status? The City of Biddeford is among the poorest communities in York County, one of Maine's largest and wealthiest counties. The 2010 Maine Public Health District Indicator places poverty levels at for York County at 8.2% (2007), far below the 13.8% given by the City of Biddeford in its April 2, 2013 report *Analysis of Impediments to Fair Housing*

Choice. The US Census American Fact Finder indicates that 12.8% of Biddeford's residents live in poverty (U.S. Census, Table S1702, 2009-2013). If the statistics on poverty vary so greatly, how can one assume that York County or York District's health data accurately portrays the health status of Biddeford's residents?

Biddeford stakeholders need timely, reliable and accurate health data so they may establish priorities and funnel limited resources where they will do the most good. At present some Biddeford organizations are expending considerable resources on a myriad of chronic conditions and behavioral risk factors such as obesity, smoking and substance abuse. However, there are few if any data available to evaluate the effectiveness of these efforts.

Several stakeholder groups serving Biddeford's population are part of state-wide organizations with state-wide agendas that may not address Biddeford's needs. Anecdotally, I was told by several stakeholder groups that substance abuse, specifically heroin use, was reaching critical levels in Biddeford and that prevention programs were desperately needed. If this information were substantiated by data, it would serve to guide stakeholders, who maintain some autonomy, to evaluate state priorities in light of local concerns.

Chronic Conditions

The three main chronic conditions chosen were indicated as Maine's priorities in the Maine State Health Improvement Plan 2013-2017: Tobacco Use/Smoking Cessation, Obesity and Substance Abuse. Stakeholder's prevention efforts for each identified behavioral risk factor were examined. Currently, in the City of Biddeford, the number of stakeholder initiatives, programs or events to reduce obesity far outweigh those taken to reduce substance abuse and tobacco use.

Tobacco Prevention/Smoking Cessation Programs. The City of Biddeford's tobacco-free policies are strong and many businesses have banned smoking with the assistance of Coastal Healthy Communities Coalition (CHCC) and the Heart of Biddeford (HOB). Biddeford maintains a tobacco-free policy on all public beaches, playgrounds, ball fields, and recreational facilities. Other public buildings that are tobacco-free include McArthur Public Library, Southern Maine Health Center and the YMCA, as are many social service organizations.

Presently, there does not appear to be an active ongoing anti-smoking campaign in Biddeford, although the Biddeford Recreation Department did participate in the National Kick

Butts Day in 2014. There is also only one smoking cessation program available to the public, which is administered by Southern Maine Health Care.

Issues

1. Almost 21% of Biddeford Middle School (BMS) students smoked a whole cigarette before they were 11 yrs.*
2. 31% of BMS students are exposed to secondhand smoke (during a 7-day period, they spend some time in a room with someone who smokes)*.
3. 5.2% of BMS students (up from 4.3% in 2011) say their parents would not tell them that it's wrong to smoke*.
4. 29% of people living below the Federal poverty levels smoke vs. 17.9% at or above poverty. GED recipients (individuals who never completed their high school education) are 9 times more likely to smoke than those with graduate degrees.
5. Only one smoking cessation program in Biddeford, administered by SMHC, is available to the public. This is a one on one program. Those interested must call to participate, and it is located at hospital.

(**Source: MIYHS*)

Barriers

- The one smoking cessation program is in a location that requires use of transportation and interested persons must call to make arrangements to participate.
- It has been observed by Biddeford stakeholders that LSES populations
 - Lack commitment and determination
 - Lack self-empowerment
 - Lack of awareness to understand what's good for them
 - Do not believe that wellness holds much value to them.

Gaps

- Anti-tobacco use; teen messaging at Teen center.
- Efforts to target second-hand smoke.
- Efforts to actively identify populations of smokers and access to them.
- No local smoking cessation programs exist in locations easily accessed by LMI neighborhoods which are known to have high rates of smokers.

Opportunities

- Messaging to parents on second-hand smoke.
- Identifying and targeting parents of school-age children who smoke.
- Offering free smoking-cessation programs in high-risk locations (E.g. Canopy Park Community Center, 46 Sullivan Street, a walk-in, HUD social service mixed-use building located in the most distressed neighborhood in Biddeford).

Obesity. Common measures to reduce the rates of obesity include policy and programs designed to restrict the consumption of high-caloric, low-nutrient value foods, while attempting to encourage the consumption of nutrient-rich foods and increase physical activity levels. Collectively, stakeholder groups are pounding the pavement to reduce obesity levels by bringing awareness, messaging, programs, and tools to Biddeford's community, while working to change policies. Although two stakeholder groups appear to be spearheading the effort city-wide (CHCC and Southern Maine Health Center's (SMHC) Let's Go Obesity 5-2-1-0), their success depends on the support of other community stakeholder groups. CHCC is primarily responsible for providing technical assistance for policy development, although they do offer programs that have been successfully promoted to general public and business communities by leveraging their relationships with other stakeholder groups.

SMHC's Let's Go Obesity 5-2-1-0 program is comprehensive, with 5-2-1-0 toolkits available to different market segments: childcare establishments, primary care physicians, schools and after care programs, and workplace programs. The school program, with its emphasis on reducing or eliminating sugar products from school meals and snacks and increasing physical activity, has the potential to make a significant impact on all children. This program appears to have made some inroads, with parts of its program being adopted by four out of five Biddeford schools (JFK, Biddeford Primary, Biddeford Middle School and Biddeford High School). Success of this initiative will largely depend upon how thoroughly the 5-2-1-0 program is adopted, championed and integrated by the Biddeford School Department. This is a self-directed program with guidance and technical assistance provided by the Let's Go 5-2-1-0 program coordinator, who responds to requests that primarily come through word-of-mouth.

Two other stakeholders with significant contributions need to be mentioned: Biddeford

Community Planning/HUD (BCP/HUD) and the McArthur Library (MPL). Perhaps the most unsung hero, BCP/HUD provides funding to build safe sidewalks and walkways, which are essential to providing low-barrier opportunities to increase physical activity. They also support a community garden, which produces fruits and vegetables. These infrastructure improvements are located in LMI neighborhoods, which research shows have populations with high levels of behavioral risk factors and chronic conditions. BCP/HUD also provides financial support to many community organizations that provide healthy food opportunities to LMI residents.

Through their worksite wellness program, their early childhood development programs and other special events, MPL promotes healthy eating habits and healthy lifestyle choices. In addition, MPL early childhood development programs provides participants with access to wellness professionals and resources. MPL also offers a unique service, a Recreation Collection, similar to checking out a book from the library, MPL allows members to borrow recreational equipment (e.g. volleyball equipment, fishing rods, snow shoes, and badminton equipment). This program promotes and provides low-cost, low-barrier opportunities to increase physical activity.

Issues.

Policy.

1. SMHC's Let's Go Obesity and CHCC are working to create policy to eliminate sugary drinks and reduce or eliminate sugary foods allowed in Biddeford schools. In addition, the Let's Go Obesity program strongly advocates adopting policy that prohibits using food as a reward. These prospective policy changes have met with resistance within the Biddeford School Department who maintain the belief that LSES children would be deprived of these treats.
2. Organizations providing food to high-risk populations are key resources to engage when promoting and adopting public policies to eliminate low-cost, low-nutrient value foods and replacing these with high-nutrient alternatives. Although high-nutrient foods might be more costly and harder to find, they would help to reduce this population's higher rates of obesity, diabetes, hypertension and heart disease. The cost of treating these conditions is much greater than the cost of providing healthy food choices.

Access, availability and affordability of nutrient-rich foods

3. As a primary provider and distributor of food, the Biddeford School Department plays an influential role in determining what school children eat. Over 50% of Biddeford kindergarten, primary, intermediate and middle school students and 40% of high school students are eligible

for a free breakfast and lunch (Poverty Index 2012-2013). These children, many of whom face food insecurity at home, depend upon the school system to provide healthy nutrient-rich foods, which are more expensive than energy-dense foods.

4. Access to affordable nutritious foods is fundamental to wellness, so any successful strategy requires a food network that provides healthy, affordable food to institutions and individuals, especially those at high-risk. In Biddeford these include three organizations that provide cooked meals -- Meals-on-Wheels, Seeds of Hope, and Bon Appétit —and two food pantries, Friends of Community Action and Stone Soup.

Other Issues.

5. Segments of Biddeford’s population are unfamiliar with vegetables and do not know how to prepare or cook them. At one MPL event, some participants were not able to identify common vegetables (Source: Stakeholder)
6. Other individuals may not know how to cook or simply do not cook and may not own cookware or utensils?
7. Regular moderate exercise is an important element of most obesity reduction initiatives. While City of Biddeford offers many opportunities for organized physical activity through the local YMCA, the Biddeford Recreation department and the Biddeford School Department, these activities may not be readily accessible to all population segments. I observed that physical activities in Biddeford tend to favor active adults, active older adults and children that participate in team sports. There are few ongoing low-to-moderate-impact cardio activities targeted to inactive working adults and few physical activities for teens and youth who did not participate in team sports. I was unable to identify any free or low-cost ongoing physical activities located in LMI neighborhoods.
8. According to one stakeholder, older kids were afraid of what other kids might think. “I don’t want to look stupid.” And that they will not engage in an activity if they think it is “not cool”

Barriers.

- Limited buy in – Biddeford School Department Administration is resistant to changing policy believing that it deprives children especially LSE children who might not get these treats at home.
- Free school breakfast is starchy and sugary.

- Teachers feel overwhelmed to change lesson plans to include physical activity.
- Parents are apathetic.
- Attitudes of older kids:

Gaps.

- No ongoing programs or campaigns to show people how to shop, prepare or cook nutritious low-cost foods. (Exception for those who are SNAP-ED eligible).
- No ongoing free or low-cost opportunities to increase physical activity (low-impact cardio) targeted to LSES neighborhoods.
- Few on-going low impact cardio activities targeted to inactive working adults.
- Little emphasis on the value of developing lifelong sporting activities: biking, jogging, golf, roller blading, skating, snowshoeing, swimming, tennis, and walking.

Substance Abuse. Within the City of Biddeford, groups trying to reduce substance abuse include the Biddeford Police Department (BPD), CHCC, and the Maine Sheriff's Department, which currently offer programs that support medication returns. CHCC also trains teachers within a federal program on the negative effects of marijuana, and trains restaurants and bars on responsible serving and selling of alcohol. Other active groups include the Biddeford Schools, which are a drug-free zone that permits searches by police dogs, and the Community Partnership for Protecting Children (CPPC), which provides meeting space for Crossroads for Women, a substance abuse and behavioral health group. It also refers adolescents to Day One, a drug rehabilitation program.

Issues.

1. MIYHS findings indicate that 22% of BMS students had their first alcoholic drink before the age of 11 yrs., 29% of BMS students say that it's easy to get alcohol beverages, almost 22% of BMS students say they would probably not get caught by their parents if they drank*.
2. Marijuana -23% of BMS students smoked marijuana before they were 11 yrs. 20.4% of BMS students said that access to marijuana was either sort of or very easy*.
3. Prescription drug use: 9.2% (a 3.8% increase from 2011) students that used OxyContin, Percocet, Vicodin, codeine, Adderall, Ritalin or Xanax without a doctor's prescription*.
4. Only 45% (down from 49.6%) of parents have spoken with their child about the dangers of tobacco, alcohol or drug use*.

5. These findings raise many concerns. What messaging is there to school-age children under 11 yrs.? Several stakeholders said that heroin is the No. 1 drug in Biddeford because it is cheaper than marijuana. If data supports assertion, then there is an immediate need for a comprehensive substance abuse programs targeting heroin use.
6. One stakeholder noted that Biddeford does not have any local drug or alcohol rehabilitation facilities, and felt that Biddeford lacked a strong recovery community. However, there is a strong, active 12-step community in Biddeford (Alcoholic Anonymous and Alanon) that could be leveraged to provide programming to schools.

(*Source: MIYHS)

Barriers.

- Parents are apathetic.
- LSES parents are not involved in their children's lives.
- Parents of Biddeford school children that drink excessively or do drugs don't care.

Gaps.

- Local data on substance abuse is not available: rates of underage drinking by age, rates of smoking marijuana by age, rates of recreational use of prescription drugs by age and heroin use by age.
 - i. Determine if current programs target identified population.
- No drug and alcohol rehabilitation facilities in Biddeford.

Other Chronic Conditions. These include arthritis, cardiovascular disease, cancer, diabetes, hypertension/high blood pressure, lung disease and stroke, which come at significant costs to Maine. The Maine Cardiovascular and Diabetes Strategic Plan 2011-2020 indicated that Medicaid estimated spending over \$93 million on hypertension costs for Mainers. Diabetes expenses exceeded \$73 million and although less prevalent in Maine, strokes have cost Medicaid \$55 million due to higher costs per Medicaid beneficiary. Heart disease cost \$29 million with heart failure estimated to cost \$12 million (Drewette-Card R., 2011, p. 20).

York County's aggregate data in 2010, had high blood pressure rates at 30%, high cholesterol at 36%, and diabetes: at 7%. However, of that 7% only 56.5% of York County

diabetics have taken a diabetes management course vs. 60.5% elsewhere in Maine (Maine Public Health District Health Indicator Tables, 2010).

Using this data to make assumptions at the local level is precarious at best. However, data has shown that the prevalence of chronic conditions increases in individuals living below the federal poverty level. Biddeford's poverty rate is estimated at 12.8% for the general population. For children under the age of 18, that number jumps to 16.7% and for adults 18-64yrs. the rate is 13.1% (U.S. Census, 2009-2013).

In Biddeford, primary prevention efforts for these chronic conditions were noticeably few with programs offering screenings or immunizations. The YMCA and the BR 50 Plus Club catering to the interests of their active older adult members provide blood pressure screenings. The BR 50 Plus Club offers a free blood pressure screening open to all members and to the general public once a year. The YMCA offers all members free access to blood pressure screenings by appointment. Secondary or tertiary programs were more available. The YMCA offers an exercise program targeted to people suffering from arthritis and a free 12-week program for cancer survivors and their families. At the Biddeford campus, Southern Maine Health Center provides support groups for people with cardiovascular disease, breast cancer, diabetes and lung disease. BR Fifty Plus also offers a diabetic shoe event annually, which is free to members.

Issues.

1. Maine's Medicaid program spends a considerable amount of money on hypertension-related health care costs (\$93 million)
2. 30% of York County residents have high blood pressure.
3. 36% of York County residents suffer from high cholesterol.
4. Both high blood pressure and high cholesterol may lead to heart attacks and strokes.

Barriers and Gaps.

- Not sure, although there are no primary prevention programs targeting high blood pressure or high cholesterol in the City of Biddeford.
 - With no available data to support the need to develop primary prevention programs or secondary management programs for chronic conditions, it is difficult to identify gaps.

High-Risk Population

High-risk populations, which include those with secondary and tertiary conditions, require a greater number of resources than other population segments. The cost is a financial hardship to individuals, local communities and to the state. Chronic conditions, already discussed in the previous section will not be included in this section, which will focus on Biddeford's lower socioeconomic population.

Lower Socio-economic Population. Socio-economic factors contribute significantly to the choices we make and lifestyle options available to us. Publications and newspapers frequently publish articles announcing that zip codes are a better predictor of one's health status than is a person's genetic code. Where we live, how we live, and what we do; it is the daily choices we make that have the greatest affect our long-term health. Lower socio-economic status (LSES) populations tend to smoke, eat poorly, and do not engage in regular physical exercise putting them at greater risk for developing chronic conditions. These habits are compounded by the use of drugs and alcohol abuse.

Biddeford's High Risk Population. Among stakeholders interviewed, the greatest concentration of programs and initiatives were observed in three categories: food assistance, job readiness and developing a social network. These three areas will be explored in an effort to highlight stakeholder contributions, expose gaps and identify barriers.

Areas with the fewest activities were in affordable housing, behavioral health, dental/medical care and domestic violence, child abuse and child neglect. This does not suggest gaps in available services for these categories; it is simply a reflection of the limited number of social service providers interviewed.

Food assistance. Food insecurity is a reality for many living in Biddeford. Over 50% of Biddeford school children are eligible for free meals (Poverty Index, 2012-2013). Understanding the critical need for Biddeford's school children to have access to food during after school hours, the Biddeford School Department implemented several programs: a backpack food program, provides school children with food for evening meals, weekends and on holidays; a summer meals program, provides kids with food during summer months, and a program that provides monthly access to free fruits and vegetables.

The summer meal program provides three access points: the Biddeford Primary School, the Biddeford High School and at Canopy Park Community Center. The monthly free fruit and

vegetable program is located at JFK School. The Canopy Park location is situated in one of Biddeford's poorest, most densely populated neighborhoods with a large population of school-age children. This location makes it is easy for children in distressed families to access food with or without adult supervision.

Adult access to food is more limited, although their reliance on free food sources has grown according to two stakeholders; one attributed it to restrictions in WIC and SNAP-ED, two federal food assistance programs. A food pantry source noted an 11% increase in participants from the previous year. This same source also remarked that their role was to provide supplemental access to food, but to some people, "We are their only source."

Biddeford has four sources that provide low-barrier access to free food. Two stakeholder organizations provide prepared and cooked meals and two food pantries, which provide groceries or food items. Seed of Hope offers breakfast, four days a week. Bon Appétit provides a hot evening meal 5 days a week. According to one stakeholder, there is no access to prepared or cooked meals on weekends, during snowstorms or when parking bans are in effect. Friends of Community Action Food Pantry (aka Biddeford Food Pantry) are open 3 days a week in the mornings and Stone Soup Food Pantry is open 2 days a week, also during morning hours making access to these establishments difficult for the working poor.

While availability of food is a significant issue, so is the quality of that food. A diet rich in nutrients that are low in saturated fats is important to support good health and reduce the risk for chronic disease. Food sources serving LSES populations must have access to high-quality nutrient rich foods to reduce the risk of developing costly chronic conditions.

Evaluation of meals prepared and served by these institutions including the Biddeford School Department are important to stem the availability of high-caloric, sugary foods. Food pantries in Biddeford do offer fresh fruits and vegetables when available. They also are a great source for one-day old bread, cakes and pastries, as well as ice cream. This appears to refute the belief that school policies eliminating sugar-laden foods would deprive LSES children, when in fact; their physical need for more expensive nutrient-rich foods is actually greater. Friends of Community Action Food Pantry (aka Biddeford Food Pantry) provide clients with 3-weeks' worth of groceries. If they know that their client is diabetic or has nut allergies, they support their clients' health by replacing objectionable items with permissible alternatives. This is a perfect example of how conscientious stakeholders can directly impact their client's health

choices.

Issues.

1. Limited availability, no food on weekends, no pantries opened during evening hours.
2. Limited transportation available to obtain food; location of food sources need to be accessible.
3. Children need access to local food sources.
4. Increasing number of people dependent upon free food sources.
5. Increasing supply of nutrient-rich foods and reducing access of high-caloric low-nutrient value foods.
6. Evaluation of food system to increase supply of affordable high quality foods.
7. Are current programs providing sufficient food for families, especially families with children?
8. Do people know how to prepare and cook these foods and do they own cookware and utensils?

Barrier.

- Lack of transportation.
- Lack of data on quality of foods distributed to LSES families.
- Lack of data on LSES families' ability to prepare and cook foods or if they own cookware/utensils.
- Limited buy-in from BSD to change policies reducing/eliminating sugary drinks and food.

Gaps.

- Weekend food source.
- Evening option for obtaining groceries for the working poor.
- Locally convenient access to food sources.

Job readiness. In the City of Biddeford, only 4.7% of people living below the federal poverty level worked full-time, 46.2% worked less than full-time during the past 12 months and 33.8% did not work (U.S. Census, Table S1701, 2009-2013). There are many factors affecting someone's ability to work including personal factors (attitude, skill sets), social factors (family,

cultural) and environmental factors (housing, transportation).

One stakeholder commented that people want to work, but may lack the skills to work. Of those stakeholders interviewed two stakeholders, SOH and Biddeford Adult Education offer the majority of services to ready adults for employment. SOH's program assists lower socio-economic status (LSES) individuals by teaching them rudimentary computer skills so they can search for jobs and fill out online applications. They also help clients' write resumes and cover letters. Although these services may be offered by other stakeholders, SOH goes a few steps further than most. Understanding the limitations and personal barriers affecting some LSES individuals, they frequently role play, rehearsing the interview so clients become familiar and more comfortable with the process. They also provide appropriate interview clothing if needed.

Biddeford Adult Education (BAE) offers free basic literacy classes in English and math and they teach English to non-English speaking residents. For those who never graduated from high school, BAE offers a GED curriculum, which is also free. In addition, Biddeford is very fortunate to have the Biddeford Regional Center of Technology (BRCOT) in their community. This asset is used by BAE to provide adults with a hands-on opportunity to learn employable job skills such as automotive technologies, small engine repair, and welding. They also offer a comprehensive certified nursing assistant program, in addition to an extensive array of online business classes, such as a certified customer service course. These programs are not free. Tuition for the combination welding certificate is \$675, basic welding is \$115, EMS Emergency Medical Technician is \$895, and the popular Certified Nursing Assistant program is \$1031, which includes the price of the textbook and the cost of a background check. Auto body, auto mechanics, and small engine repair are less costly at \$130 each.

As part of their regular curriculum, Biddeford high school students may take classes at the Biddeford School of Technology providing them with employable skills and real life experience upon completion of their course. This type of educational opportunity may be attractive to students who might not be interested in obtaining a college degree, and want join the workforce upon graduation from high school.

The Community Bike Center (CBC) is dedicated to youth development. Job readiness is a natural outgrowth of their programs providing youth with opportunities to develop socially, physically and mentally. Boy and girls under 18 yrs. gain hands-on experience working with tools and bike parts while learning to repair and fix bicycles. These programs expose children to

the rudiments of mechanics, and open their world to possible careers in engineering and other technologies. Equally important, these kids develop social skills such as listening and learning how to take direction as they practice at working together and learn to get along with others.

Biddeford's office of Community Planning/HUD (BCP/HUD), is instrumental in supporting many programs to LMI communities and individuals. Through their Community Development Block Grant (CDBG), which is federally funded through the Department of Housing and Urban Development (HUD), 15%-20% of their funds are dedicated to providing block grants for social services organizations, which serve Biddeford's neediest persons. Many of these programs help LSES individuals develop skills and habits that will enable them to hold down jobs. One grant recipient, The Maine Way, a transitional housing unit that helps formerly homeless people transition back into the mainstream by working with residents on life skills such as budgeting, scheduling time and becoming responsible. Another grant recipient, SOH offers a computer skills program for unemployed workers who are computer illiterate to make them "work ready". A third program hosted by Learning Works is a graffiti bust program that provides mentors, teaches skill sets and allows 18-24 yrs. olds to complete their GED. BCP/HUD funded the purchase of a 3D printer to provide LSES individuals with access to new technology and the opportunity to learn new skills.

Issues.

1. Developing the right skills for a decent paying job is a challenge. Many LSES adults are unskilled workers.
 - Access to gaining job skills e.g. BAE courses, may be too expensive.
 - The skills being offered may not lead to well-paying jobs.
 - Teaching social skills acceptable in the workplace may be needed.
2. Housing insecurity effects someone ability to work. Biddeford has a lack of affordable housing. One stakeholder remarked that it was difficult for adults with Section 8 vouchers to find landlords willing to accept them. This problem is likely to worsen as the neighborhoods closest to the mill district gentrify raising the price of rental units forcing people to move to other less expensive areas. Having stable housing is necessary to achieve stability and maintain a regular work schedule.
3. People are cut off from benefits if they improve their living situation because new income pushes them over the federal guidelines even though their wages are not sufficient to

support them. Therefore there is no incentive to get a better paying job.

4. Transient population, “People move to Biddeford for services. They don’t come here for jobs.”
5. LSES adults may have habits and beliefs not conducive to holding a job. Stakeholders indicated that this population lacked commitment, discipline, a sense of responsibility and they were not engaged.
6. Generational poverty.
7. Are educational programs for children from LSES households effective?

Barriers.

- Personal attitudes and beliefs:
 - They do not believe that they can improve their situation.
 - They maintain a personal belief system of scarcity.
 - Poor role models.
- Lack of available jobs and lack of jobs paying livable wages.
- No incentive to work due to misguided policy that eliminates support for low wage earners.

Job development. The City of Biddeford is transitioning from a textile mill town to a city with a more diverse economic base, albeit, one that is still favors lower paying service jobs. LSES workers are heavily saturated in lower paying service positions. According to US Census American City Factfinder, (2012) the retail trade in the City of Biddeford employed 1,840 persons as compared to 1,559 in the manufacturing sector. The retail trade’s annual payroll was \$40,783,000 vs. manufacturing’s \$65,441,000. (U.S. Census, Table EC1200A1, 2012). This suggests that annual salaries for service workers were approximately \$22,164 vs. \$41,976 for higher paying manufacturing jobs.

While manufacturing jobs are growing in Biddeford, with the purchase of the Lincoln Mill property and its conversion to a hotel, low-wage service jobs will grow challenging the development of a higher economic base. In Maine, most hotel service positions including: maids and house cleaners, dining room and cafeteria attendants, food preparation workers, hotel, motel and resort desk clerks, and laundry and dry cleaning workers make under \$25,000 with most salaries in the low \$20’s. Other common low paying jobs exist in the medical service sector and

include: nursing assistants, home health aides, psychiatric assistants, personal care attendants and pharmacy aides; with Maine salaries between \$24,720 at the high, to a low of \$20,980 (US Department of Labor, 2014).

The “Living Wage Calculator” created and hosted by MIT, determined that to live in the City of Biddeford, a single adult must make \$19,882 before taxes. That amount increases significantly, to \$43,534 if the household is composed of a single adult with one child. This figure assumes a childcare cost of \$638/month. Interestingly, the cost for two parents with one child drops by almost \$5700, to \$37,878 for two parents with one child and assumes no cost for childcare (Glasmeier, A., 2015).

Stakeholders most responsible for job development in the City of Biddeford were outside of the scope of this project. However, BCP/HUD does provide valuable assistance for job creation with a gap financing loan program for micro-enterprises. The business owner or at least 51% of employees must be of lower or moderate income.

Issues.

1. Biddeford’s economic health will reflect its population’s health. A diverse economy with a wide wage base is stable and better able to absorb downturns in any one market sector. Biddeford needs jobs requiring highly technical skills as well as those for unskilled workers.
2. The health status of LSES populations residing in wealthy communities has been shown to be better than those living in poorer communities (Ludwig, J., et. al., 2012).
3. When discussing Biddeford’s transient population, one stakeholder remarked, “People move to Biddeford for services. They don’t come here for jobs.”

Barriers

- Transient population
- Housing insecurity – lack of affordable housing
 - Some people with section 8 vouchers cannot find places to take them
 - “It’s hard to work if you don’t have a place to live.” (Stakeholder comment)

Gap.

- Jobs that pay livable wages

Physical Activities

Aside from diet, physical activity (PA) is an essential part of a wellness agenda and it is crucial to wellness as it reduces stress and relieves depression. Keeping physically fit requires daily moderate physical exercise, which can reduce the chances of developing chronic conditions such as hypertension, cardiovascular disease, obesity, diabetes, and stroke.

This report assessed physical activities by identifying the type of activity (cardio: high or low impact, strength/toning, mind-body), as well as identifying the intended population, the time, frequency, cost, location, and duration of the activity. Ideally, the goal was to identify daily physical activities that were available, affordable and easily accessible.

The two major non-profit providers of physical activities in the City of Biddeford are the Biddeford Recreation Department (BR) and the Northern York County YMCA. Each venue caters to their own segment within Biddeford's population, although members of the community may participate in both organizations.

Biddeford Recreation Department. The Biddeford Recreation Department plays a valuable role enriching and improving the quality of life of many community members. Their intent and purpose is "to provide supplemental educational, recreational, cultural and social opportunities for all members of the community, to lead a healthy and active lifestyle." Its offerings supplement those of the Biddeford School Department and other area institutions, by promoting adult team sports to active adults, youth team sports, recreational and social activities for seniors, a teen center, which is open during the school year, and summer day camps. Neither wellness nor fitness is part of Biddeford Recreation's mission statement, although they do offer a few fitness classes.

The scope of their programs is broad and in addition to the above activities, they also offer: an "After school Early Release" program, an educational science program, numerous social and cultural opportunities for families, and events that promote the outdoors and teach new skills like kayaking.

In terms of the assessment, BR's mission statement helped to clarify their priorities, although their use of the term supplemental was initially unclear. Did BR provide supplemental activities to support ongoing activities from other institutions or was their role to provide

supplemental activities where gaps existed? Based upon stakeholder interviews, their role is to provide supplemental activities to support ongoing activities from other institutions. BR is very aware of other stakeholder groups and tries not to compete with another organization's programming. They either target a different age demographic or they choose not to offer a competing program. For example: the BR youth soccer program serves children in grades 1-6 only since the Biddeford Middle School has a soccer program, which is open to all 7th and 8th graders.

Biddeford has a highly developed team sports culture and supporting team sports and team sports leagues appears to be one of BR's main roles. These programs offer a great way to stay fit and develop a supportive social network. However, not all children or adults are involved in team sports.

In light of their mission statement, their emphasis on team sports and their philosophy of not competing, it was not surprising to find that the assortment of fitness activities targeted to individual adults under fifty, was limited. Due to the presence of a large senior population, members of the BR 50 Plus Club, most fitness classes were tailored to accommodate an older audience. BR offers no programming that targets inactive adults under fifty and unorganized workout options are not available. The J. Richard Martin Community Center (RMCC) does not offer gym space with weights, a treadmill or a stationary bike.

Like adults, children who do not participate in team sports appear to have little opportunity for regular physical activity. For some kids, the skate park provides a chance to engage in unorganized physical activity. The Rotary Park Teen Center's description on the BR website, suggests that most activities are sedentary. Alternative physical activities are available in the for-profit sector, however these tend to be specialized (e.g. dance, gymnastics) and can be costly.

The BR 50 Plus Club serves active older adults. It is based at the RMCC and most daily activities, including fitness classes, are held at the center. Fitness classes for 50 Plus members are actually the most comprehensive incorporating cardio, strength/toning and mind-body activities. Unlike BR, they offer seniors an early morning fitness class and they have access to an hour of indoor walking five days a week.

Not wishing to compete with the YMCA's childcare programs, BR offers only one class for preschoolers, a gym program for an hour once a week. While this class is free, it is also a

parent-directed activity. No organized physical activities for are available for toddlers.

Biddeford's Department of Parks and Recreation, manages multiple city facilities and locations throughout Biddeford including ball fields, parks and playgrounds. These spaces are shared with other groups such as the Biddeford School Athletic department (BSD), Biddeford Adult Education (BAE) and various leagues such as Biddeford's Little League, Youth Football and Biddeford Youth Lacrosse. Space is at a premium and BR trades space with the BSD, which means that BR may hold their activities at various school fields, school gyms or in school buildings.

Issues. Adults.

- Activities favor competitive team sports, which seek highly skilled and fit adults. Team sports are expensive. Fees range from \$375-\$1200/team.
- There is little available for adults seeking low-cost regular moderate exercise and there are no programs specifically targeting inactive adults.
- There is a lack of weekday evening drop-in games to accommodate working adults of with different skill and fitness levels. No evening or weekend drop-in games are available at the RMCC.
- Fees for individual physical activity classes may be too expensive. Although scholarships for classes are available, no adult has ever requested assistance, and scholarship applications are submitted to the City of Biddeford's Health and Welfare office, which may be a deterrent.
- By deciding not to offer programs that other groups offer such as the YMCA, segments of the population are being missed. This attitude assumes that the market segment BR attracts will be the same segment participating in the YMCA's programs.
- BR is a city-owned and funded entity, with a community center that is located in the heart of Biddeford. It is conveniently accessed by walking and biking, and is close to LMI neighborhoods. Yet, it does not offer programs that target LMI neighborhoods.

Barriers.

- Offering programs in schools benefits those who live nearby or have ready transportation

Gaps.

- No programs that target adults from LMI neighborhoods
- Lack of fitness programs available at the RMCC
- No fitness programs target inactive adults
- No early morning or evening indoor walking programs are available to the general public.
- No treadmills or stationary bikes located at RMCC and BR does not have a weight room.

Issues. Teens/Youth Sports

- Cost to participate in youth leagues and other team sports can be expensive when including registration fees, the cost of equipment and gear, and transportation costs to and from practices and games. Scholarships are available and in some leagues no child is turned away for inability to pay. Some scholarships require parents to volunteer their time which may provide an additional hardship for some families. The scholarship application process varies by league. BR scholarship application is filed with the Office of General Assistance, which might be a barrier to parents seeking scholarships for their children.
- Time commitment for parents and children playing team sports is substantial, especially if more than one child is involved. This burden becomes greater if the parent is single.
- Transportation is not provided by the league, parents are responsible. Most children do not ride their bikes to practices or to games (anecdotal).
- Children of parents who are not involved in their kid's activities will not make an effort to involve their kids in organized sports. Registration requires parental involvement and consent. Parents who are not involved in their kid's activities will not support their kids' involvement in organized sports. Children living in distressed neighborhoods do not have easy access to free low-barrier drop-in recreational activities.
- The Teen center is only opened from 2:30-5:30pm on weekdays. They have no evening hours and are closed weekends and during summer months.

Gaps.

- No available free low-barrier organized sports
- No open gym, weight room, no treadmills, no stationary bikes

Issues. 50 Plus.

1. 50 Plus mainly provides social programs which are included in the membership. They do provide physical activities which tend to be strength and toning rather than low impact aerobic exercise.
2. Most physical activity programs carry additional fees. While they may seem reasonable, fees for individual classes can add up, especially for people on fixed incomes. Taking additional classes might be prohibitive. No scholarships are available for classes that are sub-contracted. The following show the annual costs incurred if taking a class for one year (52 weeks).
 - a. Living Fit, \$4/class, 3 days/week is \$624 annually.
 - b. Pickle ball, 2 days (winter) \$2/drop-in is \$208 annually.
 - c. Get Fit! At \$80/ 8weeks is \$480 annually
 - d. Zumba, 1-day/week is \$288 annually
 - e. Kettle ball \$5/week is \$260 annually
 - f. Tai Chi \$48/6-weeks is \$413 annually

Northern York County Branch YMCA (YMCA or Y). The YMCA is a major contributor to wellness enhancing the lives of members and the Biddeford community at-large. Wellness (mind, body and spirit) is a core value of the Y and is included in their mission statement: “The YMCA is committed to building strong kids, individuals, families, and communities through programs and services that promote a healthy spirit, mind, and body for all, regardless of ability to pay.” In the non-profit arena, the YMCA offers the majority of daytime (5am-5pm) fitness classes in the City of Biddeford. All fitness classes, the gym and the swimming pool are included in the Y’s annual membership fee. Annual membership dues are: \$624 for one adult, \$768 for a single adult with a family, and \$924 for a family. The YMCA offers a low-barrier approach to membership with flexible payment arrangements and sliding scale membership fees. No one is turned away due to an inability to pay.

The Biddeford branch mainly serves adults, active older adults and they have a comprehensive childcare program, although they do offer a limited number of fitness options for teens (e.g. Tri Inside the Y, swimming). Their primary programs focus is on individual fitness classes including: cardio, strength/toning and mind-body, swimming and aqua classes; and they include some beginner classes for those new to exercise or returning after a prolonged absence. For those not interested in classes, the Y has a gym with weights, treadmills, stationary bikes, ellipticals, cross-trainers, stair steppers, and a rower.

The YMCA attracts people who are interested in fitness, in staying healthy or getting healthy. Early morning high-impact aerobic classes target active working adults who want to get in a workout before heading off to the office, followed by self-employed, stay-at-home Moms, and other adults able to work-out after the rush. The active older adult program provides dedicated fitness classes and although the Y has developed a social program for seniors, this is fairly new and the emphasis is still on fitness.

Aside from offering fitness classes, the YMCA appears to be serious about promoting wellness. They offer a secondary prevention class to manage one of two chronic conditions – arthritis and cancer; they provide members with regular blood pressure screenings, by appointment, and they provide wellness assessments: a personal fitness assessment, a body composition assessment, a nutritional consultation and a healthy living consultation. Most wellness assessments are fee-based and again, available only to members.

The YMCA offers comprehensive childcare programs and weekly summer camps for adolescents, there is a cost, but sliding scale discounts are available. Again, no child is turned away for lack of funds for any program.

The Biddeford High School reached out to the Y several years ago, to create “Alternative Pathways”, a program designed to bring disadvantaged high school students to the Y. This program runs once a week and participating students spend one hour using the Y’s facilities – swimming, lifting weights or participating in other ongoing activities. Students receive one gym credit.

The YMCA in Biddeford is located in the outskirts of town on Rt. 111, on the way to Arundel and Alfred. This location is not accessible by walking. A car or public bus transportation is required. Biking to this location from downtown Biddeford is physically possible, but dangerous. Rt. 111 is a major thoroughfare with lots of traffic going from one lane

in Biddeford proper, to two lanes and then widening to 3 or 4 lanes.

Issues.

1. The cost of membership and related costs such as purchasing workout attire and transportation may be a barrier. Although there is a sliding scale, requesting a reduced fee may not be easy for some people. Adults from LSES backgrounds may not consider joining the Y or may find access to the Y too difficult.
2. The Y's location is not easily accessible. Transportation is difficult for those that do not drive or own a car. A public bus is available during daytime hours, although the bus stop is a distance from the Y's entrance. Riding a bike to the Y is not safe.
3. Partnering with BHS to provide access to LSES youth is a good first step. However, I was not able to identify any effort made to market the Y's programs to Biddeford's LSES population.

Barriers

- Location
- Transportation
- Attitudes of potential users
 - Lack self-efficacy
 - Lack of empowerment to ask for discounts

Gaps

- Teen/Youth fitness programs
- Outreach to the LSES community

Opportunities. (Indicated by stakeholder)

- Diabetes prevention program
- Youth education & youth exercise programs (3yrs-10yrs)

Other Groups Offering Physical Activities. These stakeholders understood that there was a need for low-cost, low-impact cardio activities and created these programs to help fill in the gap.

1. BAE: Indoor walking at Biddeford High School, 5:30-7:30pm, T&Th, Jan-May, \$5 one-time charge
2. CHCC: Free indoor walking at Walmart during hours of operation
3. CBC: Indoor Cycling, Saturdays, 2-5pm, Free, Kids have first priority but adults are welcome

4. HOB: Through the Biddeford Wellness Council, part of the Healthy Maine Street project, they created walking (maps with one-quarter to two miles loops) of downtown Biddeford.

Issues

1. Transportation for some locations and self-motivation required.
2. Indoor cycling is within walking distance of many neighborhoods, self-motivation required
 - a. If an adult, may not be comfortable cycling with kids.
 - b. If a kid, may be too shy or uncomfortable to participate.
3. Walking maps of downtown Biddeford are not readily available
 - a. Self-motivation is required to walk.
 - b. May question safety of neighborhood.

Gaps

- Developing free low-barrier PA especially in LMI neighborhoods

Recommendations and Conclusion

Health begins where we live, work and play – in our communities, our schools and at our worksites. We know that daily lifestyle habits and the choices we make impact our health outcomes significantly. So how do we gauge our choices and get rid of bad habits and develop good ones?

Seven Habits of a Highly Effective Wellness Community

(To borrow from the title of Stephen Covey's book, the 7 Habits of a Highly Effective People.)

1. A wellness strategy
2. Access to accurate timely information.
3. Access to Affordable High Quality Foods
4. Free access to low-barrier physical activity located in local neighborhoods
5. Low-cost or Free Health Screening and Lifestyle Assessment
6. Low-cost or Free Wellness Coaching
7. Evaluation and Strategy Refinement

City of Biddeford wellness strategy. All stakeholder groups interviewed have limited resources: time, money and personnel. Many serve on each other's boards and committees, yet they still function as independent agents. Developing and adopting one wellness strategy for all members of the community living and working in the City of Biddeford, would establish a single unified focus for all stakeholder organizations, set agreed upon priorities, and allow stakeholder's to decide how their organizations might best contribute and at what their level of commitment since several organizations have county-wide responsibilities.

Having a wellness strategy would benefit the City of Biddeford. It would enable the city to organize its resources to support wellness efforts and provide the opportunity to evaluate and monitor its progress, results of which could be used in a variety ways to promote the city and attract new resources and new economic development. Adoption of wellness into Biddeford's Comprehensive Plan would secure wellness as integral part when planning community growth and development.

Access to accurate timely information. We need accurate information to tell us where we are. Biddeford needs to be able to identify which health conditions and behavioral risks are most prevalent and which require immediate attention. Access to this information will allow Biddeford and community stakeholders to set priorities, target their limited resources and design appropriate solutions. Developing a data collection and retrieval network will involve the cooperation of stakeholders to devise the most efficient and least expensive system.

Access to affordable high quality foods. The adage "You are what you eat" is true. Food's importance as a key determinant of health cannot be understated. A diet in nutrient-rich foods is essential to maintain good health. The health costs associated with disease resulting from a poor diet such as diabetes, can potentially bankrupt the community and the state. The City of Biddeford must take the lead to develop a food network that supplies nutrient-rich food. These efforts will not be easy as there are many stakeholders, some of whom might harbor contrary opinions and beliefs or have hidden agendas such as maintaining vendor relationships. In this instance, using an impartial third party to evaluate the current food system and develop a healthy food system alternative might be advised. Seeking outside funding for this effort may be possible. The USDA recently announced a new grant program to fund initiatives that help SNAP-ED recipients increase their purchase of fruits and vegetables. They may be interested in funding efforts to develop a healthy food network, which would increase access and availability

of healthy foods.

Free access to low-barrier physical activity located in local neighborhoods. It is strongly encouraged that this step be immediately organized and implemented prior to all others. The benefits to the City of Biddeford and to its neighborhoods are many. Second to food, engaging in regular moderate physical activity is important for good health. And equally important are the potential social effects on the community. Neighborhood-based physical activities which are easily accessible, will engage the community, provide neighbors with opportunities to create social networks, encourage physical activity and invoke a sense of community spirit as residents recognize that their city cares about them.

High-risk neighborhoods. Employing the Pareto Rule commonly known as the 80-20 Rule, approximately 80% of Biddeford's resources are consumed by 20% of the population. The majority of high-risk populations live in high-risk neighborhoods. They tend to use greater amounts of medical care and due to their lifestyle choices (e.g. illicit drug use), they frequently use the resources of other community agencies (e.g. police, EMS). Adding the highly effective Broken Windows Theory, which demonstrates that small efforts can produce big changes, to the Pareto Rule, makes a strong case for establishing neighborhood-based physical activities in lower socio-economic status neighborhoods.

The associated costs would be relatively small targeting one or two neighborhoods and the implementation process easily coordinated, monitored and refined. Although health data from this may be slow to evaluate, social changes resulting from this effort, such as the number of reports for domestic violence and child abuse, and the number of reports of crime and disorderly conduct emanating from the neighborhood would be easy to identify.

The Bacon Street neighborhood may be the perfect starting point with its high rates of poverty, dense population and large number of school-age children. Although I do not have exact figures, one stakeholder mentioned that this neighborhood had a high rate of reported child abuse and neglect. In addition, this area has no active playgrounds or athletic facilities.

Low-cost, low-barrier physical activities. Examples of organized low-impact, cardio physical activities include: drop—in activities such as basketball or soccer, Tai Chi or Qigong; organizing neighborhood bike rides, neighborhood bike, jogging and walking clubs. To provide drop-in activities the street may need to be closed for a period of time each day.

The role of the Biddeford Recreation Department, the YMCA and the Community Bike

Center. The Biddeford Recreation Department is a city entity, and as such, is obligated to serve all residents. It is strongly suggested that BR expand its mission statement to include wellness activities and that it expands its outreach to LMI neighborhoods; partnering with the YMCA, CBC, BAE and other stakeholders to create satellite hubs that provide ongoing physical and wellness activities to these high risk populations. Since its inception, the YMCA has served disenfranchised community members. However, outreach efforts to LSES communities in Biddeford appear to be lacking. Since it might not be practical to transport busloads of Biddeford's residents to the Y, partnering with BR to provide joint programming in satellite locations might be a realistic option. The Community Bike Center's impact is potentially significant for two reasons. With their access to bikes and cyclists, they are in the position to easily offer local neighborhood kids and adults organized bike rides and help develop neighborhood bike clubs. Also, their format for youth development – small groups interacting and learning from each other while repairing bikes – is easily adapted and transferrable to neighborhood locations. Plus, repairing bikes provides children and adults with real marketable skills.

Low-cost or free health screening and lifestyle assessment. This assessment presents community members with an opportunity to learn about their health and how their lifestyle choices impact them. This process engages participants allowing them to become better informed, and provides them with a chance to discuss their health, set goals and learn about healthy living options. It also will identify those at-risk, who may then be counseled and advised of available intervention options. This process facilitates data collection, although HIPPA rules apply and only aggregate data could be used.

Health risk assessments may include both medical and non-medical components. Those assessments that include medical tests, usually HDL-cholesterol and glucose tests are more expensive than those that do not. Non-medical assessments include: demographic information, family history, weight, height, BMI, and lifestyle habits such as diet, frequency and type of physical activity, use of tobacco products, use of alcohol, use of drugs, and stress levels.

Health risk assessments that include medical components will be more complicated to administer. Working with an outside third party may be too expensive. Since Biddeford has access to a number of health institutions and organizations that provide medical training and internships, involving community stakeholders may help reduce costs (e.g. working with UNE's

medical school for possible interns and sharing cost of licensed software to provide instant test results). Support from Medicaid to offset costs of administering assessments to high-risk populations might be available.

Health risk assessments that do not include medical tests are less costly and open the program to include possible internships from BRCOT's medical assistance and CNA programs, and other stakeholder groups such as the YMCA. These types of assessments are frequently performed at gyms by trained fitness instructors.

Free or low-cost wellness coaching. Wellness coaching has been credited with producing effective changes in participants' behaviors and has increased their level of satisfaction. Studies have shown that wellness coaches do not have to be medical personnel and that they are highly effective. In fact, in some setting wellness coaches are peers who have faced similar health issues (Swarbrick, M., Murphy, A. A., Zechner, M., Spagnolo, A. B., & Gill, K. J. 2011). Providing ongoing access to a wellness coach with high-risk populations may be a key strategy to employ and if aligned with results from a health/behavioral-risk assessment, could be properly tailored. Use of peer or non-medical persons as wellness coaches may be a practical alternative.

Evaluation and strategy refinement. Evaluation is a measurement tool and an important part of any effective wellness strategy. Each area of the process (administration, policy, procedures and programs) should be included. Planning the evaluation process as part of the initial wellness strategy allows goals to be set, objectives defined and benchmarks established.

Measuring performance produces tangible results which help identify areas of strength and weakness allowing the wellness strategy to be refined to reflect new findings, modifications to be made, and resources to be redirected. Sharing evaluation results with the community and stakeholders elicits their support, engaging them and demonstrating proof that programs are effective. Results may also be leveraged to seek additional funders.

Conclusion

The City of Biddeford and stakeholder organizations are working to increase wellness for all members of the community. Historically, stakeholders work together to promote their organization's designated health priorities; however, there is no unified cohesive effort which ensures that all groups are working towards the same goals and there is no way to determine the

success of these efforts. Developing one wellness strategy for the city would be beneficial to all stakeholders allowing them to streamline their efforts, focus their resources and measure their success, providing tangible results they can demonstrate to funders, state and federal agencies, and leverage to attract new funders and support economic development. Businesses want to be in cities with healthy populations.

A wellness strategy can be simple or complex; addressing only health and behavioral risk factors or it can be comprehensive and include social and economic issues which have serious impact on health outcomes. Even at its most simple, a wellness strategy that is meaningful requires accurate information. Biddeford must gain access to relevant health data and behavioral risk factors affecting the community. This data system will require cooperation from medical and non-medical stakeholder groups including Biddeford's police and fire departments.

One of the best sources and a key contributor to developing a wellness strategy for the city is the Biddeford Community Development/HUD office. Having access to their extensive knowledge of LMI neighborhood demographics and infrastructure will ensure a wellness strategy that captures the bulk of high-risk populations which use a greater proportion of city resources. In addition, working with them will help integrate wellness into all their future planning efforts.

Finally, having lived in New York City during the years George Kelling tested his Broken Windows theory, I can personally attest to its effectiveness. While it may be a tool originally designed to reduce criminal activity, I believe that its application has crossover value in community wellness efforts especially since criminal activity affects a community's wellness status. An overly simplified explanation of the theory is that fixing broken windows in a neighborhood deters crime because it sends the message that people are watching and that they care about their neighborhood.

If we apply that same principle and bring free, low-barrier physical and wellness activities to these neighborhoods, we can begin to demonstrate our concern about these communities and provide them with opportunities to engage in positive interaction. Above all else, this step with its potential for positive change should be immediately considered.

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Appendix A

Key Informant List,

Stakeholder List,

Key Informant and Stakeholder Survey Questions

Key Informants**1. Local Government**

- a. City of Biddeford
- b. Health and Welfare Department
- c. Biddeford Recreation Department

2. Non-profit Wellness-oriented Community Institutions

- a. Northern York County Branch YMCA
- b. Coastal Healthy Communities Coalition (Healthy Maine Partnerships)

3. For-Profit or Workplace wellness key informants

- a. Biddeford & Saco Chamber of Commerce

Stakeholder Organizations**4. Local Government**

- a. Biddeford Adult Education
- b. Biddeford Community Planning/HUD
- c. Biddeford Recreation Department
- d. Biddeford School Department

5. Non-profit Community Institutions

- a. Coastal Healthy Communities Coalition
- b. Community Bike Center
- c. Community Partnerships for Protecting Children
- d. Heart of Biddeford
- e. McArthur Public Library
- f. Northern York County Branch YMCA
- g. Seeds of Hope
- h. Southern Maine Health Center

Key Informant Questions

1. With which wellness programs and services are you familiar?
 - a. (Prompt If not) Wellness programs or services are non-medical programs such as nutrition classes, smoking cessation program, or programs to increase physical activity for those who are inactive.
2. Who would you say is responsible for creating or implementing wellness programs in Biddeford?
3. What organization, agency or venues offer these programs?
4. Which individuals do you recommend I contact to learn about what's available in Biddeford?
5. Is there a priority wellness agenda for the Biddeford community? If so, what is it? (conditions, issues or concerns)

Stakeholder Questions

6. Please describe your wellness programs and how they began. Who do they serve?
7. What individual wellness services and activities do you currently offer?
 - a. If available, I will hand them a schedule of their program list.
8. What do you consider the basis or evidence for your programs/activities or services?
9. How is this financed? Do participants pay to participate?
10. What challenges do you encounter?
 - a. With regard to serving the intended population.
11. What recommendations would you make to alleviate or overcome these barriers to access?
12. Is there any coordination between your wellness programs/service and the medical community? If so, please describe the relationship and how it functions.
12. Is there any coordination between your wellness program/service and the community-at-large? If so, please describe the relationship and how it functions?
13. What do you see as the most significant gaps in wellness programs being offered in Biddeford?
14. What do you see as the most immediate opportunities for wellness program development?
15. Is there anything else you would like to tell me that you think is important about wellness programs in Biddeford?
16. What are your organization's wellness priorities?
17. Please review the following list. (Hand a copy of the list to the stakeholder)

In the past year, which if any of these have you participated? What would you like to do more often? What do you see as the most significant gaps or barriers? What do you see as the most immediate opportunities for wellness program development in the City of Biddeford?

- a. Community Engagement
- b. Strategic Planning
- c. Coordination between stakeholder groups
- d. Information Dissemination
- e. Stakeholder Empowerment/Apathy
- f. Funding
- g. Communication
- h. Partnerships

Appendix B

Pilot Data Collection

Key Informant List, Sample of Request to Participate
and Summary of Preliminary Findings

Pilot Data Collection

Key Informants:

Former Mayor of Biddeford

City Manager, City of Biddeford

Biddeford-Saco Chamber of Commerce

City Administrator, City of Saco

Town Manager, Town of Old Orchard Beach

Volk Packaging

Sample of Email: Please note that a copy of the original concept proposal was attached: A Community Wellness Program for the Tri-Community Area of Biddeford, Saco and Old Orchard Beach

Dear Key Informant:

Thank you for agreeing to review the attached proposal. The reason for this inquiry is to solicit your opinion to determine whether such an entity could realistically exist. If so, in what capacity? Should a program like this be implemented all at once or incrementally? How do you envision an association like this working in the tri-community area? Or if you do not believe that this concept is realistic, why not?

I realize that this is a lot to ask, however, please do not feel obligated to respond. Whatever insight you offer will be most appreciated. Your answers to the questions listed below are highly welcoming and would be extremely valuable to me as I frame my investigation. However, it will be a part of my research to answer them.

Thanks again. I am grateful for your insight you for your willingness to share your thoughts. I have included my capstone adviser, David Lambert on this email.

Kind regards,

A Silver

Questions:

- What obstacles might a program of this nature encounter?
- Which stakeholders would you consider to be natural allies?
- Which stakeholders would opposed to such a program?
- Knowing the communities of Biddeford, Saco and OOB, do you think people would be willing to participate?
- According to the research, small businesses are interested in offering wellness programs to their employees, but they want the local communities to offer programs. Do you think that small businesses within the tri-community area would actively support and participate in the proposed community wellness association?
- Are there any aspects of the proposed association that you particularly like? Dislike?
- Please feel free to add any additional comments.

Summation of Key Informant Comments

Feedback from six key informants was sought. Five replied, although only four responses are included in this summation.

The response to the proposal was enthusiastic and positive. Respondents agreed that a community-based wellness program would be good for the tri-community area. There was a general consensus that small businesses would be supportive since they did not possess the resources to develop their own programs. Everyone thought that the public would also support this type of plan, although they commented that it would take time and effort to recruit participants. Respondents noted that both groups would require incentives and that long-term commitment was needed by all parties. Three major themes emerged, which were common to all four responses: cost, incentives for the public and employers to participate and commitment to build program and by participants to stay involved.

Costs: How will the program be funded? Nothing is for free.

- Businesses would be willing to contribute; however, cost is a factor. Businesses will want to know what is being asked of them and how they will benefit.
- Support from Insurance providers and Medicare/Medicaid will be required.
- Financial analysis on healthy communities, cost of unhealthy communities on business

development

Incentives: Small businesses not “on the hook” to develop, implement or pay for their own wellness programs.

- Convenience of programs/activities: easy access, well-located and suitable times.
 - Use of public facilities (schools, public buildings, etc) was considered positive.
- Participants want to see results.
- Health care providers could use this program to direct their patients for assistance in healthy practices/habits.
- Supporting and incorporating local for-profit and non-profit wellness businesses
- Incorporating internships (UNE, YCCC, Biddeford School of Technology, USM)
- Group (DEMS/GOP) in Augusta want to tie open enrollment of Medicaid to personal responsibility this program could be an answer to that.
- Creating community goals (e.g. to lose weight – total # of pounds)
- Would businesses get tax credits?
- Would a participant be able to use HAS to pay for these expenses?

Commitment: Finding committed people who will make a long-term commitment

- Community approach great, but challenging to start and sustain due to declining individual commitment
- Members of the public who participate would be considered stakeholders
- Local businesses are locally committed.
 - Hard to get out of town businesses to join local chamber.
- Employee attrition rates
 - Inconvenient locations/times
 - Participants do not see results

Obstacles

- Funding
- Push back from anyone not having an incentive to participate

- Using public buildings (“... although, it makes sense, you will hear every reason why it is not possible.”)
- Employees complain about the lack of time with early starting hours

Additional comments:

Natural allies: Southern Maine Medical Center, Muskie School, UNE, and members of the medical community.

One stakeholder suggested I start the process by taking an inventory of existing programs and determining if there was a way to coordinate them. This stakeholder also advised that I speak with insurance providers, Medicare and other health care professionals for their input.

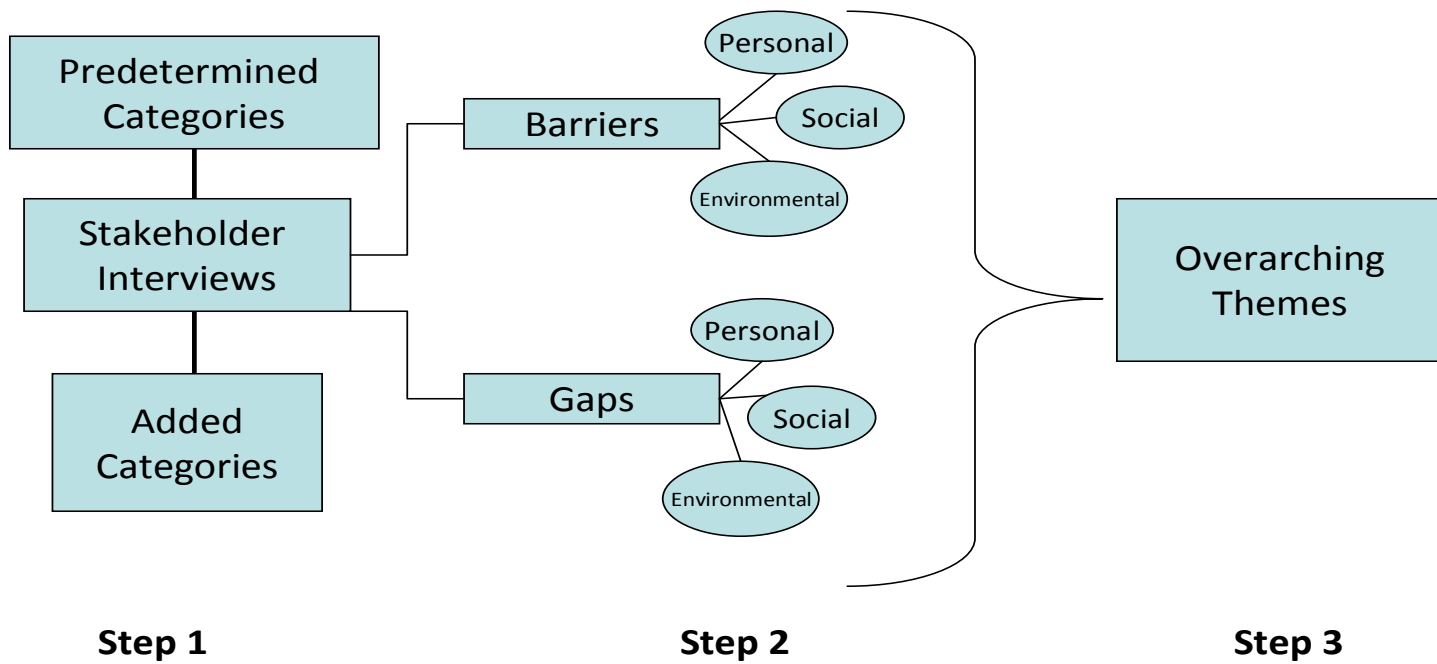
Another stakeholder recommended that I do an economic health status community assessment, which could demonstrate the cost to local businesses and to future development.

Appendix C

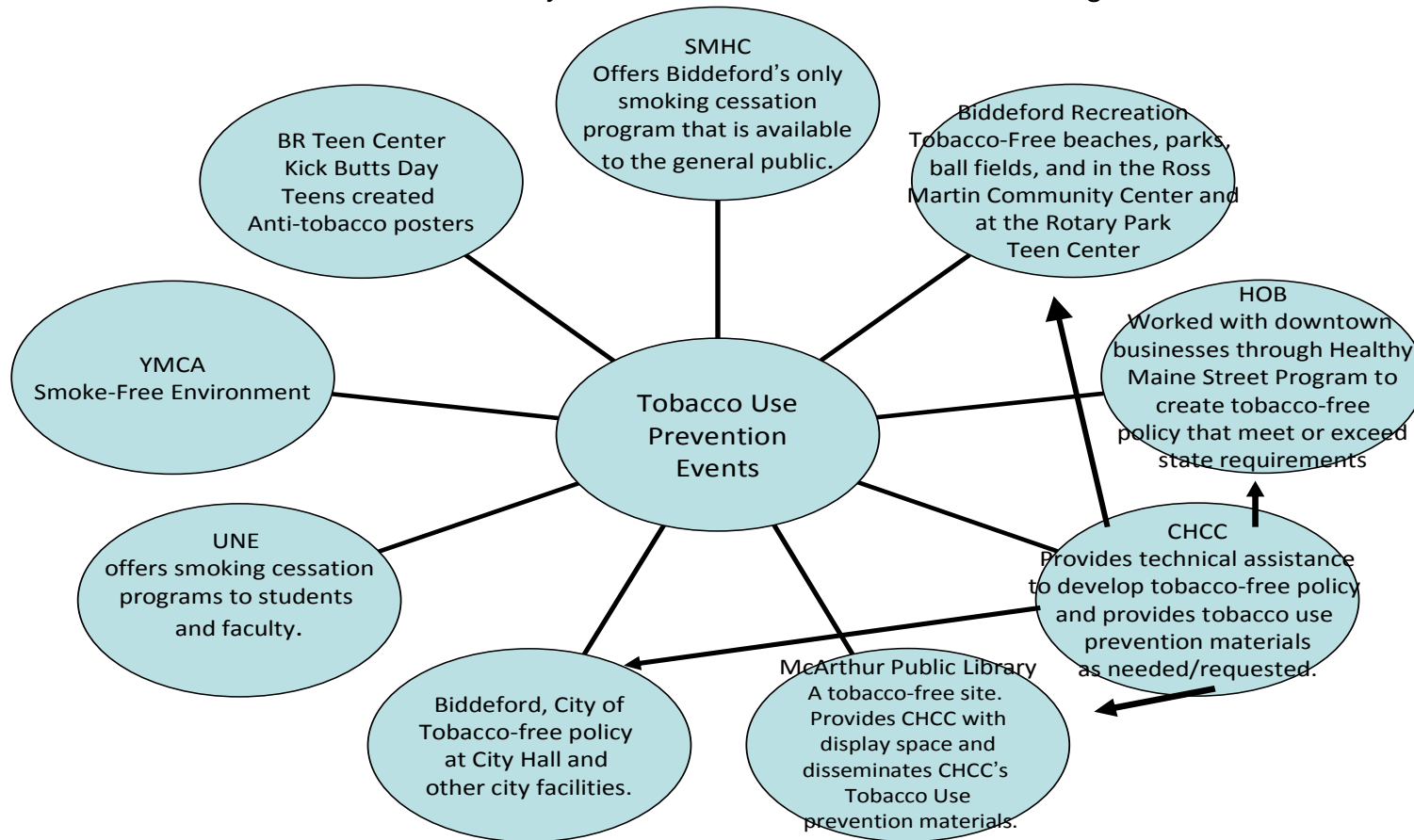
Presentation Materials:
Sample of Event Charts and Tables

The Process

Data Management and Analysis: Qualitative Research



Chronic Conditions: Tobacco Use
Biddeford's Community Effort to Prevent and Reduce Smoking



Tobacco Use: Prevention Events and Collaborative Efforts

Ranking Scorecard: Chronic Conditions

Primary and Secondary Support / Coordination and cooperation among

Chronic Condition	Ar	As	C	CVD	D	FP/ flex	HBP	HC	CRD	O	St	SA	TU
Event	1	0	2	2	2	10	6	0	1	14	2	8	9
Orgs	1	0	2	2	2	2	2	0	1	8	2	3	7
Ranking/ Score	8	9	6	6	6	4	5	9	8	1	6	3	2

Ar = Arthritis

As = Asthma

C = Cancer

CVD = Cardiovascular disease

D = Diabetes

FP = Falling prevention (Flex – flexibility)

HBP = High blood pressure

HC = High cholesterol

CRD = Chronic respiratory disease

O = Obesity

St = Stroke

SA = Substance abuse

TU = Tobacco use