

Health Impact Assessment of the Lexington Market Revitalization Initiative



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BCHD
Health Impact Assessment
Design 4 a healthy Baltimore

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Abbreviations

BCHD – Baltimore City Health Department

CDC –Centers for Disease Control and Prevention

DOT – Department of Transportation

HB 2015 – Healthy Baltimore 2015

HIA – Health Impact Assessment

HIAP – Health In All Policies

HUD – U.S. Department of Housing and Urban Development

LEHD – Longitudinal Employer – Household Dynamics

MTA – Metropolitan Transportation Authority

PEQI – Pedestrian Environmental Quality Index

SDOH – Social Determinants of Health

UMB – University of Maryland, Baltimore

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Facing east across the Study Area. University of Maryland in the foreground, Lexington Market on the hill, and the center city business district rising in the background.

xecutive Summary

The Baltimore City Mayor's Office has created a vision for the city's downtown Lexington Market area, the commercial center of Baltimore's Westside neighborhood, to stimulate its growth and development. The goals include developing a *mixed-income, mixed-use, pedestrian friendly neighborhood* that will attract reinvestment and become an amenity to the community and to the region. The Baltimore City Health Department coordinated a Health Impact Assessment (HIA) of this area for Baltimore City. The results of the HIA identify potential health impacts of the redevelopment initiative and inform future direction on how to optimize the positive health outcomes and mitigate negative health effects.

Site Context. The Lexington Market area is located in the center of Baltimore's historic commercial district, located within the Westside Neighborhood. The area is a regional transit hub, with stops serving the light rail, the subway, and numerous bus routes. At the heart of the neighborhood is the historic, still operating, 140-stall Lexington Market. The Lexington Market area is bordered by the University of Maryland post-graduate campus and medical system, the central business district, and dense residential neighborhoods.

Despite its amenities, the Lexington Market area suffers from high rates of violent crime¹ and blight².

In a recent community health assessment conducted by the Baltimore City Health Department (BCHD), the Community Statistical Area that includes the Lexington Market area scored low on several measures key to overall health and well-being. The goal of this Health Impact Assessment (HIA) is to identify the potential health impacts of creating a mixed-income, mixed-use, pedestrian friendly Lexington Market area and to align recommendations with current initiatives paving the way toward reinvestments such as an increased police presence and a comprehensive Lexington Market interior renovation. The Lexington Market Area Vision will serve as an outline directing the neighborhood's infill and redevelopment.

Health Impact Assessment. HIAs are defined by the World Health Organization as "a combination of procedures, methods, and tools by which a policy, program, or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population." To ensure that health is considered in the policy process, HIAs aim for change at three distinct targets: the project, the environment, and the decision

¹ Violent crimes include homicide, rape, shooting, aggregated assault, robbery, and carjacking.

² Source: Baltimore City Police Department.

making process. At the heart of the HIA deliverable is a set of recommendations. These recommendations gain their strength and momentum by incorporating best evidence with stakeholder input and participation. Each step of the HIA process integrates ways to actively engage the community.

Lexington Market Area HIA. This HIA is directed at informing the Mayor's forthcoming Lexington Market Area Vision. The Scoping Phase of the HIA began in spring of 2012 with a series of community workshops designed to identify and prioritize stakeholder concerns regarding the potential health impacts of the project. The redevelopment outcomes identified as most critical to the community's health were:

- *Economic Opportunities*
- *Multimodal Access*
- *Personal Security*
- *Social Cohesion*

In the planning discipline, similar objectives would be labeled *quality of life indicators*, which are often the focus of a project's outcomes. In public health, they are referred to as *social determinants of health* for their well-documented influence on health outcomes. Thus, these social determinants of health represent the intersection between urban design and public health. This HIA examines these health links more closely, and produces a set of recommendations for aligning the redevelopment's goals with the city's health goals (see Figure 1).

Results Summary. The recommendations in this report add specific input and contextual support

Six Steps of a Health Impact Assessment

1. Screening. Determine the value and feasibility of conducting a Health Impact Assessment on a specific project, policy, or plan.

2. Scoping. Identify and narrow down the health determinants to be considered. Develop research questions. Determine metrics.

3. Assessment. Develop a profile of existing conditions and evaluate the potential health impacts.

4. Recommendations. Identify feasible, evidence based strategies to promote positive health impacts and mitigate against negative ones.

5. Report. Summarize results and present recommendations to decision makers (this document).

6. Monitor. Track the impacts of the HIA on the written project, the environment, and the decision making process.

as the Mayor's Office's vision for the Lexington Market area takes shape. With so many potential outcomes for the market area, this report provides advice for creating a lasting, healthy community.

The recommendations are supported by primary research, Baltimore City

data, US Census data, and published studies. The following summarizes of our key recommendations:

1. Work with key stakeholders to establish buy-in and to capitalize on opportunities for increasing the multi-modal character of the neighborhood.

This HIA provides specific strategies for shifting neighborhood transportation goals from increased automobile capacity to balanced pedestrian, transit rider, bicyclist, and driver needs. Doing so will improve the walkability of the neighborhood and improve health outcomes. A comprehensive strategy linking origins and destinations via multi-modal transportation options, and ongoing modifications based on changes in amenity use and behaviors of employees, vendors, and customers are needed.

2. Prioritize the creation of “Safety Corridors”: one east-west and one north-south pedestrian corridor through the area that is safe and recognizable. Part of the HIA included a community survey in which community members’ concerns about crime and safety issues in and around the Lexington Market were captured. With the market geo-strategically positioned between the University of Maryland, the city’s business district, the historic Mt. Vernon residential neighborhood, and the popular Inner Harbor, stakeholders desired a market area that prioritizes connecting pedestrian networks. To encourage pedestrian activity, we recommend a safety-in-numbers approach that concentrates city infrastructure improvements (i.e.,

pedestrian lighting, fenestration, traffic calming, pedestrian buffers, intermodal features, and signage) along one east-west corridor and one north-south corridor through the neighborhood, with the intention of creating a specific catchment area for retailers and a designated safe corridor for pedestrians. The analysis presented in Appendix F provides some potential “safe” corridor candidates. This approach aims to decrease crime by putting more eyes on the street, while at the same time promoting walking and economic activity to the benefit of the whole community.

3. Connect to the surrounding urban environment, both physically and culturally, and capitalize on the diversity to create an authentic, desirable downtown experience.

Although the market area’s wide streets and excessive ground floor parking support drivers’ needs, foot traffic is inhibited, and the lack of bike lanes and bike racks discourage bicycling. Increasing the walkability of the neighborhood will increase physical activity, which thus promotes heart health and prevents obesity. Maintaining a balance of popular chain stores and local small businesses will help keep local entrepreneurs competitive, and it will help bring the fringe demands that make Baltimore unique to the city’s *zeitgeist*. By tapping into the city’s diversity, a community-serving, mixed-income downtown market can find its niche among the region’s shopping destinations.

4. Ensure that mechanisms are in place to help invest in diversity. As renters, homeowners, shoppers, students, employees, tourists, businesses, and persons participating in social services learn to coexist in an increasingly dense environment, workshop participants expressed hopes that individual differences are encouraged rather than becoming sources of conflict. A strategy to maintain and promote the area's rich cultural heritage is essential.

5. Reduce the growing gap between the neighborhood's jobs and the city's workforce skills. Employment is a leading indicator of access to health care. Stakeholders participating in the workshop expressed concern that emphasis on large franchise retailers

could threaten local jobs “all the way down the supply line”. Our analysis of neighborhood demographic and salary shifts suggests a potential mismatch between local education/skills development and market job demands. Our recommendations focus on reducing the job-skills' gap by encouraging local hiring, promoting targeted job skills training, and providing opportunities for low wage earners.

The rationale and the health links for these recommendations are presented in more detail. The complete list of recommendations, accompanied by a plan for monitoring the response to this HIA, is presented in Appendix A.



An example of a walkable streetscape, across from the University of Maryland. The University system is a major stakeholder in Baltimore City's efforts to revitalize the Lexington Market Area.



Introduction

The Case for Health Consideration. Sustainable development, according to the 1987 Brundtland Commission of the United Nations, requires the reconciliation of environmental, economic, and social equity demands. This “triple bottom line” theory of development is often praised but rarely enforced or practiced. The Venn diagram (Figure 1) illustrates how sustainability is achieved, and conversely, the consequences of compromise. Policies that do not address social needs may not be bearable or equitable, let alone sustainable.

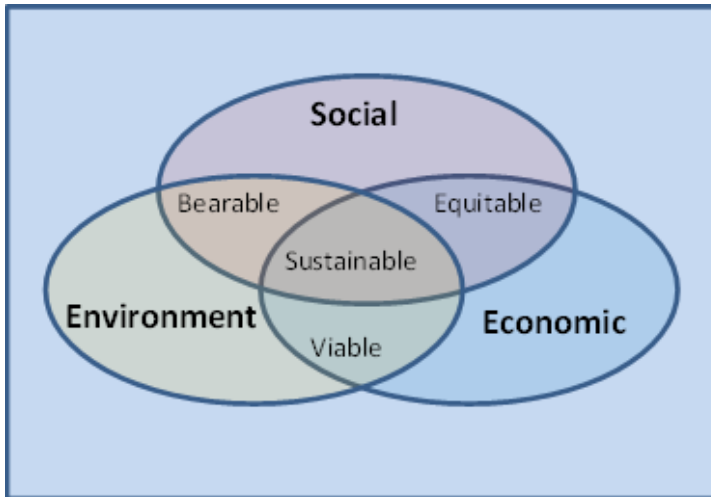


Figure 1. Pillars of Sustainable Development.

Sustainable development addresses economic, environmental, and social needs. A plan must be bearable, equitable, and viable to stand the test of time.

Municipal policies do not necessarily meet social priorities: they are required to reflect the different needs and associated cost burdens (equitable and bearable, respectively) of the affected communities. In the typical government decision-making process, even redevelopment projects initiated to address quality of life issues are shaped more by an analysis of immediate returns (lowest bid, for example) than by broader contextual and societal issues. “Business as usual” is more responsive to addressing viability issues that lend themselves to quantitative analysis than it is to accounting for quality of life issues like the social determinants of health, which, while not easily quantifiable, are equally important to a project’s sustainability.

The often-cited psychologist Abraham Maslow’s Hierarchy of Needs proposes that an individual must

satisfy basic physiological and health needs before he/she can excel in the community (Maslow, 1954).

Today’s society is not organized with these basic needs in mind. In general, access to health care is contingent on one’s job, jobs are contingent on one’s schooling, and the quality of one’s education is tied to the quality of their neighborhood. As a result, one’s life expectancy can be predicted based on where they live. In Baltimore especially, neighborhoods with large concentrations of

poverty may not have the resources to promote or enable an active healthy lifestyle. Thus, to promote good health, and to be a sustainable community, policies that impact environmental issues like education, housing, transportation, and jobs must consider their indirect impacts on public health.

Health In All Policies. The Health In All Policies initiative, or HIAP, grew from the recognition that *most health issues are the result of policies made by other disciplines*. The Center for Disease Control and Prevention refers to these issues as *social determinants of health*, and hypothesizes that they are accountable for 75% of the public’s health (Figure 2). These factors include but are not limited to the quality of and access to good housing, transportation, jobs, community and civic relations, and

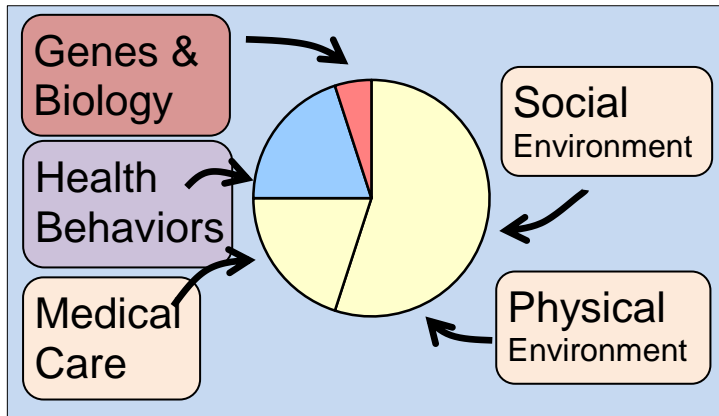


Figure 2. The CDC's "Determinants of Health" in yellow, account for 75% of public health issues.

social services like medical care and education. Often undetectable at the local level, the impact and cost that the built environment has on health is gaining increasing attention by federal and state governments, who are leading efforts to ensure the success of HIAP.

Healthy Baltimore 2015. Baltimore's comprehensive health policy agenda, Healthy Baltimore 2015 (HB 2015) was created in early 2011. This agenda highlights ten priority areas that account for the top preventable

causes of premature morbidity and mortality (see Figure 3). The plan includes data that reflect the groups with the largest inequities by race, gender, education, or income to further highlight opportunities for addressing health inequities. The agenda emphasizes policy, community engagement, and health care access strategies that incorporate the social determinants of health. A multi sector

Health in All Policies approach to building health-promoting neighborhoods has been a hallmark of *Healthy Baltimore 2015*. Health impact assessments are one of the key strategies utilized by the Health Department to advance this agenda.

Health Impact Assessment. HIAs are defined by the World Health Organization as "a combination of procedures, methods and tools by which a policy, program or project

Healthy Baltimore 2015 Priority Areas

- | | |
|--|--|
| 1 Promote quality health care access for all | 6 Recognize / treat mental health care needs |
| 2 Be tobacco free | 7 Reduce drug use and alcohol abuse |
| 3 Redesign communities to prevent obesity | 8 Encourage early detection of cancer |
| 4 Promote heart health | 9 Promote healthy children and adolescents |
| 5 Stop the spread of HIV and other STDs | 10 Create health promoting neighborhoods |

Figure 3. Healthy Baltimore 2015 priority areas highlight the health outcomes "downstream" to take into consideration when creating plans "upstream".

may be judged as to its potential effects on the health of a population and the distribution of those effects within the population." HIAs serve the secondary purpose of building capacity in other departments to consider health in their decision-making.

Lexington Market Area HIA. This report communicates the findings and recommendations of BCHD's Health Impact Assessment of the Lexington Market Revitalization Initiative, led by the Baltimore City Mayor's Office of Economic and Neighborhood Development.

Lexington Market Area CONTEXT

Study Area

The Lexington Market area is defined by distinct physical and social

features. For the purposes of this study, the following boundary definitions were used.

The Lexington Market Area: Physical boundaries. The physical context for the Lexington Market area includes the Lexington Market as well as the surrounding 1 to 2 block radius, as defined by the Lexington Market Area Committee. For the purpose of this study, it is referred to as the *Lexington Market Study Area* (see Figure 4, map c, in tan color). This includes the area bounded by W Saratoga St to the north, N Howard St to the east, W Baltimore St to the south, and Arch St to the west. In this HIA, this geographic area was used when considering features of the built environment; especially street and sidewalk conditions, parking availability, and land use. These boundaries served as the basis for the community survey of the Lexington

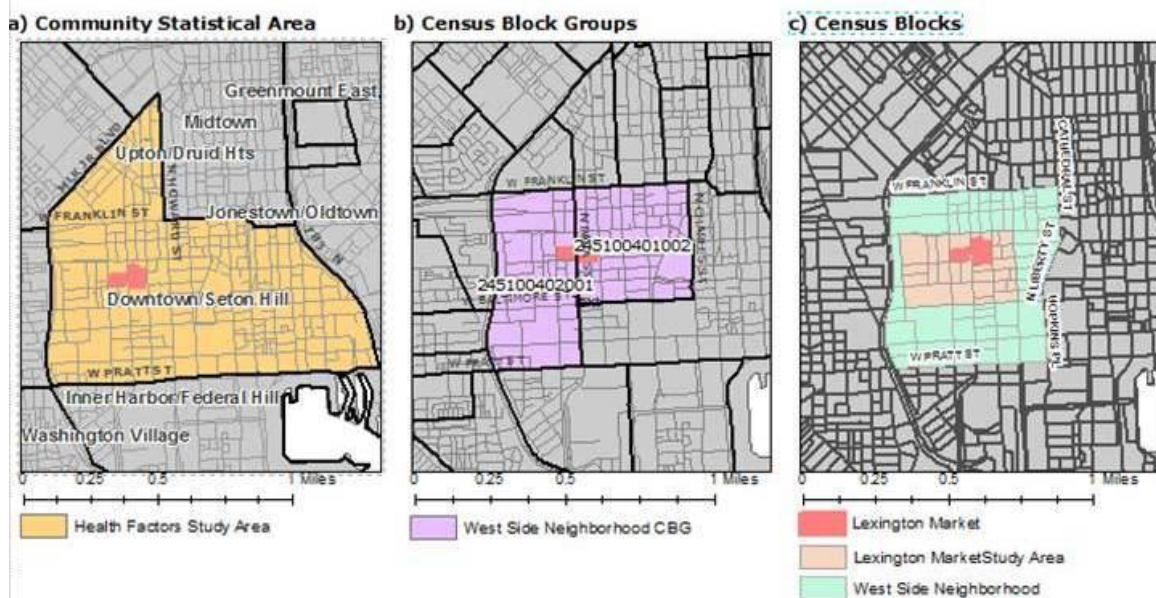


Figure 4. Data Capture Boundaries. Illustrated here are different data capture boundaries used in this HIA.

Market Area, as well as the assessment for the Pedestrian Environmental Quality Index (PEQI).

Consideration of the Social Context: The Westside Neighborhood. The social context for the Lexington Market area needs to take into account the broader West Side neighborhood. This context is used in this assessment to describe the socio-demographic conditions of the community. The following boundaries (see Figure 4, map c, in blue color), were derived in collaboration with the Planning Department, chosen because they reflect broad streets with fast moving traffic that inhibits pedestrian activity.

Referred to as the West Side Neighborhood in this document, the specific boundaries for this area are as follows: Cathedral St / N Liberty St / Hopkins Pl to the East, Pratt Street to the South of Pratt St, Martin Luther King, Jr. Blvd to the West, and Franklin St to the North. The total population of this area has changed from 1,914 in 2000 to 2,671 in 2010. The racial demographic breakdown of this area has changed in that time period; 44% of the population was African American in 2000, compared with 25% in 2010. The majority of residents are in the 25-44 year age group (data from the Baltimore City Department of Planning).

Regarding boundary specifications, we recognize different people, organizations and agencies have slightly different boundaries to define neighborhoods in Baltimore City. In this report, we use systematic

methods to define boundaries that balance commonly used definitions with the boundaries that contain the best available demarcations for the data.

Health Statistics Boundaries: The Westside Area Census Block Groups and the Downtown/Seton Hill Community Statistical Area. When considering demographic and descriptive statistics (such as socio-demographic statistics, etc.) it is helpful to consider the specific boundaries of the area or neighborhood under consideration. However, when considering other health data such as job/income statistics or life expectancy, small population sizes yield numbers that lack reliability and could threaten confidentiality. In this report, the larger boundaries of the West Side Area Census Block Groups (see Figure 4, map b), and the Downtown/Seton Hill Community Statistical Area (Figure 4, map a) were used to report important health related data that are not available or robust at a finer geographic level.

Stakeholders did contend that using larger geographic boundaries for certain data could potentially mask significant social disparities. As noted above, this HIA uses data applied at the smallest geographic level possible at each step; however, it is recognized that a limitation of this assessment is that it is not possible to have data at the specific Lexington Market Area boundary for every indicator.

Historical Context

The Lexington Market Area was once the heart of the region's culinary, fabric, and cultural heritage. The area now goes unnamed on most neighborhood maps of the city. While Baltimore has seen the rise of other commercial districts like Fells Point and Harbor East, none has replaced the Lexington Market Area as the city's cultural capital.

In many ways, the surrounding neighborhood opens and closes six days a week with the Lexington Market. Lexington Market consists of an arcade-style addition built in the 1980's and two buildings constructed after 1949 covering roughly 150,000 square feet. The Market area is home to 140-stalls that follow in a 230-year old neighborhood tradition. In the 1850's, essayist Oliver Wendell Holmes called it the "Gastronomic Center of the Universe" for the quality and diversity of its gourmet foods (Lexington Market, Inc, 1982). When satellite markets opened up around the city in the 1920's, Lexington Market struggled to retain the demand for quality goods that once made it a notable regional amenity. The 1960's brought riots downtown that drove the major department stores and middle class

out to the suburbs, and it has been a very slow road to recovery ever since.

Preservationists have blocked the demolition of this historic neighborhood's architectural treasures, but today many remain underutilized or vacant. While the Market still attracts nearly two million visitors a year, the perception that it is unsafe overshadows the history, character and potential of the Market area.

The Mayor's Office and the University of Maryland, the two primary property owners in the area, are both moving forward with plans to revitalize the neighborhood. With scarce matching funds, there is potential for the two to leverage their collective resources to attract investors. The city is preparing a vision to guide growth and to build on successes in the Market area. The vision will include input from stakeholders, and is expected to guide the disposition of properties through an Request for Proposals (RFP) process. The strategies introduced below are intended to inform the Market area vision.

Baltimore City Mayor's Office Redevelopment Strategies for the Lexington Market Area

- **Mixed-Income.** The Mayor's Office has listed creating a Mixed-Income community as one of its goals for redevelopment. One objective of a Mixed-Income community is to break up concentrations of poverty in order to stimulate market opportunities and investment in historically low income areas. This could result in additional amenities to these neighborhoods, including social services like child and elderly care, healthy food choices, commercially sponsored neighborhood activities, jobs, and civically engaged residents to help deter crime and blight. Additional benefits of mixed-income communities include introduction of housing developments for the local workforce and reducing distances between housing, workplaces, and retail businesses.
- **Mixed-Use Development.** A major component of the redevelopment process includes urban infill to address the large number of vacant and underutilized buildings. This is an intentional effort to create a mix of land uses to revitalize the neighborhood's commercial and residential markets.
- **Complete Streets.** The Mayor's vision promises to reduce automobile dependency in the neighborhood. Complete Streets are streets that make alternative modes of transportation, including walking, bicycling, and transit, both safe and practical. Complete Streets improvements are usually directed toward the road, sidewalk, and intersections. They include infrastructure to support mode transitions (e.g., car to train, bicyclist to pedestrian), and circulation *within* and connectivity *across* places.

HIA Methodology

BCHD created an HIA Advisory Team to inform process decisions and to guide the City's limited resources toward an increased capacity for future HIAs. Experts from the Johns Hopkins Bloomberg School of Public Health provided strategic planning and expertise. Equity Matters, the local Place Matters affiliate, provided consultation and outreach support to strengthen community engagement strategies. Human Impact Partners, based in northern California, conducted on-site training in HIAs for city staff representing eleven departments and agencies. Several of the trained staff returned to provide technical expertise during other phases of the HIA. With guidance and manpower from these partners, the BCHD organized and led the effort, using the steps highlighted below.

Screening. Screening involves determining whether a project, plan, or policy is appropriate for an HIA; and identifying the resources it will take to complete one. Conducting an HIA in the early stage of the plan's development has advantages and disadvantages. During pre-planning, there is a real opportunity to impact the decision-making and shape a process so closely tied to health outcomes and health equity. Also, the political will for health consideration is there, as the Mayor has announced to stakeholders that public health will be directly considered in the development process. The downside of conducting an assessment at this stage

is that there is insufficient project and plan specificity to conduct a thorough quantitative investigation of the health impacts. Qualitative assessments may be seen as less reliable to developers seeking to reduce risk and protect their bottom line, especially in these challenging economic times.

With these factors considered, the decision was made to move forward with the HIA. The assessment would consist of a literature review to deconstruct the broad redevelopment strategies into their component strengths and weaknesses, and reconstruct them as recommendations to better serve the health needs of the community's stakeholders, using information gained from a thorough analysis of existing conditions and from lessons learned in Baltimore and elsewhere.

Scoping. In this step of the HIA, the assessment topics are narrowed down to a manageable number, and the stage is set for the assessment. Thirty-five stakeholders representing people who live or work in the neighborhood; including University of Maryland students and staff, hospital administration, retailers, entrepreneurs, city school students, residents, community-based non-profits, and city staff participated in a two-day workshop held at the Lexington Market to develop the scope of the HIA (Figure 5).

The objective of Day 1 was to create an informed decision making body (See Figure 5). . HIA Advisory Team members from Johns Hopkins delivered a summary presentation on HIAs, the BCHD presented on *Healthy Baltimore 2015*, and the Mayor's Office Project Manager gave a walking tour of the area to impart to participants the Mayor's vision and redevelopment strategies.

On Day 2, participants engaged in small group activities to create the pathways linking each of the redevelopment strategies discussed on page 6 to the *Healthy Baltimore 2015* health outcomes presented in Figure 3. The Scoping Workshop methods and results are further discussed in Appendix C.

The primary purpose of the scoping workshop was to generate a manageable list of social determinants of health that are most likely to be impacted by the redevelopment strategies and of most concern to the participants. The pathways models developed by the four groups generated about 40 social determinants of health. Following group presentations and a vote by workshop participants, participants narrowed the health determinants to the four highlighted in this HIA. The social determinants of health chosen for the HIA were economic opportunities, multimodal access, personal safety, and social cohesion. The scoping process



Figure 5. Community-Driven Scoping Workshops.

Top: Day 1. Goal – Create informed participants. Pictured: - Tour of the Lexington Market Study Area by Mayor's Office PM. Bottom: Day 2. Goal – Identify and prioritize social determinants of health potentially impacted. Pictured: - Community stakeholder presenting her group's pathways model of potential redevelopment-health outcome links (see Appendix B).

produced a set of research questions to be explored and expanded upon in the assessment phase of the HIA. (see Appendix C – pathways models)

Assessment. The results are presented in the Results & Recommendations section. The goals of the assessment are as follows:

1. Determine whether chosen social determinants really impact health, and whether redevelopment strategies can impact them. Steps towards achieving this goal involved a detailed literature review looking at

published manuscripts, unpublished reports, and city documents.

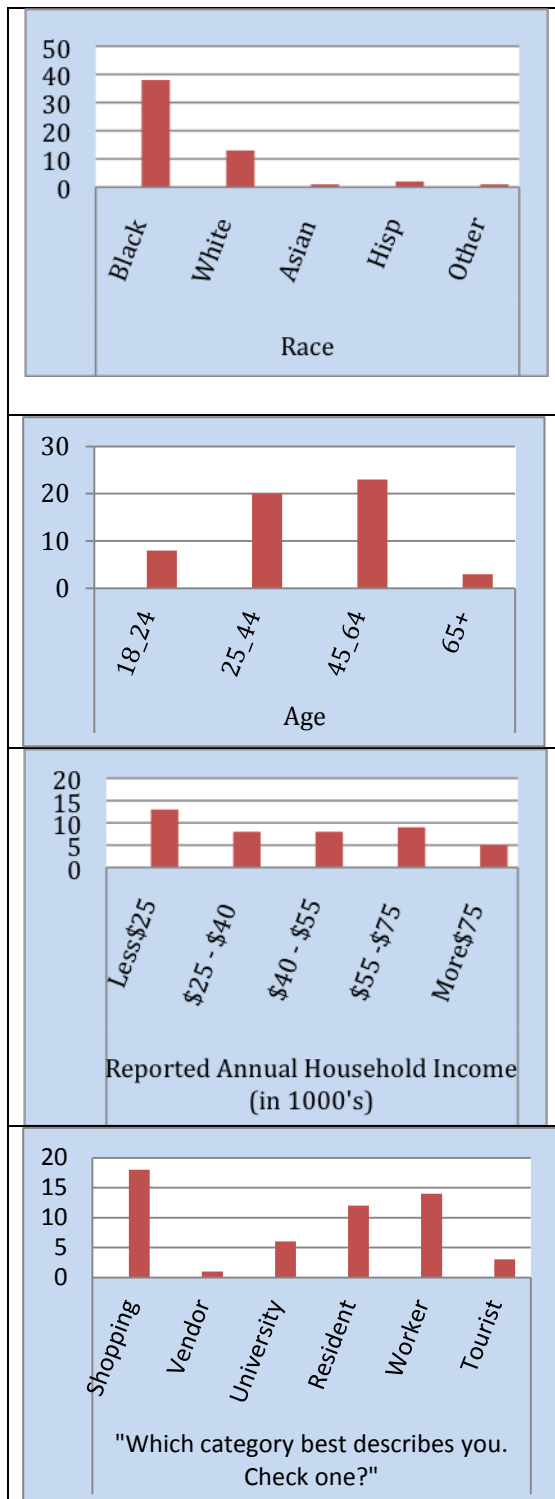


Figure 6. Community Snapshot, n=57.
Lexington Market Area Survey, Appendix D

2. Determine whether existing conditions for these determinants of health warrant attention. (Data collection and analysis)

3. Determine the direction and, if possible, the degree of impact that the redevelopment strategies will have on the health determinants. (Literature review, data analysis). The assessment phase began immediately following the scoping workshops. The Assessment included the following secondary data sources: U.S. Census (2000 and 2010 Decennial, American Community Household Data), and Baltimore City data (crime, housing, traffic, accidents, zoning, and general asset inventories).

Primary data was also collected using a pedestrian environment audit, the PEQI, to describe the area's walkability (see Figure 12 for results and Appendix E for the complete survey) and by administering a community survey conducted specifically for this HIA. The *Lexington Market Area Surveys* were administered using paper and pen by members of the Baltimore City Health Department's HIA Advisory Team between 9am – 5pm over a week in the summer of 2012 in different locations around the Lexington Market Study Area (see Figure 6 for demographic summary of survey respondents and Appendix D for the complete survey). Microsoft Excel and ArcGIS were used to analyze descriptive and spatial statistics.

Recommendations. In this step of the HIA, the assessment results are evaluated, and strategies are identified to promote positive health outcomes and mitigate negative ones.

Most of workshop 1 and 2 participants reconvened for a third workshop to begin the process of translating assessment findings into health recommendations. In this workshop, BCHD presented the results to participants, who then engaged in a brainstorming exercise to identify potential change mechanisms and the corresponding agents of change.

The process was repeated for city staff participating in the Health Department's Cross Agency Health Task Force, but with a focus on identifying related and existing projects, plans, or policies. The information gathered from these meetings helped draw on the experiences of technical and place experts, leading to the creation of recommendations with momentum.

Results & Recommendations

The results of the assessment are described in this chapter, along with recommendations to promote potential positive health consequences and mitigate against negative health consequences.

The chapter is divided into three main sections according to the social determinants of health identified in the scoping process: Economic Opportunities, Multimodal Access, Social Cohesion and Personal Security. Social Cohesion and Personal Security are presented together as one category to avoid repetition in presenting recommendations (Figure 7).

The sections begin by establishing the health determinants' health link. Next, related existing conditions in the study area are described. Each subsection is further divided by each of the three broad-based redevelopment strategies. Each of

Results and Recommendations Directory		Intro	Redevelopment Strategies		
Social Determinants of Health			Mixed Income	Mixed Use	Complete Streets
	Economic Opportunities	P. 15	P. 16	P. 18	P. 20
	Multimodal Access	P. 21	P. 22	P. 24	P. 27
	Personal Security	P. 29	P. 30		P. 31
	Social Cohesion				

Figure 7. Results & Recommendations Directory. The HIA uses the following matrix to explore how each of the redevelopment strategies can address the individual determinants of health. While their health outcomes may differ, Personal Security and Social Cohesion were merged in this report because of their recommendation similarities.

the strategies is examined more closely for its potential and historic contribution to the respective health determinant. With existing conditions in mind, recommendations are devised to help shape each strategy so that it more fully endorses the respective health determinant.

SOCIAL

DETERMINANT OF

HEALTH:

Economic Opportunities

A neighborhood's economic health directly impacts its public health. Employment opportunities increase access to health care services and promote social inclusion. At the scoping workshops, stakeholders identified equal access to economic opportunities as the determinant of health of most concern in this redevelopment project.

Health Link. Adults without health insurance are more likely to forego necessary medical treatment and as a result, are more likely to die prematurely (Institute of Medicine, 2004). The same study found that adults with cancer, diabetes, HIV, and heart and kidney disease who were previously lacking health insurance were 25% more likely to die as a direct result. Employment is the number one indicator of access to health insurance (Institute of Medicine, 2004). In terms of smart

growth benefits, a local balance of jobs and workforce can reduce car dependency, which improves opportunities for physical activity and increases air quality by addressing carbon reduction requirements (Cervero & Duncan, 2006). As workplace density increases, emissions per employee decrease exponentially because of opportunities to use car share, to take public transit, and to live near one's work (Frank, et al, 2000).

Existing Conditions. The measure of a competitive inner city includes the ability to fill jobs using the city's workforce (Porter, 1980). Applied to Baltimore City, the West Side Neighborhood should aim to match its job demand to Baltimore's workforce supply, or seek to improve its local workforce. Using standard proxies of the West Side Area Census Block Group salary breakdown to represent job demand and citywide educational attainment levels as a proxy for worker supply, we show that the percent of high-skill jobs in the West Side Area Census Block Group is disproportionate to the percent of high-skill workers in Baltimore City³ (Figure 8). Further, educational attainment rates amongst White West Side Area Census Block Group workers far exceeds those of

³ The Mayor's Office of Employment Development uses educational attainment and education requirements for their supply and demand model (Baltimore Workforce, 2010). We used salary as a proxy for education requirements.

Comparison of Salaries, Demographics and Educational Attainment in the Westside Area Census Block Group and Baltimore City

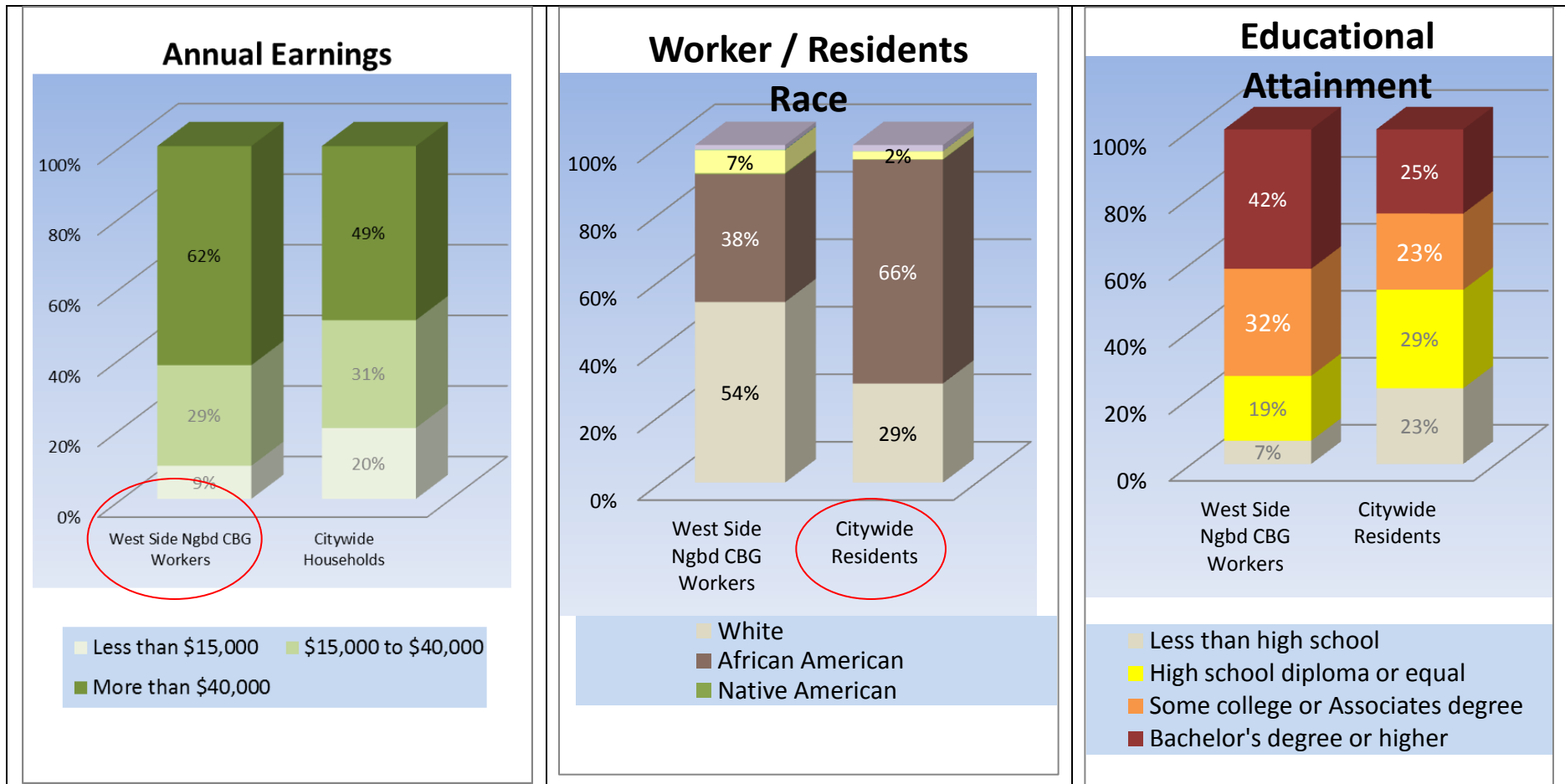


Figure 8. A look at the West Side Area Census Block Group earnings, citywide education levels, and racial breakdowns suggests a need to address a skill level gap between the city's workforce and downtown job opportunities. (Associates Degree = \$40,000/yr) Source: 2010 U.S. Census, Decennial, SF3; U.S. Census Longitudinal Employer—Household Dynamics (LEHD); 2010 Worker Profiles, Census Block Groups 0402001, 0401002. See Appendix F3 for study area maps.

African Americans⁴ (American Community Survey, 2010). While this data stems from an area broader than the specific Lexington Market Area, this information is included to show how investments into the Market area specifically could have broader benefits.

To match Baltimore City's workforce with local jobs and thus reverse this gap, it is necessary to either create an able-bodied workforce to meet industry demands, or increase the number of meaningful job opportunities for low-skilled workers.

STRATEGY: Mixed-Income

As a strategy for improving economic opportunities, workshop participants expressed mixed feelings about turning the Lexington Market area into a mixed-income community. Their concern was not necessarily with whether the city could attract higher income residents, but with whether the city would go a step further to ensure that the new housing market does not displace the poor and working class over time. Specific issues included access for all residents to the new jobs, and the threat that discount stores and national chains reliance on non-local

venders will underprice local merchants.

Findings. Two-thirds of Baltimore's jobs are filled by workers living outside the city's limits, and half of the city's employed residents work outside the city (U.S. Census Bureau, 2012). Not only is this commute contrary to a healthy lifestyle, but this high rate of "bedrooming" in the city suggests that employers are not capitalizing on the local workforce. Respondents to our community survey echoed concern over this job/resident mismatch, listing employment training first among needed services. The Lexington

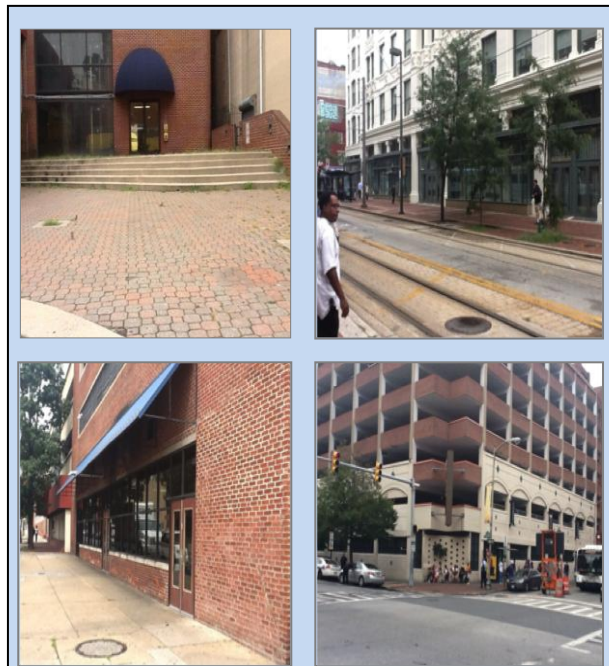


Figure 9. Underutilized Space. Clockwise from top left: The PABC's rear parking garage entrance, next door to the Lexington Market, is empty; vacant storefronts surround the light rail stop; ground floor parking dominates a busy intersection; and the N Greene St's Lexington Market façade contributes little to the busy corridor.

⁴ For the population over 25 years old, % black residents & % with Bachelor's degree, $r = -.68$; % white residents & % with Bachelor's degree = $.63$. R is the correlation coefficient, and $r = "1"$ is a perfect positive correlation, $r = "0"$ is no correlation, and $r = "-1"$ is a perfect negative correlation.

Market Area has a pervasive entrepreneurial spirit, with its multiple independently owned shops, and its reemerging cultural scene. National studies on the economic impact of local and chain retailers report that the direct, indirect, and induced spending that locally owned retailers generate equals nearly 4.5 times more per dollar earned for the local economy than their rival chain stores (Civic Economics, 2002). This translates to more local jobs and a more competitive inner city.

Recommendations. A sustainable mixed-income community should address the employment needs of its most at-risk residents in order to prevent displacement. BCHD recommends that developers seek commercial tenants that invest in employee training and provide wages and benefits that amount to self-sufficiency wages⁵. To further increase local employment opportunities, the City could consider policies that encourage local hiring. The City should consider working with agencies such as the Baltimore Development Corporation to review policies that emphasize use of local workers and specifically include the Lexington Market area. The City might also design incentives to attract

those companies that practice sustainable supply chain management strategies. The City of Cleveland's triple bottom line sustainability procurement ordinance, presented in Appendix B, serves as one example. The Wegman's Supermarket chain, which has a store in Baltimore County, provides a local model. Investing in companies that buy and hire locally not only re-circulates money through the community, but each new local job reduces the need for public assistance and shifts spending from reactionary to prevention and improved quality of life.

⁵ Self-sufficiency wages are wages that allow workers to support themselves and their families without government support given the local cost of living. In the new economy, service industry jobs, which often lack such wages or health insurance, have replaced industry jobs, which were required to provide such wages. Source: The Self Sufficiency Standard for Maryland 2012 report.



Figure 10. Market Demand. This is NOT the Lexington Market, but Wegmans, in Hunt Valley. It's ironic that from Lexington Market you can ride the light rail directly to this 140,000 sq ft grocery store in a suburban strip mall outside the city. It uses awnings, balconies, and faux-window displays to recreate an urban market inside the store. On any Saturday night, it is full of diners.

STRATEGY: Mixed-Use

In our HIA assessment evaluation workshop, participants pointed out that a Lexington Market area would have to compete with Baltimore and Howard Counties' suburban malls to support its retailers. Malls and downtown commercial districts behave in similar ways: they use narrow storefronts to move shoppers between anchor department stores. But the similarities end there. In the private realm of malls, overall design is tightly managed to ensure an experience that is safe and

convenient. Where suburban malls benefit from cheap and abundant space, downtown merchants have better access to cultural and human resources and as a result can be more responsive to the changing consumer tastes of its urban neighbors. With local market success comes customer "spillover" generated from adjacent city amenities and ultimately, success as a regional amenity.

Findings. A multi-city analysis of the correlation between housing values and walk score (walkscore.com) found that a 1% increase in a place's

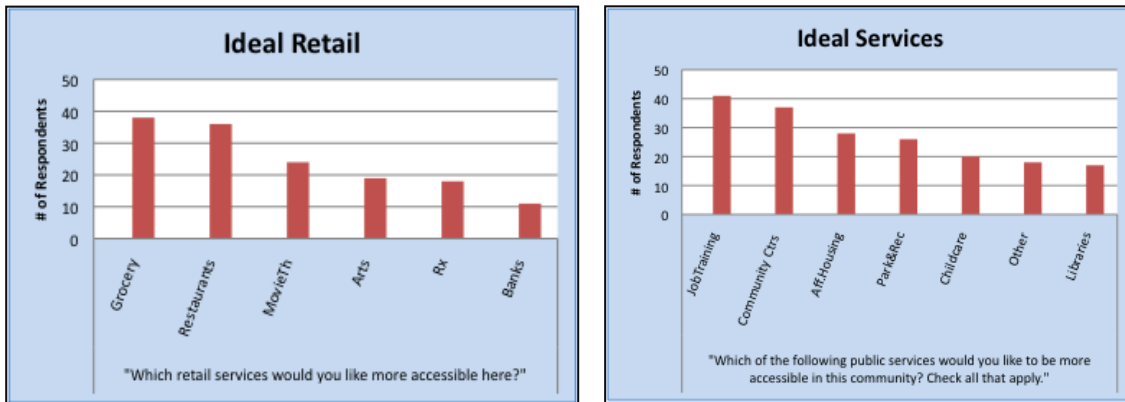


Figure 11. Lexington Market Area Community Survey. A desire for better access to groceries and restaurants is important information for entrepreneurs who believe the area is oversaturated with food services.

walk score⁶ is associated with property value increases ranging from \$700 to \$3000 (Cortright, 2009). A "walk score" as defined by walkscore.com is a measure of mix of uses of a neighborhood. By most definitions, the Lexington Market area neighborhood is already mixed-use (score of 94% on walkscore.com) and yet a circular pattern exists where the lack of pedestrian traffic deters businesses, and the closed storefronts at night turn the pedestrians away. Further, the local shopper must cross an overabundance of regionally serving parking lots with little to attract the pedestrian (Figure 9). If a downtown Baltimore resident or worker has to use a car, they will likely do business outside of the city.

A recent independent study by economic specialists Social Compact to identify lost market potential in inner city neighborhoods found that

⁶ A 1% Walk score increase can be achieved by adding an additional restaurant. The first restaurant is worth a 3% increase.

the neighborhood adjacent and west of the Lexington Market⁷ area loses \$23.8M annually outside of its borders on retail, dining, and entertainment. This represents a potentially significant, but yet untapped, revenue source for West Side retailers. When asked what services were lacking in the community and what retail they would like to see, two-thirds of community survey respondents reported that the area lacked retail, and desired better access to grocery, restaurants, and movie theaters (Figure 11).

Recommendations. The Lexington Market area could compete regionally by shifting priority towards serving as a local amenity first. The over-abundance of parking lots in the Lexington Market area exemplifies

⁷ Identified as the "West Baltimore Street" market area in the Social Compact report referenced, this area stretches west from MLK JR BLVD to N Fulton St; and roughly between Pennsylvania Ave and Lafayette St to the north, and Pratt St and Wilkins St to the south.

the neighborhood's perceived dependence on the regional market, at the expense of pedestrians and residents who are discouraged from entering from nearby neighborhoods and events.

- Implement the recently proposed TransForm Baltimore rezoning ordinance that exempts the downtown district from parking requirements, makes commercial district parking lots nonconforming, and requires commercial district parking structures to have active ground floor uses⁸.
- Employ adaptive reuse strategies for the first floors of existing garages to actively drive the change towards a community vs. a regional district. Uses could benefit the emerging community, such as child and elderly care, fitness clubs, health screening services, or specialized training centers.
- Require new homes and apartments to have entrances that face the street to utilize incidental social vigilance, or "eyes on the street", as a crime deterrent.
- Continue the Live Near Your Work program to support local home ownership. By intentionally designing for the local community's needs, the redevelopment plan makes the

community's design an asset to the region and to potential investors, whose jobs will improve access to health insurance.

STRATEGY: **Complete Streets**

Reducing the current capacity for automobiles to make way for safer and more practical walking and biking is a perceived risk for businesses. As long as customers are driving to the neighborhood, businesses will link parking and automobile mobility to their bottom line. But when the Lexington Market area becomes a widely desired place, it will not be easily accessible by car. The task for a Complete Streets strategy is to balance driving with walking and biking in the study area, so that both regional and local demands are met. Improved pedestrian and bicycle circulation and connectivity with other local pedestrian destinations (the Convention Center, Mount Vernon, the Inner Harbor, and Camden Yards, all less than a ½ mile away; see map in Appendix F-2), should reduce car dependency.

Findings. Walkscore.com looks favorably on the study area, labeling it a walker's paradise (Walk Score Results, 2012). But their methodology only recognizes an area's mix of uses, not the quality of the uses or the pedestrian environment (Walk Score, 2011). To illustrate, a theme repeated by a few of the workshops' technical experts was that they had never realized how

⁸ (TransForm Baltimore – City Zoning Code – Draft 2.0, §16-601, and §10-201, respectively).

close the Lexington Market was to the rest of the city. Perception plays a key role in factoring walkability.

We adapted the Pedestrian Environmental Quality Index (PEQI) (San Francisco, 2008) to better identify the barriers to walking in the neighborhood. Some of the key issues we found included poorly marked crosswalks, inadequate lighting, and sidewalk impediments including demolition debris and missing curb ramps at driveway cuts. There were no marked bike lanes in the study area at the time of the study. Street trees are valuable for their health and aesthetic qualities, but sidewalks around the Lexington Market are difficult to navigate because of heavy loitering, street trees planted in the middle of the sidewalk, and gaping holes around these trees. Legal and illegal vendors also congested the sidewalks and block storefront displays, as reported by area merchants.

Recommendations. Please refer to Appendix F: Pedestrian & Bicycle Priority Corridors for a nodal geographic analysis of the major employment centers and places of residence surrounding the Study Area. The analysis proposes suggested pedestrian and bicycle routes for prioritizing streetscape and façade improvements. By focusing on designating pedestrian paths and bike lanes along these corridors, Lexington Market area businesses will benefit from an expanded local market geography reach (larger “ped sheds” and “bike sheds”) and from a broader range of walkers and riders

who depend on a safer pedestrian and bicycle infrastructure (e.g., elderly, non-athletic, non-risk takers). Also, monitor and report on changes in biking and pedestrian behaviors to communicate to the businesses how mode shift trends support their bottom line.

SOCIAL

DETERMINANT OF

HEALTH:

Multimodal Access

Multimodal access refers to the presence and feasibility of alternative modes of travel. In addition to supporting cars, bikes, pedestrians, and transit; a multimodal transportation system considers the full socio-demographic range of modes (e.g., skateboarders, wheelchairs, boats, and water taxis). A good multimodal infrastructure supports the transfer from one mode to another, such as bike racks at train stops or on buses, and transit stops within walking distance of shopping centers. A practical and safe multimodal infrastructure can be accomplished by planning for interconnectivity and by putting limits on the mobility of one or more competing modes.

Health Link. In transit-oriented neighborhoods, shifting transportation goals from auto-oriented to a multimodal orientation can save lives. The number of lanes

(Milton & Mannering, 1998), lane widths (Heimbach, et al, 1983) and the presence of trees and medians (Naderj, 2003) have all been found to influence traffic accidents with

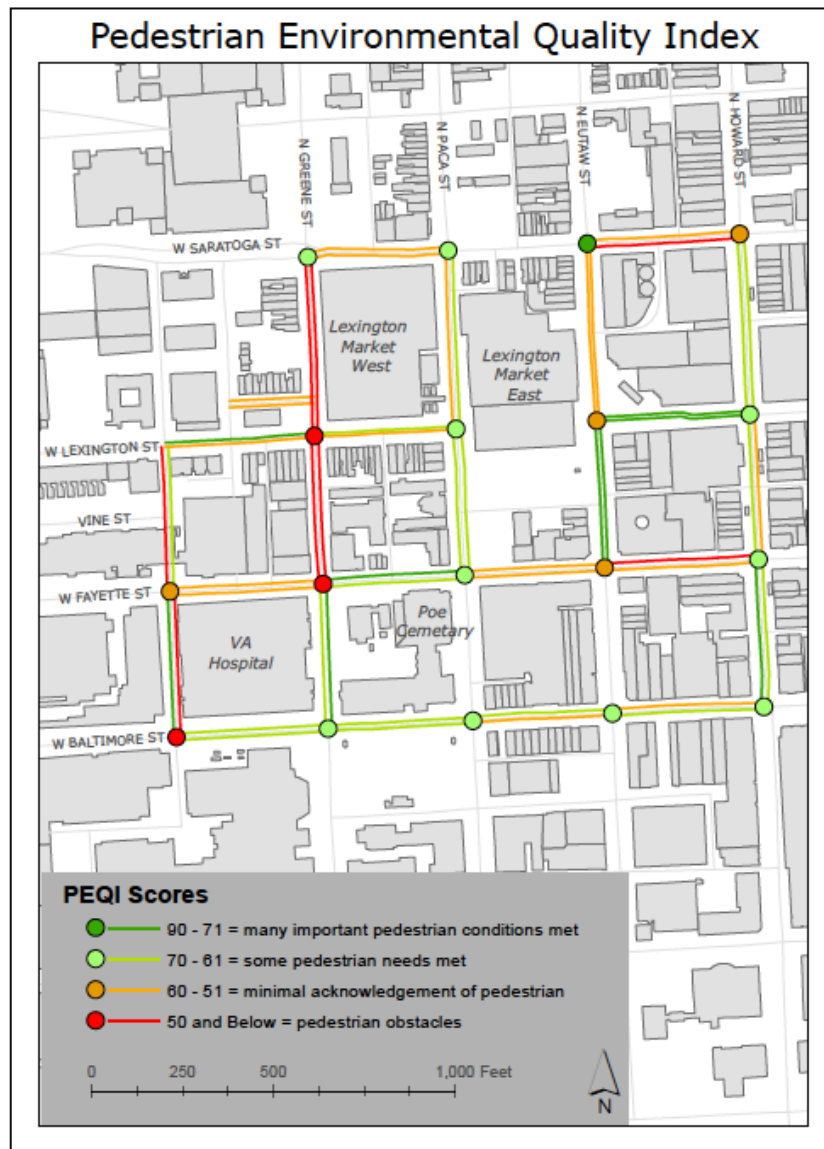


Figure 12. Pedestrian Environmental Quality Index. (PEQI). This peer reviewed tool generates a weighted index of walkability based on the following categories: intersection safety, perceived safety, traffic, Mixed-Use, and street design.

pedestrians. The CDC reports fewer than 15% of students walking to school in 1999 compared to 50% in 1950, with traffic safety reportedly the biggest obstacle 40% of the time (Schlossberg, 2006). Connecting pedestrian and bike pathways with the existing transit network can decrease the perceived distance and, consequently, the choice to walk or bike rather than drive (Ewing, et al, 2004). Establishing primary bike and pedestrian routes can increase the concentrations of pedestrians on given roads, which is linked to fewer crashes between motorists and bikes or pedestrians (Leden, et al, 2000). Cities with more bike commuters had on average 70 % more bikeways per road mile (Federal Highway Administration, 1994).

Existing Conditions. The study area has among the highest transit ridership in the city (Maryland Transit Administration, 2010). But the Pedestrian Environmental Quality Index (Figure 12; Appendix E) uncovered several key blocks and intersections where pedestrian infrastructure is inferior or completely lacking. There are no bike lanes in the study area despite the strong presence of University of Maryland students and staff. Howard and Saratoga Streets have insufficient pedestrian lighting. West Fayette and Green Streets both have permanent obstacles effectively blocking wheelchairs and strollers. Not surprisingly, this neighborhood stands among the leaders citywide in terms of reported bike and pedestrian accidents (Baltimore Department of Transportation, 2012).

In addition to transit, other existing alternative transportation infrastructure in the study area includes designated spaces in parking garages for bicycles, as well as spaces and utilities for electric cars. There are also excellent examples of pedestrian wayfinding signs that communicate the distance and direction of nearby points of interest to encourage walking.

An analysis of census data and Department of Transportation improvements found that between 2000 and 2010, Baltimore's bike commuting increased 300% in communities where bike lanes were installed, compared to a 25% increase in other communities (American Community Survey, 2010; Mayor's Office of Information Technology, 2012).

STRATEGY:

Mixed - Income

Stakeholders expressed concern that improving the walkability and bikeability of the area is a gentrification strategy; walkability, because these investments are typically driven by anticipated increases in tax revenues (rather than health benefits), and biking because of the stereotype that only young white males bike.

Findings. Across Baltimore, African American commuters are more likely to commute by transit than White commuters are, and the more African Americans in a community, the

longer the commute times⁹ (American Community Survey, 2010).

According to ridership counts by the MTA, the market area is Baltimore's central transit hub, with the highest number of boardings and departures (Maryland Transit Administration, 2010). Largely serving the African American community, this transfer hub has no central station but consists of several bus routes, a light rail stop, and a subway station distributed throughout the neighborhood and rarely on the same block.

Looking at bicycling nationally, 16 to 24-year olds are just as likely to ride as those over 45, and households making under \$40,000 annually are only slightly more likely to ride than those making over \$80,000 (Outdoor Industry Foundation, 2010). African Americans, Hispanics, and Asian Americans make up 21% of cyclists, and are trending faster than white cyclists (Pucher, J., et al., 2011). According to a national survey, the primary reason for not bicycling is lack of access to a bike (Royal, et al, 2008). Strategies to increase the demographics of riders and to encourage employees to use alternative modes of transportation have proven to be effective (Pucher, 2009).

Recommendations. Apartment building developments should be encouraged to dedicate secure,

⁹ Over 30 minutes, $r = .61$ for African Americans. (See footnote 5 for "r" value definition).

covered parking for bikes (good for LEED credits). Favor design features that promote physical activity like an open staircase design, and face primary building entrances to the street's sidewalks instead of the parking garage to make walking a viable transportation option. The City could support programs that help introduce bicycling to economically disadvantaged neighborhoods by providing space, advertising, and even funding opportunities to ensure staffing. Strategies could also focus on improving the conditions and connectivity of bus stops and train stations, which are the primary mode of commuting for workers from low socio-economic communities. Following these recommendations will help support an increase in the diversity of people choosing healthier transportation options in the market area.

STRATEGY: **Mixed-Use**

Mixed-use and denser urban spaces make alternative transportation modes more practical. Zoning and development design standards can be effective tools for promoting alternative transportation modes.

Findings. Forty percent of the Market area's surface space is dedicated to roads and parking for automobiles (Figure 13). Several of the blocks adjacent to the Lexington Market close their shops at night. Without the presence of storeowners and patrons, the lack of "eyes on the street" creates a barrier to safe (or

perceived safe) pedestrian travel across the study area to the University, the office district, historic Mt. Vernon, or the Inner Harbor.

A small proportion of University of Maryland buildings have bike racks, and some of those are underutilized, most likely because they are poorly designed to protect modern bikes (e.g., quick release wheels require the frame is locked, not just the wheel). The Lexington Market's lone bike rack is underutilized and is situated about 50 meters from any building entrance, making it inconvenient and potentially dangerous for bicyclists. Inconvenient, because the door-to-door benefit of bicycle riding is lost; and dangerous because the bike is more vulnerable to theft so far removed from pedestrian traffic. Without well-placed bike racks, it is difficult to find a safe and secure spot to lock up. The literature supports that secure bike racks at workplaces can have a significant impact on bike commuting (Pucher, 2009). Studies also estimate significant impacts of workplace shower facilities on bike commuting (Pucher, 2009).

Recommendations. Both new and existing buildings can incorporate design features to better accommodate and attract users of alternative transportation modes. Commercial or institutional buildings could provide secure bicycle storage and shower/changing facilities for both employee and customer needs.

If redeveloping on the block scale, narrow 18' – 20' windowed storefronts promote window-

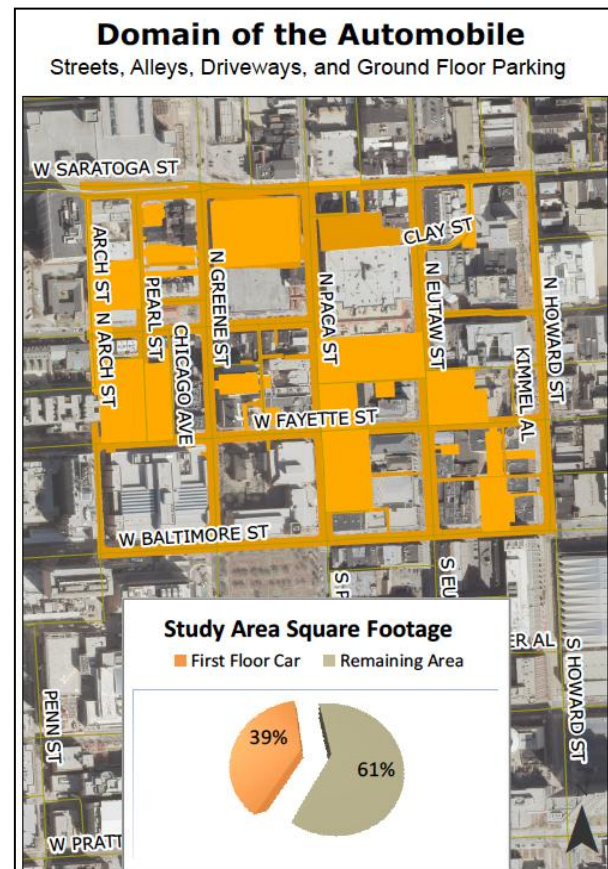


Figure 13. The Lexington Market Area is heavily auto oriented, as denoted by regions in yellow.

shopping and create an interesting interactive pedestrian environment (Schmitt, 2012). By unbundling parking requirements from development costs, the City can relieve some of the burden of car costs from those who do not own a car, and ensure costs for parking in the city are assumed by drivers¹⁰. Creating a mixed-use neighborhood that supports multiple transportation modes creates incentives for and

¹⁰ This recommendation aligns with the proposed TransForm Baltimore – City Zoning Code – Draft 2.0, §16-601

reduces barriers to being physically active.

STRATEGY:
Complete Streets

The goal of Complete Streets is to encourage multimodal uses. It provides the most direct method for realizing that redevelopment strategies provide practical and safe alternatives to driving cars.

Findings. Attitudes about biking and transit are changing in cities around the country. Between 2000 and 2010 in Baltimore City, the number of single occupant vehicle commuters in Baltimore increased by 6%, during which time commuting by bicycle increased nearly 200% with a 300% spike in areas that had bike improvements during this time (American Community Survey, 2010). Bike commuting is a key indicator for recreational bike use, and the data suggests that bike infrastructure improvements can be effective in changing people's behaviors.

The San Francisco Department of Public Health developed the Pedestrian Environmental Quality Index (PEQI) to prioritize improvements in pedestrian infrastructure. The PEQI is an observational survey that draws on published research and work from numerous cities to assess how the physical environment impacts people's travel behaviors. It looks at five categories: intersection safety, traffic, street design, land use, and perceived safety. It was adapted to

identify needs for pedestrian improvements in the study area.

The results, summarized in Figure 14, highlight intersections and street segments that could benefit from improvements. Detailed results of this PEQI analysis are available from the Baltimore City Health Department upon request.

Opportunities to Increase Walkability and PEQI



Figure 14. Local examples of streetscape obstacles captured in the PEQI assessment of the Lexington Market area. Clockwise from top left: mid-sidewalk trees and non-covered pits disrupt pedestrian flow; sewer grate pattern captures bike wheels; missing sidewalk ramp poses a challenge to wheelchairs and strollers; no crosswalk striping.

Recommendations. There are a number of ways that Complete Streets strategies can be incorporated to address the community's alternative transportation needs. To better absorb the costs, we suggest the following phases in improvements in order to generate momentum in the business community and to build on the gains.

- **Phase One:** Establish demand by strategically targeting infrastructure upgrades. Designate 24-7 safe corridors and concentrate initial infrastructure improvements there. Identify one north/south and one east/west pedestrian and bike route through the neighborhood (see Appendix F: Pedestrian & Bicycle Priority Corridors for suggested routes). Create clean and safe corridors along these two routes. Ensure adequate lighting, stripe the intersections, remove barriers to wheelchairs, and clean the sidewalks once a week. Distinguish the routes with unique pavers or wayfinding signs.
- **Phase Two:** Leverage newly-created market demand to line the routes with quality services and food kiosks that will remain open late. Walk-up food windows with seating areas can serve as "safety bases" for pedestrians and late-shift workers. The ideal is

that at late at night, most pedestrians would converge on a single "primary" route, hence creating a concentration of eyes on that street (i.e., what Charles Street is to Mt Vernon residents), and increased food and retail market demand.

- **Phase Three:** Focus streetscape improvements on beautifying connections with neighboring destinations and origins (e.g., UMB dorms, the Medical Center, the Inner Harbor, theaters, the police station, and the Poe Cemetery). Consider installing raised landscaped medians on select streets to reduce jaywalking, calm traffic, and capture storm water runoff. Replant or replace the trees on Eutaw Street in front of the Lexington Market from the middle of the sidewalk closer to the curb as they disrupt pedestrian traffic flow and appear to encourage loitering.
- **Phase Four:** Create a multimodal facility that physically links the light rail, the Metro, and bus service in a safe and secure environment. As an alternative, build a well-marked, covered walkway on Lexington Street to "ferry" transit transfers between the light rail and subway stations.

By initially concentrating improvements on just two corridors, it increases the likelihood that

pedestrians will choose to walk rather than drive.

**SOCIAL
DETERMINANT OF
HEALTH:**

**PERSONAL SECURITY &
SOCIAL COHESION**

For the purpose of the HIA, personal security was defined as security from criminal acts against people rather than property. Using this definition, workshop participants identified concerns about personal security as a significant barrier to walkability and investment in the neighborhood.

Social cohesion emerged as another valued health determinant. The research on violent crime overlaps with measures of social cohesion, so they are presented together in this section.

Health Link. Real and perceived threats to one's personal security present as barriers to walkability (Shriver, 1997). In a study of mixed-income neighborhoods, feelings of insecurity were linked to mental health issues (Joseph, et al, 2006). Crime theory (Jeffrey, 1971) and urban planning theory (Jacobs, 1961) posit that visibility deters crimes by increasing the risk of getting caught. Crime Prevention Through Environmental Design strategies, which are based on this principle, has been found to decrease robberies

from 30% to as much as 84% (Casteel & Peek-Asa, 2000). Alcohol outlet density is positively associated with violent crimes (Gruenewald, et al, 2006).

Social cohesion refers to the bonds that unite communities as one. Social cohesion is often measured by levels of group membership (Kreuter & Lezin, 2002), voting rates (Kim & Kawachi, 2006), number of one-person households (Cummins, et al, 2005), residency duration, and public meeting attendance (Kreuter & Lezin, 2002), all of which are associated with health outcomes. Social capital, the currency of social cohesion, is correlated with increased survival rates following major illness, as well as with better overall health (Berkman & Glass, 2000). Residents in mixed-use/ walkable communities reported a stronger sense of community (Kawachi, et al, 1999).

Existing Conditions. Real and perceived violence is an issue in this community. Fifty percent of the Lexington Market Area Survey respondents, surveyed during the day, reported that they were more than a little scared to be in the neighborhood after dark. A third of survey respondents reported that next to healthy foods, crime was their main deterrent from using the Lexington Market more. Workshop participants and survey respondents both remarked that the police presence was highly visible but overly intrusive.

The percentage of one-person households in the study area is

among the city's highest (American Community Survey, 2010), and the voter participation is among the city's lowest¹¹ (State of Maryland, 2010) both of which are indicators of low social capital. With resident turnover at 50% each year, the West Side Area Census Block Group is among the city's highest for resident turnover. And while this 50% will move somewhere else, the remaining 50% still live within a Community Statistical Area with the city's lowest life expectancy (HB 2015).

STRATEGIES:

Mixed-Income & Mixed Use

National empirical research of crime patterns and social organization theories have found that high rates of ethnic heterogeneity combined with low socio-economic status, low residential mobility, and high family disruption ("broken" families) is associated with social disorganization and increased violence against people (Sampson & Groves, 1989).

Conversely, researchers found that higher socio-economic status and homeownership rates are associated with higher levels of neighborhood cohesiveness, and specifically, to taking action in support of the community. Further, action in support of the community is very unlikely in communities with high rates of self-reported violence (Sampson, et al, 1997).

Findings. The Lexington Market Area is perceived to have a number of social problems, the reason for this often cited as the multiple social service clinics that provide support for recovering substance abusers. It is widely speculated that the methadone clinics, paired with the cash economy¹² and traffic at the Lexington Market, have contributed to making this area the regional epicenter for trafficking illicit prescription drugs. Since 2007, the West Side Area Census Block Group has averaged one violent crime every three days (Baltimore City Police Department, 2012).

Recommendations. Developers could target home-ownership across different income groups by partnering with programs like HUD's 203K loans. Consider building homes with attached (e.g., first floor) efficiencies, which homeowners can rent out as a means of helping with mortgages. Design new apartments with exterior individual unit entrances oriented towards the main pedestrian thoroughfare. These entrances can serve the dual purpose of acting as a shared space for neighbors, and as a catalyst for improved civilian vigilance. In addition to shared balconies, New York City's Active Design Guidelines emphasizes the utility of well-designed common lounges, courtyards, and stairwells for facilitating opportunities for social

¹¹ Rates in the 2010 general election were 73rd out of Baltimore's 290 voter wards

¹² With cash being used in the drug trade, the high density of local stores that require cash-only unwillingly simplify drug transactions.

interaction between neighbors (NYC Active Design Guidelines).

In the public realm, incorporate multiple uses into open space planning to create a sustainable, dynamic environment. NYC's Active Design Guidelines suggestions include building a walking / running track around a children's playground or a community garden. Monument Park in Mt. Vernon provides cost efficient two-seat chess tables for eating and leisure activities. Similar tables around the Lexington Market might be useful for reclaiming the sidewalks from loiterers and drug dealers by creating new social norms.

STRATEGY:
Complete Streets

Both the social sanctions for street crime and civic engagement that are characteristic of higher income groups can have mixed impacts on the community. While "nosy neighbors" help to deter crime, they also threaten to reduce any other activity that lowers property values, including the area's numerous social outreach and rehabilitation programs. Strategies focused on educating newcomers about the existing social services which currently bring a lot of chronically homeless and drug addicts to the neighborhood could be effective for increasing social cohesion. BCHD recommends creating and promoting a two-way, 24 hour communication pipeline linking the local police, social services, and the community, focusing on education, conflict resolution, and community integration strategies.

Conclusion

The amenities that Baltimore City and the University of Maryland can leverage to attract reinvestment to the Market area are plentiful. They include excellent transit access, a well-established food market, the University of Maryland and its medical system, an educated workforce, and half-mile proximity to the best of Baltimore's tourist destinations. Baltimore residents would benefit from a central commercial downtown like those in nearby Washington DC and Philadelphia. City planners should weigh immediate economic returns along with broader benefits for the city.

Multiple themes emerged from this Health Impact Assessment for addressing health issues and disparities through the proposed Lexington Market Revitalization Initiative. Equal access to employment related health benefits can be addressed by implementing strategies that aim to reduce the area's job-skills mismatch. Urban infill could acknowledge the need for community-based services and a community scale that would attract the resident density needed to make the neighborhood a safer place. Through building design, streetscape design, and policy design, the City and developers can work together to maximize opportunities for positive interactions and to mediate conflicts

between different socio-economic groups.

As the details for the Lexington Market Area's Revitalization Initiative begin to take shape, decision makers should consider these potential health impacts of the plan on economic opportunities, multimodal access, personal security and social cohesion. A thorough understanding of how the different socio-economic groups across the city will respond to the Lexington Market Area Vision is necessary to ensure that the neighborhood serves the health needs of everyone, including the most vulnerable populations.

Moving forward, this HIA will raise awareness among city stakeholders about the impact that decisions can have on health outcomes. It is the intention of the Baltimore City Health Department to work as a cross-agency partner to support the design of healthy communities and a healthy city. The Health Department will measure the success of this HIA by tracking the three impacts it aims to change: the language of the Lexington Market Area Vision¹³, the changes to the neighborhood's social determinants of health as recommended in this document (see Appendix A. Lexington Market Area HIA Monitoring), and the frequency of future urban design collaborations between the Mayor's Office and the Health Department.

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