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Towards a Healthy Neighborhood: Recommendations for Health Assessments of Future Development in Upham's Corner

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Towards a Healthy Neighborhood:

Recommendations for Health Assessments of Future Development in Upham's Corner

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Abstract

Historic growth in Boston belies dramatic gaps in socio-economic status among residents and corresponding increases in health disparities between low income and more affluent Boston neighborhoods. The Fairmount/Indigo Planning Initiative Corridor Plan is a renewed investment in Boston's poorest communities that may potentially tackle these inequities. The plan aims to link neighborhoods that are cut off from downtown to the heart of the city. Such investment in rapid transit may combat the spatial isolation found to negatively affect health outcomes but similar transportation upgrades in other American cities have been associated with gentrification and displacement (Pollack et al, 2010). As such, the Fairmount/Indigo plan's impact on health disparities in Boston is not so straightforward. This project focuses on the Upham's Corner Station Area plan because it is primed for some of the largest developments along the Indigo line. While the station area planning process and proposal utilized community participation to create a holistic strategy, the plan failed to investigate the health effects of the project. Applying an ecosocial framework, my research offers improvements to the plan that better takes into account the potential perverse effects of gentrification and displacement on health outcomes. I utilize interviews with key stakeholders, case studies with similar neighborhoods, and trends in median housing prices to determine what stage of gentrification Upham's Corner is in. I then recommend conducting a Health Impact Assessments (HIA) to examine the Station plan as it provides an ideal opportunity and formal conduit for health to be appropriately factored into the plan.

Key Words: public health, urban planning, health impact assessment, station area plan, gentrification, displacement, ecosocial theory, community development, community participation.

I. Introduction

Neighborhoods, and the processes of community development are increasingly understood to be powerful determinants of population health (Corburn, 2009). That is, the health of a community goes beyond individual risk factors, and includes forces outside of an individual's control such as housing stock, transportation, job opportunities, and access to goods and services. Differential access to these factors contributes mightily to disparities in health between the wealthy and the poor (Link & Phelan, 1995). Compared to Boston as a whole, Upham's Corner is home to some of the largest health disparities in the city. According to the Boston Public Health Commission, Upham's Corner has a higher average annual rate of every selected health indicators except for suicide, making the community one of the unhealthiest in the city (BPHC, 2012). These indicators, which range from asthma emergency department visits to substance abuse deaths, are indicative of differences in income in Upham's Corner compared to the city of Boston. These do not stem solely from individual choices and risk factors, but instead are indicative of larger systemic issues that make up the built environment (Krieger, 1994; Link & Phelan, 1995; Corburn, 2009).

Defining health as an outcome of social and economic conditions falls under an ecosocial framework. This perspective examines both the social and biological processes that result in individual and population disease outcomes, and assumes that distributions of disease are determined at every level from individual to global (Krieger, 1994). In other words, it identifies a direct correlation between the developments that make up a neighborhood, policies that them, and the health outcomes of the community.

This correlation calls for us to apply an ecosocial framework to developments in Upham's Corner that may impact health. One of these developments includes the recent

investments in Boston's Fairmount/Indigo commuter rail line. This is a 9.2-mile line linking

Downtown Boston's South Station to Readville Station in Hyde Park, and passes through

Roxbury, Dorchester, and Mattapan, some of the city's poorest neighborhoods. In 2012, the

Boston Redevelopment Authority (BRA) along with the private planning firm the Cecil Group

initiated the Fairmount Initiative Corridor Plan to develop short and long term strategies for

improving capital investment and job access along the line (Fairmountplanning.org, 2014). A

Station Area Plan was conducted for both the entire Fairmont/Indigo Line as well as for each

individual station with the help of a community nominated working advisory group (WAG). A

Station Area Plan is meant to provide input on potential developments designed to maximize

access to public transport [otherwise known as Transit Oriented Development (TOD)] (Gateway

Corridor, 2015). The goals are to formulate a plan that will: minimize displacement, protect

community assets, strengthen businesses and activity, reinforce a walkable neighborhood,

provide new housing opportunities, and to reinforce a connection between the station, and the

center of activity (Station Area Plan, 2014).

With expanded investment in the Fairmount/Indigo line, along with a renewed interest in

the Upham's Corner stop, there is potential to combat the health gap. The Fairmount Initiative

Corridor Plan aims to link neighborhoods that are cut off from downtown to the heart of the city.

Such investments in rapid transit may combat the spatial isolation found to negatively affect

health outcomes (Frumkin et al, 2004; Litman, 2015). However, similar transportation upgrades

in other American cities have been associated with gentrification and displacement (Pollack et al,

2010). As such, the Fairmount/Indigo plan's impact on health disparities in Boston is not so

straightforward. While the proposed plan represents the community goals of mitigating

displacement by making recommendations for Transit Oriented Development (TOD), modified

zoning, enhanced walkability and increases in arts programs, it fails to incorporate how these developments may affect the health of Upham's Corner. With this in mind, this project demonstrates how the proposed development plans ignore an ecosocial framework at the neighborhood's peril, as existing plans for Upham's Corner prime it for gentrification and resident displacement, which have perverse effects on health outcomes (Causa Justa, 2014).

To show this, I will begin by outlining why Upham's Corner is an appropriate neighborhood for this case study. Then, through my literature review, I will further explain the concepts of healthy urban planning, and ecosocial theory, followed by showing the link between unhealthy neighborhood development and gentrification, an explanation of why Upham's Corner needs urban planning from an ecosocial perspective, and finally, I will introduce the process of a Health Impact Assessment (HIA), and detail why it is necessary for Upham's Corner. My analysis section will then look to address the health gaps left in the Station Area Plan by addressing issues of environmental health, gentrification and displacement, along with the built environment. Finally, I will introduce the Healthy Development Measurement Tool (HDMT) and demonstrate how it can be used to serve as a guide for healthy development in Upham's Corner, throughout the Fairmount line, and for transportation initiatives in other major American cities.

II. Research Design and Methodology

Research Design

I selected Boston's Upham's Corner as an appropriate neighborhood for this case study based off of three factors rooted in an ecosocial framework. They are: 1) The neighborhood's history of segregation and ghettoization (Medoff, 1994; Anguelovski, 2011, 2) Upham's Corner

fits the description of a neighborhood in the early stages of gentrification (Levy, 2013); and 3)

the health disparities present in Upham's Corner according to the Boston Public Health (BPHC,

2012).

Data Collection

My assessment of the Station Area Plan and subsequent recommendations for how to

conduct a Health Impact Assessment of future Transit Oriented Development specific to the

Fairmount/Indigo line investments were derived from the following modes of data collection and

analysis:

- I conducted four months of background fieldwork in the Upham's Corner neighborhood prior to starting this project, working in conjunction with community organizations including the Dudley Street Neighborhood Initiative (DSNI) and Upham's Corner Main Street (UCMS), along with the city of Boston to make recommendations for the revitalization of the Upham's Corner's historic Strand Theater. I canvassed the neighborhood with local artists, and took part in multiple Arts & Culture community meetings at DSNI focused on the Strand, and gained a better understanding of the dynamics of the neighborhood, and how it is being primed for gentrification. Further, as a white passing male studying at University, I went into the research process fully aware, and honest about my own privilege. By being open about the difference in my own upbringing, and understanding how different my neighborhood experience was, I showed that this research reflects my own commitment to the community.

- In building relationships with these community organizations, I was able to garner two interviews with key stakeholders in the community. Both of the interviews were conducted confidentially. The first interviewee who I will refer to as John Doherty, has lived in the community for almost 50 years, and has played a major role bringing affordable housing to the neighborhood, while also contributing to the revitalization of the business district. Our interview covered issues of neighborhood development stemming from the Fairmount Line and its potential effects on gentrification and displacement. The other interview was conducted with Raymond White, an urban planner who has been the lead planner in several HIA's throughout the state of Massachusetts. During the interview we spoke in depth about the HIA process, and strategies that would be applicable to a HIA of Upham's Corner Station.

- I pulled from existing ecosocial scholarship primarily drawing on Social Epidemiologist Nancy Krieger's *Theories for Social Epidemiology in the 21st Century: an Ecosocial Perspective*. Further, my linkage of the urban planning and public health fields drew

specifically from Urban Health expert Jason Corburn's book *Towards the Healthy City: People, Places and the Politics of Urban Planning*. Finally, my recommendation for a HIA stemmed from my assessment of the Upham's Corner Station Area Plan conducted by the Cecil Group, in conjunction with the BRA, and the neighborhood appointed Working Advisory Group.

- Finally, I drew upon two existing HIA's to inform my own recommendations. The first was the Massachusetts Area Planning Council's (MAPC) HIA *Transit –Oriented Development: A HIA to Inform the Healthy Neighborhoods Equity Fund* which was conducted in Roxbury, and Mission Hill, two neighborhoods of close geographic proximity to Upham's Corner with similar racial and economic demographics and used it to support my own framework for assessing the Station Area Plan. The second was the Eastern Neighborhoods Community Health Impact Assessment conducted by the San Francisco Department of Public Health to assess the health impacts of the health effects specific developments in neighborhoods similar to Upham's Corner. Because this HIA produced the first healthy metrics tool used by developers and policy makers to inform neighborhood developments (Farhang & Bhatia, 2007), I chose it to inform my recommendation of creating a set of healthy development metrics specifically for the Upham's Corner rail stop, that can also serve as a model for future developments all along the Fairmount/Indigo line.

Data Analysis

For my data analysis, I examined three categories to show how a HIA will utilize the ecosocial perspective missing in the Station Area Plan. The three categories and areas that they directly affect that I will examine were:

1. Environment: Air Quality; Environmental Contamination
2. Gentrification: Social Cohesion; Affordable Housing; Economic Opportunity
3. Built Environment: Public Space; Walkability; Safety

I chose these three categories based off of the target areas of interest indicated by the community in the Station Area Plan as well as pathways to health indicated in the MAPC HIA.   The topic areas analyzed in the Station Area Plan include: prosperity, home, place, getting around, quality of life and public space (Station Area Plan, 2014) While the pathways identified by the HIA include: walkability, safety from crime, economic opportunity, displacement/gentrification,

affordable housing, green housing, social cohesion, green space, access to healthy/affordable food, safety from traffic, air quality, and environmental contamination.

I first looked at Environmental health because the Station Area Plan failed to mention environmental issues. Second, through a statistical analysis of the plan comparing the amount of times gentrification or displacement were mentioned, I found that displacement was mentioned .00023% and gentrification was not included (Station Area Plan, 2014). This represented a key gap in the data that a HIA will address. Finally, the Station Area Plan only implicitly talked about the relationship between public space and public safety, all of which are areas that the HIA would explore in depth.

III. Literature Review: The Ecosocial Advantage for Healthy City Development

Defining the Healthy Community

Health is not just determined by an individual's biological makeup and decisions but instead is affected by a combination of social, economic, and political factors that shape communities. According to the World Health Organization, health is defined as, "A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. It is a resource for everyday life, not the objective of living, and is a positive concept emphasizing social and personal resources as well as physical capacities" (WHO, 1986). Thus, health is not only determined by biological causes and individual risk factors, but is affected by the resources and variables that make up one's socioeconomic status (Link & Phelan, 1995). This is central to the ecosocial framework for urban planning and transportation development.

The variables that contribute to the correlation between SES and health outcomes, which include the social, physical, and economic environments, are collectively referred to as the social

determinants of health (SDOH) (Rudolph et al, 2013). One way to address the SDOH is through

"Health in All Policies," (HiAP), which is a collaborative approach to improving the health of all

populations by incorporating the considerations of health into decision-making across sectors

and policy areas (Rudolph et al, 2013). Practicing HiAP incorporates non-traditional voices into

conversations and decision-making processes of public health[1], which can more effectively

address health inequities, found in low-income neighborhoods.

Urban planners and policy makers can alter the social determinants of health (SODH),

including the quality of employment, affordable housing, access to better transit, and safe spaces

for social interaction, all fundamental promoters of health inequities (Corburn, 2009). The

combination of planners, policymakers, and community organizations/members make up the

voices of urban governance.   Urban governance is made up of a mix of different contexts,

actors, arenas, and issues, where struggles over power are exposed in public discourses or

embedded in the implicit day-to-day routines (Corburn, 2009).

In a community context, the design and development of a neighborhood plays a

significant role in the health of the community's population (Frumkin et al, 2004). Because

communities are unique and dynamic spaces (Sharkey, 2015), it is important to first identify and

define them to better create plans and policies that may improve health (Corburn 2009; Rudolph

et al, 2013; Hacker, 2013). A community is made up of people connected by social ties that

share common perspectives or interests and may also share a geographic location while

neighborhood is directly linked to an area's location (Hacker, 2013).

In the case of Boston's Upham's Corner neighborhood, the community is extremely

diverse (shown in Table 1). Upham's Corner is a majority-minority neighborhood with 69.3% of

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[1] I will be using Jason Corburn's definition of public health: "public policies, practices, and processes that influence
the distribution of disease, death, and well-being for populations…health promotion" (Corburn, 5).

its residents identifying as non-white. This diversity is reflected in the community's arts and

culture scene, which is embedded in the community's history (Lobenstine, 2014; Station Area

Plan, 2014). In the context of this report, census tracts 912-915 geographically identify Upham's

Corner based off of the geographic markers provided by the Upham's Corner Improvement

Association (UCIA, 2011), and the Station Area Plan, (Station Area Plan, 2014).

Table 1. Race in Upham's Corner

Race: Upham's Corner	%
White	30.7%
Black	28.8%
Hispanic/Latino	16.3%
Asian	11.1%
Other	6.6%
Multiracial	6%
Hawaiian/Pacific Islander	0.1%

Source. Bridgewater, Khary. Upham's Corner
Neighborhood Briefing Document. 2008. Online.

Theory for a Healthy Community

To explain the causal relationship between community, urban planning, and health, we

must utilize an ecosocial framework. This framework assumes that distributions of disease are

determined at multiple levels and that analyses must include historical political economic,

temporal, and spatial analyses (Krieger, 1994). Instead of focusing solely on biology, or only on

the social determinants of health, the ecosocial perspective examines both the social and

biological processes that result in individual and population disease outcomes while specifically

asking who and what is responsible for population patterns of health, disease, and well-being, as

manifested in present, past, and changing social inequalities in health (Krieger, 2001).

The framework starts by looking at how we embody our natural milieu. According to Krieger (2001), embodiment refers to how we incorporate, biologically, the material and social world in which we live, from conception to death. She goes on to say that no aspect of our biology can be understood without knowledge of history and individual and societal ways of living (Krieger, 2001). Knowing that we embody our own ecologic environment (Krieger & Sydney, 1996; McMichael, 1999; Krieger, 2000) is crucial to our examination of health in Upham's Corner. Not only does it offer a potential explanation of the health disparities within the community, but it also serves as a major reason to incorporate community voice in the development process as no one is more qualified to talk about the embodiment of health than the residents who own their individual health narratives (Corburn, 2005).

To explain how we literally incorporate the material of our social world, we must identify the pathways of embodiment, which are structured simultaneously by societal arrangements of power and constraints and possibilities of our own biology (Krieger, 2000). In other words, these pathways include both the physical, social, and economic environments that make up the social determinants of health, along with our own biological capacities. According to Krieger (2001), the interplay among exposure, susceptibility, and resistance conceptualized both at multiple levels (individual, neighborhood, regional, national, international) and in multiple realms (school, work, home, etc.) is expressed in these pathways. Through this, we see that individual and population health are affected at each level simultaneously regardless of spatiotemporal scale (Krieger, 2008).

Finally, these pathways of embodiment lead us to determining accountability and agency, which refers to the who and the what is responsible for social inequalities in health and rectifying them, as well as the overall current and changing outlines of population health (Krieger, 2001).

By specifically identifying the major sources of health inequalities, we can more easily advocate

for mending these issues (Krieger, 2008). In recognizing and identifying these four constructs,

We see then that an ecosocial framework is not just adding biology to social factors, but instead

it begins to imagine a more systematic, and integrated approach capable of generating new

hypotheses and suggestions rather than just reinterpreting factors from one approach in terms of

another (Krieger, 2001).

Gentrification as a Product of Development

Working from an ecosocial perspective to evaluate the health impacts of neighborhood

development is crucial as said developments have the potential to change the makeup of a

community. Research shows that issues of gentrification and displacement are directly linked to

transit oriented developments (Pollack et al, 2010; Causa Justa, 2014). So while these

developments may seem to be a positive change for a community (Freeman, 2005), the question

becomes, what community benefits, the new one moving in, or the one already there? To answer

these questions we must first define gentrification.

Gentrification has a number of definitions ranging from economic (based on household

income, investment or rent to owner transition) (Levy et al, 2006), to demographic (increase in

white households, college educated residents, non-family households) (Freeman, 2005) or a

combination of both (Kahn, 2007). Generally, terms used synonymously with gentrification

include displacement, and revitalization suggesting that gentrification can either be positive or

negative (Pollack et al, 2010). While the term has been debated consistently, it is always viewed

as an occurrence that can bring both positive and negative effects for a neighborhood (Freeman,

2005; Levy et al, 2006; Chapple, 2009; Bates, 2013). However the view of gentrification that

motivates this project is distinct from positive neighborhood development. That is, while

gentrification leads to displacement, revitalization, development without is beneficial for

indigenous residents.

Renewed interest, investment, and development (more commonly referred to as

revitalization) can help strengthen forgotten neighborhoods (smartgrowthamerica.org, 2012).

Such redevelopment may bring in much needed services that these communities have longed for

such as improved transportation services, increased access to healthy foods, and a stronger police

presence to name a few. In his qualitative assessment of gentrification in the New York City

neighborhoods of Clinton Hill and Harlem[2], Columbia urbanist Lance Freeman finds that in the

midst of gentrification (using his definition), residents were appreciative of the improvements

associated with the process (Freeman, 2006). The influx of white middle/upper middle class

people brought with it more police, chain grocery stores, and an improved streetscape. These

aspects of revitalization are crucial in closing the health gap within minority communities.

Because of this I will distinguish between gentrification and revitalization.

Yet while the research supports the claim that the type of revitalization shown by

Freeman may be beneficial for a community, we must be cautious in the usage of the term.

Revitalization opposes the people-centered definition of gentrification, and hints at the

neighborhood being brought back to life without acknowledging how it became a ghetto. The

"revitalization" term, and the way in which it is used to market neighborhoods by real estate

companies and agents (Massey & Denton, 2003) implies that the neighborhood is ready for white

middle and upper middle class families and investors. This ignores the history of neighborhood

neglect, and the past and current community's involvement in the improvements. For these

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[2] Though Harlem and Clinton Hill may be further along in the gentrification process than Upham's Corner, both are similar in that they are all majority minority neighborhoods with a similar histories plagued by arson and abandonment (Freeman, 2006).

reasons, I will use the term "development without displacement" to indicate positive

neighborhood development that stems from reinvestment as it acknowledges these

neighborhoods were created by disinvestment and that the community tirelessly fought for a

renewed interest from the rest of the city.

While neighborhood reinvestment may bring benefits that indigenous residents are

appreciative of, there are also significant downsides that may stem from redevelopment

including the loss of affordable housing, conflict between newcomers and more established

residents, and resentment stemming from feeling as if neighborhood improvements are not for

"them" (Freeman, 2006). With this in mind, there are two types of displacement, physical and

cultural. Physical displacement is defined as an involuntary occurrence in which residents are

forced out and development is pushed forward by the profit motive of investors, developers,

landlords, and government (Causa Justa, 2014). Cultural displacement is recognized as, "the

removal of a sense of place and community and feeling like you have the right to creating the

vision for that community's future. Even if people are not forced from their homes due to rising

rents, they may feel like their community is less their own than it used to be" (Elliott via

Williams, 2013).

The common factor between both physical and cultural displacement is that they both

arise from developments that attract the outside gentry, while not reflecting community interests,

needs, or goals. The neutral definitions of gentrification that I mentioned earlier were created

without community input, in essence silencing their experience. This again reinforces the

importance of local knowledge as the evidence suggest that residents being effected by

gentrification (regardless of definition) view it as directly linked with displacement, and

differentiate between gentrification and development without displacement (SOMCAN, 2004;

Freeman, 2006; Causa Justa, 2014).

We can see then that gentrification is not a neutral term, but one rooted in a history of

policies that abandoned these neighborhoods and thus requires a more people focused definition.

Because of this, I utilize the South of Market Community Action Network (SOMCAN)

definition of gentrification, which views it as:

> "The process by which poor and working-class residents, usually communities of color,
> are displaced from neighborhoods by rising costs and other forces directly related to an
> influx of new, wealthier, and often white residents. These forces include both market
> forces and public policies, which may deliberately or inadvertently make a neighborhood
> more attractive or accessible to a high-income population" (SOMCAN, 2004).

This people centered definition distinguishes between development without displacement and

gentrification and explicitly outlines the parties accountable for creating and fostering specific

pathways of embodiment that stem from it.   .

Gentrification as a Social Determinant of Health

Based off of the definition of gentrification offered above, we can see that it plays a

significant role in the health of two sets of residents: those that stay, and those who are forced to

leave. For lower income indigenous residents, gentrification may lead to financial burden linked

with increasing rental prices. Rent burdened families (those that spend more than 30% of

household income on housing (Causa Justa, 2014)), are forced to make choices that have dire

health consequences including choosing between which basic needs are most necessary. This

leads to sacrificing health care, transportation, or healthy food for housing. When basic needs

require choosing one over another, household health suffers (Egerter et al, 2008).

Rent burden and cultural barriers also excludes indigenous residents from benefiting from new development so that those in most need of these essential resources are unable to utilize them (Sullivan & Shaw, 2011). New store and restaurants may be unaffordable and culturally unattractive to longtime residents. Therefore, because gentrification leads to development that ignores the needs and desires of existing residents, it may be an alienating experience resulting in longtime residents feeling out of place in their own neighborhood (Causa Justa, 2014).

Displaced residents face similar financial hardships (because of relocation and new household setup costs) while also facing social loss in the shape the physical as well as social and cultural environment. In terms of physical loss, displaced families may be forced to either find new work, or make longer commutes to their old jobs, potentially leading to income and job loss (Causa Justa, 2014). For children, displacement is destabilizing to their social networks and may result in declining school performance (Cooper, 2001).

Besides physical effects, displacement has a major impact on neighborhoods social networks, a crucial element of individual and community health. Todd Clear (2007) defines social networks as the relationships in which a person lives, works, and engages with. These networks are crucial to neighborhood organization and for individuals to seek help inside of the neighborhood via connections. Because people living in impoverished communities tend to only have connections within their community (Clear, 2007), displacement leads to the deterioration of social networks. This "social loss" creates excess stress and psychological effects, which in turn affects physical systems we rely on for resilience against disease and chronic conditions (Fullilove, 2004).

Finally, as these social networks dwindle, social capital (unity within a community) also falters, Frumkin et al (2004) defines social capital as a feature of communities, corresponding at

the individual level to a person's network of social relationships. Social capital has been shown to improve mortality rates, and decrease incidence rates of noncommunicable diseases (Kawichi et al, 1999; Blumenthal et al, 1987 via Frumkin et al, 2004). In other words, when neighbors trust each other and help out one another, they feel more connected to their community. However, as displacement breaks up these ties, the social capital of the neighborhood is lost, making it harder to respond to social and economic hardships as both social networks and capital diminish.

How to Measure Gentrification;

While gentrification may be a social determinant of health, there are still several stages that have different impacts on community health. A neighborhood is more likely to experience gentrification if it meets a certain set of criteria. Freeman (2005) identifies the characteristics of a neighborhood with the potential to be gentrified, which include central city neighborhoods populated by low-income households that have previously experienced disinvestment, while the actual process of gentrification includes an influx of the relatively affluent or gentry, and an increase in investment specified by increase in a neighborhood's educational attainment along with increase in housing prices. In these metrics of gentrification, I believe that the percentage of renters in a community is also crucial, as Reardon & Dutta (2011) demonstrated that areas with a high amount of renters are at risk of gentrification, especially with a train station in the area. These characteristics allow us to roughly determine at what stage in the process gentrification is occurring. Further, because it is a dynamic process, we can characterize a neighborhood as being in early, middle, or late stage gentrification as seen in table 2.

Table 2. Stages of Gentrification

Early Stage	• Signs of revitalization with the possibility of future gentrification • Evidence of housing improvements and increased housing prices
Middle Stage	• Housing prices sharply rising • Affordable housing remains available along with some developable land parcels
Late Stage	• Housing prices skyrocketed • Little affordable housing • Few developable parcels • Demand for profitable, market rate housing overshadows needs of lower income households

Source. Levy, Diane K., Jennifer Comey, and Sandra Padilla. *In the Face of Gentrification: Case Studies of Local Efforts to Mitigate Displacement*. Publication. Washington: Urban Institute, 2006. Print.

Gentrification in Upham's Corner

  Using the criteria detailed above for measuring gentrification, we can determine how far

along Upham's Corner's stage of gentrification. Referencing census tract data from 2010, we

find that the highest percentage of the community has no more than a high school diploma/GED

while a larger percentage of the population had less than a high school diploma (25%) than

Bachelor's degree or higher (21%). As for the second criterion, the median house/condo price in

Upham's is $312,028.50, with a median increase of $121,812 since 2000. Finally, 68.1% of

Upham's Corner rent their homes. This coupled with a $3.1 million investment into the

Upham's Corner main street infrastructure (Deluca, 2014) shows that there is evidence of

revitalization meeting the characteristics of a neighborhood in the early stages of gentrification.

That is, while Upham's Corner may not be in the process of gentrifying, the investments and

fluctuating housing prices indicate that it may in the future.

Why Upham's Corner Needs Healthy Urban Planning:

Because Upham's Corner is in the early stages of gentrification, it requires urban planning from an ecosocial perspective that will fully address the ways in which neighborhood developments revolving around the Fairmount Line will lead to gentrification, and further exacerbate existing health disparities in the community. To determine why a HIA is necessary using an ecosocial framework, we must first address the community's history that positioned it for gentrification, and current developments, specifically around the investments in the Fairmount/Indigo line that are priming the neighborhood for major changes.

Upham's Corner's Past as a Foundation for its Future

Upham's Corner requires an ecosocial perspective for planning because of its history of ghettoization (Medoff and Sklar, 1994). A history of policies geared towards slum removal, housing, and extending the city to the suburbs via highway systems all have impacts on the health of urban populations (Corburn 2009; Fullilove 2004). For urban blacks, the ghetto is defined as a set of neighborhoods that are exclusively inhabited by members of one group within which virtually all members of that group live, and has been the paradigmatic residential configuration for the last century (Massey & Denton, 2003). Though the history of Upham's Corner is different than many of the case studies on white flight and urban renewal offered by previous scholars (Klinenberg, 2002; Massey & Denton, 2003) due to its increased racial diversity, it was affected in a similar manner.

In the early 1900s before disinvestment, Upham's Corner was both a business and transportation hub for the city of Boston. Upham's Corner thrived as an important stop in the streetcar network as it connected to both downtown Boston, and the outskirts of the city (Station

Area Plan, 2014). Further, the neighborhood was home to what many consider the world's first supermarket, helping solidify Upham's Corner as a commercial center of activity (Youth Violence Systems Program, 2008) while nearby the New Market Industrial Area employed many of the neighborhood residents with manufacturing jobs (Medoff and Sklar, 1994).

However, while the area thrived for a time, it was heavily affected by the white flight phenomenon. By the late 1950's, the white population in Upham's Corner and the adjacent Dudley neighborhood dropped from 95% to 45% (Anguelovski, 2011). Further, as white families moved out, they left behind houses that were in substandard conditions marked by faulty plumbing, outdated heating systems, and facades with peeling paint (Rosenthal 1976).

The community's black population in the 1970's was at 53%, while Latino and Cape Verdean immigrants began moving in making up 28% of the population by 1980 (Medoff & Sklar, 1994). During this time, poverty had skyrocketed, landlords found it easier to pay fines to building inspectors than to obtain loans from banks (Levine & Harmon, 1992), and like other minority cities (Massey & Denton, 2003; Sugrue, 2005) Upham's Corner was victimized by redlining where banks would not invest in communities with large minority residents as they considered them to be areas in decline (Medoff & Sklar, 1994).

By the 1980s, various socioeconomic, political, and individual decisions had transformed the neighborhood into a ghetto with frequent arsons, increased drug dealing, and minimal police presence (Anguelovski, 2011). While Boston's downtown area had achieved a high degree of economic health and vitality, the benefits did not spread throughout the community; the 'New Boston' did not include the Upham's Corner community (Medoff & Sklar, 1994). One resident described this time in saying, "Every night there was a fire. It was like this block and the next

after that. Each time a house burned, they'd tear it down and you had another vacant lot"

(Madyun, 1996).

        However, this also brought about community action in which residents came together led

and created the Dudley Street Neighborhood Initiative (DSNI) to rebuild the neighborhood.

From the "Don't Dump on Us" campaign, which targeted vacant lots and helped prevent illegal

dumping, to the redevelopment of that same land, the community led the charge in revitalizing

its streets (Medoff & Sklar, 1994). Along with this came heartening developments including the

rehabilitation of the Pierce Building for artist space and successful work towards revitalizing the

Strand Theater (Youth Violence Systems Project, 2008).

The Potential of the Fairmount Line

        The continued work of organizations like DSNI along with other community efforts has

helped steadily renew Upham's Corner, attracting various developments that will play a major

role in community revitalization, including renewed investments in the Fairmount/Indigo

Commuter Rail Line. The train has run from South Station to Hyde Park since the 1940s, but it

only recently started serving the community due to residents fighting for stops in their

neighborhoods (Handy, 2013). Though Upham's Corner had one of the first stations built in

1979, service was limited and did not reach most of the residents of the Fairmount Corridor until

renovations were made in 2007, and the price was dropped from $5.50 to $2.00 in 2013

(fairmountcollaborative.org, 2015).

        The renewed investments in the line have many residents across the corridor excited.

Dorchester state Senator Linda Dorcena Forry notes, "this is about access, this is about economic

opportunity. More importantly, this is going to really jump-start development along the

Fairmount line" (Dorcena Forry via Gellerman, 2013). Further, with the MBTA preparing to use

high speed trains on the Fairmount line by 2018 so that they can run a more consistent and

efficient schedule, (Lepiarz, 2014), the line has the potential to better connect residents of

Upham's Corner, and other communities on the Fairmount line to economic opportunities

(Tomer et al, 2011).

However, while the Indigo line may help continue the work done by residents and

community organizations to rebuild the community, the line, and the TOD that will follow

(McMorrow, 2014; Ross, 2015; Editorial Board Boston Globe, 2015) has the potential to change

the social and economic landscape of Upham's Corner. Longtime community organizer and

Upham's Corner resident John Doherty talks about how the line has the potential to make or

break the community:

> "We worked so hard to promote the Fairmount Line as a something the City and State really
> need to look into as a way to solidify Upham's Corner as a strong community. But from what it
> looks like, the developments that are being linked to the line are not meant for us here, but are
> coming up to attract outsiders. That Globe Article (Editorial Board Boston Globe, 2015) says
> that gentrification isn't something we should worry about because it is happening all over
> Boston. But they don't live here; they don't know how much this could hurt us" (Doherty,
> 2015).

In theory, transit centered developments promote community diversity, attracting

minority and low-income populations as well as wealthier populations choosing to use public

transit (Pollack et al, 2010), as both low-income residents have an affordable means of

transportation, while others have the conveniently located transit. However, the research shows,

the addition of transit to neighborhoods with large number of renters makes the area more

susceptible to gentrification making housing more expensive, neighborhood residents wealthier,

and vehicle ownership more common (Pollack et al, 2010). Thus, the concern of gentrification

brought up by Mr. Doherty is valid and must further be addressed to make sure these developments are benefitting the current community of Upham's Corner.

A past example of TOD leading to gentrification and displacement can be found across the Charles River in the Davis Sq. neighborhood of Somerville. In 1985, a Red Line was opened in Davis offering a fast subway ride to Harvard University, and downtown Boston. While in 1970, 8.2% of adults living in Davis Square were college graduates, in 2000, 49.7% were college educated (Kahn, 2007) and the city has watched prices skyrocket and residents priced out since (McMorrow, 2014). Former executive director of Dorchester Bay EDC notes that she doesn't want Upham's Corner to be Davis Sq (BNNN, 2012). For this to happen, the community requires a commitment to the residents already living in the neighborhood to ensure that transit and infrastructure developments are not followed by gentrification and displacement as they were in Davis Sq.

Commitment to the Community via a Health Impact Assessment

Because Upham's Corner is being primed for gentrification, we need an assessment of future TOD that would both look at how these developments may affect physical, social, and economic health, as well as feature the community voice throughout. By definition, a Health Impact Assessment does just that. In essence, a HIA is an evolving practice used to evaluate the social, economic, and environmental effects of plans, projects, and programs for the purpose of promoting population health (Corburn, 2009). Further, practitioners have defined the practice as a combination of procedures, methods and tools by which a policy, program or project can be judged as a both positive and/or negative proposal as it pertains to the health of a community (Farhang & Bhatia, 2007).

Conducting a HIA is a six-step process[3]:

1. **Screening**: Determines whether the HIA is feasible, and if it is likely to succeed/add value
2. **Scoping**: Creates an outline for the HIA by determining what health effects the HIA should address and identifying concerns from stakeholders about pending decisions and who will be impacted by the policy or project
3. **Assessment**: Describes the baseline health of people and groups affected by the decision and predicts the potential health effects of said decision
4. **Recommendations**: Provides suggestions for protecting and promoting health. The strategies and actions require to facilitate adoption of recommendations into the final decision vary.
5. **Reporting**: Disseminates the findings to decision makers, affected communities, and other stakeholders
6. **Monitoring and Evaluation**: Identifies indicators to track the outcomes of any implemented recommendations. This serves as the basis of evaluating the impact of the HIA and helps shape future policy and management decisions

In my interview with urban planner Raymond White, he made sure to note that while no two

HIA's are the same, these steps are all needed to complete such an assessment. Further, he went

on to specify that a HIA evaluating the developments along the Fairmount Line should involve

two steps during the scoping stage that would define health in Upham's Corner, and include

specific community health objectives. He notes:

"I think for a HIA to work in this capacity, the HIA team needs to really figure out what they mean by a healthy community, like what they are trying to get out of this. So during the scoping stage, after we have come up with our own definition for a healthy Boston, we need to identify community health objectives, and health indicators that make them up" (White, 2015).

Health objectives are goals that, if achieved, would result in greater and more equitable health

assets and resources for Upham's Corner residents, while health indicators are used to measure

progress towards each community health objective, and to evaluate the benefits of plans, projects

and policies (Farhang et al, 2008).

Conducting a HIA that identifies specific community health objectives is critical because

development planning without adequate considerations of human health may pass hidden 'costs'

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[3] Source. University of California Los Angeles. Health Impact Assessment. Available at: www.ph.ucla.edu/hs/health-impact/

on to affected communities, in the form of an increased burden of disease and reduced well-being (Farhang & Bhatia, 2007; Corburn, 2009). A HIA provides a systematic process rooted in an ecosocial perspective, through which health hazards, risks and opportunities can be identified and addressed in the development planning process, to avoid the transfer of these costs onto marginalized populations and to promote multi-sectoral responsibility for health and well being (IAIA, 2006).

The story being played out in Upham's Corner has no clear conclusion. While TOD in Upham's Corner may promote community health in the broadest sense, it may also attract gentrifies who may potentially turn over the community as we have seen in the past with neighborhoods such as Davis Sq. In both differentiating between gentrification and development without displacement, while also offering a framework through which gentrification is measured, we have a base from which we can work to ensure that Upham's Corner continues to receive positive reinvestments, without pricing out current residents. In the next section, I will analyze the Station Area Plan, and show how conducting a HIA on TOD stemming from the Fairmount/Indigo line will offer a more nuanced and comprehensive approach to healthy development.

IV. Station Area Analysis:

Preparing Upham's Corner for healthy development without displacement requires a vision that outlines what community residents want their community to look like. The Station Area plan does just that in by generating community defined goals for future improvements and investments. These include:

1. Minimize displacement of current residents and businesses to preserve diversity

2. Protect existing community assets found in the current residents, businesses, and historic sites and buildings of Upham's Corner
3. Strengthen businesses and activity to revitalize and support the commercial and cultural center
4. Reinforce a walkable neighborhood orientation through public realm and open space improvements to enhance Station Area quality of life
5. Provide new housing opportunities near the station and Main Streets District to support vitality
6. Reinforce a direct connection between the center of activity and the rail station

These six goals make up a vision that informs the study's framework for future improvements and investments meant to enhance both the commercial center of Upham's Corner and surrounding neighborhoods (Station Area Plan, 2014). The plan itself offers recommendations outlined by topic areas, which directly coincide with the determinants of health that come about with TOD outlined in the methods section of this report (Ito et al, 2013).

However, the report primarily offers a vision for what future developments should look like, without offering a way in which these proposed developments could be assessed and monitored. A HIA will offer these metrics, and would be supported by a strong literature base linking factors of TOD to health determinants (Ito et al, 2013). Drawing from our list of TOD determinants of health, I will offer a more health-oriented assessment of the Station Area Plan to add a more comprehensive view of the community vision.

Environmental Issues

First and foremost, the Station Area Plan does not include an evaluation of how developments would contribute to changes in the environment of the community. Though this is understandable as the purpose of the Station Area Plan is to evaluate short and long term strategies for improving capital investments and job access (Station Area Plan, 2014), issues related to environmental health including air and noise pollution are often the first steps in

evaluating a community's health (Corburn, 2009). A HIA would begin with an assessment of potential environmental impacts that will come about from future developments to ensure that this fundamental piece of neighborhood health is addressed.

The HIA using an ecosocial view of healthy urban governance would first examine how developments would affect noise levels in the community, by considering the multiple, and often overlapping health effects of noise pollution. For example, Eastern Neighborhood HIA evaluation of noise pollution stemming from housing developments in the neighborhoods showed how excess noise is directly linked to sleep deprivation, which contributes to added stress leading to adverse impacts of family and interpersonal relationships (social health) while also leading to physical health impacts such as triggering asthma, and compromising the immune system (Farhang & Bhatia, 2007). Their outlining the cascading effects of noise pollution was not meant to imply that developers are directly responsible for these outcomes, but instead to show that these developments must be examined for how they can directly and indirectly influence a range of health outcomes (Corburn, 2009).

Almost all urban development has some adverse impact on air quality including localized particulate pollution to regional ozone leading to asthma exacerbation, chronic lung disease, heart attacks, ischemic heart disease, and major cardiovascular disease (Ito et al, 2013). Evaluating air quality is particularly relevant to Upham's Corner because local concentrations of hazardous air pollutants tend to be located in low-income communities of color (Payne-Sturges et al, 2004).

The HIA would both evaluate how proposed developments might combine with other facilities, along with mobile and vehicular sources of pollution in the same area to create a collective air quality burden on the surrounding community (Corburn, 2009). For example, the

ENCHIA found that the developments it looked at would increase transit and auto traffic and then assessed that there would be a cumulative burden of multiple pollutants in the area while these pollutants would combine with noise pollution, creating a health burden on the current population (Farhang & Bhatia, 2007).

Conducting a HIA would provide a comprehensive evaluation of the environmental impacts of future developments recommended by the Station Area Plan, addressing a major health related gap in the assessment, while also showing how these environmental impacts are connected to more indirect determinants of health, including gentrification and public space.

Gentrification & Displacement

While one of the major goals outlined by the Station Area Plan is to minimize displacement of current residents (Station Area Plan, 2014), it fails to mention how issues of gentrification surrounding the transit line may impact the community. Because gentrification can have a negative impact on community health, it is a gap that must be addressed. This is not to suggest that the report is not concerned with issues of displacement. When discussing developments of affordable housing, the report directly states that new residential units should be created to keep current residents in Upham's Corner to prevent displacement (Station Area Plan, 2014). Rather, this omission is indicative of the report justifiably promoting development without displacement, without properly assessing the real concerns of gentrification.

Because I have identified Upham's Corner to be in the early stages of gentrification, it is important that a report both looks how it may occur, along with a mitigation plan. The proposed HIA would take a comprehensive look at both gentrification and development without displacement analyzing its health effects, and how the chances of them occurring will be affected

by future TOD. In the MAPC report analyzing TOD in Roxbury and Mission Hill, they outline how gentrification may lead to the displacement of current residents from their current housing or prevent them from moving to another home in the area (Ito et al, 2013). In doing so, they are able to both demonstrate how the identified TOD may lead to the physical displacement of current residents, while also advocating for TOD focused on affordable housing.

Regarding social cohesion, the Station Area Plan looks almost exclusively at Arts & Cultural improvements as a way to promote social connectivity, specifically because of how connected Upham's Corner is to the arts (Station Area Plan, 2014; Lobenstine, 2014). One of the strongest sections of the report is it reinforcing Upham's Corner as an arts and cultural destination by advocating both advocating for the community's historic Strand Theater for it to become the hub of cultural activity on the main street, while also recommending expanding public art programs in the area (Station Area Plan, 2014).

However, while Arts & Culture are focal points of the report their positive effects of promoting community belongingness are implicit. For example, when talking about the Strand Theater, the report indicates that the theater is a unique cultural catalyst that could be expanded to bring more positive benefits to residents as a center point for community activity (Station Area Plan, 2014). Though it indicates that such investments in the arts may have potential benefits for the community, it does not explicitly indicate how these investments could promote residents feeling connected both to each other and to place through culture.

A HIA focused specifically on the community concerns of Upham's Corner would fill the gaps left by the Station Area Plan. When examining the potential impacts of TOD on social cohesion, the MAPC HIA notes that arts and culture are a key part to building more socially cohesive neighborhoods (Ito et al, 2013) as it has been linked to public safety initiatives and

economic development efforts (The Urban Institute, 2013; Weitz, 1996 via Ito et al, 2013). In measuring elements of social cohesion, the report both demonstrated how the analyzed TOD would promote social cohesion, while also echoed the empirical evidence suggesting that displacement would likely have a strong negative impact on social cohesion for the indigenous residents of the community (Ito et al, 2013).

So, while the Station Area Plan correctly offers recommendations for developments that would mitigate displacement, it falls short in several key areas including its failure to mention gentrification as an issue for the area, along with minimal and only implicit analysis of social cohesion. A HIA of TOD around Upham's Corner station would support the recommendations for affordable housing and renewed investments in the arts offered by the Station Area Plan in linking them with health benefits, while also revealing how the area may be at risk of gentrification, which is a considerable gap in the report.

Built Environment

Recent studies have found that the built environment plays a major role in health disparities within low income communities stemming from design features, land use mix, quality of sidewalks and footpaths, and the presence of other people who are physically active (Frumkin et al 2004), all of which relate to the production of public green space. Access to parks, and other open spaces may protect against poor mental health outcomes (Parra et al 2010; Sugiyama et al 2008) by encouraging socialization, which fosters greater social support (Ito et al, 2013). Specifically, the University of Illinois-Champaign studied the correlation between mental health and public spaces and found that such areas relieved mental fatigue by decreasing

inattentiveness, irritability, and poor impulse control, each of which has been linked to aggression (UIC via American Planning Association, 2003).

Though the Station Area Plan does not extensively draw upon the link between health and public space, it is still one of the focal points of the report. The plan first explicitly identifies the lack of publicly accessible open space as an area that needs to be addressed in indicating that while Boston has approximately 15% of its total land area as publicly accessible space, Upham's Corner only contains 3.9% publicly accessible open space (Station Area Plan, 2014). The report then goes on to recommend strategically converting vacant spaces into amenities like playgrounds, urban farms, and public gardens, while also promoting the Fairmount Greenway Concept Plan which looks to connect Upham's Corner to open spaces like the Harborwalk and Franklin park as well as other spaces along the Fairmount line (Station Area Plan, 2014; Fairmount Greenway, 2011).

In this case, a HIA would benefit the findings and assessments of the Station Area Plan by providing evidence rooted in public health literature demonstrating how potential public space developments would promote pathways to health such as physical activity. For example, the MAPC HIA analyzed how the TOD projects analyzed would change the amount of green space in the area. By first displaying the existing conditions of the study area it compared the minimal amount of available green space without the projects to the proposals. It found that the project planned to increase the amount of available green space, concluding that the additions of the analyzed developments would have positive health outcomes (Ito et al, 2013). In the case of an Upham's Corner HIA, it could potentially build off of the proposed public space recommendations of the Station Area Plan, and offer health-oriented evidence for developing vacant public space.

One major concern that is directly associated with public space is public safety whether it be real or perceived (Foster et al 2010; Liska et al, 1988 via Ito et al, 2013)..   The polarizing issue of safety in Upham's Corner represents a critical divide between people in the community and those who live outside of it. When interviewed about the perception of crime in Upham's Corner, editor of the Dorchester Reporter Bill Forry says:

> "Yes, I do. I think, actually, that this particular neighborhood is pretty safe. There's been some incidents through the years that were high-profile and gave it a bad name. But overall it's a strong neighborhood. It's a mixed-income neighborhood. There are many, as you can tell, chain stores here. There's a CVS, there's a Foot Locker, and different investment that you can tell corporate America is not completely convinced this place is not worth their time" (Forry, 2013).

In this sense, developed public spaces will play a significant roll in making Upham's Corner seem safer by creating positive spaces where people can go and keep a positive presence out in the community, in turn discouraging violence (Kuo & Sullivan, 2001; Dannenberg et al, 2003). While some may be concerned that these spaces may actually harbor crime and illegal activity, evidence has been brought forth including by the Human-Environment Research Lab of University of Illinois-Campaign (UIC) that when adjacent to residential areas, green spaces create neighborhoods with fewer violent and property crimes and where neighbors tend to support and protect one another (UIC via APA, 2003). Further, the study found that that these public spaces have mental health benefits by relieving mental fatigue, and reducing aggression.

Finally, while empty parcels/lots are generally viewed as more frightening to residents, and are more crime prone areas, engaged public spaces influencing community cohesion and protecting the neighborhood from crime. As an extreme example, Eric Klinenberg's "Heat Wave" recounts Chicago's deadly 1995 heat wave and specifically compared two adjacent communities one predominately African American, the other mostly Mexican with very different mortality rates in part due to the amount of public space compared to the amount of abandoned

space. While the African American community North Lawndale had depleted infrastructure, and a plethora of abandoned lots, the predominately Mexican community of Little Village has a rejuvenated business district with very little commercial vacancy which is a key factor in the differences of violence in the two communities (Klinenberg, 2002).

Though public safety and public space are directly linked, the Station Area Plan only minimally incorporates safety into its analysis. The most comprehensive assessment of public safety found in the report reads as follows. "If negative quality of life issues persist, other positive aspects of world-class amenities are ineffective. Public safety was a major issue raised…must be addressed with the community to create the appropriate context for the other positive elements to flourish" (Station Area Plan, 2014). Again the report addresses crime implicitly by offering recommendations for improved public space, and well-lit and well-maintained walkable spaces, both of which can deter crime (Kuo & Sullivan, 2001; Dannenberg et al, 2003), but sparsely talks specifically about crime as an issue.

In this case the HIA can leverage the comprehensive public space assessment done in the Station Area Plan, and use it to introduce an approach to reduce crime opportunities. Such an approach, known as Crime Prevention Through Environmental Design (CPTED), is made up of four overlapping strategies (National Crime Prevention Council 2003; Mair & Mair 2003 via Ito et al, 2013), which are (Ito et al, 2013):

1. **Natural Surveillance**: criminals do not like to be observed, therefore, more eyes on the street keeps potential offenders under observation
2. **Natural Access Control**: relies on physical elements such as doors, fences and shrubs to keep unauthorized persons out of a particular place
3. **Territorial Reinforcement**: marking clear boundaries between public and private areas helps people to take ownership of and naturally protect territories that they feel are their own
4. **Maintenance and Management**: related to one's sense of 'pride of place' because the more dilapidated a place is, the more likely it is to attract unwanted activities (Natural Crime Prevention Council, 2003)

The Station Area Plan touches upon most of these categories indirectly by offering proposals that will increase foot traffic (natural surveillance), recommending enhancing specific developments with new lighting and landscaping (natural access control), and concluding that improvements expand a sense of pride in the community (maintenance and management) (Station Area Plan, 2014). So, conducting a HIA would be the next step in thoroughly assessing potential developments and recommending them based off of public health data that shows using these CPTED strategies have led to reductions in crime (Marzbali et al, 2012; Mair & Mair, 2003; Dannenberg et al, 2003), encouraging physical activity and a sense of security (Foster et al, 2010; Stafford et al, 2007).

The purpose of conducting a HIA of potential future TOD in Upham's Corner is not to suggest that the Station Area Plan was not written with the community's interest in mind. Rather, the assessment would provide another social-oriented set of assessment work and planning recommendations that will fill in the health-related gaps found in the Station Area Plan (Brennan et al, 2012). Further, the HIA would be able to more properly address the gap in content related to potential gentrification in the area. With both the Station Area Plan outlining a community vision for growth in the neighborhood, along with a potential HIA that would make recommendations for healthy growth, these reports would act as guidelines for how to ensure development without displacement in Upham's Corner.

Recommendation of Healthy Development Measurement Tool

While the use of a HIA will highlight both the negative and positive health impacts of TOD related to Upham's Corner Station not addressed by the SAP, the assessment alone is not enough to move the vision for a healthy Upham's Corner forward. That is, there is no way to

measure whether these positive health outcomes are being encouraged by development, or if

developments are leading to negative health outcomes. To make this distinction clear, I

recommend the HIA team create a Healthy Development Measurement Tool (HDMT) that is

specific to the Fairmount Corridor that can be used to evaluate future developments.

The HDMT was created by the Eastern Neighborhoods Community Health Impact

Assessment (ENCHIA), and has been successfully used to make policy recommendations, and

inform developments in the community (Farhang et al, 2008). Rooted in the group's healthy city

vision, and community health objectives, this tool was used to systemically apply a community

health 'lens' to planning as a way to help achieve their social, environmental, economic, and

equity priorities (Farhang et al, 2008). To do this, the HDMT introduced the idea of a

"development target," which provided projects and plans a benchmark for contributing to a

healthy community environment (Corburn, 2009).

The application of the HDMT to plans, projects or policies uses health indicators based

off of the community health objectives to answer three general questions:

1. On the basis of community health indicators and other data on existing conditions, what
   are the health needs of a neighborhood or place;
2. Does a plan or project proposal meet the health needs of the neighborhood, as reflected in
   the HDMT objectives; and
3. What recommendations for planning policies, implementing actions, or project design
   would advance community health objectives?

An example of the ENCHIA team applying the HDMT is their evaluation of the

Executive Park Subarea Plan. The plan proposed to build 2800 units of residential housing on a

site used for office space. However, the assessment was requested because of concerns that the

proposed project would have adverse effects on surrounding neighborhoods and not provide

adequate community services and infrastructure to new residents (Farhang et al, 2008). The plan

examined each of the indicators related to the healthy objectives and came up with 134

recommendations to improve the plan and mitigate health impacts (Farhang et al, 2008). From there, both the San Francisco Department of Public Health and SF planning met together to apply the recommendations to the plan itself. (Farhang et al, 2008). The Planning staff agreed to incorporate many of the recommendations into the next version of the area plan, and revised other recommendations to be more feasible (Farhang, 2008).

The application of the HDMT to the Executive Park Subarea Plan produced implemented recommendations that reflected the specific health objectives of the community, acting as a technology of visibility and accountability since their indicators and monitoring aimed to make visible community values (Corburn, 2009). It went beyond looking at developments strictly from a planning perspective, and demonstrated how health is embedded in "social practices, identities, norms, conventions, discourses, instruments, and institutions" (Jasanoff, 2004: 3). In doing so, it provided a health perspective to the planning process.

Applying HDMT to Upham's Corner

When looking at how Upham's Corner could use the HDMT, we must first make sure that it is specific to the issues within the community. Though the scope of this report cannot specifically outline the neighborhood's healthy city vision or community health objectives (which would be completed by the HIA), the HDMT would look to measure how developments stemming from the Fairmount Line will affect health analyzing impacts on environmental health, gentrification, and the built environment.

One example we can look at is the city owned Maxwell building Upham's Corner. The property was designated a key site for development by the Station Area Plan as it is directly adjacent to the rail platform and condition as an underused property next to a residential area

(Station Area Plan, 2014).   At the time of this report, Boston's Department of Neighborhood

Development has put out a Request for Proposals (RFP) for the property, and has received three

bids. The first was put forth by the Dorchester Bay Economic Development Corporation and

looks to use the site for affordable housing, the second by Corcoran Associates looking to build a

mix of affordable and market rate housing, while the Weld Management Co. proposal looks to

turn the site into a 40,000 square foot light industrial building with 40 parking spots (Dumcius,

2014).

        Turning this parcel into affordable housing for the community instead of an office space

would bring substantial benefits to the low and moderate income households that make up the

majority of Upham's Corner. According to a Brookings Institution report, "The combined costs

of commuting and housing make up a larger portion of the household budgets of the working

poor than other households…For households in the lowest one fifth of the income distribution,

spending on housing, transportation and food jumps to 71 cents of every dollar." (Berube et al,

2011). Investing in housing near the Upham's Corner station would link low and moderate

income residents to the main street business district, and could be an effective strategy in

combating poverty in the area.

        While both proposals are strong in theory, the Dorchester Bay plan is both more explicit

in its interest in community development, and also offers a plan that will create affordable

housing next to the station line, further strengthening Upham's Corner against gentrification.

Further, during the RFP presentations earlier this year at the Strand Theater, there was

overwhelming support for the Dorchester Bay proposal. Resident Joceline Fidalgo talked about

how in line Dorchester Bay plan is with the community needs as it, "understands our

neighborhood and their proposal is the only one that seemed to address our needs. I especially

liked the opportunities for homeownership, the affordable rent prices, and their emphasis on

hiring residents, females & minorities. Dorchester Bay is the right choice for us!"

(courbanize.com, 2015).

A HDMT in this case could be used to evaluate the separate plans, promote the one that

more strongly promotes the health needs of the community, while also offering

recommendations to advance the community health objectives. By utilizing potential health

indicators based off of community health objectives, the proposed Upham's Corner HDMT

would look at the differences in the proposals to advocate for the healthier plan, while also

offering improvements that advance the community health goals.   Though a HIA with

community backing is required to create these objectives and indicators, looking at the two

proposals impacts on environmental health, gentrification, and the built environment can show

how the potential HDMT could be put into action.

In regards to environmental health, the Dorchester Bay proposal is seeking to bring in

businesses for the ground floor of their proposal that will not have the high impact of near

constant deliveries, loud production, or noxious odors (Dorchester Bay EDC, 2014). The

proposal indicates that they will not sign leases with businesses that engage in activities such as

heavy machinery production, chemical production, waste management, petroleum

manufacturing, or heavy construction (Dorchester Bay EDC, 2014), all of which as previously

indicated are detrimental to environmental health. On the other hand, the Corcoran proposal

mentions it will cater to low impact businesses (Corcoran Jennison Associates, 2014), but does

not make the same promises Dorchester Bay does.

In analyzing the proposals for issues of gentrification, we there is a large discrepancy

between the two proposals in terms of offered housing. While the Dorchester Bay proposal

offers 92 new units of housing, half of which are either affordable (income range between

$40,000-$54,000) or very affordable ($0-$34,000) (Dorchester Bay EDC, 2014), the Corcoran

proposal only offers 16 affordable units (Corcoran Jennison Associates, 2014). Because a stable

housing stock is one of the keys in preventing displacement (Levy et al, 2006), the Dorchester

Bay plan better promotes community health in regards to gentrification, by offering more space

for residents to stay in the neighborhood, while also having prime access to Upham's Corner

station.

Finally, in looking at the built environment, both proposals look to improve the public

space of the lot. The Corcoran proposal has outlined a parcel of land outside of the apartments

that will be public green space for the use of both residents and other community members

(Corcoran Jennison Associates, 2014). The Dorchester Bay proposal has indicated that it will

offer a similar type of public space, while also creating a public community room where

residents and community members can come together (Dorchester Bay EDC, 2014). In both

cases however, a HDMT would be useful as it could recommend an analysis of air quality occur

while also adding ventilation systems that filter out hazardous emissions from ambient air

(Farhang et al, 2008) because of the proximity of these open spaces both to a main street, and the

rail line itself.

By itself, a HIA centralizes community values, and offers an assessment of proposals

based off of the community's health objectives. However, this is not enough to make sure these

assessments are implemented into the planning process as Upham's Corner has a history of being

made unfulfilled promises (Haas, 2015). Thus, this HDMT would be a tool used to both assess

plans, while also offer a checklist of what needs to be met in order for a project to be deemed

good for community health. This will further encourage planners and public health officials to

work with community members to work towards a healthier neighborhood.

V. Key Findings & Final Remarks

Recommendations

This research offers a solution to filling the identified weaknesses in the Station Area

Plan by showing how a HIA would address the impact of TOD on future gentrification and

displacement, while also highlighting other major health concerns of the community including

environmental health, and public safety. The process of a HIA will bring planners, public health

officials, and residents together to define the healthy neighborhood in the context of Upham's

Corner, as well as identify key health objectives for the community. Finally, through these

definitions, the HIA team will be able to create a HDMT specific to the Fairmount line that can

be used as a checklist to monitor and evaluate TOD along the transit line.

The following recommendations have been identified as pertinent to both the Upham's

Corner community and the city of Boston. These recommendations are based from my findings

stemming from reviews of similar HIA's, interviews with community members, and

recommendations from the Boston Public Health Commission in regards to the usages of HIA's.

This approach offers unique recommendations tailored for the City of Boston, and the Upham's

Corner neighborhood.

Upham's Corner Recommendations

1. **Identify the community organization(s)** invested in the Fairmount Line that will work
   with the community members, and the Boston Public Health Commission, to conduct a
   HIA. Organizations including the Fairmount/Indigo Corridor Collaborative, and the
   Dudley Street Neighborhood Initiative have expressed interest in this process.

2. **Create customized HDMT or other tool,** that can be used to evaluate TOD in Upham's Corner, but that will also be specific to developments along the Fairmount Line. This tool would allow all city agencies and community organizations to use the same, facilitating communication, and standardizing evaluation criteria. Further, these agencies and organizations would all ask the same questions and using the same standards and thresholds while evaluating the same issues. These questions created by the HIA team would be specific to the community's concerns about developments leading to gentrification and displacement.

City of Boston Recommendations

1. **Expand the HIA work group** outside of the Boston Public Health Commission to include other disciplines or create an additional work group to support an interdisciplinary approach. This involves identifying departments within the city that would benefit from being a part of the work group, as well as incorporating community groups such as the Boston non-profits and community organizations to ensure understanding and sharing about best practices, tools and information (BPHC, 2011).

2. **Incorporate more health language** in master plans or request for proposals (RFP), and/or the detailed design phase that supports positive health outcomes (BPHC, 2011). One example from another city is the Denver Community Planning and Development RFP, which includes, "Neighborhood Revitalization and Incorporation of Health, Art, and Food Access" (Denver Housing Authority, 2011). This particular RFP looks to attract a proposal focused on developments around a station area that will promote the public health of the community.

These recommendations specific both to Upham's Corner prepare for both short term and long term uses of HIA's, and promote incorporating health into the planning process. While the recommendations for Upham's Corner are specific to the proposed HIA addressing future TOD stemming from the Fairmount Line, the recommendations for the City look to build a foundation for future HIA's, by promoting the process throughout city departments, while also working to utilize health language in all conversations about planning.

Conclusion

When it comes to health, neighborhood matters (Morenoff & Lynch, 2004). The physical, social, and economic environments that constitute a neighborhood all serve as pathways of embodiment. Though increased investments in the Fairmount/Indigo line have the potential to positively affect health outcomes by connecting residents to more social, and economic opportunities (Litman, 2015), it may also attract gentrification, which in turn could drive out indigenous residents.

As a neighborhood in the early stages of gentrification based off of a high amount of renters, increases in median housing prices, and public capital investments, there is no clear conclusion for Upham's Corner. While the Station Area Plan provided an assessment of potential changes in the community, along with recommendations for future improvements rooted in the community vision, it did not mention gentrification as a potential side effect of development, while only minimally addressing displacement. A HIA would both address gentrification as a potential issue linked with TOD, and reinforce the Station Area Plan recommendations with health-oriented data. Finally, by offering a set of metrics for healthy TOD as the deliverables of the HIA, the assessment would both provide a way to monitor future developments in Upham's Corner, while also providing a framework from which communities across the Fairmount Corridor can build off of. In doing so, it will bring the communities of the Fairmount Corridor closer to their ultimate goal of development without displacement.

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