Supporting Long-Term Resident Health in Campus-Adjacent Neighborhoods

How the Potential Health Impacts of Off-Campus Student Housing May Be Managed to Promote Health

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Abstract

Housing environments, both individual residences and neighborhood settings, impact health. Negative impacts of housing disproportionately burden vulnerable populations, and thereby propagate health disparities. Housing conditions, and their associated health outcomes, can be altered by a multitude of factors. This project seeks to determine how off-campus university student housing affects housing conditions for long-term residents in ways that impact health, and how these effects can be altered to support health for long-term residents.

This project examines the following questions: What are the potential community health impacts of off-campus university student housing in campus-adjacent neighborhoods? What strategies may be implemented to optimize health for residents of campus-adjacent neighborhoods? The goal of this project is to shed light on the potential for off-campus student housing to be health-supportive for all members of university-adjacent communities, particularly long-term residents.

Built environments, including housing, impact individual and community health. Off-campus student housing may impact community health by altering housing conditions to which residents are exposed. The effects of off-campus student housing on community health may be positive or negative.

This project examines these relationships in order to inform strategies that can shape off-campus student housing to have a more positive impact on community health. Stakeholders in the impacts of off-campus student housing on community health include universities, local governments, private businesses, and residents of university campus-adjacent neighborhoods. Each of these stakeholders has the potential to alter the conditions of off-campus student housing to promote positive community health outcomes.

To answer the research questions, I conducted a comprehensive literature review of housing-related health impact assessments to identify relevant health pathways, a review of experiences and strategies in off-campus student housing in 11 campus-adjacent neighborhoods, and in-depth case studies of student housing in four campus-adjacent neighborhoods. These cases studies were based on program document analysis and interviews with multiple stakeholders in each community.

The project scope was based on the experiences of the neighborhoods adjacent to the University of Rochester. Six housing were identified in Rochester neighborhoods and used as a framework for analysis of the four case studies: housing diversity, housing quality, access to health supportive resources, nuisance issues (noise, parking, traffic, etc.), crime and safety concerns, and social capital and resident empowerment.

The research findings indicate that there are unique opportunities for stakeholders in campus-adjacent neighborhoods, not only to mitigate the effects of off-campus student housing on community health, but also to manage its impacts to support health for long-term residents. Many universities have already developed collaborative, proactive strategies to address these issues. Analysis of the case studies suggests there is significant potential for further development, implementation, and evaluation of such approaches by university, city, community, and private business stakeholders in campus-adjacent neighborhoods, and that these actions would be beneficial to all involved parties.
I. Introduction

Individual health is significantly affected by environmental determinants. Air quality, water quality, temperature exposure, access to health-supportive resources including nutrition and medical care, and safety from physical injury are all determinants of health to which an individual is continuously exposed. The prevalence and magnitude of these determinants may have either positive or negative effects on individual (and, by extension, community) health.

The availability and quality of housing is a principal environmental determinant of health outcomes (Krieger, 2002). Housing is the environment in which individuals typically spend the majority of their time, and housing is usually the greatest expenditure for American households (Robert Wood Johnson Foundation, 2011). Three elements of housing can impact health: housing quality, neighborhood quality, and housing affordability (Robert Wood Johnson Foundation, 2011). Housing quality pertains to environmental exposures to individuals within their homes, including poor air quality and physical hazards. Neighborhood quality pertains to environmental exposures to individuals within their neighborhood, including crime and traffic. Housing affordability pertains to the cost of quality housing options and the outcomes of those costs, including smaller budgets for other resources including nutrition and medical care, or opting for low-quality housing options that are less expensive (Robert Wood Johnson Foundation, 2011). Housing quality, neighborhood quality, and housing affordability each may have a positive or negative impact on individual health. For example, if a house has poor air quality (mold spores, carbon monoxide, radon, particulates, etc.), occupants face greater risk of respiratory problems. Conversely, high neighborhood quality supports individual health by providing access to resources such as nutrition and green spaces. Affordable high quality housing can have a significant positive impact on individual health by providing a safe, health-supportive environment.

The health of certain sectors of the American population is negatively impacted by lack of access to affordable, high-quality housing in health-supportive neighborhoods. Vulnerable populations, including low-income persons, minorities, children and the elderly, are particularly susceptible to negative health outcomes from housing conditions. Since they have less control over their housing conditions, members of these populations are more likely to be exposed to negative housing-related health determinants. They are also more likely to have more significant negative outcomes from housing-related health determinants (Rauh, 2008). For example, the housing options of an elderly individual are limited by their physical capabilities (single level, accessible shower), and they are also more likely to be seriously injured in housing that is inappropriate for their needs (for example if they fall in the shower). Thus, the negative health outcomes of inadequate access to quality housing often reinforce health disparities in wider populations.

Off-campus student housing can be a driver of changes in housing conditions that impact resident health. For example, off-campus student populations are associated with nuisance issues that reduce housing quality by contributing noise and stress to housing environments. Off-campus student housing may impact housing stock by incentivizing landlords to buy up properties for student rental, reducing housing options for long-term residents. Changes in off-campus student housing that impact neighborhood housing conditions may be caused by growth in the size of the student body, changes in on-campus university policies, shifts in student preference, local policy changes (for example limits on the number of unrelated adults per
household), or economic forces. The impacts of changes in off-campus student housing can thus affect community health.

The key questions of this research project are,

1) *How does off-campus university housing impact community health?*
2) *What strategies are effective in maximizing positive health outcomes and mitigating negative health outcomes of these impacts?*
3) *What are constructive processes and stakeholder (government/community/university) roles in promoting such programs?*

I sought to answer these questions by analyzing experiences in four benchmark university communities, focusing on determinants of health which have been identified in the neighborhoods adjacent to the University of Rochester to be affected by changes in student housing patterns. The findings of this research provide insights into university, city, and resident-led strategies which may improve health outcomes related to OCSH in CANs.
II. Background

Housing and Health

The potential impact of housing on health is multi-faceted and complex. The physical and social health outcomes associated with housing-related health determinants may be produced through numerous pathways, and they may influence each other. For example, parents who cannot afford health-supportive housing may face budget trade-offs that limit access to adequate nutrition for their children, resulting in chronic disease and delayed development. The negative experiences of these children may produce stress and mental health outcomes. The family may also be less likely to invest economically or socially in their community, decreasing social capital, an important determinant of community health (Kreuter, 2002). The impacts of housing on health were identified through a comprehensive review of health impact assessments in the United States; this process is discussed in detail in the Approach section.

Housing-related health determinants can be categorized into 3 broad elements: housing diversity, housing quality, and neighborhood quality. Table 1 describes the potential impacts of these housing characteristics on health outcomes. Due to the complex association between housing and health, there is overlap between these fields. Reduced housing diversity is associated with reduced housing quality and neighborhood quality, for example, because high quality housing conditions become less accessible.

Table 1: Potential impacts of housing conditions on health\textsuperscript{1,2,3,4}

<table>
<thead>
<tr>
<th><strong>Housing Diversity</strong> – neighborhoods present a set of housing options that is diverse in affordability and accessibility to meet the needs of residents, especially vulnerable populations (low-income, the elderly).</th>
<th><strong>Potential health outcomes of inadequate housing diversity</strong></th>
</tr>
</thead>
</table>
| Budget trade-offs for essential health-supportive resources, including food, energy, health services, and child care | • Food insecurity, malnutrition  
• Morbidity and mortality resulting from energy disconnection  
• Avoidable negative health outcomes due to forgoing medical treatment  
• Negative impact on child development and education |
| Overcrowding | • Communicable disease (ex. tuberculosis)  
• Noise  
  ○ Stress, anxiety  
  ○ Cognitive function and development  
• Fire risk  
  ○ Physical injury |

\textsuperscript{1} (Souders, 2013)  
\textsuperscript{2} (UCLA)  
\textsuperscript{3} (Krieger et. al, 2002)  
\textsuperscript{4} (Lubell et. al, 2015)
<table>
<thead>
<tr>
<th>Housing Quality</th>
<th>Opting for lower cost substandard housing</th>
<th>Moving to lower cost areas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(see Housing Quality for associated outcomes)</td>
<td>(see Neighborhood Quality for associated outcomes)</td>
</tr>
</tbody>
</table>

**Housing instability**  
- Mental health  
- Loss of supportive social networks  
  - Reduced social capital  
  - Reduced access to health-supportive resources from social networks  
- Job loss  
  - Reduced resources resulting in budget trade-offs for housing and health-supportive resources  
- Difficult school transitions  
  - Cognitive development  
- Homelessness  
  - Safety  
  - Mental health  
  - Infectious disease  

**Need to obtain second jobs**  
- Loss in family and leisure time  
  - Mental health and well-being  

**Reduced home ownership**  
- Home ownership increases in “stakeholder mentality,” when residents exhibit behaviors that promote personal stability and commitments to family, their property, and the community that they reside in.  
- Homeowners have been found to be more likely than renters or landlords to maintain and repair housing.

### Potential health outcomes of low-quality housing

<table>
<thead>
<tr>
<th>Poor indoor air quality</th>
<th>Asthma, respiratory disease</th>
</tr>
</thead>
</table>
| Insufficient heating and ventilation | Exposure to heat and cold  
  - Exposure to air pollutants |
| Lead exposure | Lead poisoning |
| Rodent and pest infestation | Rashes, bites  
  - Vector-borne diseases |
| Physical hazards, including exposed heating sources, wiring, unprotected windows | Physical injury from burns or falls |
| Excessive noise | Stress, anxiety  
  - Cognitive function and development |
| Low-quality building materials | Lead*  
  - Asbestos*  
  - Pesticide residues*  
  - Rate of deterioration, need for repair |

*impact both construction workers and residents*
Residents do not feel empowered - residents should be empowered to implement change in their living environments

- Residents do have a sense of control
  - Mental health
- Residents do not take pride in community
  - Social capital
- Residents do not contribute to/direct health-supportive change
  - Health-supportive changes

**Neighborhood Quality** – the area in which housing is located is health-supportive. Health-supportive areas are safe, do not have nuisances that negatively affect health, and have access to health-supportive resources including nutrition, medical care, education, and social support.

**Potential health outcomes of housing locations that do not support health**

| Environmental issues: air pollution, noise, and traffic | • Respiratory disease  
| | • Mental health  
| | • Physical injury  
| Insufficient access to services, assets and resources (nutrition, medical care, schools, libraries, public transportation) | • Food security  
| | • Physical activity  
| | • Health-care  
| | • Social capital  
| Insufficient access to employment opportunities | • Mental health  
| | • Reduced resources resulting in budget trade-offs for housing and health-supportive resources  
| Dependence on motor vehicles due to insufficient access to public transportation and/or local employment opportunities | • Traffic safety  
| | • Physical injury  
| | • Promotes pedestrian travel, physical activity  
| | - Risks of obesity, diabetes, heart disease, high blood pressure  
| | • Air quality  
| | • Respiratory disease  
| Crime and violence | • Stress, mental health  
| | • Physical injury  
| | • Reduced physical activity  
| Decline in property values | • Enforced cycle of poverty

**Equity**

The negative impacts of housing characteristics on health place a disproportionate burden on vulnerable populations, including minorities, low-income families, children, and the elderly (Aday, 2001). Members of these populations are both more likely to be exposed to negative housing-related health determinants and to have more significant negative outcomes from these health determinants (Shi, 2010). For example, a low-income family is less likely to be able to afford quality housing and may also be unable to afford medical treatment to mitigate the negative health outcomes of their housing conditions. Similarly, an elderly individual is less likely to acquire housing that is suitable to their physical condition and may also be more vulnerable to the risks of physical hazards in their housing. Through these pathways, housing-related decisions and projects can augment or reduce health disparities faced by various vulnerable populations.
Due to this disproportionate burden, this research pays particular attention to housing conditions that may impact the health of vulnerable populations, including low-income, minority, and elderly residents.

Terms and Definitions

**Off-Campus Student Housing (OCSH)**

This project defines off-campus student housing (OCSH) as all residences of undergraduate university students in campus-adjacent neighborhoods that do not qualify as on-campus housing (and so do not fall under university administrative control). Properties can be university-owned.

**Campus-Adjacent Neighborhoods (CANs)**

Campus-adjacent neighborhoods (CANs) are neighborhoods adjacent to college or university campuses. This report focuses on CANs that host off-campus student housing, whose residents include students and long-term home renters and owners.

**Health Impact Assessment**

Health Impact Assessment (HIA) is a process to evaluate potential health effects of a plan, project, or policy before it is built or implemented. HIA’s can provide recommendations to increase positive health outcomes and minimize adverse health outcomes. This research used findings from HIA’s to identify the potential impacts of housing on health. HIA’s were chosen for this review because they represent a synthesis of existing literature and community experiences that provide insight into health pathways.

**Health determinant**

A health determinant is an environmental, social, or economic condition that may impact health outcomes of individuals and communities.

Off-Campus Student Housing and Health

Changes in OCSH may alter housing characteristics for long-term residents. Changes in housing characteristics, as described above, have implications for the prevalence and magnitude of housing-related health outcomes in a community.

Several characteristics make OCSH, and its associated health impacts, unique. OCSH is typically composed of individual rental units intended for unrelated adults, rather than single-family homes. Residences with multiple unrelated adults have been associated with increased nuisance issues and parking congestion resulting from multiple vehicle owners. Student tenants are especially associated with nuisance issues due to the disparities in their sleep schedules from other residents, and their socializing behaviors. The nature of student tenants also makes them more susceptible to poor housing quality; student tenants generally lack homeownership experience, and they are transient. As a result, they may not be aware of their rights to quality housing, and may not be invested in maintenance of the property. Absentee landlords may be drawn to the student housing market as it presents a low-maintenance tenant option. Poor housing quality can result from these characteristics.
Based on review of case study school experiences, the following were identified from the full list of housing-related determinants as housing characteristics which are most likely to be altered by changes in OCSH and could impact long-term resident health:

- housing diversity,
- housing quality,
- nuisance issues,
- crime and safety,
- access to health-supportive services, and
- social capital and resident empowerment.

These characteristics were consistently identified as areas of concern in CANs, and have also been associated in existing literature with health outcomes that are significant in both magnitude (affecting a wide population) and impact (resulting in health outcomes that have a consequential effect on quality of life). Definitions and the health impacts of these determinants are detailed in conceptual framework.

It is important to note that CANs are composed of both long-term residents and students, and the health of students may also be affected by changes in OCSH conditions. However, this report focuses on the potential impacts to long-term resident health. This is firstly because study findings suggest that the impacts of OCSH on student health will be different from the impact of OCSH on long-term resident health; for example, student renters are transient and therefore are unlikely to face housing displacement from increased rental rates, as long-term residents are. Furthermore, students have an inherent champion in their university, while community residents are persistently underrepresented; long-term residents typically do not have the organization or resources that characterize other stakeholders, and so their interests can be lost. This project seeks to ensure that the interests of long-term residents are considered by addressing long-term resident health.
III. Approach

Determination of Research Questions

This project was inspired by a gap in research on the potential impacts of OCSH on individual and community health, despite established relationships between housing conditions and health outcomes. My goal was to provide findings that would allow stakeholders in campus-adjacent residential neighborhoods to manage OCSH to support the health of long-term residents. To accomplish this goal, I sought to determine (1) the pathways by which OCSH can affect health and (2) strategies through which these effects may be mitigated to support health.

Development of Conceptual Framework

The conceptual framework for this project was based on the conditions and perspectives of OCSH in neighborhoods adjacent to the University of Rochester. I used the neighborhoods adjacent to the University of Rochester to define the scope of this project because I am a student at the University and a resident of one of its adjacent neighborhoods. Information on the potential impacts of OCSH on health in neighborhoods adjacent to the University of Rochester were accessible to me at the beginning of this project, allowing me to establish a foundation for data collection in other CANs. I also have a personal interest in my findings being relevant to neighborhoods adjacent to the University of Rochester, so that they may support health.
promotion in my community. The fitness of the conceptual framework was confirmed through the case studies.

**Identification of Health Determinants Related to OCSH**

To identify potential health determinants related to housing, I began the project with a comprehensive review of health impact assessments (HIAs) related to housing policy and practice in the United States (Souders, 2013). HIAs are processes that analyze the potential effects of proposed plans, policies, or projects on health, often providing recommendations for mitigating negative effects and promoting positive health outcomes. HIAs, as opposed to primary literature, were chosen as a data source as they represent a synthesis of existing literature and experiences that provide insight into health pathways. HIAs also provide examples of specific actions that can be taken to mitigate negative health impacts.

A total of 80 HIAs were reviewed for this report; the complete list of these HIAs, and access information, is available in Appendix XX. HIAs were obtained from two comprehensive databases of HIAs conducted in the United States: the directory of both complete and current Health Impact Assessments maintained by the Health Impact Project (http://www.healthimpactproject.org/resources/reports) and the UCLA Health Impact Assessment Clearinghouse (http://www.hiaguide.org/), a product of the UCLA-HIA Project. Relevant HIA reports were identified through two separate searches, one of HIAs categorized in “housing” and another of HIAs categorized in the “built environment” sector. The list of HIAs distinguished through these databases was cross-referenced with the list of housing-related HIAs in the Pew Database and results from the search “HIA/all levels/housing/United States” in the HIA Gateway database maintained by Public Health England (http://www.apho.org.uk/default.aspx?RID=44538) to ensure that all complete HIAs relevant to housing policy and practice were included in the review. Searches of “Health Impact Assessment housing United States” in Google and PubMed were also completed to confirm that relevant reports were not overlooked.

When possible, components of the HIAs identified in the literature review included the following elements:

- Who undertook the study, and the relationship between the HIA team and the housing decision-makers, if ascertainable from the HIA report;
- Source of project funding;
- Housing policy or practice being reviewed;
- Health determinants and health outcomes addressed;
- Analytic methods used;
- Data sources used;
- Means of community engagement (surveys, focus groups);
- Major findings of the report;
- Recommendations;
- Dissemination methods;
- Monitoring and evaluation plans;
- Outcomes of the HIA;
- Equity considerations.

The literature review also included a survey of data sources and analytic methods mentioned in the reviewed HIAs, including the Sustainable Communities Index, a system
produced by the San Francisco Department of Public Health of methods, data sources, and resources to translate health indicators into planning and policy decisions.

From this review I obtained a complete list of housing-related health determinants identified through HIAs. Because the research question of this project is founded in the conditions related to off-campus housing at the University of Rochester, I used observations and document analysis of the neighborhoods surrounding the University of Rochester to identify six housing-related health determinants (housing diversity, housing stability, nuisance complaints, crime and safety, access to health-supportive resources, and social capital and resident empowerment) related to off-campus housing which may impact health in the neighborhoods adjacent to the University of Rochester. These determinants are explicated in the Conceptual Framework. The appropriateness of these determinants was verified through interviews with key informants involved in University Rochester off-campus housing and community relations. I created a pathway diagram to illustrate the potential effects of these six off-campus housing characteristics on health (Figure 2).

Identification of Stakeholder Roles and Interests

Stakeholder roles and interests in the neighborhoods adjacent to the University of Rochester were identified through interviews with the University of Rochester Office of Residential Life, the University of Rochester Office of Community Relations and Government Affairs, and a member of the Rochester community who is actively involved in health-supportive efforts in the Rochester area (Figure 3). Findings were corroborated by local news publications.

Data Collection

Survey of Benchmark Institutions

This project examined the experiences at 11 “benchmark schools” to provide insight into trends and potential interventions related to the impact of OCSH on health. Because the research questions for this project are based on the neighborhoods adjacent to the University of Rochester, the review examined neighborhoods that are adjacent to schools that are typically used as benchmarks for the University of Rochester; nine of the benchmark schools for this project were selected based on an existing list of benchmark schools which has been used by the University of Rochester Office of Government Relations and Community Affairs. Two schools were added based on positive reviews of their community relations programs. A complete list of schools is available in Table 2.

For each of the 11 benchmark schools, I reviewed the university websites on off-campus housing and community relations. I identified six schools from the list that had strong initiatives reducing the negative impacts of OCSH on community health; for these schools I conducted an interview with a University employee who is involved in off-campus housing and/or community relations. Topics of the interviews included perceptions of prevalence and magnitude of the six health-determinants of interest, identified successful strategies for improving health outcomes of the six determinants, and biggest challenges to maximizing community health. A list of sample survey questions is available in Appendix I. A complete list of interviewees is available in Table 3.
Table 2: List of CANs included in project review

<table>
<thead>
<tr>
<th>Schools with CANs included in Review</th>
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</thead>
<tbody>
<tr>
<td>* interviewed University contact</td>
</tr>
<tr>
<td>** Case Study – interviewed University contact and City and/or Community contact</td>
</tr>
</tbody>
</table>

University of Rochester **

From benchmark list
- Syracuse University
- Emory University *
- Georgetown University **
- Case Western Reserve University **
- Johns Hopkins University
- Washington University in St. Louis **
- University of Pennsylvania
- Vanderbilt University *
- New York University

Added for best practices
- University of Pittsburgh
- William & Mary *

Individual initiatives included in findings
- University of Maryland
- City of St. Paul, MN

Case Studies

From this initial set of interviews, I identified three schools which merited further investigation based on 1) demonstrated best practices, and 2) potential transferability of findings to the neighborhoods adjacent to the University of Rochester campus. For these schools, I conducted further analytic review, including newspaper articles and partnership organization websites, as well as additional interviews with stakeholders from government and neighborhood representatives in the campus-adjacent neighborhood. I conducted a fourth case study of the University of Rochester in collaboration with the University’s Office of Residential Life and Office of Government and Community Relations to provide information on current trends and mitigating strategies related to off-campus housing in the campus-adjacent neighborhoods.

The case studies were also used to confirm the appropriateness of the housing characteristics considered in the analysis. Stakeholders in each of the case studies identified at least five of the six health determinants as relevant concerns. Case study summaries were developed based on the sources (interviewees, web sites, news articles, etc.) listed for each case, as listed in Section XX. At least one interviewee from each case study reviewed the draft summary for accuracy.

Table 3: List of project interviewees

<table>
<thead>
<tr>
<th>School with CAN</th>
<th>Interviewee</th>
<th>Position</th>
</tr>
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<tbody>
<tr>
<td>University of</td>
<td>Colleen McCarthy</td>
<td>Director, Community Relations, University of</td>
</tr>
<tr>
<td>Location</td>
<td>Name</td>
<td>Position</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Rochester</td>
<td>Colleen McCarthy</td>
<td>Executive Director, Residential Life &amp; Housing Services</td>
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<tr>
<td></td>
<td>Laurel Contomanolis</td>
<td></td>
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<tr>
<td></td>
<td>Robin Doughty</td>
<td>Coordinator of Off-Campus Programs and Administrative Operations</td>
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<td></td>
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<tr>
<td>Rochester University</td>
<td>Jamie Scott</td>
<td>Assistant Director, Office of Community Engagement</td>
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<td></td>
<td>Cory Peterson</td>
<td>Director, Office of Neighborhood Life</td>
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<tr>
<td></td>
<td>Ronald Lewis</td>
<td>Chair of Advisory Neighborhood Commission 2E</td>
</tr>
<tr>
<td>Washington University in St.</td>
<td>Cheryl Adelstein</td>
<td>Director, Community Relations and Local Government Affairs</td>
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<tr>
<td>Louis</td>
<td>William Lowry, Ph.D.</td>
<td>Ames Place resident and former Trustee in Neighborhood Voice program</td>
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<tr>
<td>Case Western Reserve University</td>
<td>Latisha James</td>
<td>Senior Director, Local Government and Community Relations</td>
</tr>
<tr>
<td></td>
<td>Christin Farmer</td>
<td>Greater Circle Living Program Manager, Community Partnerships Coordinator</td>
</tr>
<tr>
<td>Emory University</td>
<td>Betty Willis</td>
<td>Senior Associate Vice President, Government and Community Affairs</td>
</tr>
<tr>
<td>Vanderbilt University</td>
<td>Mary Pat Teague</td>
<td>Associate Director, Community, Neighborhood and Government Relations</td>
</tr>
<tr>
<td>College of William &amp; Mary</td>
<td>Jeremy Martin</td>
<td>Assistant to the President and Provost</td>
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</table>

**Analysis**

For the analysis, I examined the findings from the preliminary benchmark schools and case studies through the project’s conceptual framework. Strategies from two additional CANs (St. Paul, MN and the University of Maryland) were included in the findings as they represented achievements of particularly health-promoting community interventions. From the findings I was able to identify the health effects of off-campus housing in these campus-adjacent neighborhoods, and the strategies in place by stakeholders to mitigate these effects. Strategies identified from the preliminary benchmark schools were consolidated (Table 8), while an in-depth analysis was composed for each of the case studies. Trends and potential interventions in the relationship between off-campus housing and health were extracted from these analyses. My conclusions identify best practices, gaps in practice, and broader lessons learned on optimizing health through off-campus housing in campus-adjacent neighborhoods.
IV. Conceptual Framework

The conceptual framework of this project is based on the demonstrated pathways between housing characteristics and health outcomes. OCSH impacts housing conditions that impact health outcomes. Identifying the specific impacts of OCSH on housing conditions provides insight into the potential impacts of OCSH on health.

Potential Health Impacts of Off-Campus Student Housing

I identified six housing characteristics that may be impacted by changes in OCSH: housing diversity, housing quality, nuisance issues, crime and safety, access to health-supportive resources, and social capital and resident empowerment. The impacts of these housing characteristics on health outcomes are well-established.

Housing Diversity

Changes in OCSH may affect housing diversity by altering market demand of housing. Increased rates of OCSH often are associated with increased market demand, driving home values up. This change can have positive or negative effects on community health: property owners usually profit from increases in home values (though may be negatively impacted if increases in property taxes result), while long-term renters may face a new threat of housing instability due to increases in rental costs. Additionally, the OCSH market increases demand for individual rental units, as opposed to single-family homes. Student populations, as short-term, low-maintenance, high-profit tenants, are appealing for landlords, who are incentivized to acquire a large quantity of properties in student-occupied neighborhoods. This trend reduces the availability of affordable housing, single-family homes, and non-rental units (Chair of Advisory Neighborhood Commission 2E, Community Co-Chair of the Georgetown Community Partnership), so that the diverse housing needs of long-term residents may no longer be met.

Housing Quality

In the context of OCSH, housing quality is usually discussed in terms of the housing quality for student tenants. Low-quality housing is typically associated with a lack of awareness of tenants’ rights. Housing quality of OCSH may impact health of long-term residents if 1) housing quality issues are external, reducing market value and social capital in the neighborhood – for example, if a house has peeling paint or there is litter in the yard, this negatively affects neighborhood image; 2) housing quality issues can transfer between housing – for example, risks of pests or fire in a residence increase risks for adjacent residences; or 3) initiatives to improve housing quality for students can either be expanded to all neighborhood residents, or else free up resources for the city to operate initiatives for non-student residences – for example, if a program is instituted to improve the quality of student housing through increased inspections, the program could be expanded to all rental units in the target area. Alternatively, if a university implements an inspection program for off-campus student rental units, the city will not need to expend

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5 In housing-related Health Impact Assessments, noise and parking nuisances are considered an element of housing quality. However, in the context of OCSH, these issues are usually discussed separately. I have therefore chosen to separate them for this report.
resources on inspecting these properties, and can reallocate the resources to inspections for long-term residents.

Nuisance Issues

Increased prevalence of OCSH in residential neighborhoods is commonly associated with rises in nuisance issues, specifically regarding noise and parking. Student tenants tend to operate on different schedules from long-term residents, producing noise when long-term residents expect (and require) quiet living conditions. This problem is particularly prevalent during weekend evenings as students socialize off-campus. Student tenants are also more likely to have multiple vehicles per housing unit compared with single-family residences, which can produce a shortage in neighborhood parking. These problems become more significant when other students visit OCSH units.

Crime and Safety

The experiences of the case study communities for this project indicate that increases in OCSH rates in residential communities is usually associated with at least a perceived increase in safety and reduction in crime. This is a product of, firstly, the street presence of off-campus student tenants discouraging crime, and also, in some cases, the increased neighborhood patrol by universities that accompany off-campus student populations. However, I was not able to find any data demonstrating a direct link between changes in OCSH rates and crime rates.

Access to Health-Supportive Resources

Changes in OCSH rates have been associated with changes in access to health-supportive resources. Increases in student population in residential neighborhoods increases market demand for goods and services such as retail, restaurants, health care, other services, and food stores. For example, there are several instances of high-quality grocery stores moving into university neighborhoods that had previously lacked convenient access to nutrition, citing students as an appealing market population. However, resources intended to appeal to the student market may not be appropriate to the needs and values of long-term residents. For example, a grocery store developed to capture an off-campus student market may be too expensive for long-term residents, or it may not carry items that the residents would use. Further, creating a second grocery store in the CAN with resources for long-term residents will be very difficult if there is existing competition that captures the student market. As a result, resources introduced to CANs may not support the health of long-term residents, and they may actually reduce long-term resident access to health-supportive resources by deterring the introduction of other resources which are appropriate to resident needs and values.

Social Capital and Resident Empowerment

Social capital is the most complex of the determinants considered in this report, but existing literature has found that it is a significant determinant of health. This report uses the CDC definition of social capital, defining social capital as “the individual and communal time and energy that is available for such things as community improvement, social networking, community engagement, personal recreation, and other activities that create social bonds between individuals and groups” (CDC, 2015). It is the extent to which residents engage with their community, and may take many forms, including community service, recreational activities, and neighborhood development efforts. The pathways by which social capital affects
health are not fully understood, but social capital is consistently associated with improved physical and physiological health (UCLA). The extent to which a community promotes social capital is dependent on how residents perceive their community; if residents are happy with their living conditions and their neighbors then they are more likely to invest time and energy into the community, while negative changes in community conditions discourage investment (Souders, 2013). Increased rates of OCSH in residential neighborhoods may increase or decrease social capital. Student presence may increase social capital if OCSH drives changes in the neighborhood that appeal to long-term residents, causing an interest in community investment, or it may decrease social capital if it drives unfavorable changes, such as nuisance issues, change in neighborhood character, or reduced availability of diverse housing options.

Resident empowerment is defined as the level of jurisdiction that residents have over their living conditions. Resident empowerment gives residents a sense of control, which is associated with increases in social capital and improved mental health outcomes. An empowered resident community is also able to ensure that community strategies are appropriate to community conditions and values; community contributions during planning and implementation allow for strategies that are maximally health-supportive for the population of interest. OCSH changes may be managed in ways that either promote or stymie resident empowerment as university and city decisions on student enrollment and housing policies may be made with or without inclusion of community perspectives. Potential promoters of resident empowerment include city or university financial support for community groups, resident organization, and active involvement of residents in the development of university policies and city planning and zoning laws.
Stakeholder Roles and Interests

Stakeholders in the relationship between OCSH and community health include the university, the city, the community, and private businesses.

The University

Universities are interested in developing and maintaining a positive university-community relationship, creating an enjoyable and healthy student experience, producing an appealing public image, and having the potential to develop their campus and physical environment (e.g. expansion). Some universities have publicly articulated their commitment to
benefitting their local community – the community relations webpages for all four case study schools referred to a university commitment to the local community. As it improves the physical and social environment for both long-term residents and students, promoting community health in CANs is complementary to all of these interests; university efforts to support health in CANs allow universities to fulfill commitments to their communities, improve university-community relations, positively impact student experience, and improve their public image.

University capacity for shaping the impact of OCSH in CANs include control over the size of the off-campus student population, student behavior enforcement mechanisms, supporting financial and health-supportive resources, such as medical care and tutoring programs, and community engagement programs (e.g. campus arts and cultural events open to community members, neighborhood recreational events). Universities also may possess a level of control over the market choices of students who live off-campus, including property rental choices and locations of student shopping and socializing. For example, school housing offices may run websites for off-campus housing options, choosing to exclude landlords who have housing code violations. The choice of universities to provide resources on-campus may also shape the market impacts of OCSH. These market impacts can affect community health positively or negatively.

The Community
Community residents, neighborhood associations and community-based non-profit organizations are interested in making their communities health-supportive. In relation to housing, this includes improving housing quality, improving neighborhood quality, and ensuring that there are diverse housing options to meet the needs of all community residents, including vulnerable populations. As OCSH impacts housing conditions in CANs, community residents have an interest in mitigating negative effects of OCSH and in shaping the impacts of OCSH to support community health. The involvement of community stakeholders is particularly important as community members have the unique capacity for informing strategies intended to support health so that they are appropriate to the needs and values of the community. Strategies that are not appropriate will be ineffective and may even worsen negative health effects of OCSH. Inappropriate strategies will fail to mitigate negative health outcomes and may impede the introduction of effective strategies by monopolizing resources, the market, or public interest.

Community strategies for shaping the impact of OCSH in CANs may include public monitoring systems, reporting to city or university enforcement agencies, influencing their government representation through elections, and a voice through the media. Community-based non-profits may have other tools and resources for promoting community health.

The City
The various branches of city government – elected officials, appointed officials, city departments including police and planning – are all interested in making their city more health-supportive. A health-supportive city is healthier and happier, conditions which are associated with resident investment, economic growth, improved safety, and positive city image. As OCSH can impact the health determinants of portions of a city, city stakeholders should be invested in assuring that the impacts of OCSH are health-supportive. Elected officials, whose positions rest on resident approval, should be particularly motivated to action by concerns related to OCSH if they are impacting their constituency.
City tools for shaping the impact of OCSH in CANs include the provision of incentives (or disincentives) for other stakeholders, policy change (e.g. zoning laws, occupancy limits), population-wide information distribution, and enforcement mechanisms.

Private Businesses

Private businesses with an interest in OCSH may include landlords, developers, retailers, and other services. These businesses have an interest in creating health-supportive communities because residents who feel safe and do not have strained financial budgets are more likely to purchase available goods and services. Landlords may be uniquely motivated to improve community health by their interests in their reputation and the development and maintenance of business-favorable housing codes. For example, landlords do not want the occupancy limit to be lowered in response to overcrowding or nuisance issues, nor do they want to lose the student tenant market due to poor reviews from former tenants.

Private business faculties for shaping the impact of OCSH in CANs include the provision of resources, especially health-supportive resources such as grocery stores. Landlords of student rentals can alter the impacts of OCSH by maintaining code compliance and enforcing appropriate tenant behavior, for example not allowing tenants to throw parties or to litter outside the property. Private businesses could take an active role in mitigating negative impacts of OCSH by lobbying for policy change or seeking grant funding to make health-supportive changes in their communities.

The specific roles and interests of these stakeholders are unique in every CAN. Figure 2 illustrates the relationships and interests of the stakeholders in OCSH in the neighborhoods adjacent to the University of Rochester campus, based on conversations with the representatives from the University of Rochester Offices of Residential Life and Government and Community Relations.
Using this framework of housing-health associations and stakeholder roles, I sought to identify (1) how changes in OCSH may impact health and (2) what effective strategies have been implemented by stakeholders to mitigate those impacts.
V. Findings: Case Studies

This section presents the findings four case studies. These case studies are meant to provide insight into the potential impacts of OCOSH and potential mitigating strategies by university, city, community, and private business stakeholders. The scope of strategies was limited to those directly addressing the impacts of OCOSH on long-term residents; general initiatives to improve housing conditions that incidentally mitigated impacts of OCOSH were not included. For example, city programs that provide affordable housing options in case study CANs are not discussed because they do not specifically target the impact of OCOSH on housing diversity. Similarly, even though OCOSH is associated with changes in access to health-supportive resources in several CANs, I did not identify any deliberate efforts to increase access to health-supportive resources for long-term residents in response to or in conjunction with OCOSH.

V.A. University of Rochester

| Contacts: | Colleen McCarthy, Director of Community Relations, University of Rochester  
|          | Laurel Contomanolis, Executive Director of Residential Life & Housing Services, University of Rochester  
|          | Robin Doughty, Coordinator of Off-Campus Programs and Administrative Operations, Residential Life, University of Rochester |


The neighborhoods adjacent to the University of Rochester campus are the site of housing for off-campus students from multiple collegiate institutes, including the University of Rochester, the Rochester Institute of Technology, and Monroe Community College. The number of University of Rochester students living off-campus has increased significantly in the past six years with increasing student enrollment; the Office of Residential Life approximates an increase of 225 students in OCOSH since 2008. In that time, the University has also added two separate student housing units outside the campus perimeter, so that in the past seven years approximately 600 additional students have moved into University-owned housing in a CAN. The increase in the concentration of University of Rochester students in the PLEX and 19th Ward neighborhoods has been accompanied by an influx of student populations from other Rochester collegiate institutes; University of Rochester housing office staff who have observed this trend suggest that these students are drawn by the concentration of University of Rochester students because students tend to cluster.\textsuperscript{6} Because these students are from other institutions, their prevalence is not tracked by the University of Rochester, and the magnitude of this trend is therefore unknown.

\textsuperscript{6} interview with Executive Director of Residential Life & Housing Services, University of Rochester
Off-campus undergraduate student housing is concentrated in the 19th Ward and PLEX (Plymouth-Exchange) neighborhoods. These neighborhoods are also the site of several University-owned housing options. These are low-SES neighborhoods with high concentrations of vulnerable populations, including elderly and minority individuals. These neighborhoods also have worse indicators of health than Rochester as a whole (Korfmacher, 2013).

The increase of both University- and non-University-owned student housing in the PLEX and 19th Ward neighborhoods has been met by push-back from long-term residents. The rapid increase of undergraduate students in these neighborhoods is unprecedented – prior to construction of the first student housing unit in 2008, undergraduate student populations in the neighborhoods were almost negligible – and residents began to express concerns with housing instability, nuisances, and social capital around 2010.

Table 4: Current strategies that respond to impacts of OCSH on health

<table>
<thead>
<tr>
<th>Housing Affordability</th>
<th>No relevant strategies in place.</th>
</tr>
</thead>
</table>
| Housing Quality       | • University Office for Off Campus Living Programs (within the Office of Residential Life & Housing Services) provides student education to understand rights to quality housing, including tenants rights and a housing safety checklist.  
• University Office for Residential Life will step in as a mediator for student/landlord dispute resolution and communication.  
• University Office for Residential Life hosts an OCSH fair to connect students to quality housing options.  
• University Office for Residential Life requires code compliance for landlords on its free listing service.  
• University Office for Residential Life alerts Neighborhood Service Center of identified code violations. City responds to as many reported code violations as possible, but it does not have adequate resources to respond to all violations quickly. |
| Nuisance Issues       | • University Office for Residential Life distributes education materials to off-campus students on good neighbor practices, specifically targeting noise issues.  
• University Office for Residential Life distributes education materials to long-term residents providing information on reporting nuisance issues.  
• Neighborhood Ambassador program through the University Office for Residential Life: undergraduate students living in OCSH are employed by the University to report nuisance issues, distribute information to students and long-term residents, and guide neighbors through reporting nuisances. |
| Crime and Safety       | No relevant strategies in place. |
| Access to Health-Supportive | No relevant strategies in place. |

7 interview with Executive Director of Residential Life & Housing Services, University of Rochester  
8 Ibid.
### Resources

<table>
<thead>
<tr>
<th>Social Capital and Resident Empowerment</th>
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<tbody>
<tr>
<td>• University Office for Residential Life personnel works with neighborhood associations and service centers to maintain open communication and promote strong community ties.</td>
</tr>
<tr>
<td>• Neighborhood Ambassador program organizes recreational programs for students and long-term residents.</td>
</tr>
</tbody>
</table>

Table 4 summarizes the programs and efforts relevant to the health impacts of OCSH in Rochester. The University of Rochester Office of Residential Life has instituted a comprehensive program of student education, complaint referral, landlord screening, community engagement, and events to promote social cohesion. Personnel have been dedicated to field community questions and concerns related to OCSH, and to remain aware of community concerns by attending neighborhood association meetings. These efforts proactively respond to community concerns that may negatively impact health, and they promote social capital and resident empowerment. The Office of Residential Life also organizes quarterly landlord councils, in which some of the landlords of university student tenants meet to discuss housing quality and nuisance issues. The Office uses its free student OCSH listing service as a tool for encouraging landlords to provide quality housing to student tenants; landlords who are not in compliance with housing codes are removed from the service, which reduces opportunities to access the student tenant market. To reduce nuisance issues, the Office has implemented education campaigns for both students and long-term residents – students are made aware of appropriate (and legal) resident behavior, and neighbors are given information on contacting the University or the city police in response to nuisance issues.\(^9\)

The Neighborhood Ambassador program provides off-campus students with a stipend to act as representatives of the Office of Residential Life in their neighborhoods; they report nuisance issues, distribute information to students and residents, and organize social events to encourage socializing between students and long-term residents. The program has received positive feedback from the community as a means of reducing nuisance issues and promoting social capital.\(^10\)

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\(^9\) Ibid.

\(^10\) Ibid.
Georgetown University is based in the affluent Washington D.C. suburb of Georgetown. The existence of significant rates of off-campus student housing in Georgetown began in 1990. The influx of student tenants into the surrounding neighborhoods of Georgetown and Burleith had a multifaceted impact on housing characteristics, producing changes in housing affordability, housing quality, nuisance complaints, and social capital. These changes created tensions between student tenants and their neighbors, and between the community and the University. Resolving these tensions by addressing the impacts of increased off-campus housing has been a recent collaborative process by Georgetown University, city, and community leaders.

The efforts of Georgetown stakeholders to mitigate the negative effects of off-campus student housing, and to improve university-community relations, were actualized through the University’s 2010 Campus Plan. The Plan includes numerous initiatives to address the role of OCSH in the community, including a rededication to efforts to increase on-campus housing options, and the founding of the Georgetown Community Partnership (GCP) as a forum for discussion, information sharing, and consensus-based decision making to facilitate higher quality of life in the neighborhood of Georgetown. The GCP Steering Committee includes representatives from neighborhood associations, local citizens associations, the university, and the Georgetown University Student Association. Through collaboration among these stakeholders, the GCP addresses community concerns including undergraduate housing and future growth.11 Of note for this study are the efforts and goals of the six GCP working groups in determinants related to off-campus housing, including housing quality, nuisance complaints, crime and safety, and resident empowerment. Table 5 summarizes the programs and efforts relevant to the health impacts of OCSH in Georgetown.

Table 5: Current strategies that respond to impacts of off-campus student housing on health

| Housing Diversity | • The University has committed to increasing on-campus housing for undergraduate students, specifically providing an additional 450 beds on campus by Fall 2015. The resulting reduction in student demand for off-campus housing may make more housing options, including affordable |

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11 Georgetown Community Partnership website (https://communityengagement.georgetown.edu/gcp)
| Housing Quality                      | • The Office of Neighborhood Life maintains a list of local addresses for all undergraduate students. Using this list, the Office  
  a. identifies houses that may be exceeding maximum occupancy.  
  b. identifies houses that do not have a Basic Business License (BBL). The Office works with students to report houses that are not in compliance to the relevant city office (the Department of Consumer and Regulatory Affairs)  
  • The Georgetown Student Tenant Association is an organization of the university student body that advocates for responsive landlord-tenant relationships. This group has been effective in addressing absentee landlord issues through tenant education and market power. More information at [http://www.gustudentassociation.org/student-tenant-association/](http://www.gustudentassociation.org/student-tenant-association/)  
  • The Office of Neighborhood Life has increased staff capacity to assist students in finding off-campus rental properties, navigating landlord issues and property maintenance, and educating students about home safety and tenant rights  
  • The University conducts education on trash removal and property maintenance during student orientation, and provides tools for property maintenance in off-campus properties. |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nuisance Issues                  | • University initiatives to move socializing on-campus including: new late-night food options, creation of common spaces, an on-campus pub, conference rooms available for reservation, revised open-container laws in specific, limited on-campus locations, no keg limit policy, and no party registration required.  
  • In response to student requests, the University runs late-night shuttles for students to socialize in other neighborhoods in the city, rather than just in neighborhood around campus. These shuttles also bring students back from off-campus locations to prevent large groups walking through residential neighborhoods at night.  
  Georgetown SNAP (Student Neighborhood Assistance Program) through the Office of Neighborhood Life: 24/7 community helpline with 100% response policy. Thursday, Friday and Saturday from 10pm-3am, Georgetown University staff members employed at $150/shift to mitigate noise and safety issues. |
| Crime and Safety                  | • SNAP  
  • Employment of 2-5 off-duty Metropolitan Police Department officers every night of the week |
Housing quality, specifically with regard to property maintenance and landlord-tenant relations, is addressed through the Environment and Landlord Initiatives working group. Past activities of the working group include the addition of education on trash removal and property maintenance to student orientation, a recommendation for an increase in the University’s Office of Neighborhood Life staff capacity to assist students in off-campus rental search, landlord-tenant relations and property maintenance, and support for the creation of the Georgetown Student Tenant Association. The Georgetown Student Tenant Association is a nonprofit run by Georgetown students dedicated to improving student housing quality by increasing student awareness of tenant rights, hosting a community-based monitoring system of landlord behavior, and representing student tenants with complaints against landlords. The group partners with the DC Office of the Tenant Advocate to assist tenants.

The Environment and Landlord Initiatives working group is also currently involved in a collaborative effort with the city Department of Consumer and Regulatory Affairs to bring properties that house off-campus students into compliance with basic business license (BBL) compliance. BBLs are required to legally rent a property in the District of Columbia. Obtaining a BBL requires a Certificate of Occupancy, (in most cases) registry as a rent-controlled unit, and a housing inspection, so it is an effective means of assuring that housing is fairly priced and that the quality of rental housing meets code. The working group is pressuring property owners that rent to students to obtain BBLs by identifying rental housing units without a BBL from a list of local addresses maintained by the University’s Office of Neighborhood Life, and reporting non-compliant properties to the Department of Consumer and Regulatory Affairs for enforcement. As a result of this collaborative approach, 31 of 51 identified properties had been brought into compliance at the time of this report. The Office of Neighborhood Life directs additional initiatives to promote housing quality including monitoring of over-occupancy properties using the student local address list – the Office investigates any residences listed with four or more student occupants, and informs transgressing students of legal repercussions – a rental program for property maintenance supplies, so that students can borrow free of charge tools, shovels, etc. to maintain property quality, education on trash removal and property maintenance during student orientation, and education campaigns to address pest issues, directed at both students and long-term residents because pests can transfer between residences. The efficacy of trash removal programs is currently being monitored by the working group.

The efforts to improve the quality of student rental housing may support the health of long-term residents by improving the exterior quality of homes (trash removal), reducing nuisance issues that can be transferred between residences (pests), creating inspection and enforcement programs that can be expanded to non-student residences, or, through dedication of

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12 interview with Director of Office of Neighborhood Life and Assistant Director of Office of Community Engagement, Georgetown University
university resources, freeing up city resources for separate inspection and enforcement programs targeting non-student residences.

GCP efforts to reduce noise nuisances and increase safety are linked through the Safety and Student Life working group. The Safety and Student Life working group seeks to reduce the negative impact of noise associated with off-campus housing by advocating for greater university responsiveness, student education, community engagement, and on-campus alternatives to off-campus parties. The creation of the Office of Neighborhood Life was supported by the working group as a proactive response-mechanism for community concerns, responding to complaints, educating and supporting students as members of the community, and engaging local residents in university efforts through community meetings. The Office of Neighborhood Life runs the Student Neighborhood Assistance Program (SNAP) to address noise and safety issues. This program includes a 24/7 community helpline and increased neighborhood patrols on weekend evenings as a supplement to the off-duty police officers funded by the university. Data from responses to neighborhood calls are shared with neighborhood leaders. Reports from community partners indicate that these programs have been effective in reducing both noise nuisances and crime rates.

The Communications and Engagement working group of the GCP promotes social capital and resident empowerment through community outreach programs, including on- and off-campus cultural and educational programs, and by facilitating communication and collaboration between university and community partners. Initiatives include hosting of a community fair and performing arts nights to support social engagement between university and non-university residents. The group is now seeking a regular listing of Georgetown University events in the local newspaper. The Communications and Engagement working group has also been central to ensuring awareness of the community-improvement efforts by other working groups; for example, they are now reviewing communication to university faculty, staff, and visitors about transportation and parking, so that health-supportive changes are actualized.

Georgetown also represents best practice in monitoring the success of its programs; the Data and Metrics working group of the GCP represents the most comprehensive university-based system for monitoring determinants related to off-campus housing of the schools reviewed for this report. Current initiatives include reviewing data on nuisance issues (number of contacts received, how they were reported, the reasons for the contacts, the neighborhood of origin, how incidents are referred to the Office of Student Conduct, and the disposition of the cases), bi-annual reviews of housing reports, and neighborhood quality of life surveys. The methods of this working group, and the means by which data and metrics support health, may be found at the GCP website, https://communityengagement.georgetown.edu/gcp. The GCP’s monitoring of nuisance issues is shown in Appendix I.

Stakeholders have noted significant improvements in university-community relations due to the efforts to improve the impacts of off-campus student housing and the consistent collaboration between the University, the City, and the community through the GCP. This improvement is expected to be demonstrated during approval for the next University Campus Plan; the GCP Community Co-Chair projects that the new Plan will likely be passed by the Zoning Commission immediately, in sharp contrast to the 18-month legal battle which occurred in 2010 before the founding of the GCP.
Washington University in St. Louis is based in University City, an inner-ring suburb of the city of St. Louis. Approximately 1,500 of the 6,000 undergraduate students at Washington University live off-campus, predominantly in University-owned apartments in three neighborhoods off-campus including the Rosedale Heights Neighborhoods which is predominantly students. As a result, the health determinants associated with OCSH are largely confined to a heavily student-populated area in which the University has jurisdiction since very few students live in privately-owned rental housing. However, an adjacent neighborhood, composed mostly of single family homes, is impacted by night-time foot traffic between the university campus and the student apartments.

Table 6: Current strategies that respond to impacts of OCSH on health

<table>
<thead>
<tr>
<th>Category</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing Affordability</td>
<td>• Washington University sets rental rates for university-owned properties at the low end of market rate. These properties are largely marketed toward graduate students.</td>
</tr>
<tr>
<td>Housing Quality</td>
<td>• University provides student education to address tenant-landlord issues.</td>
</tr>
</tbody>
</table>
| Nuisance Issues     | • “Beyond the Bubble” educational campaign by Residential Life and other University offices raises student awareness of student impact (noise, treatment of public spaces) on neighborhood residents. Includes mailings throughout the year and information and poster distribution in all off-campus student apartment complexes (including non-University owned properties). The University community relations office has perceived a large decrease in nuisance complaints in conjunction with this campaign.  
  • In response to high rates of nuisance complaints, the University has increased supervision in neighborhood with a deputized police department and neighborhood liaison program, allowing for frequent neighborhood patrols.  
  • Neighborhood liaison position enforces parking rules (2-3 warnings, then towed vehicle), liaison interviewed perceived a decrease in parking violations by students with enforcement. |
| Crime and Safety    | • University employs deputized police force (without powers of arrest) which patrols areas with significant OCSH presence.  
  • University coordinates closely with local police department on safety and enforcement issues.  
  • Community perception that student presence increases neighborhood |
<table>
<thead>
<tr>
<th>Access to Health-Supportive Resources</th>
<th>No relevant strategies in place.</th>
</tr>
</thead>
</table>
| Social Capital and Resident Empowerment | • Monthly collaboration with neighborhood associations through Neighborhood Voice program.  
• In the case that neighborhood did not have a representative association, the University helped found one.  
• Neighborhood Voice program coordinates two events per year to bring together student and long-term residents of CANs. |

The current initiatives by Washington University to lessen negative impacts of OCSH in surrounding neighborhoods, outlined in Table 6, are a response to the high community tensions that have faced the campus in the past decade. These tensions, which focused mainly on nuisance complaints, including noise and parking, and resident empowerment, were characterized by local police involvement and confrontational student-neighbor discourse. The Neighborhood Initiative, created in 2009 by a campus collaboration involving several departments including Residential Life and Community Relations, has successfully reduced student-community tensions through five complementary strategies: a student education campaign, the neighborhood liaison position, neighborhood council and events, increased communication with neighbors through the Office of Community Relations, and increased police presence. According to university and community interviewees, these efforts have improved student-community relations so that nuisance complaints have become rare, and further university development in the community is not objected to.

The Neighborhood Initiative raises student awareness of their impact as residents in neighborhoods, creates a consistent and representative system of collaboration between stakeholders in the community, including neighbors, neighborhood associations, local businesses, and government officials, and increases enforcement to ensure improved neighborhood conditions. The Neighborhood Liaison position plays a key role in these efforts. Neighborhood Liaisons are faculty or staff member of the university whose roles include student and neighbor advocacy, education to students on resident responsibly and community service opportunities, student monitoring to identify nuisance issues, and engagement of neighbors and community councils to address resident concerns. Neighborhood Liaisons receive complimentary housing as compensation for this work. University and community interviewees have cited the neighborhood liaison program as associated with significant improvements in student-neighborhood relations. These improvements may reduce the negative effects of OCSH on health in University City.

Housing diversity is not a common concern in resident discussion of OCSH impact in University City, though the rise in OCSH rates has been associated with an increase in housing market rates in the Parkview Gardens neighborhood. Some residents are concerned that the presence of University properties, which has expanded in recent years, pushes property tax

13 interview with Director of Community Relations and Local Government Affairs, Washington University
14 interviews with Director of Community Relations and Local Government Affairs, Washington University, and Ames Place resident and former Neighborhood Liaison
burden onto non-University properties; since the not-for-profit University does not have to pay property taxes on properties it owns, residents perceive that the city attempts to compensate for this loss by increasing taxes on other properties. The University provides rent-controlled housing units intended for graduate students, which may reduce the risk of reduced housing diversity by removing graduate students from the housing market. However, this initiative is not intended to mitigate the impact of OCSH on housing diversity, and its impacts are unknown. If Washington University continues to purchase properties for OCSH, rising property taxes may reduce access to diverse housing for long-term residents, increasing the chance of associated negative health outcomes.

The success of Washington University’s initiatives in improving community opinion of OCSH was recently made evident in the process of developing OCSH units. While previously any university development was strongly contested, not a single complaint was raised against the new development. Consistent collaboration between the university and community members is credited for the positive community response. The best practices of Washington University programs were recognized at the International Town and Gown Association 2014 Annual Conference.

15 interview with Ames Place resident and former Neighborhood Liaison
V.D. Case Western University

Contacts:  Latisha James, Senior Director of Local Government and Community Relations, Case Western Reserve University
          Christin Farmer, Greater Circle Living Program Manager, Community Partnerships Coordinator, University Circle Inc.

Other resources:  Case Western Reserve University School of Medicine Strategic Plan
http://casemed.case.edu/ora/strategicplan.cfm

Case Western Reserve University is located in University Circle, a small suburb of Cleveland and site to the Cleveland Clinic and University Hospitals. University Circle is surrounded by six neighborhoods, composing Greater University Circle. Between University Circle and Greater University Circle, there are significant disparities in both health determinants and outcomes; in the peripheral neighborhoods of Greater University Circle, the average household SES is lower, there is less access to nutritional food sources and medical care, crime rates are higher, residents report greater levels of stress, and the housing quality is lower than in University Circle. Rates of diabetes, heart disease, high blood pressure, and mortality are higher in these peripheral neighborhoods, particularly among minorities.\(^{16}\)

OCSH, which previously has been confined almost completely to University Circle, has begun to spread in the past 10 years into surrounding neighborhoods as students seek more affordable housing. This spread swelled in the past 3-4 years with an increase in University student enrollment. At this time the impacts of OCSH, previously limited to University Circle, became significant in surrounding communities.\(^{17}\) Effects of this increase in OCSH presence noted by University and community members include both positive impacts (increased housing values, new drivers for increased access to health-supportive resources) and negative impacts (increased nuisance complaints, fear of housing instability due to rising property values).

\textbf{Table 7: Current strategies that respond to impacts of OCSH on health}

<table>
<thead>
<tr>
<th>Housing Affordability</th>
<th>No relevant strategies in place.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing Quality</td>
<td>• Student education on security deposits, inspections, property maintenance and security.</td>
</tr>
</tbody>
</table>
| Nuisance Issues        | • The Case Western University Student Affairs Office responds to noise complaints from off-campus student properties, warnings to students have been effective in preventing continuous problems.  
                         • University Circle Incorporated runs an awareness campaign on legal parking, has significantly reduced violation rates. |
| Crime and Safety       | • Collaboration between the Cleveland Division of Police, the University Circle Police Department, and the Case Western Reserve University Police Department. |

\(^{16}\) interview with Community Partnerships Coordinator, University Circle Inc.  
\(^{17}\) Ibid.
Table 7 summarizes the programs and efforts relevant to the health impacts of OCSH in Greater University Circle. The responses of university, city, and community stakeholders to impacts of OCSH in Greater University Circle have so far been limited to nuisance issues, crime and safety, and social capital. Parking concerns, which have increased with the presence of student vehicles, are addressed by the non-profit community development corporation University Circle Incorporated through continuous informational campaigns promoting legal parking practices. These efforts have been supported by Case Western University through the (informal) distribution of parking information to students by resident advisors during orientation.\textsuperscript{18} Case Western has coordinated its public safety efforts with city programs to improve crime and safety conditions. In order to remain responsive to community concerns, university personnel meet regularly with the Cleveland City Mayor, city council members and residents from local neighborhoods, businesses and real estate developers.\textsuperscript{19} These efforts support social capital and resident empowerment. The university also runs cultural and educational programs and provides medical care to the local community; these efforts improve community relations, which the university says proactively prevents community tensions from OCSH.\textsuperscript{20}

The Greater Circle Living home purchase program, a project of the non-profit community development corporation University Circle Incorporated, is cited by proponents as a best practice for ensuring that institutions benefit their local communities. However, the program presents an example of an intended health-supportive program that may negatively impact the health of long-term residents in CANs. The Greater Circle Living program provides funding to employees of Greater University Circle institutions to rent, make a down-payment, or complete exterior home repairs on a home in Greater University Circle. Case Western Reserve University, along with several other employers, has increased the assistance funding for their employees, so that University faculty and staff are provided with $30,000 to rent, purchase, or repair a home proximate to their place of employment. This program is health-supportive for University employees as it increases access to quality homes, allows employees to spend more money on health-supportive resources instead of housing, and improves quality of life by reducing commute times. It also may increase community stability and reduces area automobile dependence, which are generally positive developments for community stakeholders.

The benefits of the Greater Circle Living program for University employees are significant, but may negatively impact the health of long-term residents. By incentivizing workers to live in Greater University Circle, the program increases market demand in the area, which is typically associated with increased property values. Increases in rental rates may reduce housing diversity for long-term residents, resulting in negative health outcomes. This program

\textsuperscript{18} interview with Community Partnerships Coordinator, University Circle Inc.
\textsuperscript{19} interview with Senior Director of Local Government and Community Relations, Case Western Reserve University
\textsuperscript{20} Ibid.
illustrates the importance of considering all potential impacts on long-term residents when developing plans, projects, and policies. By identifying potential negative impacts, stakeholders can alter plans or introduce mitigating strategies so that long-term resident health is supported.

There is the potential for the OCSH student presence to make Case Western Reserve University CANs more health-supportive for long-term residents. The Community Partnership Coordinator of University Circle Inc. believes that OCSH could positively impact the health of long-term residents by introducing a student market that could draw businesses into the area, ultimately increasing local economic wealth and access to health-supportive resources. The student presence in University Circle is credited for the neighborhood’s new high-quality grocery store\textsuperscript{21} and similar patterns have been seen in other university communities.\textsuperscript{22} However, these positive impacts have never been intended outcomes of OCSH changes. If new resources are not appropriate to the needs and values of long-term residents, they will not support the health of long-term residents, and may in fact reduce resident access to health-supportive resources.

For OCSH to be health-supportive for long-term residents, its impacts must be shaped by stakeholders; impacts of OCSH can either benefit or threaten long-term resident health depending on how they develop. As OCSH in Greater University Circle continues to increase with university enrollment, the impact of OCSH on community health will continue to expand. This impact should be mitigated by CAN stakeholders to ensure that changes are health-supportive for long-term residents.

\textsuperscript{21} interview with Community Partnerships Coordinator, University Circle Inc.
\textsuperscript{22} interview with Associate Director of Community, Neighborhood and Government Relations, Vanderbilt University
VI. Findings: Survey of Benchmark Institutions

This section presents all of the strategies to mitigate impacts of OCSH on long-term resident health identified through this research. It consolidates the information presented in the case studies, and supplements with additional findings from the survey of benchmark institutions. Several strategies in CANs not included in the list of benchmark institutions (College Park, MD; St. Paul, MN) were identified as best practice during the review, and have been included here.

For each strategy, the program type, potential implementers, an example program, and relevant health determinants are identified. Strategies that seek to improve the impact of OCSH conditions on community health may be defined under five program types: policy/regulation change, education, resource provision, community engagement, and data/monitoring. These categories were identified through review of existing strategies. Policy/regulation change includes changes in city or landlord housing policies (occupancy limits, housing codes) and university policies related to OCSH (who can live off-campus, where they can live, repercussions for misdemeanors). Education refers to education of students and/or long-term residents of CANs to promote student and/or resident actions that support health. Resource provision pertains to the distribution of health-supportive resources by university, city, or private businesses, such as investments to improve the walkability of neighborhoods or incentives for students to socialize away from CANs. Community engagement refers to involving long-term residents of CANs in plans, policies, and projects related to OCSH. Data/monitoring is the use of tracking systems to collect information on conditions in CANs and to determine the efficacy of initiatives intended to support long-term resident health.

“Potential implementers” refers to the stakeholders that could be involved in developing, implementing, or monitoring a given strategy. The “example program” is a single example of the strategy identified through the survey of benchmark institutions; it is not inclusive, and does not reflect that some of these strategies have been implemented in several CANs. The “relevant housing condition” identifies the specific housing condition(s) that the strategy is seeking to make more health-supportive for long-term residents.

Table 8: Existing strategies that may mitigate the negative impacts of OCSH on long-term resident health

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Program Type</th>
<th>Potential Implementers</th>
<th>Example Program</th>
<th>Relevant housing condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set market-rate rent for student housing</td>
<td>Resource provision</td>
<td>University property owners</td>
<td>Washington University sets the rental rates for University-owned OCSH at the middle-to-low end of market price</td>
<td>Diverse housing options</td>
</tr>
<tr>
<td>Ensure that students know their rights as tenants</td>
<td>Education</td>
<td>University Housing Offices, Student Associations</td>
<td>University of Rochester housing office communicates tenant rights to students completing OCSH process</td>
<td>Housing quality, Resident empowerment</td>
</tr>
<tr>
<td>Encourage tenant</td>
<td>Education</td>
<td>Tenant</td>
<td>Georgetown University Student</td>
<td>Housing</td>
</tr>
<tr>
<td>activism</td>
<td>Associations</td>
<td>Tenant Association raises student awareness of tenant rights</td>
<td>quality</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Use free landlord listing service as leverage for landlord code compliance</td>
<td>Resource provision, Policy/ regulation change</td>
<td>University Housing Offices</td>
<td>University of Rochester housing office removes non-compliant landlords from its listing service, reducing the landlord’s access to the student market.</td>
<td>Housing quality</td>
</tr>
<tr>
<td>Create public review systems for landlords</td>
<td>Data/ monitoring</td>
<td>Community, University, Student Associations</td>
<td>Georgetown Student Tenant Association created a student-run website (Roomr) to allow students to rate and compare landlords.</td>
<td>Housing quality, Resident empowerment</td>
</tr>
<tr>
<td>Prohibit student leases with non-code compliant landlords</td>
<td>Policy/ regulation change</td>
<td>University Housing Offices</td>
<td>Vanderbilt housing office maintains “Do not rent” lists for landlords who have code violations</td>
<td>Housing quality</td>
</tr>
<tr>
<td>Provide access to tools needed to maintain safe housing</td>
<td>Resource provision</td>
<td>University, Community</td>
<td>Georgetown University: Winter houses stock snow shovels and salt for student resident use, other supplies available for rent at neighborhood life office</td>
<td>Housing quality</td>
</tr>
<tr>
<td>Address inter-house quality issues through neighborhood networks</td>
<td>Community engagement</td>
<td>City, Community, University</td>
<td>Georgetown University partners with neighborhood associations to educate on rat control</td>
<td>Housing quality</td>
</tr>
<tr>
<td>University-city collaboration to identify and respond to housing code violations</td>
<td>Policy/ regulation change, Community engagement</td>
<td>City, Community, University Housing Offices</td>
<td>Georgetown University has local addresses for all students, investigates permits of properties with 4 or more students to confirm landlord has a BBL. Coordinates with city agency that distributes BBL to enforce. 29/51 violators have come into compliance.</td>
<td>Housing quality</td>
</tr>
<tr>
<td>Increase rental inspections</td>
<td>Policy/ regulation change</td>
<td>City, University</td>
<td>University of Maryland housing office partnered with city offices to inspect every off-campus Greek unit every year. Inspection fee pays for noise patrols. More information at: <a href="https://www.des.umd.edu/fire/greek/fireinspections.html">https://www.des.umd.edu/fire/greek/fireinspections.html</a></td>
<td>Housing quality</td>
</tr>
<tr>
<td>Increase student awareness of appropriate resident behavior (noise, parking)</td>
<td>Education</td>
<td>University Housing Offices</td>
<td>University of Rochester housing office distributes education materials to students on appropriate residential behavior, including city</td>
<td>Nuisance issues</td>
</tr>
<tr>
<td>Contractual obligation for off-campus students to exhibit appropriate resident behavior</td>
<td>Policy/ regulation change</td>
<td>University</td>
<td>Vanderbilt housing office: off-campus students sign a “Good neighbor pledge.” Violation results in revoked authorization to live off-campus</td>
<td>Nuisance issues</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>Increase presence of enforcement personnel, especially during high-risk times</td>
<td>Policy/ regulation change</td>
<td>University, City</td>
<td>Georgetown University SNAP program - see Georgetown case study for complete description.</td>
<td>Nuisance issues, Crime and safety</td>
</tr>
<tr>
<td>Encourage student socializing in areas away from CANs</td>
<td>Resource provision</td>
<td>University</td>
<td>Georgetown University provides resources and transportation options to encourage student socializing on-campus or outside of CANs</td>
<td>Nuisance issues</td>
</tr>
<tr>
<td>Limit socializing in off-campus properties</td>
<td>Policy/ regulation change</td>
<td>Landlords</td>
<td>Landlords can establish protocols to require landowner permission for a certain number of guests in the residence</td>
<td>Nuisance issues</td>
</tr>
<tr>
<td>Dissuade students from walking through neighborhoods at night</td>
<td>Resource provision</td>
<td>University</td>
<td>Georgetown University provides shuttles to transport students through CANs to prevent noisy walking groups</td>
<td>Nuisance issues</td>
</tr>
<tr>
<td>Increase the walkability of neighborhoods</td>
<td>Resource provision</td>
<td>University, City</td>
<td>Clifton Community Partnership (Emory University) is a University-community collaboration seeking to improve pedestrian travel and decrease reliance on automobiles</td>
<td>Crime and safety, Social capital</td>
</tr>
<tr>
<td>Limit number of unrelated adults per residency</td>
<td>Policy/ regulation change</td>
<td>City</td>
<td>Cities have ordinances on number of unrelated persons. Lowering this number would reduce number of students per household, may reduce nuisance issues.</td>
<td>Nuisance issues</td>
</tr>
<tr>
<td>Require 150 feet between student housing units</td>
<td>Policy/ regulation change</td>
<td>City</td>
<td>Ordinance in St. Paul, Minnesota, intended to prevent clustering of student housing</td>
<td>Nuisance issues</td>
</tr>
<tr>
<td>Create a format for communication and collaboration between all involved parties</td>
<td>Community engagement</td>
<td>University, City, Neighborhood Associations</td>
<td>College of William &amp; Mary: University President, Williamsburg Mayor, neighbor and landlord appointed by Mayor meet regularly to discuss university role in community. Only instance identified of mayor meeting to discuss</td>
<td>Social capital/ Resident empowerment</td>
</tr>
<tr>
<td>Have personnel specifically dedicated to promoting community cohesion</td>
<td>Resource provision, community engagement</td>
<td>University, City</td>
<td>Vanderbilt University: 4 employees work full-time in community, engaging with local government and attending community meetings</td>
<td>Social capital/Resident empowerment</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>Housing office staff as residents in CAN</td>
<td>Resource provision, community engagement</td>
<td>University</td>
<td>Washington University neighborhood liaison position (see case study for full description)</td>
<td>Social capital/Resident empowerment, Nuisance issues</td>
</tr>
<tr>
<td>Monitor outcomes related to OCSH</td>
<td>Data/monitoring</td>
<td>City, Community, University</td>
<td>The Georgetown Community Partnership (Georgetown University) has a Data and Metrics working group dedicated to tracking progress related to improving impact of OCSH on CAN conditions.</td>
<td>Housing quality, Nuisance issues, Crime and safety</td>
</tr>
</tbody>
</table>
VII. Discussion

Limitations of this project include the limited number of CANs included in the survey and the limited number of perspectives from the case studies, particularly from non-university stakeholders. Additionally, the project may have been shaped by the university-centered approach for identifying sources; city and community interviewees for three of the four case studies were identified through university contacts. Future work should endeavor to obtain additional independent perspectives from city and community stakeholders. Nonetheless, the insights gleaned from the case studies suggest promising strategies that should be further explored, evaluated, or disseminated. Below I summarize the strategies currently in place to minimize the negative impacts of the changes in housing conditions associated with OCSH in CANs for each of the six health determinants. These strategies were identified through the survey of benchmark institutions and the four case studies. They include a broad range of tools, including policy change, public and private resource provision, and communication among stakeholders. I then discuss potential additional strategies which may not only prevent negative effects of OCSH, but may use OCSH to promote health for all members of CANs.

Housing Diversity
How can stakeholders shape the impacts of OCSH in ways that maintain or promote diverse housing options for long-term residents?

Housing affordability is one of the primary concerns expressed by long-term residents related to OCSH; though it is difficult to attribute changes in market rates to specific causes, the case studies found multiple instances of resident concern that increases in market demand from OCSH drive higher rental costs and property values. For renters, this increases the risk of increased housing costs (raises in rent) leading to housing instability; for owner-occupants, it may raise concerns about sharp property tax increases. However, none of the stakeholder responses to impacts of OCSH in these case studies directly address housing diversity for long-term residents. Washington University in St. Louis recognizes the impact of off-campus students on the market rate in CANs and sets rates for university-owned housing, but price-controlled apartments are intended for university graduate students. Though providing graduate student housing in University-owned rent-controlled units may prevent a graduate student market from causing inflation in the private market, this was not the expressed intention of the University Housing Office for instituting this program.

Many public and private tools exist to maintain diverse housing options. Potential tools include requiring affordable and accessible units in new developments, and community benefit agreements in which developers pay into a community fund (NCHH, 2013). City, community, and university stakeholders each have an interest in the provision of diverse housing options; the city as they seek to protect long-term residents, the community as it requires housing to meet a diverse set of needs, and the university as an anchor-institution that is invested in the health of the community in which it is based, both to strengthen its public appeal and to uphold its commitment to serve (referred to in community relations webpages of all four case study schools).

These harmonized interests, and the tools available to increase diverse housing options, present an opportunity for stakeholders in CANs to mitigate the impacts of OCSH and to significantly improve community health through the preservation of diverse housing options. City planners and government housing programs should account for the potential impacts of
OCSH on the availability of diverse housing options in CANs by developing housing or providing assistance to ensure that diverse housing options remain available to long-term residents. In the development or allocation of affordable or accessible housing, community stakeholders must be involved in planning processes so that housing options are appropriate to the specific needs of long-term residents.

**Housing Quality**

*How can stakeholders shape OCSH trends in ways that maintain or promote housing quality for long-term residents?*

In the context of OCSH, housing quality is often addressed as the quality of off-campus student rental housing. For long-term residents, housing quality for students may impact health if 1) housing quality issues are external, 2) housing quality issues can transfer between housing, or 3) initiatives to improve housing quality for students can directly impact initiatives to improve housing quality for long-term residents. As it greatly impacts community health, universities, cities and communities all have an interest in mitigating the impact of OCSH quality on long-term residents.

Currently, programs to improve housing quality in the context of OCSH are products of universities. Due to legal restrictions, university offices are not able to directly enforce housing codes, but universities have found ways to discourage student housing with non-compliant landlords, ranging from removing landlords from University housing listings (University of Rochester) to forbidding housing from landlords on do-not-rent lists (Vanderbilt). These initiatives have been effective at using the student market to encourage landlords to come into compliance. Student education and tenant activism have also been promoted as a means of encouraging responsive landlords (Georgetown University).

Some universities have collaborated with city offices to actively enforce housing code compliance, either by increasing inspection rates for OCSH (University of Maryland) or by reporting non-compliant properties to the City office (Georgetown University). With their legal backing, these collaborative efforts have been particularly effective at changing landlord behavior, and represent best practice for ensuring the quality of rental housing (University of Maryland https://www.des.umd.edu/fire/greek/fireinspections.html). The community can play an active role in this process by reporting observed code violations.

Promotion of housing quality in OCSH can benefit long-term residents. Housing that is code compliant will not have exteriors that reduce neighborhood market value and social capital, nor will it have pests and fire hazards that may impact adjacent residences. If strong code enforcement strategies are established to address student housing, they could be expanded to include non-student residents both within and beyond the CAN. If the strategy remains targeted at student residences, it could at least be funded by the university with its specific interest in student housing quality; this would make more resources available to the city for enforcement in non-student residences. In these ways, initiatives to improve student housing quality can support health for long-term residents.

**Nuisance Issues**

*How can stakeholders reduce nuisance issues associated with OCSH conditions to mitigate negative impacts on long-term residents?*

Case study strategies to reduce nuisance issues in CANs are based in education, enforcement, and resource provision. Education campaigns by university offices targeting off-
campus students raise awareness of respectful neighbor behavior (e.g. keep parties indoors with the windows closed) and city ordinances for nuisance issues including noise and parking. Universities have also used educational campaigns to help long-term residents respond to nuisance issues in their neighborhood, such as when issues may be addressed by the housing office or the city police. Enforcement of noise and parking ordinances for off-campus student residences is effected by City police departments, sometimes supplemented by University personnel. For example, distributing parking citations is one of the job requirements of the neighborhood liaison position at Washington University. The housing office may also be involved if a residence receives multiple complaints, in which case the students are subject to the disciplinary action of the university. Vanderbilt University offers OCSH as a privilege which may be revoked in the event of multiple nuisance complaints. Only Georgetown provided resources (new campus amenities, transportation options) as a means of reducing nuisance issues, but it appeared to successful – it was associated with a significant reduction of nuisance issues in the CANs.

Community, university and city government stakeholders all have an interest in reducing nuisance issues from OCSH. All stakeholders can help reduce nuisance issues by aiding in the identification of problem residences, increasing student awareness of city ordinances on noise and parking, and enforcing laws. Universities can use student address lists and tracked information on nuisance rates to ensure that educational materials are appropriately distributed, targeting problem residences. University relationships with landlords of student residences allow for collaborative education and enforcement efforts. Long-term residents can help alert universities of problem residences by reporting nuisance issues to university housing offices. City-university partnerships can increase enforcement power for noise and parking laws. The Georgetown Community Partnership, a city-university-community collaborative, has a working group dedicated to mitigating the impact of Georgetown University students on noise nuisances and traffic in the local community. In this type of multi-stakeholder forum, stakeholders can work together to develop community-appropriate strategies to address nuisance issues from OCSH.

**Crime and Safety**

*How can stakeholders manage OCSH conditions to promote safety in residential neighborhoods?*

Safety in CANs is in the interest of universities as it impacts the safety and appeal of the university for current and prospective students and improves the economic, social, and physical health of the university-adjacent environment. It is in the interest of city governments to improve safety as it impacts neighborhood quality and city image. Community social capital and resident health are directly impacted by neighborhood safety. Crime is also bad for private businesses, so they too should be interested in the safety of their host neighborhoods. Though definitive evidence on the association between OCSH trends and crime rates is not available, the case study findings indicate that the impact of OCSH on crime and safety tends to at least be perceived as health-supportive; stakeholders reported that the foot traffic created by increased student presence in CANs makes the neighborhoods seem safer. CANs may also benefit from increased security presence brought by university safety patrols for off-campus students.

OCSH can be managed to improve crime and safety conditions for long-term residents in CANs. Extended university security in CANs, such as blue light systems or safety patrols, could supplement current safety resources to benefit both students and long-term residents. Dependent
on determined associations between OCSH and crime, cities may choose to increase police presence in CANs to mitigate negative impacts of OCSH. Communities may choose to create their own volunteer citizen patrol system, like PAC-TAC in Rochester, in response to safety concerns. These efforts should be coordinated between the university, city, and community to ensure maximum efficiency and efficacy. The necessity of safety resources in CANs is based on crime rates, so universities and cities should monitor incidences and share findings to determine the appropriate allocation of resources.

**Access to Health-Supportive Resources**

*How can stakeholders shape the impacts of OCSH conditions to increase access to health-supportive resources for long-term residents?*

Increased access to health-supportive resources in CANs stands to benefit universities by increasing the resources for their students and improving the economic, social, and physical health of the university-adjacent environment. City governments generally want to promote economic growth and healthy environments. Communities want neighborhoods to be more appealing and health-supportive.

No initiatives intentionally planned to improve access to health-supportive resources for long-term residents in response to changes in OCSH were identified in this review. However, several cases provide evidence that changes in OCSH may impact access to health-supportive resources both for students and for long-term residents in CANs. With the appeal of a student market, there is an opportunity to use OCSH to increase access to health-supportive resources for long-term residents. For example, in University Circle in Cleveland, OH, increased student presence at Case Western Reserve University spurred the construction of a grocery store. High-quality nutrition, which had previously been absent in the neighborhood, is now accessible to students and long-term residents.

City, university, and community stakeholders may help shape the impacts of OCSH to increase access to health-supportive resources. Private interests may be drawn to student markets unprompted. However, businesses appealing to students may not provide resources that are economically, socially, and culturally appropriate to residents. Resources that are not aligned with community characteristics and values will not only be underutilized, but may increase the risk of negative health outcomes by obstructing future opportunities for the introduction of appropriate resources. For example, if a grocery store that appeals to students is introduced to a CAN, it may not be appropriate to long-term resident needs and values and therefore may not improve long-term resident access to nutrition. That new store has also taken up the student market share, so the entrance of another grocery store that is well-suited for resident needs is made more difficult by the smaller available market. Given the need for appropriate resources to effectively support long-term resident health, stakeholders should ensure that business developments are meeting the needs of the community as a whole. If private businesses are not adequately motivated by the market in neighborhood-adjacent neighborhoods, city and university stakeholders may choose to provide economic incentives to private businesses to increase access to resources, or may choose to be directly involved in providing access to resources. Universities may choose to allocate increased resources (free or discounted local clinics through medical programs, tutoring through education programs) to CANs to compensate for negative impacts of OCSH, capitalizing on the university’s potential to support health. Some universities currently provide access to health-supportive resources, but these are not openly discussed as ways to offset the impacts of OCSH. Identifying the impacts of OCSH in CANs, and responding
specifically to negative outcomes, would allow universities to mitigate the negative impacts of OCSH and to support health for long-term residents in ways that benefit the university, for example by fulfilling commitments to their communities, improving university-community relations, positively impacting student experience, and improving their public image.

**Social Capital and Resident Empowerment**

*How can stakeholders manage OCSH to promote social capital and empower long-term residents?*

Social capital (individual and communal investment in community activities that support social bonds – refer to full definition in Conceptual Framework) may be impacted by OCSH as OCSH changes the way long-term residents perceive their neighborhood; if OCSH produces changes that are unappealing to long-term residents, then this may reduce social capital by discouraging investment. Potential unappealing changes include negative housing conditions (social tensions between residents or stakeholders, increased nuisance issues, reduced housing diversity), or may be related to perceptions of the university or the city failing to give adequate consideration to long-term resident interests, resulting in feelings of powerlessness. Resident empowerment may increase social capital in two ways: by improving housing conditions and/or by giving residents a sense of power over their lives.

Resident empowerment can promote improvements in housing conditions because involving residents – the stakeholders who know most about community conditions – in planning decisions helps ensure that plans are appropriate to the needs and values of the community, and are therefore maximally effective. Resident empowerment promotes health-supportive programs, ultimately supporting health-supportive outcomes. These improved outcomes increase the appeal of the community, thereby increasing social capital. The other pathway by which resident empowerment can increase social capital is its insurance that residents do not feel powerless over their living conditions. Feelings of powerlessness are associated with stress and reduced quality of life (Souders, 2013), and so may cause a decrease in social capital. Empowering residents can prevent this reduction in social capital.

Case study interviewees acknowledged the importance of social capital and resident empowerment, and the universities in all four case studies had strategies in place to improve community relations and to ensure long-term resident involvement in planning processes. For example, the University of Rochester Office of Residential Life has implemented regular meetings with community leaders and organized off-campus recreational events to bring together students and long-term residents. Community engagement personnel living in CANs, as in the neighborhood liaison positions at the University of Rochester and Washington University in St. Louis, have allowed long-term residents to build relationships with university representatives that promote social capital and resident empowerment by cultivating a more friendly community atmosphere and by providing residents with a means of easily communicating their concerns to the university.

The successes of several of the case study schools suggest that strategies to promote social capital and resident empowerment in CANs are most effective when they are proactive, collaborative, and consistent. Many CANs had periods of high university-community tension before implementing community engagement strategies. The negative social and health outcomes of this tension might be avoided by stakeholders taking proactive steps to support social capital and resident empowerment, including involving community members in early planning phases and creating an open dialogue to address community concerns when they arise.
By effectively promoting social capital and resident empowerment, these strategies will support the health of long-term residents and benefit all stakeholders in CANs.

Data and Monitoring

*How can stakeholders use data tracking to support long-term resident health?*

Data collection, monitoring, and reporting are important tools for planning, implementing, and evaluating health promotion efforts. Tracking data allows stakeholders to determine where health-supportive interventions are needed, to target interventions, and to determine whether interventions are effective. For example, if crime rates in a CAN increase as OCSH rates increase, this may indicate that OCSH is having a negative impact on neighborhood safety. If crime and OCSH rates are being tracked at an appropriate scale, this association can be identified, analyzed, and communicated appropriately. This enables stakeholders to respond with an intervention (e.g., increase safety patrols, education campaign for residents). Continuing to track outcomes will allow stakeholders to assess the efficacy of the program in reducing crime, and to adjust as appropriate. Data and monitoring can also verify or counter stakeholder perceptions, so that the true impact of OCSH is known, and misconceptions of its impact can be addressed. For example, if stakeholders perceive that crime is increasing in association with OCSH, but this is not the case, this can be communicated and other sources of the residents’ perceptions explored.

Among the four case studies, Georgetown University presented the sole example of comprehensive quantitative data and monitoring to address the impact of OCSH on long-term resident health. The Georgetown Community Partnership is monitoring several issues related to OCSH, including trash disposal, housing rates, and nuisance issues (Appendix II). The Partnership has also administered neighborhood quality of life surveys. As a result of these programs, Georgetown now has a clearer picture of the prevalence of some issues related to OCSH, and soon will be able to determine the efficacy of its interventions.

City, community, or university stakeholders can facilitate data and monitoring initiatives to track health conditions, health determinants (rental rates and property values, home ownership, code violations, nuisance incidents, crime, food security, resident perceptions of neighborhood quality), or outcomes of interventions (changes in determinants). Data and monitoring programs set the stage for health-supportive interventions that effectively mitigate the negative impacts of OCSH on long-term resident health in individual CANs, and can substantiate evidence of the impacts of OCSH on health to inform future stakeholder action in all CANs. Additionally, jointly selecting key metrics, analyzing trends, and problem-solving around findings can bring stakeholders together in constructive ways.
VIII. Lessons Learned

**All stakeholders in CANs have incentives to promote health-supportive OCSH strategies.**

Universities, cities, communities and private businesses all have individual incentives for promoting health in CANs (see Figure 3). Recognizing this common interest, stakeholders should collaborate in strategies to create health-supportive communities. A best practice example of this is the collaboration between City and University personnel in the Georgetown Community Partnership to bring landlords of OCSH into code compliance.

**Collaboration facilitates effective strategies.**

Collaboration among stakeholders allows for the pooling of resources including funding, personnel, enforcement mechanisms, and information on housing conditions and health outcomes. By collaborating, stakeholders can acquire a greater understanding of potential strategies and how health may be most effectively promoted in target neighborhoods. They have different capacities to manage OCSH and its impacts; if they work together they can leverage these more effectively.

**There should be a consistent dialogue between universities and communities.**

Often, change in CANs came about after university-community tensions had increased from resident displeasure with the impacts of OCSH in their neighborhoods. By potentially avoiding stress for residents, avoiding these tensions is, in and of itself, health-supportive. There should be a consistent dialogue between universities and communities so that concerns can at least be responded to in a timely manner, if not prospectively addressed through collaborative planning processes. Washington University in St. Louis presents a best practice example; since the university established a system of consistent communication with community members, there has been zero community outcry in response to university off-campus development because community members have been consulted throughout the planning process. Community involvement is also important as it ensures that strategies to promote community health are appropriately aligned with community needs and values, so that changes will be maximally health-supportive.

**Strategies should consider all health pathways.**

Certain health pathways (nuisance issues) have been given more attention than others (affordability) in initiatives to reduce the impact of OCSH on long-term resident health. This is not necessarily aligned with the distribution of impacts or priorities in the community. Strategies to promote health should consider all potential health pathways before they are implemented; this will ensure that all appropriate impacts are addressed. Further, incorporating multiple health considerations into a single intervention can save resources and create a more health-supportive community. For example, if diverse housing options are made accessible, they should be inspected before allocation to ensure that residents are not negatively affected by low quality housing.

**Stakeholders should consider all potential impacts of plans, projects, and policies on long-term residents.**
Plans, projects, and policies may impact long-term resident health in unexpected ways. Even initiatives that are intended to be health-supportive, like the Greater University Circle home purchase program (Case Western Reserve University), may negatively affect long-term residents. To avoid unintended outcomes that put long-term residents at risk, stakeholders should consider long-term resident health in every development decision.

**The voice of community members can promote health-supportive OCSH conditions.**

Universities initiated a majority of the strategies identified in this analysis. However, in all four case studies the driver of University action was identified as community feedback; the universities took action in response to vocal community concerns. An organized community voice will always be louder and more effective in finding resolutions than one that is uncoordinated in its interests and actions.

**Accountability ensures change.**

Depending on city ordinances related to OCSH (for example zoning laws), commitments to health-supportive initiatives may be enforced legally. For example, if a university commits to reducing OCSH in a campus plan that requires city approval, the city may be able to revoke development rights if the commitment is not met. Publicity is another means to stakeholder accountability: failing to meet commitments is bad for public image. Universities, cities, and private businesses all have an interest in preserving their image, so linking stakeholder actions to public monitoring systems may be effective in encouraging health-supportive action.

**Monitoring outcomes will allow for the continuation and expansion of health-supportive strategies.**

Monitoring outcomes of strategies intended to support health ensure that the programs are effective; if outcomes are not improving, a strategy should be adjusted or discontinued because it is not effectively promoting health. Proving the efficacy of strategies also facilitates their implementation in other communities. Programs that have been shown to be health-supportive in a CAN may be expanded throughout the city or introduced in other CANs.
IX. Conclusion

OCSH has the potential to negatively or positively impact the health of long-term residents. Universities, city governments, communities, and private businesses all stand to benefit from promoting community health. The interests of these stakeholders, and their diverse abilities to manage, respond to, or shape OCSH dynamics, mean that there are unique opportunities in CANs to significantly improve community health.

The findings of this project suggest that most efforts to manage the impacts of OCSH are initiated, funded, and led by universities. However, there are examples of cities and communities taking leading roles in improving the impacts of OCSH on long-term resident health. These cases indicate that cities and communities, with their unique resources, enforcement capacities, and community networks, can affect significant positive changes. For these reasons, greater engagement of community and city stakeholders should be promoted.

The findings also determined that, while education is the most prevalent strategy for mitigating negative impacts of OCSH, policy/regulation change and resource provision have been implemented to considerable advantage in several cases. For example, nuisance issues are commonly addressed with good neighbor education campaigns, but policy changes to limit off-campus residency and greater provision of neighborhood patrol resources may be more effective in reducing nuisance issues. These less common approaches could significantly improve the impacts of OCSH on long-term resident health in CAN’s, and should be considered by all CAN stakeholders.

Finally, this project revealed that responses to OCSH are not limited to mitigating its negative impacts, but that there is unrealized potential for OCSH to affect health-supportive change in CANs. While neighbors usually perceive growth in student housing as having a negative impact on long-term neighbors, particularly those who are low-income, there is potential to leverage the buying power, energy, policy power, and research capacity of students and universities to benefit existing residents. In this way, strategies managing the impacts of OCSH are uniquely equipped to improve health outcomes. However, these positive changes will only occur if the needs and values of existing residents are proactively considered in decisions. This would preferably happen before OCSH has a negative impact on long-term resident health.

Through proactive, collaborative efforts that efficiently pool resources, consider all potential health pathways, and are appropriate to community needs and values, stakeholders in CANs can be frontrunners in promoting community health. By mitigating negative impacts and supporting positive outcomes from OCSH in CANs, strategies will benefit not only students, long-term residents, and stakeholders in CANs, but may improve the health of their cities and provide best practice examples that can be expanded throughout cities, in other CANs, and beyond.
X. References


Appendix I: Sample Interview Questions

1) Can you describe the neighborhoods surrounding [University name] in terms of demographics and neighborhood structure (students vs. permanent residents)?

2) Can you describe off-campus housing at [University name]? Is it a common choice among undergraduates? Are off-campus students primarily located in one area?

3) Have changes in off-campus housing been associated with changes in housing affordability in the community?
   What university/city/resident strategies are in place to mitigate this impact?

4) Have changes in off-campus housing been associated with changes in housing quality in the community?
   What university/city/resident strategies are in place to mitigate this impact?

5) Have changes in off-campus housing been associated with changes in access to health-supportive resources (e.g. nutrition, health care) in the community?
   What university/city/resident strategies are in place to mitigate this impact?

6) Have changes in off-campus housing been associated with changes in nuisance complaints (e.g. noise, parking) in the community?
   What university/city/resident strategies are in place to mitigate this impact?

7) Have changes in off-campus housing been associated with changes in crime and safety in the community?
   What university/city/resident strategies are in place to mitigate this impact?

8) Have changes in off-campus housing been associated with changes in social cohesion in the community?
   What university/city/resident strategies are in place to mitigate this impact?

9) Are there data sources available to track this information? How are these data sources used?

10) What would you say are the biggest challenges for improving the role of off-campus housing in the community?
# Appendix II: List of Reviewed Housing-Related HIAs

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<thead>
<tr>
<th>Report</th>
<th>Access Link</th>
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<tbody>
<tr>
<td>Aerotropolis Atlanta Brownfield Redevelopment Health Impact Assessment</td>
<td><a href="http://www.healthimpactproject.org/resources/body/Aerotropolishia-I.pdf">http://www.healthimpactproject.org/resources/body/Aerotropolishia-I.pdf</a></td>
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<td>Healthy Corridor for All; A Community Health Impact Assessment of Transit-Oriented Development Policy in Saint Paul, Minnesota</td>
<td><a href="http://www.healthimpactproject.org/resources/body/Healthy-Corridor-summary.pdf">http://www.healthimpactproject.org/resources/body/Healthy-Corridor-summary.pdf</a></td>
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<td>Long Beach Downtown Rapid HIA</td>
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<td>Yellowstone County/City of Billings Growth Policy</td>
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<td>Pathways to Community Health: Evaluating the Healthfulness of Affordable Housing Opportunity Sites Along the San Pablo Avenue Corridor Using Health Impact Assessment</td>
<td><a href="http://www.healthimpactproject.org/resources/document/San-Pablo-Corridor.pdf">http://www.healthimpactproject.org/resources/document/San-Pablo-Corridor.pdf</a></td>
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<td>A Health Impact Assessment of Accessory Dwelling Unit Policies in Rural Benton County, Oregon</td>
<td><a href="http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/21254/Fellows.pdf?sequence=1">http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/21254/Fellows.pdf?sequence=1</a></td>
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<td>Health Impact Assessment of Affordable Housing Inspections in Ohio</td>
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<tr>
<td>Santa Monica Airport Health Impact Assessment</td>
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<td>SE 122nd Avenue Planning Study Health Impact Assessment</td>
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Appendix III: Monitoring Nuisance Issues, Georgetown Community Partnership

Georgetown Community Partnership website (https://communityengagement.georgetown.edu/gcp)

<table>
<thead>
<tr>
<th>Property Type</th>
<th>Number of Incidents</th>
<th>Percentage of Incidents</th>
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<tbody>
<tr>
<td>Noise</td>
<td>174</td>
<td>70%</td>
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<tr>
<td>Parking</td>
<td>38</td>
<td>16%</td>
</tr>
<tr>
<td>Traffic</td>
<td>12</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
<td>6%</td>
</tr>
</tbody>
</table>

The total number of incidents reported in the last six months is 260. The most common issues reported are noise (70%), parking (16%), traffic (5%), and other (6%).