CHIA
Chronicles of Health Impact Assessment
Improving community health through health impact assessments

November 2022 VOLUME 7 ISSUE 1

LETTER FROM THE EDITOR

SOPHIA has started an academic interest group to support SOPHIA members who are teaching HIA or HiAP courses, or are participating as guest lectures in other courses. A few of the member of the academic interest group have shared their experiences in this edition of CHIA. We also have an article submitted from a student of a recent HIA course that presents their findings.

Tatiana Lin has created a HIA Health tool and shared that with two universities in Kansas. Keisha Pollack Porter shares how she recruited and managed a very large online HIA course at Johns Hopkins University. Lindsey Realmuto discusses her first HIA course experience at the University of Illinois-Chicago.

If you would be interested in joining the SOPHIA Academic interest group please contact me at cylstone@iu.edu

Thank you,

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Editor, Chronicles of Health Impact Assessment Journal

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ABOUT THE JOURNAL

A Health Impact Assessment (HIA) is a systematic process that uses a variety of data sources and analytic methods and input from community stakeholders to determine the potential health effects of a proposed policy, program, or plan. HIAs provide recommendations to decision makers on how to adjust the policy or program to minimize negative health effects and increase potential positive health benefits.

The editorial board and staff of CHIA strive to give expression to health impact assessment research and scholarship while serving the public health profession.

Table of Contents

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November 2022 VOLUME 7 ISSUE 1

HEALTH IMPACT ASSESSMENT: THE IMPACTS OF INCREASING TREE CANOPY COVERAGE IN MARION COUNTY, INDIANA

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Abstract

Background: Urban tree canopies help to address issues of climate change related to all dimensions of health. Certain areas of the city of Indianapolis are more prone to the negative effects that lack of tree coverage can cause. This assessment explored the short term and potential long-term impacts of the efforts to increase the tree canopy coverage in vulnerable areas of Indianapolis. This effort was a collaboration of faculty members from the Indiana University Richard M. Fairbanks School of Public Health, Indianapolis Department of Public Works, Keep Indianapolis Beautiful, and the Indianapolis Office of Sustainability.

Methods: Our team used the standard seven-step Health Impact Assessment (HIA) process to make the recommendations provided. Using direct observation of the neighborhood, secondary data collection, literature review, and a key stakeholder interview, we examined key dimensions of health including environmental, physical, and personal health outcomes resulting from increased tree canopy coverage within census tract 3505 of Marion County, Indiana.

Results: Increasing the percentage of tree canopy coverage in census tract 3505 – Crown Hill has significant positive health impacts with minimal negative outcomes. Such impacts may be, but are not subject to, lower temperatures, reduced cases of respiratory and cardiac infections/illnesses, promoting animal life, increasing neighborhood property values and filtering pollutants that result from human production activity.

Conclusions: Further implementation of the Thrive Indianapolis project has broad positive implications for the community members living in this area. While few negative implications were found, we make recommendations to mitigate these effects while attempting to supplement the current project plan with a focus on the effects to human health.

Keywords: HIA, Health Impact Assessment, Census Tract 3503, Crown Hill, Indianapolis, Marion County, tree canopy, Thrive Indianapolis, Keep Indianapolis Beautiful (KIB)

Introduction

As the climate patterns change across the world, there must be action taken within communities to adapt to these changing temperatures. In Indianapolis, extreme weather changes affect certain populations disproportionately and areas of high poverty are especially prone to the negative side effects of poor climate-centered infrastructure planning (Vilfranc, 2021). Tree canopy coverage in urban areas has many benefits to the health of the individuals who live and work there (Indianapolis Office of Sustainability, 2019).

The local nonprofit organization, Keep Indianapolis Beautiful (KIB), has been working toward addressing this issue, along with numerous other nature related tasks in the community, for over 40 years (Keep Indianapolis Beautiful [KIB], 2022). In 2006 KIB began an initiative in partnership with the Indianapolis Office of Sustainability to address the need for more tree canopy coverage in Indianapolis (Sheridan, 2021). This health impact assessment explores the reasoning behind this program, how the program was implemented, the successes of the program, and how it can be improved to better address the social determinants of health as identified. The primary objective of this assessment is to evaluate the Thrive Indianapolis program and provide recommendations to maximize the positive outcomes while minimizing the negative consequences of the program.

Project Under Assessment

An urban tree canopy is defined as the layer of leaves and the amount of coverage or shade that is provided by a tree to the ground below (U.S. Department of Agriculture, Forest Service, 2019). Cities can assess the amount of coverage provided by a canopy and use this information to track the growth and progress of the canopy. These tree canopy projects are more than just an effort to beautify a community; they also assess and evaluate specific social and environmental health determinants in areas that are lacking resources (U.S. Department of Agriculture, Forest Service, 2019). After an assessment and analysis has been conducted on a specified area, stakeholders provide input on the best places to strategically plant trees to address the identified environmental, social, and health risks. In addition to the initial implementation of the tree plantings, continued short- and long-term monitoring of these canopies is vital to the project. The monitoring not only assesses the growth and progress of the canopy, but also the effectiveness of addressing the health impacts and goals initially intended. This HIA was conducted by graduate students at the Indiana University Richard Fairbanks School of Public Health.

Health Impact Assessment Methodology

Our HIA sought to evaluate census tract 3505 (the Crown Hill area) within Marion County, Indiana. The graduate student research team used the standard seven-step Health Impact Assessment (HIA) process adapted from Ross and colleagues (2014); the steps are outlined below:

1. **Screening** – determine if usefulness of HIA for the project
2. **Scoping** – plan the HIA
3. Assessment – identify immediate and long-term impacts of project
4. **Recommendations** – provide strategies to enhance the positive impacts of the project while minimizing any negative impacts
5. **Reporting** – communicate and disperse findings to stakeholders and community
6. **Evaluation** – understand the implications of the project
7. **Monitoring** – continue to track key metrics over time after project implementation

(Ross, Orenstein, & Botchwey, 2014)

Screening
Due to time limitations, faculty members at the Indiana University Fairbanks School of Public Health conducted this step in the HIA process. Prior to student engagement, the faculty members identified project opportunities which allowed our team to proceed through the subsequent steps of a rapid HIA. Further discussion of the screening step included: 1) an evaluation of whether the project will affect a new population; 2) an evaluation of whether the decision makers are open to collaborating; and 3) an HIA, if there was a value-add to the decision and if there was sufficient information to conduct additional research (KA Hilts, 2022).

Scoping
Our team relied on literature reviews, secondary data collection, and a stakeholder interview to assist in the development of a scoping document to guide the execution of this HIA. Stakeholders were identified by the faculty members in the screening process of the HIA and included decision-makers from the Indianapolis Office of Sustainability, Department of Public Works, and Keep Indianapolis Beautiful. In our hour-long interview with the stakeholders, 10 priority areas were identified to expand tree canopy coverage using the Key Neighborhood Identification Tool (KNIT). A KNIT score is derived using four major factors:

- Social Vulnerability Index (SVI) data
- Percent Canopy Coverage
- Concentration of litter and illegal dumping complaints
- KIB Program Score

(Adler, Kincius, & McReynolds, 2022)

One of the priority areas having a high KNIT score was selected by the graduate student research team for subsequent evaluation and is the focus of this HIA – census tract 3505 in Marion County, Indiana. This census tract represents a 0.6 square mile area within Marion County, Indiana having a population of approximately 2,379 (U.S. Census Bureau, 2022). The team selected census tract 3505 for review due to time limitations. Familiarity of the area, proximity, and background knowledge of inequities occurring in this area were additional contributors to the selection of this census tract.

After conducting a literature review, we developed a scoping document which outlines the goals of the HIA. These goals were extracted from action plans developed by various governing agencies with the intent of implementing the Thrive Indianapolis program:

1. Increasing community resilience through a focus on equity (Indianapolis Office of Sustainability, 2019)
2. 100% renewable energy use by 2028 (WHO, 2022)
3. Achieve net zero greenhouse gas emissions in Marion County, Indiana by 2050 (Indianapolis Office of Sustainability, 2019)
4. Plant 30,000 native trees in Marion County, Indiana by 2050 (Indianapolis Office of Sustainability, 2019)

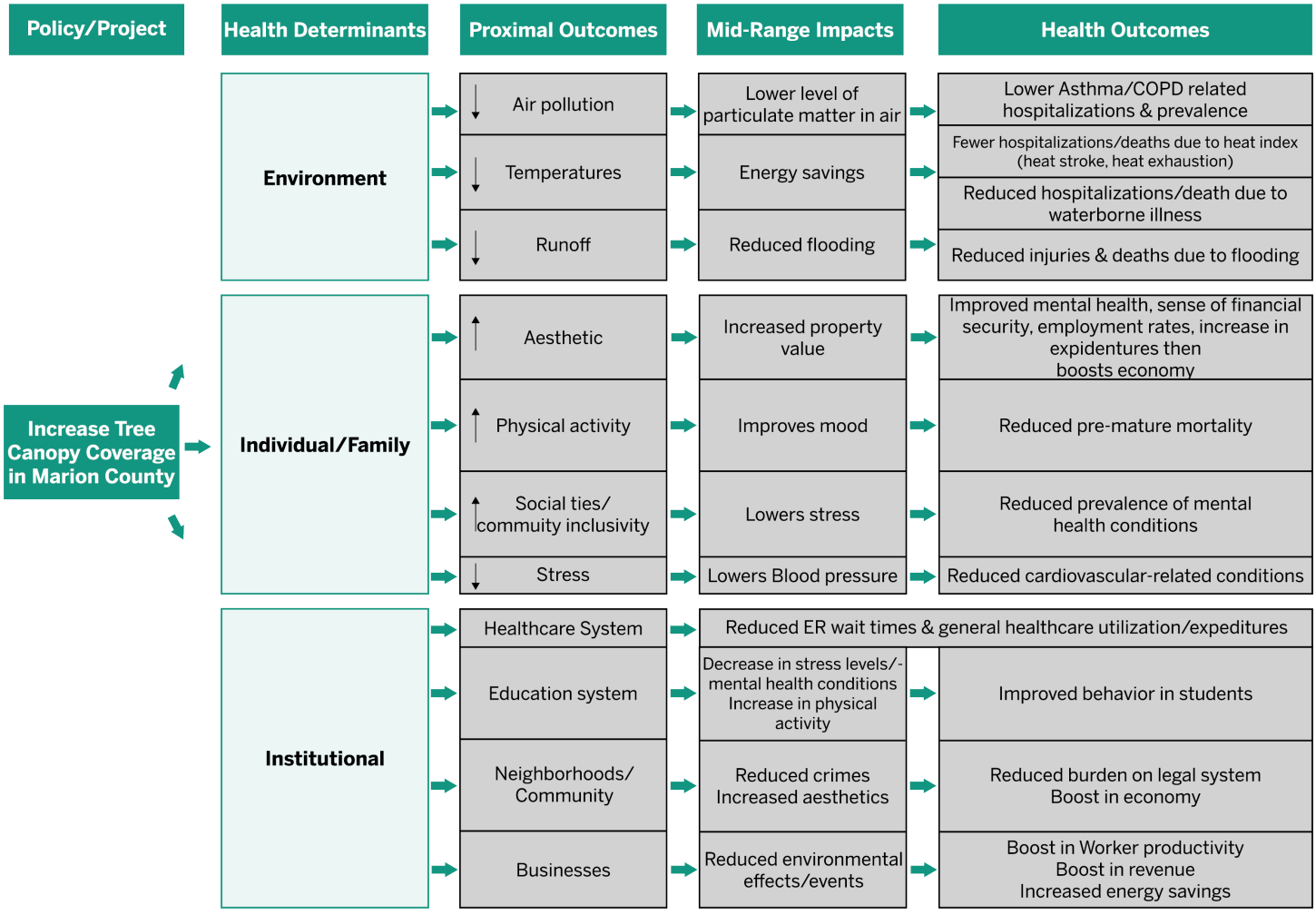
The above outlined goals are the principal drivers in the selection and subsequent assessment of further expanding tree canopy coverage in census tract 3505.

Assessment
Our team relied on stakeholder interviews, literature reviews, secondary data collection and direct observation of the area to develop baseline health, social and environmental metrics, and a community profile. To aid in the prioritization of health-specific outcomes, we created a pathway diagram displaying how increasing tree canopy coverage in census tract

3505 would affect the three primary groups of social determinants of health (environment, individual/family, and institutional). The pathways diagram (**Figure 1**) further outlines the proximal, intermediate, and long-term effects that increasing tree canopy coverage might have. Our literature review also elicited the development of four research questions that this report further discusses in the results section:

1. What impact will an increase in tree canopy coverage have on premature deaths, hospitalization rates, and mental health outcomes?
2. What are the necessary requirements to reduce any negative outcomes related to increased tree canopy coverage?
3. How will increasing tree canopies affect food insecurity, cost of living, and other equity-related issues?
4. How will increased tree canopies affect climate change challenges such as heat waves, droughts, and flooding?

Figure 1: Pathways Diagram



Note: Arrows under the proximal outcomes section represent the direction (positive/negative) of the predicted outcomes

Results

Summary

We conducted three distinct analyses to develop a community profile and baseline health metrics worthy of further monitoring and evaluation. First, our team developed a community profile by reviewing publicly available data sets from SAVI, the Centers for Disease Control and Prevention (CDC), Environmental Protection Agency (EPA), and through direct observation of the neighborhood. These results are outlined in the sections below. Quantitative data were compared to Marion County, Indiana rates to comprehend possible disparities occurring in this area.

Community Profile – Quantitative Results

SAVI data were used to understand the demographic characteristics of the population in census tract 3505; results are presented in **Table 1**. As a benchmark, we used Marion County, Indiana to understand how census tract 3505 compares using the same metrics. SAVI data were also used to understand organizational resources currently available in this area; findings can be viewed in **Table 2** and **Figure 2**. Secondly, our team completed a windshield survey/direct neighborhood observation focusing on the housing characteristics, environmental infrastructure, resources, and neighborhood life to get a sense of this population's living circumstances.

Table 1: Demographic Characteristics and Composition of Census Tract 3505 Population

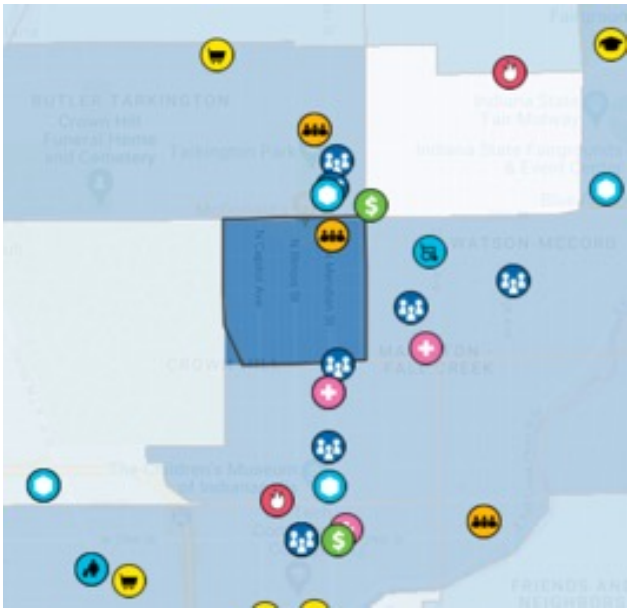
Metric	Census Tract 3505 Crown HIII	Marion County, Indian
Population	2,379	951,869
Unemployment Rate	13%	6%
Poverty	47	18
Per Capita Income	15,339	30,013
Violent Crime Rate Per 1,000	92	6
% African American	78%	28%
Median Age	35	34
Poverty (children under 18)	55%	24%
Poverty (65+ yo)	27%	10%
Educational Attainment - Bachelor's Degree	6%	32%

(SAVI, 2010; U.S. Census Bureau, 2022)

Table 2: Organization Resources Available Within Census Tract 3505, Crown Hill

Metric	Census Tract 3505 - Crown Hill
Material Assistance	0
Fire Stations	0
Education Programs	1
Emergency Food	0
Community Center	1
Basic Needs Organizations	1

Figure 2: Organizational Resources of Census Tract 3505 Map



One member of our research team surveyed census tract 3505 – Crown Hill on a Thursday morning during the summer season; this Thursday morning was laden with heavy rain and thunderstorms with a temperature of 69 degrees Fahrenheit. Photographs were taken to express housing characteristics, available open spaces, community resources, and the neighborhood life in the area.

Housing Characteristics

Per the U.S Census Bureau survey completed in 2020, there are a total of 1,235 housing units in this census block (**Figure 2**); 21% of these units are vacant which is nearly double the rate of Marion County, Indiana (11% vacancy) (U.S. Census Bureau, 2022). The number of housing units outweigh the number of households (seen in **Figure 3**) in this area – there are 973 households with an average of 2.4 persons per household (U.S. Census Bureau, 2022). Majority of these households are owned by female members which is 1.5 times the rate of Marion County, Indiana (U.S. Census Bureau, 2022). It was also observed that numerous houses had boarded-up or broken windows, with a run-down appearance.

Figure 3: Housing Unit Located in census tract 3505 – Crown Hill

Figure 4: Representative Household & Structure in census tract 3505 – Crown Hill

Open Spaces

While this area had open spaces, the appearance aligned with that of some of the housing characteristics. The state of the observed open spaces can be seen in **Figure 5**. There were a handful of empty gravel or concrete-paved lots not in use – some construction debris could be seen laying in these areas. The buildings in proximity to these lots had graffiti in addition to vacant buildings.

Figure 5: Open Space Example Within Census Tract 3505 – Crown Hill

Community Resources

As discovered in our quantitative overview, it was found that this area has very limited resources; however, within near proximity outside the census tract boundaries, more resources can be found. Our team found no fire or police stations in the area although police presence was observed (**Figure 6**). One elementary school was found to be in the area. There are extreme limitations to food in the area – a Dollar General, McDonald's, a few gas stations, and liquor stores were found in the area suggesting limited potential for obtaining healthy food options. Per SAVI, this census tract has been deemed a food desert (SAVI, 2018) and could benefit from alternative project options like a community garden or farmer's market to provide healthy food options. This area has also been deemed a medically underserved area – meaning there are no hospitals or healthcare clinics. Due to this fact, we found it essential to prioritize baseline metrics including hospitalization rates due to inhaled air pollutants, rates of disease correlated with inhaled air pollutants including COPD, asthma, cardiovascular-related disease, and mental health-related disease. Finally, it was found that there are six churches in this census tract that could provide additional resources and feedback.

Figure 5: Open Space Example Within Census Tract 3505 – Crown Hill

Neighborhood Life

Our team observed a largely African American population confirmed by our quantitative results that this area is 78% African American (U.S. Census Bureau, 2022). Although not observed at the time of the windshield survey, a member of our team has previously observed homelessness when driving through the area on sunny days. We suspect that no interaction was occurring from members of the neighborhood due to the rain in the area at the time of observation; previous sightings by a team member of neighborhood interaction had occurred outside of the survey timing.

Neighborhood Infrastructure

The observations in this section promote a significantly higher health risk for the members living in this census tract – in particular, members whose houses border major streets. This community is adjacent to a main highway, I-65; this community is also segregated by several major Indianapolis streets, including 38th Street, Illinois Street, and Capitol Street. All these heavy traffic areas increase the citizen's exposure to particulate matter, and toxic air pollutants. Furthermore, it was found that multiple major bus routes move through this area further increasing the chances of air-pollutant related hospitalizations and disease prevalence (**Figure 7**). These bus routes serve as a point of transportation for the citizens living in this area; however, the risks of the bus routes may outweigh the benefits and further research would be necessary to determine this. Finally, the overall infrastructure was run-down, consistent with the housing characteristics. To better align this area with the goals outlined in the Thrive Indianapolis plan, funding to improve the built environment to include the displacement of debris-laden vacant lots with a community garden or plant native

trees may improve the mental health of this area's citizens and subsequently reduce the excessive prevalence of violent crimes by providing a more serene, aesthetically pleasing appearance (Park, et al., 2011).

Figure 7: Bus Routes Moving Through Census Tract 3505 – Crown Hill

Baseline Health Status

We reviewed various health, behavioral, and environmental metrics to evaluate the inequities occurring in census tract 3505 – Crown Hill. Disease prevalence and health risk behavior data were obtained from the PLACES database – these data are a combination of the Behavioral Risk Factor Surveillance System (BRFSS) and census data (CDC, 2022). The environmental metrics are a combination of data from the Environmental Protection Agency's (EPA) Environmental Justice Screening and Mapping Tool (EPA, 2022) and Thrive Indianapolis action plan reports. Baseline metrics were prioritized by us to express potential disease exacerbations directly correlated with exposure to poor air quality as well as the underlying mechanisms of stress influencing poor mental health status. The selected rates are displayed in Table 3 comparing census tract 3505 to Marion County, Indiana.

Table 3: Baseline Metrics of Census Tract 3505 – Crown Hill Compared to Marion County, Indiana: Disease Prevalence Rates, Behavioral Risk Factor Rates, and Environmental Metrics

Metric	Census Tract 3505 - Crown Hill	Marion County, Indiana
Baseline Health Metrics		
High Blood Pressure	52%	35%
COPD	13%	7%
Asthma	14%	10%
Stroke	8%	4%
Heart Disease	10%	6%
Diabetes	25%	13%
Depression	21%	20%
Obesity	48%	34%
Baseline Health Behavioral Metrics		
Physical Inactivity	51%	34%
Sleep < 7 hours	48%	38%
Mental Health Status (“not good” for >=14 days)	23%	16%
Physical Health Status ("not good" for >=14 days)	23%	13%
Environmental		
Respiratory Risk due to cumulative air toxics	0.472 - 0.777	N/A
Summertime Maximum Daily Temperature	97.1 - 98 Degrees	N/A
Social Vulnerability	High	N/A
Percent Tree Cover	5 - 15%	N/A

Table 4: Summary Outcomes, Likelihood, Magnitude, and Additional Considerations in Implementation

Outcome	Likelihood	Magnitude	Additional Considerations & Details
High Blood Pressure	Likely	Small to Moderate	Literature suggests more green space may lower the odds of hypertension, diabetes and cardiovascular disease (Astell-Burt & Feng, 2019)
COPD	Likely	Small to Moderate	Certain trees are associated with higher levels of allergens (Sousa-Silva, et al., 2021). Allergies have the potential to exacerbate symptoms for those with COPD (Gayle, et al., 2020). Exacerbation of symptoms could be minimized by planting trees approved by those directly affected.
Asthma	Likely	Small to Moderate	Certain trees are associated with higher levels of allergens, it would be essential to seek guidance from community members where trees will be placed to ensure increased asthma-related conditions are mitigated (Sousa-Silva, et al., 2021)
Stroke	Likely	Small to Moderate	Those living in greener areas had a lower risk of death in those having a prior stroke (Kondo, et al., 2020)
Heart Disease	Likely	Small to Moderate	Literature suggests more green space may lower the odds of hypertension, diabetes and cardiovascular disease (Astell-Burt & Feng, 2019)
Diabetes	Likely	Small	Literature suggests more green space may lower the odds of hypertension, diabetes and cardiovascular disease (Astell-Burt & Feng, 2019)
Depression	Likely	Small to Moderate	Higher levels of green space are associated with lower depressive symptoms, anxiety and stress (Beyer, et al., 2014)
Obesity	Likely	Small	Increasing tree canopy coverage shows an increase in physical activity thereby having the potential to reduce rates of obesity (Wolf, et al., 2020)
Physical Inactivity	Likely	Small	Increased heat is directly correlated with lower levels of physical activity; increasing tree canopy coverage from 4% to 60% reduced daily maximum temperatures by approximately 3 - 5.23 degrees Celsius (Esfehankalateh, et al., 2021)
Sleep < 7 hours	Likely	Small	The odds of insufficient sleep were lower among participants having higher tree canopy coverage (Astell-Burt & Feng, 2019) - low-level vegetation was not associated with sufficient sleep (Astell-Burt & Feng, 2019)
Mental Health Status (not good for >=14 days)	Likely	Moderate	Higher levels of green space are associated with lower depressive symptoms, anxiety and stress (Park, et al., 2011)

Table 4: Continued

Outcome	Likelihood	Magnitude	Additional Considerations & Details
Physical Health Status ("not good" for >=14 days)	Likely	Small	Direct impacts can be measured through increases in physical activity and associated reductions in cardiovascular disease, diabetes, and other chronic health conditions (Wolf, et al., 2020)
Respiratory Risk due to cumulative air toxics	Likely	Moderate	The planting location of the trees are essential; research suggests that trees planted close to the street may disrupt wind flow and subsequently trap pollutants below the tree canopy line (Vos et al., 2013)
Summertime Maximum Daily Temperature	Likely	Moderate	Tree canopy coverage is associated with fewer ambulance calls for heat-related events (e.g. heat stroke, heat exhaustion) and subsequent heat-related mortality (Graham, et al., 2016).
Crime Rates	Likely	Small to Moderate	Tree canopy coverage is inversely associated with crime rates (robbery, theft, shootings). Trees planted near the street were associated with decreased crime (Troy, et al., 2012)

Explanations:
* Likelihood: strength of evidence in the literature (likely or unlikely); Magnitude: estimated size of the impact (effect on number of disease cases or adverse events)

Projected Impacts

We evaluated each of the metrics outlined in Table 3 and assessed the likelihood that increasing tree canopy coverage has on influencing the respective metric and the intensity and magnitude of the effect; these effects are outlined in Table 4. In summary, increasing tree canopy coverage or additional green spaces in this community have the potential to reduce all reviewed health outcomes if the proper mitigation strategies are executed.

Mitigation Metrics & Considerations

While the projected impacts of expanding the Thrive Indianapolis program to include increasing tree canopy coverage are overwhelmingly positive, it is also essential in the HIA process that mitigation metrics be developed to reduce any potential negative impacts. Our team would suggest tracking or considering the following to ensure mitigation of negative outcomes:

1. Planning proper tree planting location; literature suggests that trees planted in near proximity of the street can disrupt air flow thereby trapping air toxins (Vos et al., 2013)
2. While increased tree canopy coverage is associated with reduced gun assaults (Wolf, et al., 2020), researchers found that small view-obstructing trees are associated with increased crime rates (Donovan, 2012)
3. Careful consideration must be placed on the tree species planted to ensure community members are not allergic

4. While increased urbanization is linked to an increase in the incidence of vector-borne diseases, increasing eco-habits for these species also provides opportunity for increased exposure and hospitalizations (Diuk-Wasser, et al., 2020)

Recommendations

Our team exhibited vigilance to not duplicate current efforts and measures that are being taken in conjunction with the Thrive Indianapolis program. Rather, we found limiting factors in the plans that would help to supplement and accelerate meeting currently devised metrics.

Recommendation 1: Convert Empty Vacant Lots into Community Gardens or Rain Gardens

Direct observation of census tract 3505 – Crown Hill enables the research team to recommend the conversion of vacant lots to either community gardens, rain gardens, or green spaces. This recommendation directly aligns with three of the current metrics being reported: 1) total tons of materials recycled; 2) square feet of rain garden; and 3) % impervious area (City of Indianapolis Office of Sustainability, 2021). Addressing these metrics would have further implications on select public health and safety metrics reported out like the percentage of adults who are overweight or obese (City of Indianapolis Office of Sustainability, 2021). While the 2021 report describes current funding and efforts to enhance violence prevention, the project plan does not report any mental-health related outcomes. Our team seeks to supplement the plan by encouraging additional violence-related health metrics to fully understand the effect that the built environment, including green areas, has in reducing Indianapolis-based crime. Community gardens are a proven way to encourage social connectivity in communities and enhances the sustainability of communities with this opportunity. Additionally, green areas have a sustainable impact on the mental well-being of populations near these areas (South, et al., 2018).

Recommendation 2: Develop Partnership with IndyGo

The expansion of bus routes in the Indianapolis area are contributing to increased diesel exhaust exposing members to poor air quality (EPA, 2022). Our analysis found that census tract 3505 – Crown Hill is wedged between multiple high-traffic city streets (38th Street, Meridian Street, Capitol Street, and Illinois Street) and is also adjacent to I-65. Our recommendation to engage leaders from IndyGo with the intent to evaluate bus routes to lessen the effects of air pollution from bus exhaust would improve psychological stress as well as asthma/COPD-related hospitalizations. Careful consideration must be taken to resolve the increase in air pollution while either maintaining or reducing the level of transportation options available to this community. Our team stresses that barriers to transportation would increase vulnerabilities in this population.

Recommendation 3: Mitigation Measures

The safety and security of members in this community are of utmost importance. While evidence shows an overwhelming number of positive outcomes stemming from increased tree canopy coverage on human health, environmental health, and further downstream effects, mitigation metrics are an essential component to minimize any potential negative outcomes. We further recommend the mitigation measures outlined in a prior section of this report be reported on a regular cadence to governing and funding authorities.

Reporting

Results of this analysis will be presented in three separate formats. First, this report will be provided to the stakeholders for review and

additional feedback. Second, our team will be presenting a summarized version of this report to stakeholders and faculty members. Third, we have intent to submit this report to a peer-reviewed journal for wider dissemination of findings.

Monitoring & Evaluation

Project plans for the Thrive Indianapolis program currently provide robust evidence, analyses, and tracking that allow for continual reporting to governing and funding authorities. These project plans currently track metrics related to the built environment, energy-use, food and urban agriculture, transportation/ land use, and waste/recycling efforts. This HIA serves as a supplement to these project plans by providing health-related metrics showing the direct effect on the populations of the target communities. We found several metrics that are formally reported with varying timelines by the project stakeholders: most occurring every year or every three years. However, there were minimal health-based outcome measures developed. Our team's recommendations would be to partner directly with data-collecting organizations such as the Indiana State Department of Health to obtain hospitalization data from mental health conditions, asthma, COPD, heat-related, and cardiovascular-related events. This partnership would aid in regularly monitoring the downstream health impacts of increasing tree canopy coverage in census tract 3505 – Crown Hill. Publishing quantitative results using these data would also be beneficial in securing additional funding to continue sustainability efforts in Indianapolis communities.

Conclusion

This Health Impact Assessment was conducted to determine the health-related benefits and consequences of Thrive Indianapolis, specifically focusing on the impact of increased tree canopy in the Crown Hill neighborhood of Marion County, Indiana. Crown Hill has disproportionately high rates of unemployment, poverty, and violent crime and thus has the most to gain from the benefits of increased tree canopy and/or green space.

The assessment was initiated by Keep Indianapolis Beautiful and the Indianapolis Office of Sustainability and conducted by graduate students at the Richard M. Fairbanks School of Public Health at Indiana University-Purdue University Indianapolis. Through key interviews, direct observation, secondary data analysis, and review of the existing literature, our team of graduate researchers assessed the impact of the increased tree canopy on morbidity and mortality, social equity, and mitigation against climate change. We also provide recommendations for maximizing the positive and minimizing the negative effects of the program. The major limitation of this assessment was time. Because of time constraints we were also unable to engage community members; additional input from these key stakeholders is essential to the success of the program and should be considered prior to planting.

In addition to engaging community members in planning and evaluation, we make the following specific recommendations: 1) convert vacant lots into community gardens or rain gardens to reduce the effects of climate change; 2) develop a partnership with IndyGo to align public services to achieve the City's climate change goals ; and 3) continuous monitoring of potential threats such as crime and vector-borne disease to ensure that conditions in the Crown Hill neighborhood are not made worse by the program initiatives.

References

Adler, M., Kincius, B., & McReynolds, M. (2022, May 24). It's My City Contract: Urban Forestry Investment. Indianapolis, Indiana.

Astell-Burt, T., & Feng, X. (2019). Urban green space, tree canopy and prevention of cardiometabolic diseases: a multilevel longitudinal study of 46 786 Australians. International Journal of Epidemiology, 926-933.

Beyer, K., Kaltenbach, A., Szabo, A., Bogar, S., Nieto, F., & Malecki, K. (2014). Exposure to Neighborhood Green Space and Mental Health: Evidence from the Survey of the Health of Wisconsin. International Journal of Environmental Research and Public Health, 3453-3472.

CDC. (2022, April 4). PLACES: Local Data for Better Health. Retrieved from Centers for Disease Control: https://www.cdc.gov/places/

City of Indianapolis Office of Sustainability. (2021). THRIVE INDIANAPOLIS Annual Report 2021. Indianapolis: City of Indianapolis Office of Sustainability.

Diuk-Wasser, M. A., VanAcker, M., & Fernandez, M. (2020). Impact of Land Use Changes and Habitat Fragmentation on the Eco-epidemiology of Tick-Borne Diseases. Journal of Medical Entomology, 1546-1564.

Donovan, G., & Prestemon, J. (2012). The effect of trees on crime in Portland, Oregon. Environment and Behavior.

EPA. (2022, May 26). AirData Air Quality Monitors. Retrieved from EPA: https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=5f239fd3e72f424f98ef3d5def547eb5&extent=-146.2334,13.1913,-46.3896,56.5319

EPA. (2022, May 26). EJScreen. Retrieved from EJScreens EPA's Environmental Justic Screenign & Mapping Tool: https://ejscreen.epa.gov/mapper/

EPA. (2022, June 6). EPA. Retrieved from Learn About Impacts of Diesel Exhaust and the Diesel Emissions Reduction Act (DERA): https://www.epa.gov/dera/learn-about-impacts-diesel-exhaust-and-diesel-emissions-reduction-act-dera#:~:text=Human%20health%2C%20our%20environment%2C%20global,all%20affected%20by%20diesel%20emissions.&text=Human%20Health%20%2D%20Exposure%20to%20diesel,in%2

Esfehankalateh, A., Ngarambe, J., & Yun, G. (2021). Influence of Tree Canopy Coverage and Leaf Area Density on Urban Heat Island Mitigation. Sustainability, 7496.

Gayle, A., Quint, J., & Fuertes, E. (2020). Understanding the relationships between environmental factors and exacerbations of COPD. Expert Review of Respiratory Medicine, 39-50.

Graham, D., Vanos, J., Kenny, N., & Brown, R. (2016). The relationship between neighborhood tree canopy coverage and heart-related ambulance calles during extreme hear events in Toronto, Canada. Urban Foresty & Urban Greening, 180-186.

Hilts, K. (2022, May 17). H644: Health Impact Assessment Screening & Scoping. Indianapolis, Indiana. Indianapolis Office of Sustainability. (2019). Thrive Indianapolis. Indianapolis.

Keep Indianapolis Beautiful. (2022, June 16). About keep Indianapolis beautiful. Retrieved from Keep Indianapolis Beautiful: https://www.kibi.org/about-keep-indianapolis-beautiful

Ross, C. L., Orenstein, M., & Botchwey, N. (2014). Health Impact Assessment in the United States. New York: Springer.

Ruiz-Tagle, J., & Urria, I. (2022). Household overcrowding trajectories and mental well-being. Social Science & Medicine.

SAVI. (2010). SAVI Community Assessment & Planning Tool. Retrieved from SAVI: https://assessment.savi.org/AssessNeeds

SAVI. (2018, November 29). SAVI. Retrieved from Estimated 200,000 Indy Residents Live in Food Deserts: https://www.savi.org/2018/11/29/estimated-200000-indy-residents-live-in-food-deserts/

Sheridan, J. (2022, June 18). Tree planting gives boost to city's urban canopy. Retrieved from WFYI Public Media: https://www.wfyi.org/news/articles/tree-planting-gives-boost-to-citys-urban-canopy

South, E., Hohl, B., & Kondo, M. (2018). Effect of Greening Vacant Land on Mental Health of Community-Dwelling Adults. JAMA.

Sousa-Silva, R., Smargiassi, A., Kneeshaw, D. et al. Strong variations in urban allergenicity riskscapes due to poor knowledge of tree pollen allergenic potential. Sci Rep 11, 10196 (2021).

Troy, A., Morgan Grove, J., & O'Neil-Dunne, J. (2012). The relationship between tree canopy and crime rates across an urban-rural gradient n the greater Baltimore region. Landscape and Urban Planning, 262-270.

U.S Department of Agriculture, Forest Service. (2019). Urban Tree Canopy Assessment: A community's path to understanding and managing the urban forest. Retrieved from United States Department of Agriculture: https://www.fs.usda.gov/sites/default/files/fs_media/fs_document/Urban%20Tree%20Canopy%20paper.pdf

U.S. Census Bureau. (2022, June 18). Census Reporter. Retrieved from American Community Survey 5-year estimates: https://censusreporter.org/profiles/14000US18097350500-census-tract-3505-marion-in/

Vilfranc, C. (2022, June 18). As climate change makes Indianapolis hotter, some communities will suffer more than others. Retrieved from The Indianapolis Star: https://www.indystar.com/story/news/environment/2021/08/27/indianapolis-weather-extreme-heat-caused-climate-change-hits-hard/8208625002/

Vos, P. E., Maiheu, B., Vankerkom, J., & Janssen, S. (2013). Improving local air quality in cities: To tree or not to tree? Environmental Pollution, 113-122.

WHO. (2022). 2022 Health & Climate Change Urban Profile Indianapolis. WHO.

Wolf, K., Lam, S., McKeen, J., Richardson, G., van den Bosch, M., & Bardekjian, A. (2020). Urban Trees and Human Health: A Scoping Review. International Journal of Environmental Research and Public Health, 17(12): 4371.

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GUEST LECTURES: INCREASING STUDENT KNOWLEDGE OF HEALTH IN ALL POLICIES BY USING THE HEALTH IMPACT CHECKLIST

Tatiana Lin, M.A.; Wyatt Beckman, MPH, CHES; Vicki Collie-Akers, PhD, MPH

Introduction

Evidence-based information, objective analysis and civil dialogue can position policy leaders to become effective champions for healthy communities. Given that young people have a significant role to play in transforming communities, the Kansas Health Institute (KHI) has a goal of collaborating with academic institutions to build student capacity in recognizing, assessing and communicating the health and equity impacts of policies.

To accomplish this goal, KHI began collaborating with the Department of Population Health at the University of Kansas School of Medicine (KUMC) in 2020 to provide one guest lecture a year to Master of Public Health (MPH) students enrolled in the PRVM 804 Community Health Assessment, Intervention, and Advocacy class. As of October 2022, KHI has delivered two guest lectures. The guest lectures introduced students to Health in All Policies (HiAP) concepts and ways to examine potential positive and negative health and equity implications of policies by using the Health Impact Checklist tool, which is also referred to as HI-C. A seven-question Qualtrics survey was developed and administered following each lecture to assess student perception of the lecture and its effectiveness. Additionally, following the 2021 presentation, students were asked about ways they could implement HiAP approaches in their MPH studies, with results immediately shared for all to review using Poll Everywhere.

> HiAP is a collaborative approach that integrates and articulates health and equity considerations into policy making and programming across sectors, and at all levels, to improve the health of all communities and individuals.
>
> *-Association of State and Territorial Health Officials (ASTHO)*

Setting for Guest Lectures

The University of Kansas Medical Center (KUMC) Department of Population Health is home to the University of Kansas MPH program, which is the first and longest-standing MPH program in Kansas. The program has two concentrations: public health practice and epidemiology. In addition, the University of Kansas Edwards Campus (KU-E) has a newly launched, fully online generalist Master of Public Health program. The MPH curriculum consists of a series of core classes required for all concentrations and a set of concentration-specific classes. A core class required for all students, regardless of concentration, is PRVM 804: Community Health Assessment, Intervention, and Advocacy. Average class enrollment is 20 students. The course is divided into three sections: understanding and assessing factors which drive health in communities, using theory- or evidence-based approaches for intervention, and advocating for community health improvement.

Curriculum for Guest Lectures

The guest lecture curriculum was built upon KHI's decades-long experience in HiAP efforts and was tailored to a virtual setting due to COVID-19 risk mitigation policies (including a campus shut-down in spring 2020 and a policy restricting guest access to campus in fall 2021). Since 2010, KHI has completed six health impact assessments, developed a workbook, delivered trainings, created the HI-C tool and provided technical assistance to communities across Kansas and nationally.

The lectures aimed to achieve the following outcomes:

1. Advance student understanding of the HiAP framework.
2. Increase student ability to identify strategies to implement HiAP.
3. Increase student understanding of potential health impacts of policies by participating in a structured activity to complete sections of the HI-C.

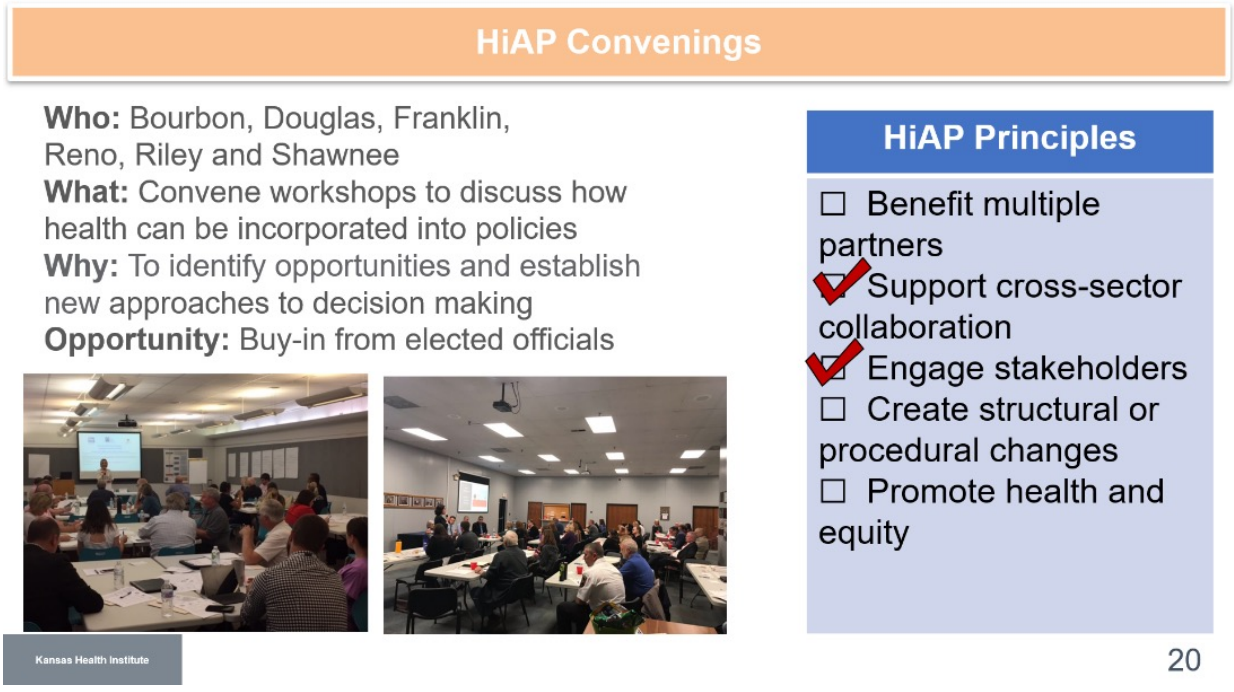
To achieve these outcomes, the class time in each guest lecture was divided into two sections: an introduction to HiAP and a small-group activity. Each section included a discussion and a question-and-answer session.

Introduction to HiAP

The introduction set the foundation for the small-group activity and covered potential reasons for adopting an HiAP approach, as well as the definition and principles of HiAP practice. The HiAP principles described were those identified in the Association of State and Territorial Health Officials (ASTHO) report *Health in All Policies: Framework for State Health Leadership.*

The introduction also described several strategies for implementing HiAP principles, including HiAP resolutions and ordinances, HiAP meetings, cross-sector partnerships around specific projects, ways to incorporate health and equity considerations into requests for proposals and strategic plans, and conducting content analyses of key documents that establish a vision for the community from an HiAP perspective. For each example, the speaker demonstrated which HiAP principles were met (**Figure 1**).

Figure 1. Example of HiAP Strategy and Alignment with HiAP Principles, from Lecture Slide Deck



Following the introduction to HiAP section, students participated in a discussion centered on these questions:

- Reasons for using HiAP: What other approaches can be used to describe why health should be part of the decision-making process? What questions or push back do you anticipate?
- HiAP strategies: Of the examples discussed during the session, which seem feasible for your county or community to implement?

Health Impact Checklist Small-Group Activity

The HI-C was developed by KHI and designed to inform decisions at many levels (e.g., organization, city, county and state). The HI-C builds on existing tools, such as Health Notes from the Health Impact Project, the *Health Lens Checklist* from Kent County, Michigan, and the *Health in All Policies: Health Lens Analysis Tool* from Tacoma-Pierce County Health Department in Washington state. The small-group activity section of the curriculum guided students in identifying potential social, economic and environmental impacts of policies, how those policies could impact health, and which populations may be particularly impacted. Students accomplished this by collaboratively completing and discussing key sections of the HI-C. For these classroom exercises, two example policies were pre-identified by the KHI instructors. Students in one lecture reviewed a county-level nuisance abatement policy while students in the other lecture reviewed a municipal policy preventing suspension of utility service disconnections in response to COVID-19. For both policies, KHI had previously completed examples of HI-C which supported facilitating the classroom activities.

Students in the guest lecture were collectively asked to complete questions 1 and 2 from the HI-C tool by naming the policy, decision or proposal being evaluated and describing its main goals or key points. Students were then randomly placed in two virtual breakout groups facilitated by KHI to discuss and collectively complete question 3 and 5 from the HI-C. For question 3, the students used the table shown in **Figure 2** on page 22 to identify potential social, economic and environmental conditions that could be impacted if the proposal were implemented. For question 5, students used their knowledge and experience to describe the potential impacts of the proposal on each of the conditions they identified. For example, if they identified "housing quality" as a condition which may be impacted by the nuisance abatement policy, students would then think through how changes to housing quality stemming from the policy may impact health. After 10 minutes, the breakout sessions ended and groups reported to the class on their discussion.

Students then returned to their breakout groups to complete question 6 of the HI-C which asked them to identify the specific populations which might be impacted by the policy for each identified social, economic or environmental condition (**Figure 3** on page 22). The breakout groups completed this activity and then reported back to the class after 10 minutes. The session concluded with an overview of the remaining components of the HI-C, examples of other HiAP resources, and time for questions and discussion.

Figure 2. Table of Social, Economic and Environmental Conditions, from HI-C

Social, Economic, and Environmental Conditions [1,2]		
Economic Stability	**Neighborhood & Physical Environment**	**Education**
☐ Employment	☐ Housing Quality	☐ Early Childhood Education and Development
☐ Income	☐ Transportation	☐ High School Graduation
☐ Housing Instability/ Homelessness	☐ Environmental Conditions(e.g., water, air, and soil quality)	☐ Higher Education
☐ Food Insecurity	☐ Access to Healthy Food	☐ Language
☐ Poverty	☐ Safety	☐ Literacy
☐ Other:	☐ Other:	☐ Other:
☐ Other:	☐ Other:	☐ Other:
Community and Social Context	**Health and Health Care**	
☐ Civic Participation	☐ Health Coverage	*Note: The number of social, economic, or environmental conditions examined could depend on available resources, stakeholder interest and timeline. After examining three, additional conditions may be examined further.*
☐ Discrimination	☐ Provider Availability	
☐ Toxic Stress	☐ Access to Health Care	
☐ Social Isolation	☐ Access to Behavioral Health Services	
☐ Incarceration	☐ Quality of Care	
☐ Other:	☐ Other:	
☐ Other:	☐ Other:	

Figure 3. Table for Identifying Health Impacts for Specific Populations, from HI-C

Social, Economic, or Environmental Condition	Impacted Population	Impact on Health	Overall Impact on Health
			☐ Positive ☐ Negative ☐ Mixed ☐ None ☐ Unclear

Lessons Learned

To assess student perception of the lecture and its effectiveness, students were asked to complete a short online survey. The survey questions focused on assessing changes in student understanding of HiAP, Health Impact Assessments, connections between policies and health, and potential impacts that policies could have on populations. Students also rated the lecture in terms of its quality and effectiveness. Across both lectures, 15 students completed the survey. Overall, the survey results showed that students found the sessions increased their understanding of HiAP and that the HI-C group activity contributed to their understanding of how policies may impact health through modifying social determinants of health. In addition, several students suggested focusing more time on a small-group activity, peer-sharing from each group and working through policy scenarios, while spending less time on lecture material.

> *It was nice to be challenged to think differently and to work through the process with an example.*
> -Student

While solidifying the overall concepts of HiAP, the group activity provided a valuable opportunity for the students to make connections between policy changes and health impacts. Importantly, the group activity facilitated interaction between students and allowed them to see potential impacts and implications they had not considered. Taken together, the introduction to HiAP and the course activity supported further utilization of, and engagement with, HiAP approaches in other areas of their academic study and future professional work.

Discussion

Fostering student understanding and competence related to Health in All Policies is an important element of MPH education. MPH programs are designed to prepare students to skillfully fulfill the mission of promoting and protecting the health of the public. The growing focus on Public Health 3.0 and HiAP necessitates inclusion of related content to ensure students are well-prepared to engage in cutting-edge public health practice and research.

At KUMC, integrating content related to HiAP practices and approaches enables this preparation and supports development of skills and competencies directly related to the foundational competencies of the MPH program. For a public health institute such as KHI, partnering with KUMC through these lectures to support public health training and engagement with HiAP helps advance the vision of healthier Kansans through effective policy. KHI continues to support utilization of the HI-C tool through technical assistance. These lectures offer opportunities to refine KHI's teaching and resources for HiAP and the HI-C.

References

Association of State and Territorial Health Officials. (2020). Health in All Policies. http://www.astho.org/Programs/HiAP.

Association of State and Territorial Health Officials. (n.d.). Health in All Policies: Framework for State Health Leadership. http://www.astho.org/health-in-all-policies-framework.pdf

Kansas Health Institute. (2020). HI-C: Health Impact Checklist; HI-C: Suspension of Disconnections of Utility Services due to COVID-19 (Hutchinson, Reno County); HI-C: Dangerous and Unfit Structures Ordinance – Chapman, KS; and HI-C: Environmental Nuisance Abatement – Linn County. https://www.khi.org/articles/2020-hi-c-health-impact-checklist/

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TEACHING HEALTH IMPACT ASSESSMENT IN AN ONLINE FORMAT

Keshia M. Pollack Porter, PhD, MPH

Background

During the 2010-11 academic year at the Johns Hopkins Bloomberg School of Public Health (BSPH), I created and launched a course on health impact assessment (HIA) in the Department of Health Policy and Management (HPM). Since the course sits in HPM, and because I am a "policy person," I promote HIA as a tool to elevate health and equity considerations for proposed policies such as legislation and regulation, at both the governmental (e.g., federal, tribal, state, and local) and nongovernmental (e.g., private/institutional) levels (Pollack Porter et al., 2018). Students must have completed a graduate level course in health policy or seek permission prior to enrolling. The course is typically taught during an 8-week term, when it meets once each week for three hours.

The course is limited to graduate students and has primarily been taken by graduate students in public health. I have never had to recruit students to the course per se. Each year, I discuss HIAs during lectures I give in policy courses and a course on the built environment and health. During these sessions I mention the HIA course so people are aware that they can learn more about the topic. In addition, the HIA course was added as one of the courses to meet competencies for several degree programs, which helped increase enrollment annually. During the first year when I taught HIA, I capped the course at 15 students and because of increased popularity and interest, I increased the cap to 30 students in 2011-12. In the 2014-15 academic year I increased the cap to 40 and then in 2019-2020, I increased it again to 60, which is where it stayed through the 2021-22 academic year.

In addition to teaching the course during a full term for over a decade, the course has been taught three times in a condensed format; the 8-week course was taught over 2-3 days during the BSPH Fall and Summer Institutes. This shortened format draws students from the part-time degree programs or other non-degree students. For example, learners from public health agencies, nonprofits, and the World Health Organization have completed the course in the condensed format.

The course includes an option for students in the School's MPH program to obtain 25 practicum hours (towards the minimum of 100 hours they must complete) in support of hands-on public health training. These credits are obtained by providing additional opportunities for students to collaborate with a community-based organization or local government partner. For example, one year, we partnered with a state legislator and conducted rapid HIAs on a proposal bill. Students who took the course for practicum hours did additional work with the legislator and supported their efforts on a bill that would require HIAs. The students helped create materials for the bill hearing to educate the committee on social determinants of health and HIAs and attended the bill hearing. Approximately, 5% of the number of enrolled learners in the HIA course opt to use the course towards their 100 hours.

While the pandemic forced many of us to move our in person courses online, in 2019 I decided that I would create an online offering of my HIA course. The BSPH has fully online degree programs, and these students repeatedly asked if I would create an online offering. During the 2019-20 academic year one part-time master's student even flew to Baltimore each week just to take the class because they thought the content was critical for their career aspirations! I finally decided to create an online version once the Bloomberg American Health Initiative wanted to add the course as one of the elective offerings for their fellows (Bloomberg American Health

Initiative, n.d.). As such, I applied for funds from the Initiative to support some of my time to record the lectures and launch an online offering of HIA during the 2020-21 academic year.

Online Format

I greatly benefited from the BSPH Center for Teaching and Learning (CTL) that supports, "educational excellence in public health, ensuring innovative and engaging learning experiences in the classroom and online" (Center for Teaching and Learning, n.d.). Once I initiated creating an online version of my course, I worked with an instructional designer from CTL to create a syllabus that would work well in a fully online course. The course was designed for asynchronous learners, with required "LiveTalks" for synchronous learning. I was paired with excellent producers who worked with me to ensure the recordings were clear and accessible, and over several months I recorded all the lectures.

My approach to developing on online offering of HIA was consistent with the skills and competencies some colleagues and I promoted in an article we wrote in 2014 about teaching HIA at the graduate level (Pollack KM et al. 2014). The schedule required students to watch recordings each week that began with an introduction of Health in All Policies (HiAP), review of each step of the HIA process, including separate lectures on equity and stakeholder engagement. The students also learned about HIAs applied for policy decisions and the types of policies that can support institutionalization or routinization of HIAs. The course was designed to front load the initial weeks with lectures on the steps of the HIAs process so that learners would have the knowledge to complete the first assignment, which was a critique of a completed HIA. The first LiveTalk of the course involved a discussion of the HIAs that were critiqued. The second LiveTalk was a discussion involving a panel of HIA practitioners. The final assignment was a brief written reflection that involved learners sharing their thoughts about the value of HIAs, how to support their growth, and any personal insight from working on a rapid HIA, which was required for the course.

The course has a hands-on component that involves working on a rapid HIA. Since the course is in HPM, HIAs are always applied to proposed governmental or nongovernmental policies. Students are placed into groups of 5-6 to work on a rapid HIA. A final report is not produced, instead students submit their PowerPoint presentations and have to clearly delineate each group member's contribution to the project. We typically work with a partner involved with the proposal that is the subject of HIA. We remain in close contact with the partner throughout the course and they attend the final LiveTalk to watch the groups present. Once the course is complete, with permission from the students, I provide the partners with slides and other resources compiled by the students.

During the first year that I taught the course online, we worked on a proposed policy by the Washington D.C. City Council. A representative from the Washington D.C. government served as a resource for the students. For the second year of the online course offering, we partnered with the Baltimore City Health Department on a bill being consider by the state legislature that would impact city residents. These partners were identified by leveraging my existing partnerships.

Reflections on Teaching Online

In reflecting on creating a fully online HIA course, there are three insights that I want to share. First, during the initial year that I taught the course online, I tried to essentially replicate what I had done onsite because the onsite

course worked well, and my course had always been highly rated. Overall, the evaluations for the online course were good, but I noted that the students hoped for more interactions with me. In reflecting on when the course was in person, the students saw me each week and could speak with me before and after class (I want to note that students are always able to schedule 1-on-1 meetings with me). With most of the sessions being recorded, the learners heard from me each week but did not have live interactions with me. As a result, during the second time that I taught the course online, I added weekly optional office hours via Zoom. This created a drop-in space for learners to speak with me about the field, to ask additional questions, and to feel connected. As I continue to offer the course online, I will ensure that there are always regularly scheduled optional office hours.

Second, the 8-week term continues to be a challenge, especially because it means that learners only have a few weeks to become familiar with the HIA process to successfully complete the assignment and then work in groups on a rapid HIA. The final presentations occur during the eighth week, which essentially means that students have seven weeks to learn all the material and complete a rapid HIA. Having additional office hours and several teaching assistants (TAs) to serve as resources for the students are a couple of ways that I provided them with support during the 8-week term. Despite this, the short time frame to grasp the content is a challenge for students.

This comment about TAs brings me to my third point – the course size. During the 2021-22 academic year, 182 students took my course (and about 12% opted to obtain practicum hours). While exciting for the field, the course was very large, which created administrative challenges regarding engagement, responsiveness, grading, etc. Even though I had four TAs, the workload was high for everyone. An additional challenge with the size was that course enrollments were large for all classes at BSPH, which meant that TAs were in high demand, so I ended up having TAs who had not taken HIA before. Although the TAs played a critical role and were able to respond to student inquiries, and with clear instructions and rubric help grade, I had to answer all technical questions. For the upcoming 2022-23 academic year, I decided to add a cap to the class (100 students) to make it more manageable. I am now the Chair of my department, which means my time is limited; thus, I will not offer additional practicum hours.

Conclusions

I have taught HIA for a dozen years. I have adapted the course in recent years, so it remains relevant. For instance, while the core elements of the course have remained the same, I have added more content regarding HiAP, including discussing other tools like the Washington Health Impact Review (Pollack Porter KM, et al. 2019) and the health note, which I helped create and implement with colleagues at the Health Impact Project (Health Impact Project, 2021).

The course has received strong ratings and in terms of the impacts on the learners, the following quote from a former student reflects many that I have received: "I have thoroughly enjoyed the process of learning and thinking of ways that I can apply the HIA in the way that I think through my other public health courses, and as a future public health professional." Over the years the partners that I have worked with have noted how valuable it was to receive the PowerPoint slides at the end of the term. One partner described the presentation slides and resources as follows, "It truly is a treasure trove of information! Please pass along my thanks to your students."

Any time that I ask myself if I should take a break from teaching the course, I seem to receive an email from a student sharing how much they are looking forward to taking the course or from a former student sharing how valuable the course was for their current position. I believe that HIAs are one important tool to help change to advance health equity, and as long as there is progress to be made towards this goal, I will continue to teach the course.

References

Bloomberg American Health Initiative. The Bloomberg Fellows Program. Retrieved 15 August 2022 from https://americanhealth.jhu.edu/fellowship.

Center for Teaching and Learning. Retrieved 14 August 2022 from https://publichealth.jhu.edu/offices-and-services/center-for-teaching-and-learning.

Health Impact Project. (2021) A User's Guide to Legislative Health Notes. Retrieved 14 August 2022 from https://www.pewtrusts.org//media/assets/2021/04/apractitionersguidereportfinal.pdf.

Pollack, K.M., Dannenberg, A.L., Botchwey, N., Stone, C.L., Seto, E. (2014). Developing a model curriculum for a university course in health impact assessment in the United States. Impact Assessment and Project Appraisal. http://dx.doi.org/10.1080/14615517.2014.960213.

Pollack Porter, K.M., Rutkow, L., McGinty, E.B. (2018). The Importance of Policy Change forAddressing Leading Public Health Problems. Public Health Reports, 133(1S):9(S)-14(S).

Pollack Porter, K.M., Lindberg, R., McInnis-Simoncelli, A. (2019) Considering Health and Health Disparities During State Policy Formulation: Examining Washington State Health Impact Reviews. BMC Public Health 19:862. https://doi.org/10.1186/s12889-019-7165-7.

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BUILDING A RECEPTIVE AUDIENCE FOR HIA: A PHD STUDENT'S JOURNEY TO CREATE AN HIA COURSE

Lindsey Realmuto, MPH

Abstract

There are few academic institutions in the United States currently offering courses on Health Impact Assessment (HIA). This commentary describes a PhD student's experience in building a receptive audience for an HIA course within the Urban Planning and Policy program at the University of Illinois at Chicago, how they went about developing the course, and details about the course and its implementation. Key lessons learned from the experience of developing and implementing the course include: having a real-life HIA project for students to work on can be challenging but very rewarding, for both students and partners; utilizing virtual meeting technology to invite guest lecturers from across the world provided an enriching learning experience; and providing clear milestones and setting deadlines for different components of the HIA is helpful for students as they work through the different HIA steps. While the course was successful by almost all metrics, institutionalizing HIA courses within interdisciplinary planning/public health programs remains an ongoing challenge.

Background

When I was finishing my Master of Public Health program at George Washington University, I thought I was done with school. PhD program? No thank you, absolutely not. In my professional life I had always been interested in the intersection of health and urban planning and I thought I could get by with what I had learned in my master program and my professional experiences. The decision to return to school was a direct outcome of my experience conducting a health impact assessment (HIA) on the East Harlem neighborhood plan in 2015. My experience with this HIA left me feeling like I knew about urban planning, but not enough. I wanted to deepen my knowledge. I thus decided to pursue a PhD in Urban Planning and Policy.

As I started my first year at University of Illinois at Chicago's Department of Urban Planning in 2019, I was full of energy to bring my ten years of experience working in public health to bare in this new academic pursuit. My first semester I took a *Planning Healthy Cities* course with a faculty member who had previously written about incorporating health into planning programs (Botchwey et al., 2009) and I told him about my professional experiences, particularly with HIA. As a result, he asked me to do a guest lecture on HIA for his Planning Studio class in the spring 2020 semester. The guest lecture was well received and from the students I sensed an interest in learning more. Around the same time, I started working on a research project in UIC's School of Public Health and was excited to hear that the university was starting a joint public health and urban planning graduate degree program (MPH/MUPP). The timing of my PhD at UIC seemed perfect for someone interested in bridging the public health and planning fields.

I began to ask around, does UIC offer (or have they ever offered) an HIA class? No. Are there other classes that bring the planning and public health students together? Besides the planning healthy cities course, an urban food systems course, and curriculum typical of environmental & occupational health programs in the School of Public Health, there were not a lot of interdisciplinary courses. In talking with the professor who had invited me to speak on HIAs for the studio class, I was encouraged to develop a draft HIA course to present to the department.

Developing the Course

Building off my experience conducting HIA trainings with the San Francisco Department of Public Health Program on Health Equity and Sustainability as well as training materials available from other organizations, specifically Human Impact Partners, I developed a course syllabus and presented it to department leadership in early spring 2021. Feedback on the syllabus was mostly supportive and constructive, but the department's primary concern was whether there would be enough interest and enrollment in the class to justify having it. Since I had already been asked to do a repeat of my guest lecture on HIA for the planning studio class in a few weeks, I used that lecture opportunity to do a quick poll among students to gauge interest and report back to department leadership. In that guest lecture poll, nearly 80% of 34 responding students indicated they were interested or very interested in taking an HIA class. With this information, I received the green light to teach the class and was put on the schedule for spring 2022.

I spent fall 2021 finalizing the syllabus and readings as well as reaching out to guest presenters and potential project partners. As part of this process, I reached out to several colleagues that I knew through Society of Practitioners of Health Impact Assessment (SOPHIA) about their experiences teaching HIA and asked them to share their syllabus. I

compared my syllabus to theirs to see if I was missing any major topics, issues, or important readings. For potential projects, I reached out to professional connections I had in organizations around Chicago, but I also surveyed different planning initiatives going on in the city. Were there opportunities to collaborate where an HIA makes sense? The projects had to roughly align with the timing of the class, which can be very challenging, but I was able to identify two potential projects for students to work on (more detail on those below). With this component finalized, I was ready to teach the course in the spring.

Organization and details about the course

Course details

The HIA course was a graduate level class offered over a 16-week semester in spring 2022. It was a hybrid virtual/in-person model. The first four weeks were held virtually as the University felt it was safer to hold virtual cases during the peak-Omicron COVID-19 wave and the rest of the class sessions were held in-person (except on a few occasions due to personal circumstances). I also offered a virtual option in the event students needed to isolate for COVID-related exposure or illness (i.e., students could connect via Zoom to the in-person classroom). The class had 10 students, representing five MUPP students, four MUPP/MPH students, and one MPH student. I also had one additional MUPP student who audited the course. To note, the class was not required for any of the degree programs mentioned.

Class Organization

Broadly, the course was broken into two segments. The first segment – taught within the first seven weeks – was devoted to teaching the different steps of HIA in-depth so that students could feel prepared to begin working on the main assignment for the course – which was a team HIA project. The other segment during the second half of the semester covered a number of different topics relevant to the practice of HIA, for example, the consideration of equity, community engagement, and institutionalizing health considerations into decision making (see full course syllabus - Appendix A). For several of the class sessions in the second half of the semester, I invited guest speakers for specific topics, which included equitable transit-oriented development, Health in All Policies, Equity in HIA and HIAs in the international context. In one of the last class sessions, I facilitated a professional panel of four guest speakers whose careers spanned the health and planning worlds. All of the invited speakers were from my professional network or recommended by someone within that network.

Assignments

As part of the course, the students had one individual case study assignment and the larger team HIA project. For the case study assignment, each student had to choose an HIA from a list (curated by me) to read in-depth and present to the class. The goal of this assignment was for the students to get a sense of different HIAs that have been done, the breadth of topics covered, and teach the other students what they learned from the HIA. For the team HIA projects, the students were split into two groups, and each worked with a project partner: the Chicago Department of Planning and Development and Cabrini Green Legal Aid. For this project, they had a mid-term presentation to discuss their progress, a final presentation, and a final report. The students were able to complete the HIA within the timeframe of the class. The students were primarily evaluated on these two assignments, but their final grades were also determined by their level of in-class participation and the results of a peer and project partner evaluation survey distributed at the end of the semester.

HIA Projects

The two HIA projects chosen for the class were both curated by me prior to the start of the semester. While I think it is helpful for students to get experience conducting the HIA Scoping step and understanding how one might decide to engage in an HIA, the timeline of an academic semester is generally not sufficient. It does not provide enough time for students to find a topic area, go through the scoping phase, and come to a decision on whether to conduct the HIA. Although this was an urban planning focused class, I did aim to find HIA projects that went outside the normal transportation/urban planning field in order to facilitate a greater understanding of the wide range of social, environmental, economic, and political determinants of health. With this in mind, I contacted Cabrini Green Legal Aid, a legal aid organization based out of Chicago that participates in policy advocacy at the state level (Cabrini Green Legal Aid, 2022). I approached the CGLA policy team about the class with information about HIAs, their goals, and whether they were working on any policy agenda's that may benefit from such a project. I luckily found very welcome and interested colleagues who saw value in bringing health data into their advocacy efforts.

The second HIA project came about more as a function of planning projects going on in Chicago. The Chicago Department of Planning and Community Development was in the process of doing a neighborhood planning study of a 5 mile stretch of Western Avenue (Chicago's longest North/South Street – spanning 25 miles) (Chicago Department of Planning and Development, 2022). I heard about the planning study through various channels and reached out to the lead planner to tell them about the class, what HIAs are, and if they would be interested in working with a group of students on an HIA of the planning study. Again, I was pleasantly surprised to receive a positive and quick response. After a telephone conversation with the planner shortly thereafter, I had the second project. At the end of the semester, I asked both project partners to fill out a brief survey about the student's performance and their experiences with the project. I also had a follow-up call with one of the project partners to further discuss the project.

Outcomes, Lessons Learned, and Recommendations

In addition to the evaluation survey sent by the university, I sent a survey to the students at the end of the semester asking specific questions related to the structure of the course, assignments, and my performance as an instructor. Feedback and recommendations provided below are largely based on responses from this additional survey. Based on informal and formal feedback received from the students, the course went very well and was well received. The student feedback and interest in the course revealed a real desire to have more opportunities to work and study interdisciplinary topics that bridge planning and health. The creation of the MUPP/MPH degree at UIC and the feedback received from students speaks to the desire of graduate students to have this type of interdisciplinary exposure and training.

The overall structure and content of the course fit nicely into the weekly seminar class structure and the 16-week semester, although I know the students would have preferred to have some extra time to complete their HIA. The inclusion of guest speakers was one of the strongest aspects of the course. It provided students with a broader range and greater depth of understanding about the topics covered in class and introduced them to a wide array of professionals – locally, nationally, and internationally - working within the planning/health realm in some way. Although most of

our classes were held in-person, the ability to use virtual conferencing software within the classroom setting was a major asset in that I could invite speakers from across the country (and even across the world) to speak to the class. In this case, the virtual normalcy engendered by the COVID-19 pandemic was a huge benefit as it broadened the pool of individuals I thought to invite and made the class much richer in terms of the variety of perspectives represented.

The project partners also seemed very satisfied with the caliber of the projects and work of the students. In evaluating the work of the HIAs, one of the project partners noted:

The team assembled some really useful data and recommendations. This HIA will hopefully help support the need for these initiatives in [neighborhood name] ... I appreciate the thoughtful work and enthusiastic participation!

The two HIA projects worked out incredibly well, although the timing wasn't perfect. A major challenge of working on real life projects within an academic semester timeline is that it's so difficult to align with the project timeline. It's important to be upfront about that and communicate appropriate expectations with both the students and the project partners. Be honest about what is possible and feasible.

In terms of the HIA case studies, I aimed to choose a broad range of HIA topics, methods, and geographic locations. I believe this helps students engage more fully with a broader range of social determinants of health and better understand different methodological approaches in HIA. As part of our case studies, I also included a racial equity impact assessment, and I am so happy that I did. Not that I am an expert on racial equity impact assessments but there was a lot of interest from the students on this topic and one even mentioned they would have liked to spend more time on this topic. While equity has always been a fundamental driver of HIA work, I believe it is important for current and future HIA practitioners to consider racial equity explicitly. I hope to incorporate more on this in future iterations of the course.

For their HIA project, I wanted to provide students with a decent amount of autonomy, and I tried my best to provide at least 10-15 minutes at the end of each class for the teams to meet and work together (with the expectation that they would also meet outside of class). I also made myself available to answer questions during this time and in designated office hours. Based on feedback from the students, there could have been more structured assignments to help them work through the different HIA steps throughout the semester (e.g., creating a pathway diagram, completing the literature review, etc.). I found this to be one of the most helpful pieces of feedback on the course. It is clear to me that this needs to be more structured and that providing deadlines on specific components of the HIA can be a useful experience for the students. For any novice (or even experienced) HIA practitioner, it is useful to have strong guideposts along the way.

Conclusions

As of the time of this writing, I have been invited to teach the HIA course again in the spring 2023 semester. And while I am excited that I have succeeded in building a receptive and interested audience for this course, and hopefully the intersection of health and planning more broadly, I feel less optimistic about the sustainability of the course. My assumption is that as soon as I am done with my PhD and if I am no longer there, the course will disappear as well. In many ways this feels analogous to the state of HIA more generally; without proper resources and policies to make it part of the

system, their future is unknown. Despite these challenges, we keep moving forward, working to build those receptive audiences, inspiring interdisciplinary professionals, and promoting the values of HIA in our everyday lives.

Appendix A – Course Syllabus

Week 1: *Introduction to the course; Understanding the relationship between public health and planning; Social Determinants of Health*
Required Readings:

- Corburn J. (2004). Confronting the Challenges in Reconnecting Urban Planning and Public Health. Available at: https://ajph.aphapublications.org/doi/epub/10.2105/AJPH.94.4.541
- Schilling J, Linton LS. The public health roots of zoning: in search of active living's legal genealogy. Am J Prev Med. 2005 Feb;28(2 Suppl 2):96-104. doi: 10.1016/j.amepre.2004.10.028. PMID: 15694517.
- Review CDC Social Determinants of Health page: https://www.cdc.gov/socialdeterminants/index.htm

Week 2: *Introduction to HIA history and practice; Review Screening and Scoping steps; Introduction to HIA projects*
Required Readings:

- Dannenberg, AL. A Brief History of Health Impact Assessment in the United States. http://journals.iupui.edu/index.php/chia/article/view/21348
- Human Impact Partners. Screening Worksheet.
- SOPHIA. Minimum Elements and Practice Standards for Health Impact Assessment. https://hiasociety.org/resources/Documents/HIA-Practice-Standards-September-2014.pdf (pages 1-6 - stop at Standards for the Assessment Step)
- Improving Health in the United States: The Role of Health Impact Assessment. Summary - https://www.nap.edu/read/13229/chapter/3 (pages 3-13)
- Review Health Impact Project - HIAs and Other Resources to Advance Health-Informed Decisions: https://www.pewtrusts.org/en/research-and-analysis/data-visualizations/2015/hia-map?sortBy=relevance&sortOrder=asc&page=1

Week 3: *Health Pathway Diagrams; Review Assessment step (pt. 1) – Baseline Conditions*
Required readings:

- Skim Executive Summary: SNAP Benefits HIA
- Complex Causal Process Diagrams for Analyzing the Health Impacts of Policy Interventions. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1470508/
- SOPHIA. Minimum Elements and Practice Standards for Health Impact Assessment. https://hiasociety.org/resources/Documents/HIA-Practice-Standards-September-2014.pdf (pages 6-8; Standards for the Assessment Step)
- WHO. Health Impact Assessment Toolkit for Cities. https://www.euro.who.int/__data/assets/pdf_file/0007/101500/HIA_Toolkit_1.pdf (Pages 13 – 19; 2.2 Appraisal: assessment – STOP at Reporting and Dissemination)
- Community Health Assessment or Healthy Community Assessment: Whose Community? Whose Health? Whose Assessment? By Trevor Hancock and Meredith Minkler from Community Organizing and Community Building for Health and Welfare
- Review the CDC Built Environment Assessment Tool: https://www.cdc.gov/nccdphp/dnpao/state-local-programs/built-environment-assessment/index.htm

HIA Presentation: SNAP Benefits HIA

Week 4: *Review Assessment step (pt. 2) – Literature Reviews, Collecting Primary Data*
Required Readings:

- UNC Health Sciences Library: Literature Review. https://guides.lib.unc.edu/c.php?g=8369&p=2634604
- Avey H. (2015). HIA Research: When is Qualitative Research Warranted? Available at: https://humanimpact.org/hia-research-when-is-qualitative-research-warranted/
- Reumers LM, et. al. (2021). Quantitative health impact assessment methodology for societal initiatives: A scoping review, Environmental Impact Assessment Review, Volume 86. Available at: https://www.sciencedirect.com/science/article/pii/S0195925520307873
- Skim Executive Summary: Family Unity, Family Health HIA

Optional Readings:

- Health Impact and Social Value of Interventions, Services, and Policies: A Methodological Discussion of Health Impact Assessment and Social Return on Investment Methodologies. https://www.frontiersin.org/articles/10.3389/fpubh.2020.00049/full

HIA Presentation: Family Unity, Family Health HIA

Week 5: *Review Assessment step (pt. 3) – Assessing Impacts; Developing Recommendations, and Reporting Step*
Required Readings:

- (Skim) EPA. The Health Impact Assessment (HIA) Resource and Tool Compilation: A Comprehensive Toolkit for New and Experienced HIA Practitioners in the U.S., available at: https://www.epa.gov/sites/default/files/2017-07/documents/hia_resource_and_tool_compilation.pdf
- SFDPH Environmental Health. TransBASE: Linking Transportation Systems to Our Health. https://sfdph.org/dph/hc/HCAgen/HCAgen2014/May%206/TransBASE%20Dec2013%20FINAL-2.pdf
- SOPHIA. Minimum Elements and Practice Standards for Health Impact Assessment. Pages 8-9 – Standards for Reporting
- WHO. Health Impact Assessment Toolkit for Cities. Pages 19-20. 2.2.3 Reporting and dissemination.

Optional:

- Skim Executive Summary: SF Road Pricing
- Review OECD "Modelling work in public health: the OECD's SPHeP models." Available at: https://www.oecd.org/health/modelling-work-in-public-health.htm
- Health Equity Implications of Retail Cannabis Regulation in LA County. http://publichealth.lacounty.gov/chie/reports/Cannabis_HIA_Final_7_15.pdf
- Urban Institute. Do no harm guide: Applying Equity Awareness in Data Visualization - https://www.urban.org/research/publication/do-no-harm-guide-applying-equity-awareness-data-visualization

HIA Presentation: SF Road Pricing

Week 6: *HIA Evaluation & Monitoring; HIA Effectiveness*
Required Readings:

- SOPHIA. Minimum Elements and Practice Standards for Health Impact Assessment. (Page 10; Evaluation and Monitoring)
- WHO. Health Impact Assessment Toolkit for Cities. (Pages 21-22; 2.3 Monitoring and evaluation: did the health impact assessment lead to any change?)
- American Planning Association. Metrics for Planning Healthy Communities. https://www.planning.org/publications/document/9127204/
- Dannenberg, AL. Effectiveness of Health Impact Assessments: A Synthesis of Data from Five Impact Evaluation Reports. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27362932
- Do Health Impact Assessments Promote Healthier Decision-Making? - https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/02/do-health-impact-assessments-promote-healthier-decision-making
- The effectiveness of health impact assessment in influencing decision-making in Australia and New Zealand 2005-2009. Available at: https://www.ncbi.nlm.nih.gov/pubmed/24341545
- Skim Executive Summary: Alternatives to Prison HIA

HIA Presentation: Alternatives to Prison HIA

Week 7: *Community Engagement in HIA*
Required Readings:

- Community, Community Development, and the Forming of Authentic Partnerships: Some Critical Reflections by Ronald Labonte from Community Organizing and Community Building for Health and Welfare
- Guidance and Best Practices for Stakeholder Participation in Health Impact Assessments. https://hiasociety.org/resources/Documents/guide-for-stakeholder-participation.pdf
- Health impact assessment in the UK planning system: the possibilities and limits of community engagement. https://www.ncbi.nlm.nih.gov/pubmed/22801987
- PolicyLink. Arts and Culture: Creates new ways to engage. https://www.communitydevelopment.art/
- Farhang L, Heller J. (2016) Advocacy in HIA: Increasing Our Effectiveness and Relevance as Practitioners to Address Health, Equity, and Democracy. http://journals.iupui.edu/index.php/chia/article/view/21350
- OR https://www.pewtrusts.org/-/media/assets/2016/10/tce_brief.pdf

Optional Reading:

- Skim Executive Summary: San Diego Restorative Justice HIA
- Iroz-Elardo N, McSharry McGrath M. (2016). Social Learning Through Stakeholder Engagement: New Pathways from Participation to Health Equity in U.S. West Coast HIA. http://journals.iupui.edu/index.php/chia/article/view/21351

HIA Presentation: San Diego Restorative Justice HIA
Week 82: *Student presentations on HIA progress*

NO READINGS OR HIA PRESENTATION

Week 9: *Promoting Health Through Zoning Reforms - Opportunities and Challenges*
Guest Speaker on equitable Transit-Oriented Development
Required Readings:

- Associations between active living-oriented zoning and no adult leisure-time physical activity in the U.S. https://pubmed.ncbi.nlm.nih.gov/27364934/
- Hanlon, J. Success by design: HOPE VI, new urbanism, and the neoliberal transformation of public housing in the United States. Environment and Planning A. https://journals-sagepub-com.proxy.cc.uic.edu/doi/pdf/10.1068/a41278
- Tehrani, SO. et. al. The Color of Health: Residential Segregation, Light Rail Transit Developments, and Gentrification in the United States. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6801918/ **OR** Transit-Oriented Displacement or Community Dividends? – chapter 5
- Incomplete Streets – intro

HIA Presentation: TOD and Health HIA

Week 10: *Promotion of Equity in HIA*
Guest Speaker: Illinois Public Health Institute
Required Readings:

- Promoting Equity through the Practice of Health Impact Assessment: https://www.naccho.org/uploads/downloadable-resources/Programs/Community-Health/HIA-Promoting-Equity.pdf
- Health Impact Assessment of Transportation Projects and Policies: Living Up to Aims of Advancing Population Health and Health Equity? https://pubmed.ncbi.nlm.nih.gov/30601724/
- Towards environmental health equity in health impact assessment: innovations and opportunities. https://pubmed.ncbi.nlm.nih.gov/29911285/
- Health Equity Impact Assessment workbook (skim): http://www.health.gov.on.ca/en/pro/programs/heia/docs/workbook.pdf
- (Skim) Racial Equity Impact Assessments: https://www.dcracialequity.org/racial-equity-impact-assessments

Optional Readings:

- Equity Metrics
- Communicating about Equity (SOPHIA resource)
- Center for Neighborhood Technology. Equity in Practice: A guidebook for transit agencies. https://www.cnt.org/transportation-and-community-development
- Metropolitan Planning Council: https://www.metroplanning.org/costofsegregation/roadmap.aspx

HIA Presentation: Chicago Racial Equity Assessment

Week 11: SPRING BREAK – NO CLASS
Week 12: *Institutionalizing health in decision making*
Guest Speaker on Health in All Policies
Required Readings:

- Health Impact Project. HIAs and Other Resources to Advance Health-Informed Decisions (review different tools) – https://www.pewtrusts.org/en/research-and-analysis/data-visualizations/2015/hia-map?sortBy=relevance&sortOrder=asc&page=1
- American Planning Association. Integrating Health Into the Comprehensive Planning Process. Available at: https://www.planning.org/publications/document/9148247/
- National Conference of State Legislatures: http://www.ncsl.org/research/health/health-impact-assessments.aspx
- Urban health: an example of a "health in all policies" approach in the context of SDGs implementation. https://pubmed.ncbi.nlm.nih.gov/31856877/
- Public Health Institute. Health in All Policies: Improving Health Through Intersectoral Collaboration. Available at: https://www.phi.org/thought-leadership/health-in-all-policies-improving-health-through-intersectoral-collaboration/

Optional Readings:

- Health Impact Project. Health Notes. https://www.pewtrusts.org/en/research-and-analysis/articles/2019/06/19/health-impact-project-health-notes
- Kansas Health Institute – Health Impact Checklist: https://www.khi.org/policy/article/HI-C

HIA Presentation: Kentucky Pregnant Workers HIA

Week 13: *Environmental Impact Assessments and Health; Climate and Health*
Required readings:

- Bhatia, R & Wernham, A. Integrating human health into environmental impact assessment: an unrealized opportunity for environmental health and justice. Environ Health Perspect. 2008 Aug;116(8):991-1000. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2516559/
- Integrated Environmental Health Impact Assessment for Risk Governance Purposes; Across What Do We Integrate? Available at: https://pubmed.ncbi.nlm.nih.gov/26703709/
- Dannenberg, A.L., Rogerson, B. & Rudolph, L. Optimizing the health benefits of climate change policies using health impact assessment. J Public Health Pol 41, 139–154 (2020). https://doi.org/10.1057/s41271-019-00189-y. Available at: https://link.springer.com/article/10.1057/s41271-019-00189-y#citeas
- Kovats, R. S., Menne, B., Ahern, M. J., & Patz, J. A. (2003). National assessments of health impacts of climate change: a review. Climate change and health: risks and responses. Geneva, World Health Organization. https://www.who.int/globalchange/publications/climatechangechap9.pdf?ua=1

HIA Presentation: Climate Change in Kivalina, Alaska HIA

Week 14: *Bridging the Professional Gap*
- Guest lecture panel of 3-4 individuals whose professional careers bridge the planning/public health fields

HIA Presentation: The Long Road Home: Decreasing Barriers to Public Housing for People with Criminal Records

NO OTHER READINGS FOR CLASS

Week 15: *HIAs in the International Context*
Required Readings:
- Health impact assessment in Latin American countries: Current practice and prospects; https://www.sciencedirect.com/science/article/pii/S0195925516302335
- Health impact assessment and health equity in sub-Saharan Africa: A scoping review; https://www.sciencedirect.com/science/article/pii/S0195925519301817
- Review: https://www.health.govt.nz/our-work/health-impact-assessment

HIA Presentation: No place like home? Exploring the health and well-being impact of COVID-19 on housing and housing insecurity: Supplementary Report (Wales)
- https://phwwhocc.co.uk/whiasu/hia-reports/
- https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-021-11480-7

Week 16: Student HIA Presentations

METHODS OF EVALUATION & GRADING POLICIES

Evaluation Criteria
You will be graded on both your individual contributions to class and a final team project. As part of the final project, I will be asking each member of the HIA teams to evaluate each other, the results of which will account for 5 out of the 40 points for the Final HIA report and presentation.
Point Breakdown for Determining Final Course Grade:
I will provide more detailed information on how assignments will be evaluated over the course of the semester.

Class participation – 20 points, 20%
Mid-semester HIA progress presentation – 20 points, 20%
HIA Case Presentation – 20 points, 20%=
Final HIA Report and Presentation – 40 points, 40%
Total Points: 100

References

Botchwey, N. D., Hobson, S. E., Dannenberg, A. L., Mumford, K. G., Contant, C. K., McMillan, T. E., et al. (2009). A model curriculum for a course on the built environment and public health: Training for an interdisciplinary workforce. American Journal of Preventive Medicine, 36(2 Suppl), 63. doi:10.1016/j.amepre.2008.10.003

Cabrini Green Legal Aid. Homepage. Retrieved Oct 14, 2022, from https://www.cgla.net

Chicago Department of Planning and Development. Western avenue corridor study. Retrieved Oct 14, 2022, from https://www.chicago.gov/content/city/en/sites/western-avenue/home.html

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Area of HIA Expertise (check all that apply):

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How are you qualified (papers written, journal reviewed for, etc.)?

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