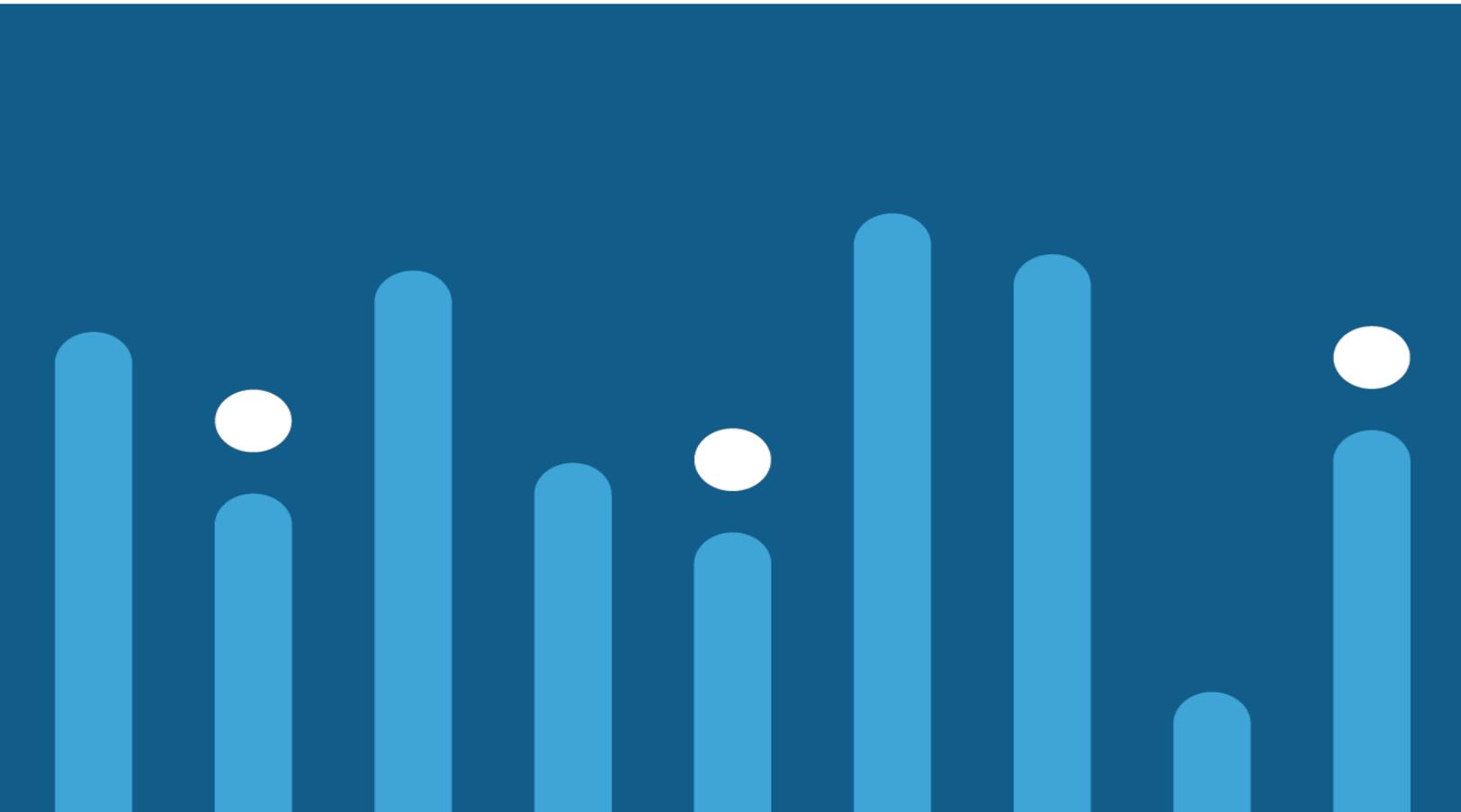




Health and Equity in All Policies (HEiAP)

Enacting HEiAP: Literature Review and Case Studies

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Thoughtwell

Lynnette Cook, Ph.D., Executive Director
Megan Johanson, Ph.D., Director of Research and Data Services
Robert Gitter, Ph.D, Ohio Wesleyan University
Marcus Erridge, Research Associate
Marc Rostan, Research Associate
Mark (Jalen) Banks, OPHA intern

399 E. Main St., Suite 100
Columbus, OH 43215
t: 614-224-5917 f: 614-224-8132
www.thoughtwell.org

Thoughtwell (previously Community Research Partners) is a non-profit research, evaluation, and data center based in Columbus, Ohio, with a mission to strengthen communities through data, information, and knowledge. Thoughtwell is a partnership of the City of Columbus, United Way of Central Ohio, The Ohio State University, and the Franklin County Commissioners. Thoughtwell is also central Ohio's data intermediary, and a partner in the Urban Institute's National Neighborhood Indicators Partnership. Since its inception, Thoughtwell has undertaken hundreds of projects in central Ohio, statewide, and across the country.

Ohio Public Health Association

Lois Hall, Executive Director
Carla Hicks and Robert Jennings, Co-chairs, Health and Equity in All Policies Committee

110 A Northwoods Blvd
Columbus, Ohio 43235
T: 614-635-0207 web: ohioph.org

The Ohio Public Health Association is a professional association representing thousands of people who work in, or support the various fields of public health and health-related organizations in Ohio. Through professional education, advocacy and networking and communication, OPHA is at the forefront of state efforts to advance prevention, reduce health disparities and promote wellness. As an affiliate of the American Public Health Association, OPHA works to ensure optimal health for all Ohioans and is the inclusive Voice for Public Health in Ohio.

For questions regarding this report, please contact the OPHA Executive Director at 614-635-0207.

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Executive Summary

Health in All Policies (HiAP) is a change in the systems that determine how decisions are made and implemented by local, state, and federal governments to ensure that policy decisions have neutral or beneficial impacts on the determinants of health. Building on this concept, the Ohio Public Health Association (OPHA) is advocating for the adoption of a statewide initiative that seeks to create a regulatory review system that ensures health and equity considerations are embedded in decision-making processes across a wide range of sectors. As proposed, OPHA's Health and Equity in All Policies (HEiAP) legislative initiative places additional emphasis on efforts to address inequities between different demographic and socio-economic population groups. The most desired goal is to ensure that all policies have positive or neutral effects on the determinants of health, including, but not limited to, the quality of schools, socioeconomic conditions, transportation options, public safety, and residential segregation.

Through case studies, a literature review, and an economic analysis, the aim of the study is to understand the potential benefits, costs, and process of a HEiAP Initiative in Ohio. This study is guided by the following research questions:

1. How are other states implementing a Health in All Policies initiative?
 - a. *What are the costs associated with setting up the initiative?*
 - b. *What model is used?*
2. How does the Common Sense Initiative (CSI) work?
 - a. *Who reviews the laws?*
 - b. *What are the costs associated with setting up the CSI?*
 - c. *Is there evidence of a Return on Investment (ROI) for the CSI?*
3. Is there evidence of a ROI from similar HIAP and HEiAP initiatives in other states?
 - a. *What is a potential example ROI for Ohio?*

Overall, the link between having health considerations (Section 2.3) in policy and improved health outcomes is strong. This study touches on the body of existing literature that links social and economic conditions to negative health consequences and some additional research that links improved health outcomes to economic benefits (Section 5.0). There are examples of different models that exist to implement health policy initiatives, from working with agencies at the policy-generation stage to reviewing bills after they are introduced. Similarly, this HEiAP proposal borrows heavily from Ohio's Common Sense Initiative (CSI) model—which requires all relevant rules and regulations from cabinet-level agencies, state boards and commissions to be reviewed from a business-friendly perspective.

Where many health and equity initiatives are relatively new, impacts are not yet known. There is potential, however, for a HEiAP initiative in Ohio to achieve both short and long-term health benefits and have a positive consequential economic impact.

1.0 Background

1.1 Introduction

Health in All Policies (HiAP) is a change in the systems that determine how decisions are made and implemented by local, state, and federal governments to ensure that policy decisions have neutral or beneficial impacts on the determinants of health. HiAP emphasizes the need to collaborate across sectors to achieve common health goals, and is an innovative approach to the processes through which policies are created and implemented. Building on this concept, the Ohio Public Health Association (OPHA) is advocating for the adoption of a statewide initiative that seeks to create a regulatory review system that ensures health and equity considerations are embedded in decision-making processes across a wide range of sectors.

As proposed, OPHA's Health and Equity in All Policies (HEiAP) legislative initiative places additional emphasis on efforts to address inequities between different demographic and socio-economic population groups. The most desired goal is to ensure that all policies have positive or neutral effects on the determinants of health, including, but not limited to, the quality of schools, socioeconomic conditions, transportation options, public safety, and residential segregation.

For either model to succeed in its objective to improve health outcomes, cross-sector collaboration is fundamental. The American Public Health Association (APHA) asserts that: "Responsibility for the social determinants of health falls to many non-traditional health partners, such as housing, transportation, education, air quality, parks, criminal justice, energy, and employment agencies."¹

1.2 Scope

The purpose of this study is to evaluate the feasibility of implementing a Health and Equity in All Policies (HEiAP) Initiative in Ohio, modeled after Ohio's Common Sense Initiative (CSI),² which would establish a process for independently evaluating the health impact of policies on Ohioans. This study also seeks to explore potential links with, and lessons learned from, both health and non-health policies that demonstrate potential impacts on health and equity. This project was produced through a collaborative process with OPHA. Thoughtwell also consulted Robert Gitter, Ph.D., Joseph A. Meek Professor of Economics at Ohio Wesleyan University.

Through case studies, a literature review, and an economic analysis, the research aim of the study is to understand the potential benefits, costs, and process of a HEiAP

¹ Joint statement by A Troutman, G. Benjamin, cited in APHA et al, 2012.

² Established by State of Ohio Senate, Executive Order 2011-01K, 2011.

Initiative in Ohio. The case studies focus mainly on statewide HEiAP or similar initiatives in Washington State³ and California⁴, plus a summary of other initiatives in various stages of implementation. The literature review includes: a review of Ohio's CSI, examples of health impacts related to policy decisions, costs associated with implementing a HEiAP initiative, particularly those focused on social determinants of health, and a review of Ohio state health reports. The economic analysis section of this report considers three ways to assess the financial impacts of health policy.

This study is guided by the following research questions, developed by Thoughtwell and OPHA:

1. How are other states implementing a Health in All Policies initiative?
 - a. *What are the costs associated with setting up the initiative?*
 - b. *What model is used?*
2. How does the Common Sense Initiative (CSI) work?
 - a. *Who reviews the laws?*
 - b. *What are the costs associated with setting up the CSI?*
 - c. *Is there evidence of a Return on Investment (ROI) for the CSI?*
3. Is there evidence of a ROI from similar HIAP and HEiAP initiatives in other states?
 - a. *What is a potential example ROI for Ohio?*

1.3 Key Terminology

OPHA provided common descriptions of key terminology referenced in this report, as defined by the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC).⁵

- Health (WHO):

“A state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity”

- Public Health (CDC):

“The science of protecting and improving the health of families and communities through promotion of healthy lifestyles, research for disease and injury prevention and detection and control of infectious diseases. Overall, public health is concerned with protecting the health of entire populations.”

³ Governor's Interagency Council on Health Disparities, Washington State.

⁴ California Department of Public Health, California Health in All Policies Task Force.

⁵ All definitions cited available on CDC website, 2012.

- **Determinants of Health (CDC):**
“Factors that contribute to a person's current state of health. These factors may be biological, socioeconomic, psychosocial, behavioral, or social in nature.”
- **Health Disparities (CDC):**
“Describes differences in health outcomes among groups and does not describe the reasons why these differences exist.”
- **Health Inequities (CDC):**
“Differences in health status that are systematic, patterned, unfair, unjust, and actionable.”
- **Equity (CDC):**
“The absence of avoidable or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, or geographically.”

2.0 HEiAP Literature Review

2.1 Introduction

While health policy initiatives are a relatively recent development, the concept is far from new. As far back as AD 50, Cicero spoke of the intersection of health and law, stating that the health of the people should be the highest law.⁶ More recently, the right to health was established as a human right under international law.⁷ In terms of HEiAP or HIAP initiatives, the vast majority of examples in the United States are in precursory or early-stage implementation phases, ranging from targeted interventions to exploratory task forces and codified ordinances. Bridging gaps in health access and outcomes are commonly seen in initiatives, as are merging health with other public issues such as education, economic development, and transportation.

⁶ Cicero, translated from Latin, c. AD 50.

⁷ Health was originally noted as an essential component to the right to life under international law in the Universal Declaration of Human Rights in 1948. In 1966, the right to health was recognized as a distinct human right in the International Covenant on Economic, Social and Cultural Rights. The US is a signatory party to both covenants. UN OHCHR, 2008.

2.2 Measuring Equity

HEiAP or HIAP initiatives are supported by the assumption that good policy improves both health and equity. Determining how health and equity considerations have been woven into public policy is at times difficult because of the variation in definitions and measurements. Some research places emphasis on health disparities through a social lens among individual and community-level interaction within a specific social context, also known as the social determinants of health.⁸ Other literature seeks to define health and equity through an institutional prism, focusing on political dynamics and discrimination as the root causes of health disparities.⁹

A key question is: how do you measure equity? Public health practitioners vary in social norms, context, and experience.¹⁰ For example, the National Association of County and City Health Officials (NACCHO) considers equity through a sociodemographic lens.¹¹ NACCHO runs a Health Equity and Social Justice program, designed to engage with public health agencies in a number of different ways. They seek “to confront the root causes of inequities” through greater understanding of health outcome disparities, such as disease and mortality rates and “what social arrangements and institutions generate those inequities.”¹²

Other ways to measure equity include focusing on environmental factors, such as geographic variation in indicators or where clinicians practice. A study looking at health disparities in Tulsa, Oklahoma identified health disparities linked to residential segregation and healthcare coverage.¹³ While 40% of the population lives in the North, East, and West regions of the city, just 4% of the city’s clinicians practice there. The study found that the racial spread of residents in these regions and their health outcomes showed a 14 year difference in life expectancy between residents of Tulsa’s predominantly African American North and the predominantly Caucasian South regions.

A review of health and equity literature conducted by Embrett and Randall included discussion of health and equity’s struggle to get on policy agendas.¹⁴ Potential barriers to successful implementation of health and equity policy identified by Embrett and Randall related to challenges around defining and framing social determinants of health and equity. Multiple causal links between social conditions and health outcomes, limitations in the technical feasibility of policy solutions, and a

⁸ Ostilin et al, 2005.

⁹ Gamble and Stone 2006, Baril et al, 2011

¹⁰ Penman-Aguilar et al 2016, Heller et al, 2014

¹¹ NACCHO (1), 2014.

¹² NACCHO (2), 2014.

¹³ Case study by University of Oklahoma, Tulsa cited in Clancy, 2012.

¹⁴ Embrett and Randall, 2014.

lack of related data present challenges in measuring health and equity and quantifying links between social conditions and health outcomes. Penman-Aguilar and colleagues echoed the challenge, noting the numerous methods and considerations that make health and equity policy both costly and time-consuming.¹⁵ Their study explored how local government action, through zoning legislation and sponsorship of neighborhood-based programs, for example, farmers markets, can be useful tools for impacting health and equity.

Governmental partnerships with academic organizations, non-profits, and the private sector are a recurring theme throughout the literature, but their sustained impact requires time and a sense of ownership among those involved.

2.3 Health Policy

Since many health and equity policy initiatives are relatively new, represent emerging practice, or are in an exploratory or development phase, specific health and equity policy impacts are often yet to be quantified and evaluated. However, the literature reviewed does reveal both links between social conditions and health policy, and examples of health policy initiatives that have improved health and equity. Most of the better documented health and equity policy studies appear at the local and regional levels, suggesting that challenges exist in promoting health and equity on a larger, national scale. Examples of health and equity policy can be found in regional health interventions and their subsequent impact reports. The literature reviewed further offered different examples of how collaborative approaches could help enable positive health policy initiatives.

One example from Ohio studied the collaborative efforts of The Wellness Council serving the City of Akron and Summit County.¹⁶ The analysis of this partnership, consisting of over 60 member organizations providing over 40 distinct programs, revealed some opportunities to address health and equity gaps and improve service coordination. The Wellness Council launched a successful diabetes self-management pilot program that linked professionals with individuals across various levels of insurance coverage. Participants widely reported weight loss and decreased emergency room visits, evidence-based results that were lauded by the American Cancer Society and the CDC for its preventive health and cross-sector collaboration focus. This intervention highlights how a leveling of equity, by removing an economic barrier such as lack of health insurance, can lead to improved health outcomes and greater equity.

¹⁵ Penman-Aguilar et al, 2016.

¹⁶ Janosky et al, 2013.

Another health and equity intervention details the multifaceted efforts of the public sector, working alongside public health officials and members of the community in Richmond, California.¹⁷ Using neighborhood improvements as pilot projects for “healthy community development”, new trees, sidewalks, recreational space construction, and other amenities were implemented in tandem with community conversations defining health and equity. The purpose of these efforts was to remove historic barriers to health-promoting resources. Analysis of Richmond Community Survey data from 2011 and 2013 looked at responses to health questions. Neighborhoods targeted by healthy community pilots showed a higher proportion of the population rating their health as excellent or good in 2013, compared with 2011.¹⁸ These findings helped build support for a HIAP ordinance, adopted in 2014.

Examples of other local health and equity-related policy efforts in Ohio:

- The Health and Equity Implications of Expanded Access to Preschool: Cincinnati’s Fork in the Road (Health Impact Assessment by Human Impact Partners, Cincinnati Children’s Hospital, Interact for Health, and other partners, 2016)
- Stress on the Streets: Race, Policing, Health, and Increasing Trust not Trauma (Health Impact Assessment by Human Impact Partners, Ohio Justice and Policy Center, and Ohio Organization Collaborative, 2015)
- Ohio Public Health Association Health and Equity in All Policies Initiative
- City of Akron Health in All Policies resolution
- City of Cincinnati Health in All Policies resolution
- Summit County Health in All Policies resolution
- Cuyahoga County Board of Health, Eastside Greenway Health Impact Assessment: Executive Summary, 2016
- Columbus Public Health Safe Routes to School district-wide travel plan Health Impact Assessment, 2015
- Ohio Housing Finance Agency Health Impact Assessment: Alignment of Affordable Housing Physical Inspection Policies of Ohio, 2014
- Delaware General Health District Predicting Health Impacts of the Premium Outlet Mall on Community Health, 2014
- Columbus Public Health Impact Assessments on Area Plans
- Cincinnati Health Department Health Impact Assessment of the Demolition of a Lead Painted Bridge Adjacent to a Residential Area, 2013

A report from The Robert Wood Johnson Foundation looked at new ways of talking about social determinants of health.¹⁹ The report found that opportunities to make healthy choices had support “across the political spectrum” and researchers have

¹⁷ Corburn, Curl and Arredondo, 2014.

¹⁸ Random sample of 3,000 Richmond households surveyed every 2 years since 2007.

¹⁹ Robert Wood Johnson Foundation, 2010

offered conclusions on how health and equity can make its way to the policy agenda. This study emphasized the importance of language and tailored messages to target audiences that account for the political climate.²⁰ Gamble and Stone note the need for advocates to focus on the causes of health disparities in their messaging.²¹ Emmett and Randall identified specific issues that can be addressed with policy solutions.²² In many cases, health disparities have existed over several decades and achieving equity is seen as “a long term proposition.” The passing of the Affordable Care Act (ACA) in 2012 can also be understood as an attempt to increase health and equity by reducing unequal access to health insurance.

2.4 State of Health in Ohio

The Ohio Department of Health (ODH) State Health Assessment provides a statewide review of population health indicators.²³ The 2011 ODH report acknowledges the social determinants of health, their association with multiple health issues, and that addressing them “can lead to a cascade of successful outcomes” for health and wellness. Following on from this, the 2016 report counts the “cross-cutting strengths and challenges” that social determinants of health offer among its key findings.²⁴ The 2016 report also contains specific references to health and equity and notes how “Ohio also has significant health disparities by race, income and geography”, later highlighting how “the prevalence of some chronic diseases and related risk factors are particularly troubling.”

Two of the biggest indicators of health inequity are premature death and infant mortality rates.²³ Premature death data collected by the CDC measures Years of Potential Life Lost (YPLL) before 75, per 1,000 population. Building on life expectancy estimates and premature death data, the YPLL measure looks at years of life that are potentially lost due to preventable or treatable illness, and accumulates these YPLL based on different groupings. When these data were disaggregated by race and ethnicity, premature death data for Ohio (2012–2013) showed that African American Ohioans experienced 10,749 YPLL, much higher than the 6,978 YPLL for Whites and 5,518 YPLL for Hispanic / Latino populations. Similarly, the premature death rate for Pike County, which has among the highest poverty rates in Ohio, was triple that of Delaware County, which had the state’s lowest county poverty rate in 2014.²⁵ The most recent ODH study supplemented health indicator data with regional stakeholder

²⁰ See Gollust et al, 2009; Gamble and Stone, 2006; and Robert Wood Johnson Foundation, 2010.

²¹ Gamble and Stone, 2006.

²² Embrett and Randall, 2014.

²³ ODH, 2011 and 2016.

²⁴ ODH, 2011.

²⁵ 2010–2014 ACS data rates Pike Co. poverty rate at 24.2%, compared with 4.9% in Delaware Co. ODSA, 2014.

forums and interviews with typically marginalized groups, building out the focus on health and equity.

Several disparities in statewide population health were noted in Ohio's 2011 health assessment.²⁴ In particular, Ohio's infant mortality rate in 2009 was 7.7 deaths per 1,000 live births, compared to the national average of 6.8.²⁶ The figure was amplified by in-state averages for the decade 2000–2009, where it was found that Black or African American infants were 2.5 times more likely to die within their first year compared to White infants. In response to this, a statewide Infant Mortality Task Force was established in 2009. In addition to known clinical factors that contribute to infant mortality, the taskforce also recognized the influence of non-medical social determinants of health, such as racism, poverty, and education; “socio-economic and racial inequities that drive disparities in infant deaths.”

The ODH 2015–2016 State Health Improvement Plan (SHIP) addendum outlines Ohio's health priority areas with strategies to achieve improved health outcomes. Building on the 2011 SHA, reducing the infant mortality rate and the burden of chronic disease are the top two priorities.²⁷ Reduction strategies include targets and measurable outcomes. Efforts include smoking cessation which is known to impact infant mortality. One objective is to increase enrollment among women of childbearing age (18–44) to the Ohio Tobacco Quit Line.²⁸ The number of calls to the quit line and the percentage of Ohio smokers covered/eligible to receive services from the Ohio Tobacco Quit Line were targets used to monitor progress. Another example includes increasing access to healthy foods to address chronic diseases such as diabetes. One measurable outcome linked to this objective is increasing the number of small retail stores offering healthy food through a healthy store initiative.²⁹ Other priorities target health care access and health organization capacity. The SHIP addendum is peppered throughout with strategies for improving outcomes of particular populations.

2.5 Conclusion

In summary, research and policy related to health and equity are diverse and continue to grow. The conversation over how health and equity are defined and measured is vibrant and ongoing, and early interventions have shown signs of success. Challenges have been identified, notably the struggle to place equity on a state and national policy agenda. Advocates and researchers alike have sought root causes as to why this

²⁶ ODH, 2011 using Ohio Vital Statistics, Center for Public Health Statistics and Informatics, Ohio Department of Health, 2011.

²⁷ ODH, 2016.

²⁸ Targets include both an increase by 10% in number of calls to Ohio Tobacco Quit Line (from 222 in 2014) and an increase to 50% of Ohio tobacco users covered / eligible (from 41% in 2014). ODH, 2016.

²⁹ In the U.S., two prominent statewide healthy food-access initiatives are the Healthy Corner Stores Network or The Food Trust's Healthy Corner Store Initiative, Food Trust, 2016.

is the case and solutions to attract policymakers across ideologies. Some legislation seeking to improve health and equity may gain more political traction in one area over another. For example, recently soda tax bills have been passed in cities such as Berkeley CA, Boulder CO, and Philadelphia PA. But would such a bill pass in Atlanta GA, home to Coca-Cola? The State of Ohio has seen encouraging health and equity activity at the local level, while public health agencies are recognizing the importance of the social determinants of health and are working with external partners to improve overall population health. It is also possible to unpack essential health and equity components as they relate to specific health priorities, such as reducing infant mortality. The literature overall shows early signs of groundwork for informed health and equity policy.

3.0 Case Studies of Health and Equity in All Policies

3.1 Introduction

The case studies in this section of the report were selected to provide geographic examples of different, operational HEiAP or HIAP initiatives in the United States. The two states selected for case studies were Washington State and California. Based on the literature reviewed, Washington and California were chosen as they appeared to be the best documented, operational statewide initiatives. To supplement the literature review, Thoughtwell contacted staff from the Washington and California Initiatives for additional information on the structure, model and funding of these initiatives. Based on available material, Massachusetts was selected as a third state for additional focus in this section of the report. In addition, other HEiAP or HIAP initiatives in practice at smaller localities were identified. These include examples from Boston and San Francisco, which are included under their relevant state sections.

3.2 Washington State

Washington State established The State Governor's Interagency Council on Health Disparities in 2006.³⁰ Legislation was passed to establish the Council and authorize the Washington State Board of Health to conduct Health Impact Reviews (HIR) on behalf of the Council focused on proposed legislative or budgetary changes that might impact health and health disparities.³¹ The Washington State Board of Health HIRs assess potential health impacts through design of a logic model, identifying short,

³⁰ The council is comprised of 14 individuals who represent state agencies, boards, and commissions and 3 members who are appointed by the Governor.

³¹ Washington State Legislature, RCW 43.20.285, December 1, 2006.

medium, and long-term health impacts for each piece of legislation.³² Their analysis then applies a “strength-of-evidence” measure to determine impact. This is mostly done through a literature review of “the best available empirical information and professional assumptions.”³³ Washington’s HIRs are primarily intended as a legislative tool, often referenced by legislators to highlight potential positive impacts on health and equity when their bills are under review.

The original mandate from the state legislature provided the Washington State Board of Health with \$119,000 a year to fund a full time analyst. In addition to the Analyst, the Manager of the Governor's Interagency Council on Health Disparities devotes about 10% of their time to reviewing HIRs, outreach with legislators, and tracking bills. During the height of legislative session, the Analyst is expected to deliver a complete HIR every 7-10 days, often putting in considerable overtime. In an attempt to balance out the workload, the State Board of Health can limit the number of reviews it conducts at peak times.³⁴ Additional staff time comes from a Communications Consultant, who reviews and maintains the website, plus the Interagency Council’s Executive Director, who performs a final review of all HIRs. The process relies heavily on reviews of scientific literature, the cost of which is currently covered by sponsorship from the University of Washington to access the library.³⁵

To initiate the process, the Governor or a State Legislator completes and submits an HIR Request Form, detailing the bill draft or budget proposal.³⁶ An optional space on the form allows the requester to make a case that the proposal might have positive health impacts. HIRs can be requested for a range of topics, such as transportation, housing, education, environment, health care, and workforce development. One example is Senate House Bill (SHB) 1680 – On Closing the Educational Opportunity Gap, proposed in 2014.³⁷ The HIR looked at educational outcomes and health. Analysis of this bill explored the health implications of policy targets which sought to close the educational opportunity gap.³⁸ A logic model established potential short, medium, and long-term health impacts for each target. The findings highlight a correlation

³² Informed by a literature review, the Washing HIRs involving developing a conceptual model that depicts potential causal pathways linking the proposal to possible impacts on health disparities. Washington State Board of Health. Procedures for HIR, last updated 1/15/2014.

³³ Health Impact Project, Health Impact Assessment Legislation in the States, 2015

³⁴ The legislation gives the State Board of Health authority to limit the number of reviews it conducts so they “did not face unreasonable demands, and in the interests of analytic quality and budget and resource management.”

³⁵ All budget and workflow information provided via email by Christy Hoff, MPH, Manager of Governor's Interagency Council on Health Disparities, Washington State Board of Health, 8/22/2016.

³⁶ Washington State Board of Health. Procedures for HIR, last updated 1/15/2014.

³⁷ Washington State Board of Health. Executive Summary of HIR, 2015.

³⁸ Targets included: decreasing disproportionality in disciplinary action; cultural competence and second language acquisition training of educators; new English language learner accountability benchmarks; better data collection and analysis; and greater investment in the recruitment and retention of educators of color. Washington State Board of Health, 2015.

between higher educational attainment and positive health outcomes, such as decreased rates of diabetes, oral health problems, obesity, and depression. The HIR also noted how this correlation is present “even after controlling for income.” Ultimately, this bill was passed by House, but not passed by the Senate.

Another bill reviewed by the Washington State Governor's Interagency Council on Health Disparities was SB 6029: Establishing a Living Wage. The HIR included review of literature that established links between lower income and health disparities. The HIR highlighted higher rates of depression, asthma, and oral health concerns among lower income populations. The HIR uses a twenty year predictive model, displaying wage increase alongside improved health outcomes.³⁹ A minimum wage hourly hike to \$9.11 in 2015, \$12.24 by 2025, and \$16.45 by 2035 is estimated to return a sharp decrease in the percentage of the population who could not afford to see a doctor, down from 40.8% in 2015 to 24.2% in 2035.⁴⁰ Similarly, the predictive model anticipates an incremental twenty year decline in asthma, from 10.2% of the population in 2015, down to 8.8% in 2035.

The Minimum Wage bill analysis used Behavioral Risk Factor Surveillance System (BRFSS) data to show a breakdown of annual income disaggregated by race and ethnicity.⁴¹ In 2007, 15.4% of White respondents reported annual income less than \$25,000 compared to 21.6% of Black and 51.3% of Hispanic respondents.⁴² These data highlight income and racial disparity. The analysis concluded that an increased minimum wage would likely improve health outcomes for low-wage workers, thereby decreasing health disparities by race and ethnicity. Although SB 6029 is currently still under review, it may be superseded by a number of \$15 minimum wage provisions being passed nationally, including a city-wide initiative in Seattle.⁴³

3.3 California

The State of California has one of the more extensive histories of studying and incorporating health and equity into policy. California's Health in All Policies (HIAP) Taskforce was established by Governor Schwarzenegger's Executive Order in 2010.⁴⁴ The Taskforce initially engaged with stakeholders, policy experts, and agency members of the Strategic Growth Council (SGC) with the intent of building a shared vision for improving public health through agency collaboration. This involved

³⁹ Using Washington State Minimum Wage adjusted to 2011 Dollars, rate of inflation projections based on past trends in per capita personal income.

⁴⁰ Washington State Board of Health. HIR of Sections 7 and 8 of SB 6029, 2015.

⁴¹ Respondents reporting annual income by self-reported race category, 2007.

⁴² BRFSS income data, analyzed in Washington State Board of Health. HIR of Sections 7 and 8 of SB 6029, 2015.

⁴³ Washington Post article outlines the implementation timeline for the \$15 minimum wage bill for employers, based on number of employees. Feichtmeir, A. 2014.

⁴⁴ State of California Governor's Office, Executive Order S-04-10, 2010.

developing a Healthy Community Framework and Aspirational Goals to guide their future work.⁴⁵ The Task Force established the following 5-element framework to help develop and implement a HIAP Initiative: 1) Promote health, equity, and sustainability; 2) Support intersectional collaboration; 3) Benefit multiple partners; 4) Engage stakeholders; and 5) Create structural or procedural change. The Aspirational Goals included working health considerations into transportation, housing, parks, safety, healthy food, and public policy.⁴⁶

The overarching aim of the California HIAP Taskforce is to recommend programs, policies, and strategies to improve state population health. Criteria for recommendations included: population health impact, likelihood of collaboration among states agencies and stakeholders, equity impact, and measurability.⁴⁷ However, a review of the taskforce's work did acknowledge that: "Reaching consensus was time-consuming and required an iterative process of repeated review and revision."⁴⁸ Stakeholder engagement was seen as key to supporting their work, while it was noted that, "It is difficult to quantify the resources and expenses of the California HIAP Taskforce because much of the work is provided in-kind by partner agencies." Participating agencies do not specifically fund staff time for the task force, and general task force activities are carried out by full time employees with the aid of a grant-funded State Public Health officer and interns.⁴⁹

There was one notable omission from the original Executive Order to create California's HIAP Taskforce; the action was not accompanied by funding. The California Endowment Fund stepped in to help fund the initiative. Estimated annual running costs are \$500k. The budget primarily covers salaries for four full-time staff positions and is funded by a grant from California's Public Health Institute. The three additional staff members are funded by the State of California, under the umbrella of California Department of Public Health. The majority of running costs, such as office space, IT, tech support, facilities, and majority of supplies are given in-kind by the State Department. Occasional costs include minimal travel, training, and facilitation, plus the hiring of health topic experts for specific projects.⁴⁹

The California model operates at the policy generating source of an agency. Their work is staff-intensive and primarily involves group facilitation, policy review, and workshopping with agencies to develop their policies and practices to incorporate health considerations. California's HIAP Taskforce does not work directly in the production of Health Impact Assessments (HIAs) or HIRs. A source at the HIAP

⁴⁵ California HIAP Taskforce, 2011.

⁴⁶ Summary of framework cited in APHA et al, 2012.

⁴⁷ California HIAP Taskforce, 2013.

⁴⁸ Rudolph et al, 2013.

⁴⁹ Staffing, funding and HIAP Taskforce workflow information provided over phone by Karen Ben-Moshe (CDPH-OHE), 8/23/2016.

Taskforce explained that California's quite dense environmental legislation, typified by the California Environmental Quality Act (CEQA), was already considered by some agencies as onerous to navigate.⁵⁰ In this climate, where potential environmental impacts of a bill or policy might already be assessed by an Environmental Impact Report (EIR), the belief is that an additional health review requirement on top of this might impair the success of the California HIAP model.⁵¹

The California model relies on multi-agency engagement. The Taskforce often works with up to a dozen partners – wherein they seek to find consensus and develop a workplace action plan around a health policy solution. Often, partnership agencies may approach the Taskforce with a particular health topic they would like to focus on. In these cases, the HIAP Taskforce's work can gear its policy solutions toward a particular health goal. In addition to their work in California, the Taskforce has also been contracted to conduct workshops in other states, including New Mexico and North Dakota, with a breakeven fee to cover expenses. In the future the California HIAP Taskforce would like to review job descriptions as posts become available and help build health goals into key roles.⁴⁹

An early example of health and equity action comes out of the City of San Francisco, where the Department of Public Health established a Program on Health Equity and Sustainability. The Partnership works with residents, public agencies, and private organizations “to advance healthy environments and social justice” through research, dialogue, and collaboration and includes equity in its guiding principles.⁵² In 1999 a living wage ordinance was being evaluated in San Francisco. The Partnership conducted health impact analysis, documenting the association between wages, health, and educational outcomes. Their analysis found that the risk of premature death would be reduced by 5% for adults age 24 to 44 years of age in households whose current income was around \$20,000.⁵³ They also found that children of these workers could be 34% more likely to complete high school. The minimum wage ordinance was passed in 2003, raising the minimum wage from \$6.75 to \$8.50 per hour. More recently, in 2014 San Francisco voters approved Proposition J, which sought to raise the minimum wage to \$18 per hour by 2018.⁵⁴

Statewide, a mix of factors contributed to health and equity making its way onto the policy agenda. Legislation targeting sustainable development and climate change, a state health agency seeking new approaches to combat chronic disease, and

⁵⁰ CEQA guidelines and processes detailed here: <https://www.wildlife.ca.gov/Conservation/CEQA/External-Review>

⁵¹ Insights and information provided over phone by Karen Ben-Moshe (CDPH-OHE), 8/23/2016.

⁵² San Francisco Department of Public Health, 2016.

⁵³ Rudolph et al, 2013.

⁵⁴ Summary of Proposition J bill progression and adoption available at Ballotpedia: [https://ballotpedia.org/City_of_San_Francisco_Minimum_Wage_Increase_Referred_Measure,_Proposition_J_\(November_2014\)](https://ballotpedia.org/City_of_San_Francisco_Minimum_Wage_Increase_Referred_Measure,_Proposition_J_(November_2014))

leadership with an interest in health issues dovetailed to create a “window of opportunity” to bridge ideas and expertise across agencies.⁵³ Advances in health and equity in California have occurred gradually, with local and state actors recognizing a long-term approach is necessary. Despite the incremental progress and limited staffing to achieve outcomes however, demonstrable progress has been made that has caught the attention of other governments.

3.4 Massachusetts

Massachusetts has a variation of a HEiAP initiative. Established in 2009, The Healthy Transportation Compact works as a collaborative with transportation, health, and environmental agencies.⁵⁵ The aim is to evaluate potential health impacts related to transportation decisions. In 2014, an Advisory Council was created “to help guide and promote the activities” of the Compact. The Council meets monthly to evaluate key transportation projects, encouraging policy solutions that seek to expand mobility, improving public health as it relates to transportation, and supporting a cleaner environment.⁵⁶ The Compact enables the use of HIAs to “determine the effect of transportation projects on public health and vulnerable populations.”

A pilot HIA was performed on a McGrath Highway Corridor project. Funded by a Health Impact Project grant,⁵⁷ the final HIA report was released in 2013.⁵⁸ The HIA considered health impacts around the removal of a section of overpass highway. The overpass, built in the 1950s, was badly deteriorated in a highly populated area of Somerville, a satellite city two miles north of Boston. The HIA identified a number of health concerns, including: air quality, noise, mobility, and connectivity. Through a stakeholder consultation process and analysis of local health data, the HIA developed research questions relating to public health impacts/benefits. The HIA then included a pathway to improvement for each health concern, linking to specific changes to the highway structure. For example, for mobility and connectivity, wider sidewalk space and an increased number of crosswalks, intersections, and cycle routes would help improve walkability and reduce congestion. This in turn could lead to increased physical activity and better linkage with local goods and services,⁵⁹ as well as improving health outcomes around cardiovascular disease, obesity, and reducing the risk of vehicular injuries and fatalities.⁴⁸

A separate 2014 HIA study was conducted by Boston-based Health Resources in Action to evaluate potential health impacts of proposed legislation on the

⁵⁵ MassDOT, 2016.

⁵⁶ MassDOT, 2009.

⁵⁷ A collaboration of the Robert Wood Johnson Foundation and The Pew Charitable Trusts, 2012.

⁵⁸ Massachusetts Department of Public Health, Bureau of Environmental Health. 2013.

⁵⁹ Full logic model available in Massachusetts Department of Public Health, Bureau of Environmental Health. 2013.

Massachusetts Domestic Workers' Bill of Rights.⁶⁰ The HIA focuses in particular on two provisions, contracts and privacy. The HIA cites results from a National Domestic Worker Survey which found that only 8% of domestic workers in the U.S. have written contracts.⁶¹ The average hourly wage for live-in domestic workers at the time of the report was \$6.15 compared with \$10.82 for live-out. Where 35% of all domestic workers reported working long hours without breaks, that figure is 50% for live-in workers who reside where they work.⁶⁰ Similarly, 36% of live-in workers experienced employer abuse (vs. 16% for live-out workers). The survey also highlighted the prevalence of psychological and social isolation, with 31% of domestic workers reporting not having any access to a private means of communication, such as telephone, mail, and email while working.

The Health Resources in Action HIA cites several studies⁶² that connect negative health impacts to the lack of a written contract, highlighting higher instances of depression, stress, and anxiety in workers with no fixed contract.⁶⁰ The research highlights how domestic workers, particularly live-in workers, face low wages and long or unstable work hours. Where income is noted as “one of the strongest predictors of health”, longer hours can increase stress, reduce time at home with family, limit sleep, and increase the risk of workplace injury, leading to increased utilization and cost of health services. An HIA conducted by the San Francisco Department of Health found that depression among domestic workers resulted in an average absenteeism of approximately nine days per year, which subsequently impacts the financial security of their families.⁶³ The HIA identified economic and health benefits to strengthening contracts and privacy laws for domestic workers. Potential economic impacts such as a greater ability to pay for housing and food, plus better overall financial security were flagged. Health impacts include reduced stress, anxiety, and unhealthy coping behaviors. Overall, the Massachusetts HIA makes the case that a Workers Bill of Rights could bring greater job security and job satisfaction, thereby improving health outcomes. The Bill was signed into law in July 2014.

3.5 Conclusion

The health and equity initiatives in Washington State, California, and Massachusetts demonstrate the different ways in which a health policy initiative can be enacted and operationalized.

⁶⁰ Auerbach et al, 2014.

⁶¹ Described as the first comprehensive national survey of domestic workers in the USA, conducted 2011-12, full results and data available online at: <https://www.domesticworkers.org//homeeconomics/>

⁶² Includes Burnham and Theodore, 2012 and HIA conducted by the San Francisco Department of Health on the Health Impact Assessment of California Assembly Bill 889 (Gaydos et al, 2011) and cited in Auerbach et al, 2014.

⁶³ Gaydos et al, 2011 cited in Auerbach et al, 2014.

Whereas the Washington State initiative reviews potential impacts through a legislative review process, after bills are generated, the California Taskforce works directly with agencies to address and attempt to embed health in policy making at the source. Midway between these two touch points, a draft review and public consultation phase can be seen in the Massachusetts Health Transportation Compact and Ohio's CSI initiative. Other agency HIAs, such as the examples from San Francisco and Boston, show variations in a similar approach to better understanding and addressing health impacts in policy that may not initially seem related to health outcomes.

There are similarities in the generation of these different HIAP or HEiAP initiatives, but differences in the way in which the work is carried out. In terms of costs, similar to Ohio's CSI Office (see Section 4), California's annual running costs fall around the \$500k mark. Where data were available, actual start up and running costs appear relatively minimal, with the vast majority of financing taken up by staff salaries. All initiatives were created by Executive Order and signed off on by the State's Governor. All initiatives rely on state agency buy-in and have an operational phase in the wider legislative or rule generation process. The initiatives also seem to operate as advisory review bodies, rather than legislative enforcement agencies.

4.0 Ohio's Common Sense Initiative

4.1 Creation and Implementation

The Common Sense Initiative (CSI) was established by Ohio Governor John Kasich in 2011 and is seen as a best-practice model for the proposed HEiAP legislative initiative.⁶⁴ The CSI independently evaluates the potential impact of agency rules and regulations on small businesses. The CSI operates as a regulatory system of compliance intended to be open to public scrutiny and to serve the public interest. Responsibility for rolling out the CSI was assigned to Lieutenant Governor Mary Taylor. Key to operationalizing the CSI was to establish and staff the CSI Office. Other steps involved in the rollout included developing a workable definition of "small business, implementing an electronic reporting system that meshed with the State's existing IT infrastructure" and establishing the Small Business Advisory Council.⁶⁵ The Council operates alongside the CSI office and acts as a conduit between the Lieutenant Governor and the small business community.

The lifespan of the CSI is tied to Governor Kasich's term in office and will expire on his last day as Governor, unless the CSI is rescinded beforehand. Continuation of the

⁶⁴ Through Executive Order 2011-01K, January 10, 2011

⁶⁵ Established by Executive Order 2008-04S, assigns responsibility to Ohio's Department of Administrative Services and the State Chief Information Officer IT.

CSI past this will be at the discretion of the next Governor. In legal terms, the initiative is essentially a guiding principle or compact and is not binding under Ohio law:

“This Executive Order does not confer any legal rights upon persons, businesses or other entities subject to the regulation of cabinet agencies, boards, or commissions. It does not provide a basis for legal challenges to rules, approvals or disapprovals, permits, licenses, or other actions or to any inaction of any governmental entity subject to it.”⁶⁶

The operational costs for the CSI initiative are essentially the running costs of administering the CSI Office. The budget consists almost entirely of staff salaries, which totals \$410,000 annually for a Director, a Business Advocate, and four Regulatory Policy Advocates. Administrative support costs are approximately \$18,000 per year for CSI office space. In addition, \$3,500 was spent in startup costs for equipment and furniture. Overall, the annual budget of the CSI Initiative comes in a little under \$450,000. Support from other departments (such as IT) is counted under their respective departmental budgets.⁶⁷

4.2 How it Works

The form and functions of the CSI Office were designed to fit within Ohio’s current regulatory system structure. Its work cycle was designed to coordinate with the review cycle of the Joint Committee on Agency Rule Review (JCARR).⁶⁸ Where agency rules were formally subject to five-year review by the JCARR, they were now also subject to CSI review. The Ohio Legislature established new JCARR authority to potentially invalidate agencies’ proposed rules, should they demonstrate “adverse impact to businesses as identified through the CSI process.”⁶⁹ Following review, the CSI office makes recommendations to State government, Ohio Business Gateway, the Governor, and the General Assembly, with the expectation that they:

“Amend or rescind rules that are unnecessary, ineffective, contradictory, redundant, inefficient, and needlessly burdensome, have negative unintended consequences, or unnecessarily impede business growth.”

The process for review of a proposed regulation, or adjustment, is as follows. State agencies select regulations for submission, when they determine a proposed rule meets the criteria for a Business Impact Analysis (BIA). This is done through a BIA

⁶⁶ State of Ohio Executive Order 2011-01K

⁶⁷ CSI Office budget information provided via email by Emily Kaylor, Regulatory Policy Advocate for the Common Sense Initiative, 8/18/2016.

⁶⁸ Ohio General Assembly (OGA) agency rule review mechanism, established in 1977. OGA, 2016.

⁶⁹ State of Ohio Executive Order 2011-01K, 2011.

submission form, available on the CSI website. The form asks the agency specific questions regarding regulatory intent, involvement of stakeholders, and potential adverse effects to business. Once received by the CSI Office, it is entered into a centralized eNotification system.⁷⁰ Any member of the public can join around 40 topic-specific mailing lists, which notifies recipients when an agency submits a new or amended rule for review. This is the “early stakeholder feedback” requirement established by the Executive Order. The CSI Office also has the ability to schedule public hearings on rules. Most regulations appear to be open for comment for a short window, before moving to the agency review phase. Following review, agencies are given the opportunity to address any recommendations and re-submit their revised rules.

4.3 Outputs

According to the 2015 CSI Annual Report, since its inception to 2015, the CSI Office has reviewed a total of “more than 7,850 business-impacting rules and 59% of those rules have been either amended or rescinded.” In 2015, the majority of regulations (55%) were reviewed within 30 days and a further 25% were reviewed within 60 days. The CSI Office is keen to emphasize its role as a partner, rather than as a regulatory enforcer. This collaborative focus is partly reliant on other agencies’ willingness to “incorporate the CSI mindset into their institutional cultures.”⁴⁰ To further this, the CSI Office seeks to “cultivate an environment in which the business community actively participates in the regulations that impact them.” In addition to bi-annual progress reports, the CSI Office also publishes monthly and weekly progress updates via its Week in Review and Monthly Digest publications, which summarize the office’s public outreach activities and highlight key recommendations made.

Examples of rules submitted vary greatly in subject matter, and in terms of their potential impact to small businesses. For example, an Ohio Department of Aging (ODA) rule package was evaluated by the CSI Office in 2015. The rules dealt with meal delivery under the Older Americans Act and Ohio’s PASSPORT Program and further specification on provider requirements. The CSI public consultation phase allowed for feedback from meal providers, who expressed concern about some of the additional certification requirements. As a result, the final rules were updated to incorporate stakeholder feedback; “ODA eliminated 210 unnecessary regulations and reduced the impact of 26 other rules on groups that deliver meals.”⁷¹

Another example of CSI impact comes from a 2014 BIA of juice processing requirements.⁷² Raw juice companies had been restricted in their production of

⁷⁰ CSI, 2011.

⁷¹ CSI Monthly digest, July 2016.

⁷² Summary of BIA cited in CSI Annual Report, 2014.

unpasteurized juice, as former Ohio Department of Health and Ohio Department of Agriculture rules prescribed raw juice must be produced where it was sold. The CSI Office worked with all three parties and recommendations were implemented that changed department rules to allow for a centralized kitchen catering model to operate for juice makers. This allowed companies to sell their juices at different locations, while analysis from the CSI office helped agencies ensure that food safety precautions were maintained.

In 2015, Ohio Department of Agriculture submitted a draft rule package addressing the use and application of pesticides in the state of Ohio.⁷³ As noted on the CSI Office BIA, the “regulatory intent is to ensure the health and safety of Ohio citizens by training and registering pesticide applicators.” While the CSI review findings suggested that the majority of amendments were stylistic, stating “in most cases to clarify the language and make the rule easier to understand”, the analysis did also highlight a number of more substantive changes. These included a new requirement for one rule that “lawn chemical application signs are clearly visible” and for another rule that “clarifies the appropriate times for pesticides to be applied in schools.” The regulations in the draft rules applied to “all pesticide applicators including businesses, from lawn care to pest control to farmers.”

4.4 Conclusion

The focus of the CSI is on the impacts of regulations on the local business community. However, it is also possible to identify structural features of the CSI that could inform a potential HEiAP initiative. Firstly, there is the formation of the CSI Office and reporting mechanism which allows it to be embedded in Ohio’s reporting infrastructure and co-exist in the regulatory framework. Secondly, the fact that the CSI is not legally binding, and the emphasis on fostering “transparency, accountability and performance” through a compliance rather than punitive focus is also informative.⁷⁴ Thirdly, the responsibility of the CSI to instigate public consultations and conduct impact assessments would in theory also be conducive to a HEiAP initiative. Rules included in the juice pressing and pesticide BIA examples carry clear public health, as well as business impact implications.

⁷³ CSI BIA Review – Plant Health: Pesticide Application Licensure, Memorandum, July 27, 2015.

⁷⁴ CSI Ohio Strategic Plan, 2011.

5.0 Economic Analysis

5.1 Introduction

In addition to improved health, there is also a case for the economic benefits of a health and equity in all policies initiative. The financial implications of health-focused policy can be interpreted in a number of different ways. To help understand the potential economic benefits of improved health considerations as written into policy, this section of the report will look at three approaches, providing examples from current literature. In all cases, these approaches are prone to local stakeholder context, interpretation, and prioritization and are intended to aid interpretation of the overall pros and cons of a policy or program initiative.

A Return on Investment (ROI) analysis calculates the dollar amount invested against the savings and/or increased revenue accrued. The base calculation takes the dollar gain from the investment, minus the amount invested, and then divides that by the original investment to produce the ROI. A Cost Effectiveness Analysis (CEA) measures a program's total cost divided by the desired outcome, when compared to an equivalent program with the same desired outcomes. A Cost Benefit Analysis (CBA) measures success if the accrued benefits of a policy or program outweigh the costs.

5.2 Return on Investment

A 2006 HIA conducted by Boston University looked at potential impacts of a Low Income Home Energy Assistance Program (LIHEAP) in Boston, Massachusetts.⁷⁵ High energy costs add to the housing cost burden for low-income families, often forcing low-income families into unhealthy living conditions. Under these conditions, children are more likely to be exposed to environmental health risk factors such as mold, lead paint, and rodent or roach infestations. The study found that households without energy were also more at risk of negative health consequences linked to heating and ventilation. Health risks identified included: asthma, lead poisoning, accidental injuries (such as burns and poisoning), and respiratory infections.

The report compared the cost of heating the average home participating in Boston's LIHEAP program to the costs of health outcomes.⁷⁶ For example, families may turn to alternative sources of heating, which in turn leads to an increase in hospitalizations due to burns and carbon monoxide poisoning. The average cost of treatment was estimated at \$7,500 for pediatric burns and around \$11,000 for carbon monoxide

⁷⁵ Child Health Impact Working Group. 2007.

⁷⁶ Federal heating assistance programs, household income must not exceed 200% of FPL to be eligible.

poisoning.⁷⁷ This report estimated these costs were 5-8 times the average cost of heating a home in the Northeast United States and 7-10 times the maximum heating benefit available from the LIHEAP program in 2006. The report also notes a U.S. Fire Administration finding that 40% of residential fires occur during the winter months, resulting in 3 billion dollars in property loss nationally, 1,900 deaths, and almost 8,000 injuries. The report concludes by making the case that increasing the investment in LIHEAP would reduce the cost-burden for low income families in health and energy expenditure, highlighting the “compelling evidence that unaffordable energy costs adversely affect the health of low-income children.”⁷⁵ Recommendations based on this the HIA helped influence a decision to increase funding for LIHEAP in Boston.

A 2012 study conducted by Iowa Department of Corrections used an ROI analysis model developed by The Pew Center to estimate the economic return of criminal justice programs to taxpayers.⁷⁸ The study applied two core measures, the benefits to taxpayers and crime victims minus costs and the benefit to cost ratio for every program dollar spent.⁷⁹ This Results First model is most commonly applicable for state agencies, where the majority of funding is tax payer dollars. The report summarizes findings for institution-based programs, community release programs, and other community programs for higher risk probationers. For prison-based programs, the Iowa analysis looked at the return on investment per program participant over a 10-year investment cycle for each program type. Prison-based cognitive behavioral programs apply a Cognitive Behavioral Therapy (CBT) approach to psychotherapy. The benefit minus cost return for these programs was \$4,561 with a benefit to cost ratio of \$37.70 for every dollar invested.⁸⁰

In addition to prison-based programs, the Iowa study calculated the ROI for prison release programs. The Intensive Supervision program utilized a Risk Need Responsivity (RNR) model. This requires more intensive one-on-one supervision for case workers, but also reduces their average caseload from 50 offenders per office to 30. Results found a reduction in overall recidivism by 25.5% for all repeat crimes, and an even higher reduction of 45.0% for repeat property and violent crimes. Drug courts in Iowa served 653 adults in 2011 and returned \$9.61 for every \$1 invested.⁷⁸ Similarly, cognitive behavioral programs in the community are estimated to return \$34.30 on every dollar spent. The report is able to make the case that further investment and expansion of these programs “would further reduce admissions to jails and prisons and keep Iowans safer”, as well as result in considerable savings to the taxpayer.

⁷⁷ Hospitalization costs cited in Child Health Impact Working Group. 2007 taken from Healthcare Cost and Utilization Project. Available at <http://www.ahrq.gov/HCUPnet/>

⁷⁸ Iowa Department of Corrections, 2012.

⁷⁹ Methodology further detailed in Cost-Benefit Knowledge Bank for Criminal Justice as cited in Iowa Dept. of Corrections, 2012 is available online at: <http://cbkb.org/basics/>

⁸⁰ Based on 2011 dollar value.

5.3 Cost Effectiveness Analysis

An HIA published in Minnesota in 2016 examined the potential health impacts and cost effectiveness of proposed policy to reform drug sentencing.⁸¹ The analysis focused on the health consequences associated with incarceration in the context of the social determinants of health. Conducted by Minnesota’s Council on Crime and Justice, the HIA looks at separate legislative proposals for drug sentencing reform. Potential savings for tax payers depend on the proposed legislation.⁸² There is an estimated \$15.01 million in savings under SF 773/HF 994, which sought to reduce certain controlled substance threshold amounts, eliminate minimum sentences, expand conditional release programs, and redirect funds for treatment and educational programs.⁸³ SF 1382 seeks to downgrade the severity of some controlled substances crimes to misdemeanors, with an estimated \$1.1 million per year in net savings.⁸⁴

Expanding alternatives to incarceration in Minnesota, such as Intensive Supervised Release (ISR), were suggested. A cost effectiveness analysis determined that the amount per person per day in prison would cost the state \$84 compared to \$18 per day for ISR.⁸¹ The study also explores the secondary costs that would burden the family of the incarcerated individual. The average debt from court-related fines is \$13,607, with 63% of family members studied held accountable for the costs. Perhaps less clear is the longer, ongoing economic impact of reduced family income and the multi-generational impact this may have on local communities.

Big picture analysis of direct and indirect healthcare costs found that health disparities for racial/ethnic minority groups cost the U.S. \$230 billion in direct medical care and more than \$1 trillion in indirect costs associated with illness and premature death from 2003–2006.⁸⁵ A 2005 study on U.S. health and workforce productivity by The Commonwealth Fund estimated that: “Labor time lost due to health reasons represents \$260 billion per year in lost economic output.”⁸⁶ A 2012 Urban Health Institute report notes how reducing chronic condition prevalence among the 2.6 million members of the California Public Employees Retirement System by 1% would save \$3.6 million per year in healthcare expenditure.⁸⁷ In addition to addressing some of the negative health consequences of certain policies, a HEiAP initiative can also be understood through a cost-effectiveness lens. Attaining

⁸¹ Marshall and Anderson, 2016.

⁸² Specifically, the Senate and House bills SF 773, HF 994, SF 1382 and HF 2107.

⁸³ Full draft bill texts are accessible here: <https://www.revisor.mn.gov/bills/>

⁸⁴ Introduced Mar 5, 2015.

⁸⁵ ASTHO, 2012.

⁸⁶ Davis et al, 2005.

⁸⁷ Waidmann et al, 2012.

health and equity supports the overarching premise that investing in preventive care and public health also yields long-term economic benefits.

5.4 Cost Benefit Analysis

This section of the report focuses on three economic analysis case studies, where the desired outcome and tracking metrics were health outcomes. The examples include further exploration of Minnesota’s drug sentencing policies, a California evaluation of the health impacts of school discipline policies, and a North Carolina study looking at investment in prenatal care and infant mortality.

In addition to potential cost savings for proposed drug sentencing reform in Minnesota, the Council on Crime and Justice’s HIA identified areas of potential improvement in health outcomes.⁸¹ The passing of bills SF 773/ HF 994 would result in less incarceration and shorter sentences. Specifically, the report identifies better health outcomes with reduced prison sentencing resulting in reduced violence, disease, trauma, stress, health inequities, and community well-being. This diversion of convictions under SF 773 and HF 994 may lead to better health outcomes as incarceration has been associated with many negative health outcomes, both directly and indirectly. Better outcomes, such as reduced recidivism, are associated with the use of community-based treatments, such as probation, rather than incarceration.

A California HIA conducted by Human Impact Partners in 2014 evaluated the health impacts of Exclusionary School Discipline (ESD) policies, Positive Behavioral Interventions and Supports (PBIS), and Restorative Justice (RJ) policies in three school districts.⁸⁸ The report highlighted that school discipline impacts educational outcomes, which in turn impact a child’s future health outcomes and long-term economic stability. According to the report, each year of education leads to an 8% increase in earnings while graduates benefit society by \$287,000.⁸⁹ Applying a strength of evidence model to evaluate policy impacts on health outcomes, the findings assert that an exclusionary discipline “zero tolerance” approach leads to lower educational attainment, whereas an RJ or PBIS discipline approach leads to higher educational attainment.⁹⁰ The report highlights some of the negative health impacts associated with school exclusion, such as greater exposure to violence and higher rates of drug use.⁸⁸ Restorative justice discipline is reported to result in better health outcomes through higher educational attainment.

The Human Impact Partners report looked at the implementation of a School-Wide Positive Behavioral Supports (SWPBS) policy by Los Angeles Unified School District

⁸⁸ Human Impact Partners, 2014.

⁸⁹ The average high school graduate generates a positive lifetime net fiscal contribution of \$287,000. (Sum A et al, 2009 cited in Human Impact Partners, 2014.

⁹⁰ See Human Impact Partners, 2014 for methodology.

(LAUSD) in 2007.⁸⁸ Where application of the policy varied, the study compared L.A.'s Local District 7 with schools in four other states, surmising that increased use of SWPBS may have reduced school suspensions by a third. The study is not explicit as to the relative socio-economic context of the other comparison school districts. The report emphasizes links between school suspension and expulsion and negative health outcomes, such as higher rates of depression, Sexually Transmitted Infections (STIs), and substance abuse. The report found that for all three districts analyzed, PBIS would help increase time in school for students, improving health knowledge and behaviors, decreasing their likelihood of involvement in violent incidents, and decreasing negative mental health outcomes.

A 2014 report from North Carolina performed an analysis on Local Health Departments (LHDs) changes in spending and subsequent impacts on prenatal care service provision and infant mortality between 2005 and 2010, with a particular focus on impacts of the 2008 recession.⁹¹ Eighty North Carolina LHDs participated in the study. Aggregate spending increased from \$74 per capita in 2005 to \$87 per capita in 2008. The overall level of services provided by LHDs remained fairly constant until 2008, when around a quarter of LHDs reduced the number of services offered. While the study acknowledged limitations in the timespan reported, the report found a "significant association" between increased women and children's service provision (primarily family planning, prenatal care, obstetric services, and WIC services) and a decrease in infant mortality rates. Overall, the study estimated that this investment in programs saved 191 infant lives in North Carolina in 2008.

5.5 Conclusion

When seen through a health impact lens, there are strong links between having health and equity considerations in policy and improved health outcomes. For health policy, it is possible to see in the example of North Carolina's investment in pre-natal care programs, where health outcomes improved in the reduction of infant mortality. In terms of non-health specific policy, the example of Boston increasing access to the LIHEAP program had the potential to reduce instances of burns and carbon monoxide poisoning. In both examples, improved health outcomes were accompanied by economic benefits. Therefore, where investment in the introduction, facilitation, and advancement of such policies in practice can be quantified in terms of improved health outcomes in the short term, evaluating the pros and cons of a financial investment into health-impacting policy also allows for better understanding of more long-term and intergenerational economic benefits.

⁹¹ North Carolina Institute for Public Health, 2014.

6.0 Key Findings

6.1 Research Questions

In conclusion, we return to the original research questions for this project.

1. How are other states implementing a Health in All Policies initiative?

Only a limited number of states have an operational HEiAP, HIAP, or equivalent initiative. We focused on three for this study. Of these, the most developed are the California HIAP Taskforce and Washington State Governor's Interagency Council on Health Disparities. Other statewide initiatives, such as Minnesota, are in early stage rollout and are not yet fully implemented. New Mexico and North Dakota are among other states exploring such an initiative. State level initiatives started with an Executive Order from the Governor's Office. Coalition building with non-traditional health partners, public support, and political will all appear key to implementation, process, and follow through. Success is in part dependent on the ability of public health agencies to support and supplement the operational needs of an initiative. All initiatives rely on state-agency buy-in and have an operational phase in the wider legislative or policy generation process.

- a. What are the costs associated with setting up the initiative?

The cost of setting up an initiative is partly offset by agreements with existing public health agencies. This takes the form of office space, IT, and equipment costs, plus additional staff time. Overall operating costs for a HEiAP initiative are largely taken up by staff salaries, ranging from \$119k to fund a single analyst in Washington State to around \$500k per year for the California HEiAP Taskforce. Additional supportive staff time is often offered by respective public health agencies.

- b. What model is used?

The Washington initiative reviews potential impacts through a legislative review process, after bills are generated. The California initiative works directly with agencies to address and attempt to embed health in policy making at the source. Midway between these two touch points, a draft review and public consultation phase can be seen in the MA initiative and in Ohio's CSI initiative. The Washington model relies on HIRs, which legislators can reference to support or question potential bills. The California model forgoes this reporting process and instead relies more on the in-house knowledge of multi-agency staff, occasionally bringing health-topic specific experts into their workshopping process. The infographic (see Section 7.0) summarizes the key phases of different HIAP models.

2. How does the Common Sense Initiative (CSI) work?
 - a. Who reviews the laws?

Proposed bills and agency rule changes are reviewed by the CSI Office, which conducts Business Impact Assessments (BIAs). Requests for a BIA normally come from agencies submitting rules for consideration. Rules are made available for public comment as part of the review process. A public hearing may also be convened by the CSI Office. The CSI office can make final recommendations to State government, Ohio Business Gateway, the Governor, and the General Assembly. Ohio's JCARR has the authority to invalidate agencies' proposed rules, should they demonstrate adverse impact to businesses.

- b. What are the costs associated with setting up the CSI?

The budget consists almost entirely of staff salaries, which totals \$410,000 annually. Administrative support costs are approximately \$18,000 per year. In addition, \$3,500 was spent in startup costs for equipment and furniture for the office space. Cross-agency in-kind support (such as IT) is also supplied from other departments.

- c. Is there evidence of a ROI for the CSI?

The reporting process for the CSI utilizes BIAs, but does not apply ROI analysis. The focus of the CSI's BIA reports is not to attribute a dollar return on investment or evaluate cost effectiveness. Instead, the emphasis is on identifying whether or not a proposed bill or rule may impact businesses. Their recommendations seek to reduce excessive or cumbersome red tape, allow for greater transparency, and address potential unintended consequence that may negatively impact business growth.

3. Is there evidence of a ROI from similar HIAP and HEiAP initiatives in other states?

There are some examples of ROIs, cost effectiveness analysis, and HIAs from different geographies in the U.S. that contain economic impact analysis at the intersection of health and policy. Examples at the state-level however, are limited. Examples of economic analysis, ROI, or otherwise, performed directly under the umbrella of a HIAP or HEiAP initiative, are limited. The focus is more often on health impacts.

In most cases, the ROIs or alternative economic impact analyses reviewed focused on a specific health topic, a policy or law, or the work of an individual agent. For the most part economic analyses directly relating to a HIAP or HEiAP initiative used contextual cost information citing other sources that range from short-term savings to long-term economic gains.

However, some example ROIs, cost effectiveness, and HIA findings can be seen as clearly relatable to health in policy. In North Carolina, increased spending on prenatal care programs, from \$74 per capita in 2005 to \$87 per capita in 2008, prevented 191 infant deaths. A cost analysis of Minnesota prison spending revealed that

incarcerating a prisoner for one day would cost the state \$84 per capita, compared to \$18 per capita for Intensive Supervised Release (ISR). Also in Minnesota, a proposed bill to downgrade some drug crimes to misdemeanors would save an estimated \$1.1 million per year. Drug courts in Iowa returned \$9.61 for every \$1 invested in 2011.

a. What is a potential example ROI for Ohio?

The challenge of applying an ROI analysis to many aspects of public health funding is threefold. First, being able to isolate the exact dollar investment amount as it applies to a specific health concern. Second is data availability. And third, having specific enough health outcomes wherein treatment and other related costs can be identified. Whereas a cost analysis is a good way of understanding the financial viability of one option compared to another, it is often difficult to fully extrapolate the many short and long-term health consequences linked to the cost of an intervention. A challenge for grantees and funding recipients whose focus is on health outcomes is the ability to be able to demonstrate value and efficiency.

Based on the literature review and case studies, this research identified a number of topics at the intersection of public policy and public health that could potentially inform an economic analysis study for Ohio. Among the potential focus study areas explored were: use of seclusion and restraint in school discipline policies, sentencing, energy programs, living wage, and housing. Within these broad topics, there exist bills, policies, and health indicators in Ohio that could feasibly be used for an in-depth economic impact study. In order to effectively apply an ROI analysis to a HEiAP initiative focusing on any of these topics, the criteria would be: (a) isolate the exact dollar investment amount as it applies to a specific health concern; (b) identify available, reliable cost and health outcome data; and (c) have specific health outcomes wherein treatment and other related costs can be identified.

Where the Boston energy study looked at hospitalization charges, based on average length of stay for burns and carbon monoxide poisoning treatment, this is the type of study that might make for a transferable ROI study.⁹² It should be possible to pull that same hospitalization data on Ohio. American Community Survey (ACS) data on heating fuel types and income below 175% of the Federal Poverty Limit (FPL) would identify Ohio Home Energy Assistance Program (HEAP) eligible households. Alongside this, local Ohio HEAP benefit data would provide costs of benefits given.

⁹² Healthcare Cost and Utilization Project: <http://www.ahrq.gov/research/data/hcup/index.html>

6.2 Summary

Research on the health impacts of policy that specifically or indirectly relate to health and equity is varied in approaches, content, and definitions. One of the challenges is the lack of common, measurable health outcomes. The literature review revealed examples of health interventions that have shown signs of success. But challenges exist, particularly in getting health and equity on the state and national policy agenda. The State of Ohio has seen limited health and equity activity at the local level but work from the Department of Health, among other agencies, has recognized the importance of the social determinants of health, with the 2016 Ohio SHA expressly noting health and equity. Ohio law also requires that LHDs be accredited by 2020. The Public Health Accreditation Board (PHAB), which accredits local, state, and tribal health departments, incorporates health equity, health inequities, and social and economic conditions that influence health equity into its standards and measures for health department accreditation. Incorporating the HEiAP framework into state policies will support health departments' efforts to address social and economic conditions that influence health and equity in their jurisdictions.⁹³

Although the focus of the CSI is business, it is possible to see potential health impacts in many of the rules they review, such as the review of juice processing requirements and the use of pesticides (see p. 20). It is also possible to identify structural features that could translate to a HEiAP initiative, particularly in their lean operating overheads and embedding in the local legislative process. The CSI Office's emphasis on working with agencies to help foster a culture of buy-in and compliance rather than a punitive legal focus is informative, as is their ability to consult with the public and conduct impact assessments. Given the effects of health and equity on community and individual well-being, it is even more imperative that we apply lessons learned from CSIs to HEiAP policies. Consider human rights law: with 60 years of history and international law treaties, many legal provisions that seek to protect civil, political, economic, and health rights still struggle to be realized in national and local law.

The HIAP and HEiAP initiatives in California, Massachusetts, and Washington State demonstrate different models. There are similarities in the generation of these initiatives, and differences in the way the work is carried out. Alongside Ohio's CSI Office, all initiatives have relatively low start up and running costs. All initiatives were created by Executive Order, signed off by State Governor, rely on state-agency buy-in and have an operational phase at either the policy generation or legislative

⁹³ Public Health Accreditation Board. 2013, December. Standards and measures – Version 1.5. Retrieved from <http://www.phaboard.org/wp-content/uploads/SM-Version-1.5-Board-adopted-FINAL-01-24-2014.docx.pdf>

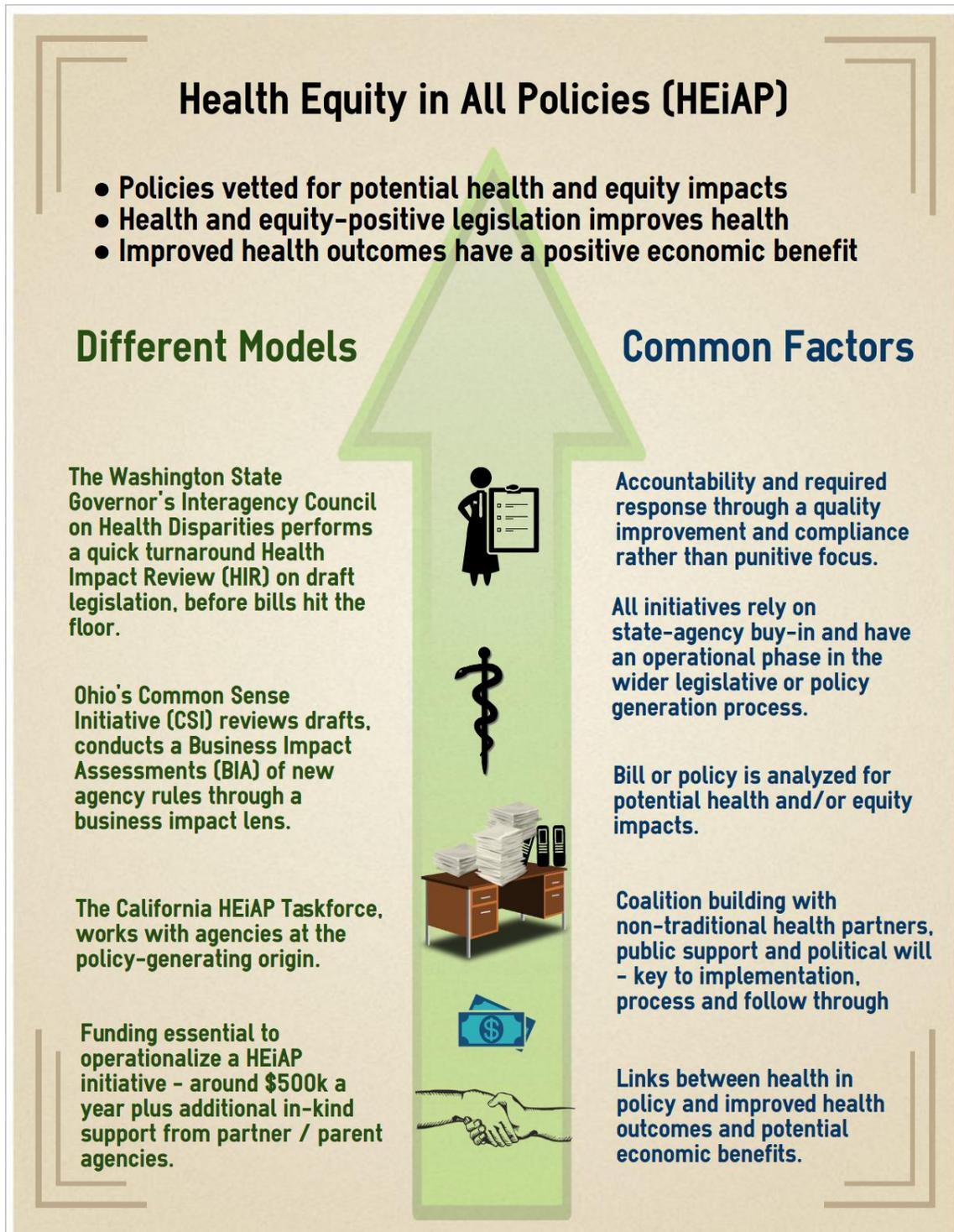
process stage. The infographic (Section 7.0) highlights some common features and processes of these initiatives in action.

Applying an ROI analysis to understand the economic impacts of policy on health outcomes is challenging, but possible. The majority of analysis relating to health policy focuses on health impacts, sometimes identifying potential cost savings. ROI studies linking health, finance, and policy tend to rely on secondary research that links health and economic impacts. Perhaps a gap in current research is the lack of economic analysis that draws a clear line between a health policy, investment, and both health and financial outcomes. Evaluating the pros and cons of a financial investment in health-impacting policy also allows for better understanding of more long-term and intergenerational economic benefits.

Overall, the link between having health considerations (as discussed in Section 2.3) in policy and improved health outcomes is strong. This study touches on the body of existing literature that links social and economic conditions to negative health consequences and some additional research that links improved health outcomes to economic benefits (see Section 5.0). There are examples of different models that exist to implement health policy initiatives, from working with agencies at the policy-generation stage to reviewing bills after they are introduced. Similarly, this HEiAP proposal borrows heavily from Ohio's CSI model—which requires all relevant rules and regulations from cabinet-level agencies, state boards and commissions to be reviewed from a business-friendly perspective.

Where many health and equity initiatives are relatively new, impacts are not yet known. There is potential, however, for a HEiAP initiative in Ohio to achieve both short and long-term health benefits and have a positive consequential economic impact.

7.0 Infographic



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