

Review of Health Impact Assessments in the Criminal Justice System, 2001-2016

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Abstract

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Purpose: This study is a systematic review of the current and potential role of a public health tool or process called a health impact assessment (HIA) within the criminal justice system. The review examines health impacts, explores the range of criminal justice policies, programs, and projects that have been evaluated by HIAs, and identifies strengths, challenges, and opportunities for the utilization of HIAs in the criminal justice system. *Methods:* The sample selection was conducted in two phases, employing HIA clearinghouses and online databases. The search yielded 20 HIA reports for inclusion. The review analyzed key characteristics of the HIAs including setting, topic, stakeholder engagement levels, funding sources, methods, and recommendations. *Results:* The review found that high stakeholder engagement, adequate time and staff capacities, and community leadership in the HIAs were highly influential on decisions made. Three case studies selected for success highlighted the impacts and application of HIAs conducted on criminal justice issues. *Conclusion:* Health impact assessments show potential as influential tools to guide and inform decisions around criminal justice policies and programs that will shift the system from a punitive paradigm toward a rehabilitative model that ensures equity, and optimize health outcomes for communities, and ultimately society.

LIST OF TABLES

Table 1. Health Impacts of Crime and the Criminal Justice System

Table 2. Full List of HIA Sources Used

Table 3. Key Characteristics of 20 Criminal Justice-related HIAs Conducted in the United States,
United Kingdom, Australia, and New Zealand, 2001-2016

LIST OF FIGURES

Figure 1. The HIA Six-Step Process

Figure 2. HIA Review Sample Selection Process

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INTRODUCTION

Background

Since the 1970s, our society has experienced a dramatic increase in criminal justice involvement and mass incarceration (Alexander, 2010; Dumont, Brockmann, Dickman, Alexander, & Rich, 2012; Golembeski & Fullilove, 2005). In 2014, the total incarcerated¹ population in the United States was 2,224,400; this does not include over 4.5 million individuals under community supervision² (U.S. Department of Justice, 2015). Contact with the criminal justice system³, whether they are accused, arrested, or convicted of a criminal act, can have prolonged impacts on many aspects of a person's life – including health. Those impacts do not occur in isolation, but spill over to the people in their lives and social circles. For each of those 6,851,000 individuals who have experienced the criminal justice system, the health and social wellbeing of their friends, family, children, and neighbors are affected in various ways as well (Table 1).

As an increasing proportion of the population experiences incarceration, the ramifications for public health become more evident. An individual's health can fluctuate from pre-arrest to post-release, and it is crucial for the public health and criminal justice systems to work together to address health issues at various points along the criminal justice continuum. Strengthening health service linkages post-release not only helps the individual maintain health, but also protects the public's health and lessens the burdens on local health services and emergency departments (Frank et al., 2013). Victims of crime may suffer physical and psychological effects of the event or events that can affect their family members and neighbors. It is important to note

¹ Inmates under the jurisdiction of state or federal prisons and local jails

² Includes those on probation or parole and living in the community or held in local jail

³ For the purposes of this study, defined as the system of law enforcement, the judiciary, corrections, and probation that is directly involved in the apprehension, prosecution, defense, sentencing, incarceration, and supervision of those suspected of or charged with criminal offenses (American Heritage Dictionary of English Language, 2011).

that in many cases, incarcerated individuals have also been victims, these intersections are imperative to examine together. Only recently have there been efforts to integrate public health and criminal justice to understand the health impacts of crime, criminal justice involvement, and incarceration (Akers & Lanier, 2009; Carr, 2007; Hirshfield, 2004; Vaughn, DeLisi, Beaver, Perron, & Abdon, 2012; Vaughn, Salas-Wright, DeLisi, & Piquero, 2014).

When examining health impacts of the criminal justice system, we must also acknowledge the shared root causes of poor health and high incarceration – structural inequities that engulf some people’s daily lives such as lack of job opportunities, low-quality education, and discriminatory policies (Braveman, Egerter, & Williams, 2011; Graves, 2015). The criminal justice system and related policies have manifested in collateral consequences that continue to punish the formerly incarcerated long after their debt to society has been paid. These collateral consequences also entrap families and communities in a detrimental cycle.

While there is burgeoning research revealing that historic and current criminal justice policies and practices have contributed to population health problems, the efforts to apply this knowledge to reformative solutions have lagged behind. The associations between upstream factors like policies and deleterious health outcomes downstream may not always be apparent to decision makers or community members. Health impact assessments offer one approach to elucidate and address these associations.

Study Introduction

This study is a systematic review of the current and potential role of a public health tool or process called a health impact assessment (HIA) within the criminal justice system. The review examines health impacts, explores the range of criminal justice policies, programs, and

projects that have been evaluated by HIAs, and identifies strengths, challenges, and opportunities for the utilization of HIAs in the criminal justice system. HIAs can help understand effectiveness of criminal justice policies and programs not just in terms of shifts in crime rates, but in changes in health and health determinants associated with crime (Hirshfield, 2004). The punitive paradigm of the current system drives recidivism and severely restricts the formerly incarcerated from positively contributing to society after they are released. Friends and family are punished by association and burdened with negative health and social consequences. By integrating public health, criminal justice can move toward a more holistic, humanistic, and community-centered approach to prevent crime, reduce recidivism, and promote health and social opportunities (Golembeski & Fullilove, 2005). HIAs can play a prominent role in criminal justice by providing research-based recommendations and actions and advocating for systemic reform in the system that would reduce negative health consequences and mass incarceration.

Background on HIAs

A health impact assessment is a systematic process or tool that uses a combination of data, analytical methods, and stakeholder input to determine if a proposed policy, plan, program, or project will have effects on the health of a population and to form recommendations to monitor or manage those effects (Human Impact Partners [HIP], 2013b; National Research Council [NRC], 2011). The HIA process generally includes six steps: (1) screening (i.e. identifying proposed plans, policies, or projects where a HIA would be useful), (2) scoping (i.e. prioritizing health impacts to focus on), (3) assessing risks and benefits, (4) recommendations, (5) reporting results, and (6) monitoring and evaluation of HIA's impact on the decision (Bhatia et al., 2014; HIP, 2013b; NRC, 2011) (Figure 1).

The majority of HIAs have been conducted in the past two decades in Europe, North America, and Australia/New Zealand. The sectors in which the most HIAs have been conducted include transportation, housing or urban planning, and environment (NRC, 2011). Using HIAs to provide health-promoting recommendations to decision makers has become more common in the United States (Bhatia & Corburn, 2011). Most HIAs in the U.S. have been conducted on a voluntary basis with no requirements or legislative mandates (Dannenberg & Wernham, 2012).

Purpose of Study

This study describes how HIAs have been utilized on criminal justice-related issues in the United States, United Kingdom, Australia, and New Zealand. It is part of a larger effort to conduct a series of reviews on HIAs in specific sectors such as transportation (Dannenberg et al., 2014), education (Gase et al., submitted for publication), labor and employment (Sohng, 2015), and housing (National Center for Healthy Housing, 2016). To the best of our knowledge, this systematic review is the first of its kind on criminal justice system HIAs.

METHODS

Search Strategy and Sample Selection

A preliminary search through health impact assessment center and clearinghouse websites was conducted between December 2015 and January 2016 (See Table 2). The search was limited with narrow search terms⁴: “criminal justice”, incarcerat*, crime AND HIA OR “health impact assessment”. This resulted in 17 unique HIAs for potential inclusion. Thirteen full reports were retrieved and four documents were unavailable. From these, two focusing on school discipline were eliminated and one was excluded because it assessed a job skills program that

⁴ used Boolean search system

included, but did not specifically serve, ex-offenders. After contacting the leads of the four unavailable HIA reports; three HIAs were still works-in-progress and one released in early March 2016 was included in this review. Ultimately, the preliminary search yielded 11 HIA reports included for review.

HIAs were selected for inclusion if they met the following five criteria: (1) distinctly labeled and identified as a “health impact assessment” by authors, (2) included a majority of steps in standard HIA practice, (3) examined health and/or mental health impacts, (4) the policy, program, or issue assessed focused on criminal justice, and (5) a full report completed by March 2016. Titles and executive summaries were screened for potential consideration in two search phases.

A secondary search in February 2016 focused on identifying small-scale, local HIA projects that may not have been included on major HIA websites. The search criteria were broadened by (1) focusing on international works, referencing sources like HIA Connect and International Health Impact Assessment Consortium and (2) expanding the definition of criminal justice to include crime prevention. These additional terms used reflected a widening of scope: polic*, penal, safety, jail, prison, rehabilitat*, correction&, “restorative justice”, justice, punishment, reform, and offender. The secondary search also utilized broader search mechanisms like the University of Washington library website and Google. Occasionally, HIAs were mentioned (e.g. in a college newspaper, a summary report, and a book chapter on crime prevention HIAs) and further attempts were made to locate or request a report. This secondary search yielded an additional 14 HIAs for potential inclusion. Of these, a total of five were eliminated for various reasons (e.g. not criminal justice focused, did not examine health impacts,

or would not be completed in time for inclusion). The secondary search captured nine full reports suitable for inclusion, and brought the total sample to 20 unique HIAs (Figure 2).

Review and Data Abstraction

The analysis included 20 HIAs conducted in the criminal justice system. The types of policies and programs the HIAs examined were grouped into four categories that reflect the range of the criminal justice system. Key characteristics captured included title, lead agency and partners, year completed, location, the level of stakeholder engagement (i.e. high, medium, low), health impacts examined, the methods used to characterize the impacts, and key recommendations (Table 3). Three case studies were chosen from among the 20 HIAs because they had high stakeholder involvement, utilized diverse methodologies, exhibited a comprehensiveness of health impact considerations, and the HIA results and recommendations impacted decision-making.

RESULTS

Summary of HIAs

The 20 HIAs were completed between 2001 and early 2016 with more than half (n=13, 65%) completed since 2010. The seven HIAs from prior to 2010 were conducted in the United Kingdom (n=4), New Zealand (n=2), and Australia (n=1). The earliest criminal justice-related HIA completed in the United States was in 2012. Locations of the HIAs varied across the world with eight internationally (40%) and 12 in different states (60%): California (n=3), New York (n=2), Wisconsin (n=2), and one each in Illinois, Minnesota, New Mexico, Ohio, and Utah. The HIA authors are comprised of various entities, including universities or academic center affiliates (n=9), community-based organizations, grassroots collaborations, and nonprofit organizations

(n=7), and government agencies or councils (n=6). Nearly half (n=9, 45%) of the HIAs were fully or partially funded by foundations (e.g. Robert Wood Johnson Foundation or The California Endowment), one third were conducted with no external funding (n=7, 35%), and four (20%) were supported by government funding.

Stakeholder Engagement

Stakeholder engagement played a crucial role in the production of the HIAs and their potential impacts. Stakeholders may include those who would be directly affected by the policy or project (e.g. incarcerated individuals, victims, law enforcement), but also those impacted indirectly such as family, neighbors, business owners, or service providers. A large majority (n=16, 80%) of the HIAs had high or medium stakeholder engagement. HIAs with high stakeholder engagement had leads who worked closely “on the ground” with local organizations, leaders, and community gatekeepers in certain or all phases of the HIA. These HIAs were co-led and co-authored with community partners and many recommendations were shaped or influenced by qualitative data gathered from community members and stakeholders. Thirteen HIA teams (65%) had an advisory board or a steering committee to provide guidance, support the process, ensure community participation, and grant approval for recommendations and the final report. Medium-level engagement HIAs may have had some, but not all, of these aspects of community involvement. HIAs done with low or no stakeholder engagement relied mainly on literature review and secondary data analysis to form recommendations and were often constrained by time or staff capacity. These HIAs gathered limited or no information directly from the community affected, such as with focus groups, key informant interviews, or surveys.

HIA Categories

A majority (n=13, 65%) of the HIAs were conducted on local-level policies or projects, while seven (35%) were conducted on national- or state-level issues. The 20 HIAs represented diverse issues and policies within the criminal justice system and are grouped into four broad categories as seen in Table 3: 1) policing and crime prevention (e.g. burglary prevention, graffiti vandalism reduction, reforming policing standards and practices); 2) social control and substance use (e.g. alcohol restrictions); 3) rehabilitation and reform (e.g. community reintegration program, tuition assistance for incarcerated individuals, drug sentencing policy reform, criminal record expungement policy expansion); and 4) built facilities (e.g. prison relocation, jail space expansion).

Health Impacts

All HIAs examined a breadth of health impacts that encompassed physical health (e.g. chronic disease, infectious disease, sexual health), mental health (e.g. substance use, stress, trauma, depression), and social determinants of health (e.g. housing, poverty, education, access to social services). Sixteen HIAs (80%) analyzed impacts on mental health or psychological distress, which speaks to how criminal justice involvement or crime victimization can have significant impacts not only physically, but psychologically. Six HIAs (30%) took a multidirectional approach and detailed the magnitude and severity of the potential impacts. Nearly all (n=19, 95%) HIAs considered the impacts of the social environment or “climate” in their analysis. They discuss the effects a policy or program could have on the health and wellbeing of community members.

HIA Methodologies

Literature review (i.e. including use of peer-review journals, books, and gray literature) was the most common method used in HIAs (n=18, 90%). Secondary and primary data were also widely used. Primary data was collected in 16 HIAs using various qualitative methods such as surveys, focus groups, or interviews with subject experts, key stakeholders, or community members and 16 HIAs conducted secondary data analysis (e.g. census data or local government records). Other methods used were case study analyses, workshops, observations, and site visits. Eleven HIAs (55%) were identified as comprehensive, two (10%) were intermediate, and seven (35%) were rapid HIAs. Some rapid HIAs, conducted under extreme time limits due to an impending policy decision or project implementation, may just utilize one or two methods. While comprehensive HIAs with large teams may dedicate months to a year to gather evidence from literature review, secondary data, and various qualitative primary data sources. Some HIA teams outsourced the work of a literature review to consulting firms who have the experience and resources to gather needed evidence. Often the choice of methodologies used depended on time and resource constraints, the staff's skills and capacity, and the type of information that would best support the HIA's aims and objectives.

HIA Recommendations

Recommendations made by HIAs can be generally described as addendums to existing policies or programs, changes or alterations, or new alternatives to prioritize community health and to mitigate potentially negative consequences. Evidence gathered show that often the health impacts are not distributed evenly and are more likely to affect certain vulnerable groups. Thirteen HIAs (65%) gave special considerations in their recommendations to protect vulnerable

groups such as racial minorities, people with mental illness, the homeless, immigrants, undocumented people, or LGBTQ communities, who would face greater health burdens or disparities. The intended audiences or decision-makers included advisory boards, governmental departments (e.g. Department of Justice or Departments of Public Health), state legislatures, researchers, and board of supervisors. To include community stakeholders and other interested parties, dissemination techniques include a dedicated project website, postings on organization website, community presentations, town hall meetings, professional conferences, blogs, and news media. Over half of the HIAs (n=11, 55%) explicitly included evaluation and monitoring mechanisms in their recommendations to promote sustainability and consideration of long-term health impacts as policies or programs move forward.

Along with strong, evidence-based recommendations, there are many factors that give a HIA clout on the decisions being made. The following three case studies highlight successful HIAs that were impactful and applicable to various criminal justice issues.

Case Study 1 Healthier Lives, Stronger Families, Safer Communities: How Increasing Funding for Alternatives to Prison Will Save Lives and Money in Wisconsin

Following the national trend, Wisconsin was facing a rising incarcerated population and overcrowded prisons. In 2007, Wisconsin piloted Treatment Alternatives and Diversion (TAD) programs in seven counties where low-risk, nonviolent offenders could attend drug and alcohol treatment court, day reporting centers, or mental health treatment in lieu of going to prison. However, the number of eligible offenders far outnumbered the available slots in TAD programs. WISDOM, a Wisconsin grassroots organization, reached out to Human Impact Partners (HIP), a non-profit HIA consulting group, to lead a HIA on the health impacts on offenders, their

families, and their communities if the state increased annual funding for TAD from \$1 million to \$75 million starting in July 2013 (HIP, 2014). The University of Wisconsin Population Health Institute (2011) conducted an evaluation that showed TAD programs were saving the state \$1.93 for every dollar spent; increasing the investment to \$75 million would yield an annual savings of almost \$150 million in criminal justice costs. HIP collected extensive information on the impacts of the TAD programs through literature review, secondary data, and analysis of the seven Wisconsin counties with TAD pilot programs along with over 2,500 alternative courts across the country (HIP & WISDOM, 2012). Testimony from former TAD program enrollees, criminal justice professionals, and health and social service providers provided powerful evidence in favor of prison alternatives. The HIA examined the health and social impacts of substance use, mental health, physical health, recidivism, stress, family structure, poverty, housing, and social cohesion on the offender, their family, and their community.

The HIA demonstrated that incarceration is linked to negative physical and mental health consequences while alternatives to prison lowered recidivism and supported better health outcomes not only for the offender, but for their children and families. Recidivism for TAD participants would be 12-16% lower than offenders sent to prison. If more parents were eligible for TAD programs, their children would be less likely to enter foster care, have less educational disruption, and have lower chances of emotional or behavioral problems. Focus groups found that TAD programs strengthened peer support and social and family cohesion. The recommendations included the expansion of funding of \$75 million per year to TAD programs, an addition of \$20 million per year to improve services for mental health, jobs, substance use, and families, and giving parents priority.

The HIA had a tremendous impact on the conversation around treatment over incarceration in Wisconsin (HIP, 2013a). There was wide media coverage and pledges of support from legislators. Because of the HIA, state legislators approved a 400% increase in state funding for TAD, from \$1 million to \$4 million. This would help keep more than 2,000 people out of prison and their families and communities healthier and safer each year. The number of TAD programs in Wisconsin also grew from seven to 34 (The Pew Charitable Trusts, 2015).

Case Study 2 Turning on the TAP: How Returning Access to Tuition Assistance for Incarcerated People Improves the Health of New Yorkers

Before 1994, incarcerated persons in New York prisons were eligible to receive financial aid for higher education through Tuition Assistance Program (TAP), which provides grants to low-income state residents. However, since 1995 the state banned incarcerated persons from receiving TAP grants, thus, dramatically decreased opportunities for people in prison to gain an education and to have better job prospects post-release. NY Senate Bill S975 (2015), sponsored by Senator Velmanette Montgomery (D-23), would have repealed the 10-year-old ban and restored TAP eligibility and access to higher education to people in NY prisons.

Human Impact Partners conducted a HIA with Education from the Inside Out Coalition (EIOC), a national group dedicated to bringing education access to currently and formerly incarcerated individuals. With funding from the Health Impact Project and the Kresge Foundation, they examined the potential impacts on incarcerated individuals, their families, and their communities in New York if tuition assistance eligibility is restored. An advisory committee composed of criminal justice researchers, department of health staff, and other professionals provided support and guidance in the process. An extensive literature review, analysis of Department of Corrections data, and focus groups gathered strong evidence to

support repeal of the 1995 ban. Interviews with criminal justice researchers, scholars, and a professor/formerly incarcerated TAP recipient captured the breadth of experiences and perspectives on the impacts of education during incarceration. The HIA focused on the impacts on the incarcerated individual's physical health, mental health and self-esteem, critical thinking/decision-making abilities, social networks/leadership skills, recidivism, and employment outcomes. People who received college education in prison are 10-20% less likely to re-offend and more likely to find employment and positively engage in civic life, contributing to the enhancement of their community. Education and more employment opportunities translates to better health status, healthcare access, and better-informed health choices for the formerly incarcerated and their families. The wellbeing of 105,000 children who have a parent serving time in New York can be improved by parent's educational attainment which is linked to better parent-child interactions, positive modeling of conflict resolution, and higher cognitive development. Additionally, the report highlighted the positive influence of educational programs on the safety and relationships in the prison environment.

Unfortunately, Senate Bill S975 died in Committee. Despite this setback, the HIA experience strengthened the EIOC's resolve and motivated them to hold multiple rallies in front of the governor's office (H. Avey, personal communication, March 9, 2016). Their actions pressured the governor to explore alternative options. In January 2016, Governor Cuomo announced that forfeiture funds along with private matching funds will provide a total of \$15 million for up to 3,000 incarcerated persons to pursue higher education (McKinley & McKinley, 2016). This HIA demonstrated that not all HIAs will successfully impact the original, intended issue or policy, but can be a powerful advocacy tool for initiating political change.

Case Study 3 Health Impact Assessment on the draft Hastings District Council Graffiti Vandalism Strategy

The community of Hastings District, New Zealand was experiencing the increasing problem of graffiti vandalism and the negative social and economic impacts of it. The District's reactive approach with graffiti removal services proved to be ineffective. In 2008, the Hastings District Council (HDC) drafted the Graffiti Vandalism Strategy which incorporated themes of reporting/recording, removal, prevention, enforcement, education, and community into coherent and proactive initiatives.

Supported by the Ministry of Health HIA Unit's Learning by Doing Fund, Hawke's Bay District Health Board (HBDHB) partnered with HDC to assess the health impacts of this draft strategy. Methods utilized included a literature review conducted by a consulting firm, a community profile formed from secondary data, and interviews with key stakeholders and community members. The HIA prioritized meaningful engagement and ensured voices were represented and heard from- especially Maori, youth, and males. To include community guidance, the HDC assembled the Safer Hastings Advisory Committee made up of community representatives and HDC staff. Valuable evidence emerged from various key stakeholder workshops with different groups such as police and youth.

An impact evaluation conducted by the Health, Equity & Wellbeing Impact Assessment Research Unit at the University of Otago concluded that the HIA had a direct effect on the Graffiti Vandalism Strategy, as evident by the adoption of 17 of the 19 recommendations by HDC (McClellan & Signal, 2009). Two examples of accepted recommendations were 1) "Add to Strategy: Recommend the development of a crime prevention through environmental design (CPTED) policy relevant to graffiti" and 2) "Modify Strategy: Paint murals on public and

commercial buildings that are commissioned locally and are reflective of the local community. Paint in a style that reduces the risk of graffiti vandalism.” A strong collaboration was built between HBDHB and HDC, resulting in increased knowledge and capacity to conduct HIAs, inclusion of equity issues, and the wide dissemination of findings. Feedback gathered from workshops was mostly positive and many participants appreciated the mentorship and facilitation. Some of the strengths of this HIA’s process highlighted by the evaluators were the strategic and well-timed selection and scoping of the policy. This HIA demonstrated that timing and dedicated community involvement are essential for HIAs to have impact on policy decisions.

DISCUSSION

HIAs are emerging as influential tools in bringing public health to the table in various sectors, in local, state, and federal levels (Collins & Koplan, 2009; Dannenberg et al., 2014; Farhang & Heller, 2016). In Europe and Oceania, the use of HIAs is more established and integrated in the decision-making process across sectors, including criminal justice. In the United States, the use of HIAs in the criminal justice system is still in a nascent phase; however, there has been a growing proliferation of HIAs conducted in the past few years. This review of 20 HIAs completed in the United States and other countries in the last 15 years demonstrates the potential application of HIAs to a wide range of criminal justice-related policies, projects and programs. Its application has implications for HIAs as a mechanism to bring health considerations to decisions being made in policy reform, law enforcement practices, prison construction, and community safety.

HIA as a Tool to Promote Equity

A HIA is a tool to change policy, it can also be a tool to promote equity (Collins & Koplan, 2009; Farhang & Heller, 2016). The current criminal justice system and crime disproportionately affects socially disadvantaged groups (i.e. the poor, the homeless, minorities, and immigrants). Our society's current self-reflection on the status quo and growing consciousness of how discrimination, racism, and sexism has devastating consequences on our wellbeing signals that the system is posed for change and reform. Criminal justice HIAs show potential short-term and long-term health impacts on individuals, their families, children, and communities; as well as the possible unequal distribution of those effects on vulnerable populations. HIAs communicate to decision makers not only what are the possible health impacts - but who is affected the most. Equity is a prominent priority of criminal justice-related HIAs. Groups that conduct HIAs intervene on the root causes of health consequences and disparities, but also are cognizant of actively exposing and addressing racial differences in arrest rates, length of sentencing, and discriminatory policies in opportunities post-release.

Collaborative Process

Equity can be promoted in the HIA process through collaboration. Six HIAs were co-authored by two or more groups, demonstrating mixed-sector collaboration in HIA efforts. The case studies show that HIAs can create new or stronger collaborations across sectors between governmental entities, grassroots leaders, faith-based groups, and service providers. These relationships can be sustained beyond the HIA project and build a strong alliance on other criminal justice issues (Bhatia & Corburn, 2011). There is evidence of strong stakeholder engagement in many of the reviewed HIAs, but there are still gaps that more capacity training and community leadership can fill. The HIA process provides a structured approach to target issues and is a valuable learning experience to gain new knowledge about health effects and

trade-offs from public policy (Bhatia & Corburn, 2011). It is critical to build capacity and skills among community groups so they are active creators and contributors to the HIA process. HIAs can be one way for disenfranchised communities to form a collective voice, louder than the sum of its parts, to speak against the systemic and structural discrimination and oppression that are embedded within the criminal justice system. For example, by collaborating with Human Impact Partners and with the technical assistance and research they provided, WISDOM was able to elevate their efforts to ending mass incarceration and addressing the blatant racial disparities in Wisconsin's prison population. With what they learned from the HIA process, WISDOM was better equipped to educate and persuade effectively about prison alternatives, investment in communities, and reforming policies that are imprisoning people of color (Godar, 2015). Collaboration can include sharing skills and resources or co-authorship, advisory boards, or consultations.

Toward Best Practices

Including advisory boards or steering committees comprised of people with diverse backgrounds and perspectives should be considered a best practice. HIAs that have the most success in influencing policy and creating positive health impacts are ones that have greatest community involvement (Farhang & Heller, 2016; Hirshfield, 2004). Capacity building and dissemination of trainings for small, grassroots organizations to lead HIAs would be ideal to empower communities to bring attention to issues that affect them the most. A set of best practices for HIA project implementation should be used as a foundation and a guide to conduct HIAs, but also allow the flexibility needed to adapt it to the unique community context, capacity,

and nature of the policy, plan, or program. Further research needs to be done to identify a comprehensive list of best practices for HIAs.

Funding Sources

Currently, HIAs have a heavy reliance on private foundation grants and greater diversity in funding is needed (Dannenberg & Wernham, 2012). Increasing the diversity of funding sources would allow more agencies to participate in the HIA process and promote sustainability of HIA work by encouraging smaller, community-based organizations to pursue funding and build HIA-conducting capacity. One possibility is for local public health departments to fund or provide technical support to conduct HIAs on local issues, such as many of them do in the UK and New Zealand. Backed by government support, HIAs can be viewed as more mainstream and integrated into the decision-making process. Many HIA teams expressed limited time and staff capacity to conduct thorough, comprehensive HIAs. The provision of funding can increase staff capacity, compensate community groups or individuals for their time and contributions, and produce more high-quality, professional HIAs. A comprehensive HIA with strong research evidence and community participation increases the success of persuading decision makers. Another possibility is to increase academic and university involvement in HIA projects. By engaging students studying disciplines like public health, social work, or public policy, the burden of funding would be lessened and future professionals in various fields would be trained in the HIA process.

Limitations

There are several limitations to consider in this review. First, not every HIA related to criminal justice may have been identified and included in the analysis because they were either not publicly available, it was not explicitly labeled as a health impact assessment by the report authors, or the final product of the HIA was not a formal report. Second, generalizability is limited to the relatively low number of HIAs that have been conducted in the criminal justice system. Third, because there are no standards of reporting, the key characteristic analysis was drawn from HIA report contents that varied in detail, description, and clarity. Lastly, while some of the key characteristics and aspects of these HIAs have been described, this review is not an exhaustive examination of criminal justice HIAs conducted. With more HIAs currently in progress, further study should be done to continue to improve the effectiveness and influence HIAs can have in the criminal justice system.

Conclusion

Research has presented strong evidence that the current criminal justice system is perpetuating social inequities, mass incarceration, and public health consequences. Both criminal justice and public health researchers and scholars should continue to evaluate the HIA process and seek best practices in creating quality, influential HIAs (Dannenberg & Wernham, 2012). Health impact assessments can guide and inform decisions around criminal justice policies and programs that will refocus the system toward rehabilitation, ensure equity, and optimize health outcomes for communities. With increasing attention to HIAs, there are substantial opportunities for the public health sector and criminal justice system to work together toward achieving health and justice truly for all.

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Table 1. Health Impacts of Crime and the Criminal Justice System

Health and Social Impacts	Population Affected	Factor(s)	Source
Infectious diseases (e.g. hepatitis C, tuberculosis)	Incarcerated individuals, Correctional staff, Visitors	Close contact in enclosed and communal facilities, lack of healthcare access prior to entering prison	Binswanger, Krueger, & Steiner, 2009; Carr, 2007; Golembeski & Fullilove, 2005; U.S. Department of Justice, 2006
Chronic diseases (e.g. hypertension, asthma, cervical cancer)	Incarcerated individuals		Binswanger, Krueger, & Steiner, 2009; Golembeski & Fullilove, 2005; U.S. Department of Justice, 2006
Mental illness (e.g. schizophrenia, Posttraumatic Stress Disorder (PTSD), depression)	Incarcerated individuals	Stressful and hostile correctional environment could trigger or exacerbate existing conditions	Golembeski & Fullilove, 2005; U.S. Department of Justice, 2006
Increased access to health services and improved health status	Incarcerated individuals (who were medically underserved)	Eighth Amendment mandates jails and prisons to provide medical care to inmates	Dumont et al., 2012; Møller, Stöver, Jürgens, Gatherer, & Nikogosian, 2007; Wallace, G., 2012
Substance use and overdosing, asthma, sexually transmitted infections, mental health issues	Formerly incarcerated individuals	Lack of continuity of care immediately after release is a vulnerable time for relapse and mortality	Binswanger, Redmond, Steiner, & Hicks, 2012; Dumont et al., 2012; Vaughn et al., 2012
Criminal injury and harm	Victims		Hirshfield, 2004
Psychological trauma, mental illness, self-medication with alcohol and/or drugs	Victims		Hirshfield, 2004
Hypervigilance, anxiety, mistrust, chronic stress	Victims Those at-risk for victimization who live in a high-crime area	Racial minorities, the poor, and those who experienced previous victimization are at higher risk	Kilpatrick & Acierno, 2003; Lorenc et al., 2012; Wallace, 2012
Corrosion of social cohesion and trust	Community	High crime rates/ fear of crime	Hirshfield, 2004; Kawachi, Kennedy, & Wilkinson, 1999
Obesity and cardiovascular disease	Women of incarcerated family members		Lee, Wildeman, Wang, Matusko, & Jackson, 2014
Psychological distress	Formerly incarcerated individuals	Criminal record discrimination	Turney, Lee, & Comfort, 2013
Incarceration	Children of incarcerated		Freudenberg, 2001
Civic and fiscal impacts, mass disenfranchisement	Communities with high-density incarceration	Weakened political power, less investment into community resources and health services	Dumont et al., 2012
Limited access to healthcare, low	Formerly incarcerated individuals and	“Legalized discrimination”: restrictions	Alexander, 2010; Dumont et

socioeconomic status, barriers to upward mobility	their dependents	on public housing, higher educational financial aid, employment opportunities, denial of voting rights and jury service; social stigma; the “felon” label	al., 2012; Golembeski & Fullilove, 2005
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Table 2. Full List of HIA Sources Used

Source Name	Website Link	Type
Georgia State University Health Policy Center	http://ghpc.gsu.edu/research_projects/publications-by-topic/	National
Health Impact Project	http://www.pewtrusts.org/en/projects/health-impact-project	National
HIA Connect	http://hiacconnect.edu.au/reports/	International
Human Impact Partners	http://www.humanimpact.org/	National
International Health Impact Assessment Consortium	https://www.liverpool.ac.uk/psychology-health-and-society/research/impact/publications/	International
Ministry of Health, New Zealand	http://www.health.govt.nz/our-work/health-impact-assessment/completed-nz-health-impact-assessments	International
National Network of Public Health Institutes	https://nnphi.org/relatedarticle/nnphis-member-institutes-as-national-health-impact-assessment-hia-training-and-capacity-building-centers/	National
Public Health England (formerly HIA Gateway)	http://www.apho.org.uk/default.aspx?QN=P_HIA	International
Society of Practitioners of Health Impact Assessments (SOPHIA)	http://hiasociety.org/	International
UCLA Health Impact Assessment Clearinghouse Learning and Information Center	http://www.hiaguide.org/	National
University of Liverpool, Dr. Alex Scott-Samuel Publications	https://www.liverpool.ac.uk/psychology-health-and-society/staff/alex-scott-samuel/publications/	International
University of Wisconsin Population Health Institute	https://uwphi.pophealth.wisc.edu/programs/health-policy/health-impact-assessment.htm	National
World Health Organization (WHO) HIA	http://www.who.int/hia/examples/en/	International

Figure 1. The HIA Six-Step Process

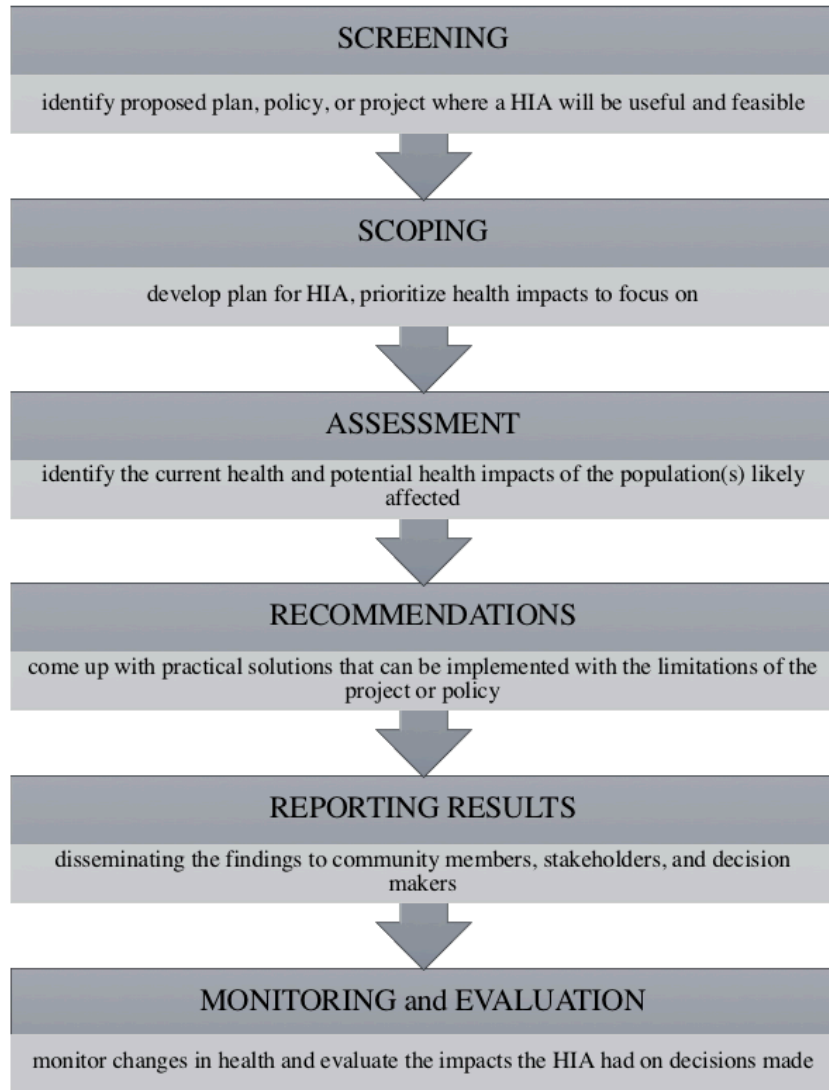


Figure 2. HIA Review Sample Selection Process

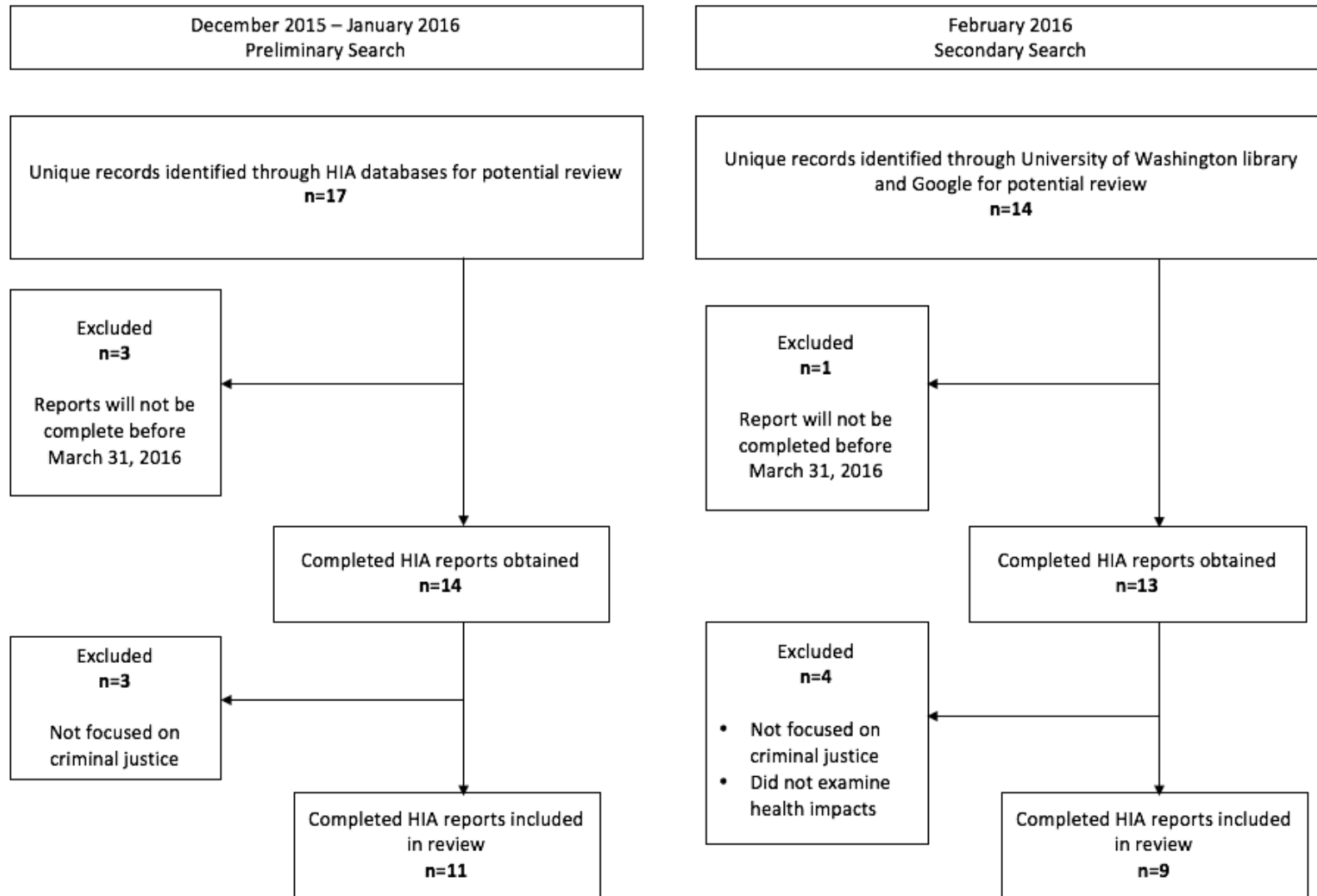


Table 3. Key Characteristics of 20 Criminal Justice-Related HIAs Conducted in the United States, United Kingdom, Australia, and New Zealand, 2001-2016

<i>Title Location Year</i>	<i>Lead Group(s)</i>	<i>Impacts Examined</i>	<i>Methodology</i>	<i>Example Recommendation</i>
<i>Policing & Crime Prevention</i>				
<i>HIA of the Home Office Reducing Burglary Initiative, United Kingdom, 2001</i>	Urban Research and Policy Evaluation Regional Research Laboratory, University of Liverpool	<ul style="list-style-type: none"> • Social environment • Lifestyle alterations • Employment prospects • Access and relationships to services • Stress, anxiety, and fear 	<ul style="list-style-type: none"> • Literature review • Secondary data analysis • Interviews • Case studies • Policy analysis 	Spin-off effects include the formation of resident associations and homewatch schemes, which in turn benefit the community cohesiveness and strengthen mutual support. RBI projects should actively seek to encourage and support the formation of formal and informal networks within the community.
<i>HIA: Measuring the Effects of Public Policy on Variations of Health, Liverpool Target Hardening Case Study, United Kingdom, 2001</i>	Department of Civic Design & Department of Public Health, University of Liverpool	<ul style="list-style-type: none"> • Psychological distress • Health-related behaviors • Lifestyle alterations • Social support • Employment/economic benefits • Access and relationships to services 	<ul style="list-style-type: none"> • Secondary data analysis • Interviews 	“Linking the Thinking” between agencies: referral protocols between agencies should be formalized and monitoring systems established. These include referrals to: general practitioners when patients with existing health problems are victimized, and when victims suffer acute psychological distress from the burglary, social services for vulnerable people in need of care and support, respite or longer term, to maintain their independence at home, and housing services following home safety risk assessments.
<i>Potential Health Impacts of the Proposed Family Violence Strategy: Safer Families, Safer Communities, Australia, 2003</i>	Health Impact Assessment Unit, Deakin University	<ul style="list-style-type: none"> • Physical injury/issues • Emotional and psychological issues • Social isolation and quality of life • Parenting styles • Pregnancy • Children's physical and mental health • Unstable household/living situation, homelessness • Education 	<ul style="list-style-type: none"> • Literature review • Rapid HIA workshop 	It is recommended that the information which children has access to include a clear definition of family violence. In addition, there should be information on where the child can get help. Any information should aim to communicate to the child: that violence is not a “normal” part of family life, that violence is not the child’s fault, and that seeking help is appropriate.
<i>The Liverpool Citysafe Trailblazers Netherley Valley Citizen's Jury HIA, United Kingdom,</i>	IMPACT, University of Liverpool	<ul style="list-style-type: none"> • Fear of crime and anti-social behaviors • Anxiety and stress • Sense of control/ self-efficacy • Social capital 	<ul style="list-style-type: none"> • Literature review • Secondary data analysis • Interviews 	Continue to involve the community in planning how to tackle anti-social behavior to ensure that community as well as strategic needs are responded to: Provide opportunities for local communities to steer, prioritize,

2006		<ul style="list-style-type: none"> • Community participation and inclusion • Access to services and resources 	<ul style="list-style-type: none"> • Observations • Workshop • Policy analysis 	and monitor delivery of services in their neighborhood alongside service partners, provide support and training opportunities to enable communities to do this, and involve socially excluded groups (such as children and young people) to ensure that these services are reflective of their needs.
<i>HIA on the Draft Hastings District Council Graffiti Vandalism Strategy, New Zealand, 2008</i>	Hawke's Bay District Health Board	<ul style="list-style-type: none"> • Social connectiveness, leadership • Physical environment and perception of safety 	<ul style="list-style-type: none"> • Literature review • Secondary data analysis • Public workshops 	Add to Strategy: Recommend the development of a crime prevention through environmental design (CPTED) policy relevant to graffiti.
<i>HIA of Domestic Abuse Services commissioned by Derbyshire County Council, United Kingdom, 2015</i>	Derbyshire County Council	<ul style="list-style-type: none"> • Lifestyle/health behaviors • Sexual health • Poverty/income • Employment and volunteering • Education and training • Housing • Family cohesion • Crime and community safety • Built and social environments • Access to services • Mental wellbeing • Injury 	<ul style="list-style-type: none"> • Literature review • Secondary data analysis • Surveys • Focus groups 	The Governance Board to raise awareness of domestic abuse to Derbyshire employers to support victims of domestic abuse to stay in work, through a greater understanding of the needs of individuals who have experienced abuse, and increased awareness of recognizing the signs and patterns of potential abuse.
<i>Stress on the Streets (SOS): Race, Policing, Health, and Increasing Trust Not Trauma, Ohio, 2015</i>	Human Impact Partners + Ohio Justice & Policy Center + Ohio Organizing Collaborative	<ul style="list-style-type: none"> • Physical and psychological health • "Racial battle fatigue" • Hypervigilance • Neighborhood socioeconomics • Trust and fear • Obesity/metabolic syndrome • Depression/suicide, stress, anxiety • Alcohol use • Children: attention, cognitive performance, PTSD 	<ul style="list-style-type: none"> • Literature review • Surveys • Interviews • Focus groups 	Publicly recognize the historical contexts that have shaped current relationships between the public and the police, using methods such as facilitated dialogues to understand each other's experiences.
<i>Dignified & Just Policing: Health Impact Assessment of the Townsend Street Gang Injunction in Santa Ana,</i>	Human Impact Partners	<ul style="list-style-type: none"> • Mental health, chronic stress, PTSD • Community trust/ police relations • Historical trauma • Perception of safety • Fear, avoidance, and coping 	<ul style="list-style-type: none"> • Literature review • Secondary data analysis • Surveys • Interviews 	Create an independent, community-based accountability and oversight committee to track police performance and service excellence.

CA, California, 2015		<ul style="list-style-type: none"> • Educational attainment • Employment and income 	<ul style="list-style-type: none"> • Focus groups 	
Social Control & Substance Use				
<i>Rapid HIA of the Draft Liverpool Alcohol Strategy</i> , United Kingdom, 2005	IMPACT, University of Liverpool	<ul style="list-style-type: none"> • Physical health and disease • Violence and antisocial behavior • Built environment • Access to services 	<ul style="list-style-type: none"> • Rapid HIA workshop 	Maintain action on alcohol and health across LASG partnership: promote the inclusion of health related Key Performance Indicators (KPIs) within the Crime & Disorder Reduction Partnership Business Plan.
<i>HIA: Proposed Liquor Restriction Extensions in North Dunedin</i> , New Zealand, 2008	Te Wakahauora: Public Health South	<ul style="list-style-type: none"> • Crime • Perception of safety • Injury • Normalization of intoxication in public places 	<ul style="list-style-type: none"> • Literature review • Secondary data analysis • Rapid HIA workshop 	Complete a comprehensive evaluation on the liquor ban in relation to the determinants of health identified in this HIA
<i>Alcohol License Density Ordinance HIA</i> , Wisconsin, 2014	Public Health Madison/Dane Counties + University of Wisconsin Population Health Institute	<ul style="list-style-type: none"> • Built environment • Social cohesion • Perceived safety • Drunk driving • Violent crime and injury • Sexual behavior • Chronic diseases • Academic/work performance 	<ul style="list-style-type: none"> • Literature review • Secondary data analysis • Surveys • Interviews • Focus groups 	Because of the impact of high alcohol outlet density, downtown Madison is viewed as a stressed or fragile neighborhood. Consideration for both public safety and fiscal responsibility suggest restraint in issuing additional licenses. Clear parameters on conditional licenses must be developed and regulated.
Rehabilitation & Reform				
<i>Healthier Lives, Stronger Families, Safer Communities: How Increasing Funding for Alternatives to Prison Will Save Lives and Money in Wisconsin</i> , Wisconsin, 2012	Human Impact Partners + WISDOM	<ul style="list-style-type: none"> • Safety • Substance use recovery and treatments • Intact families • Material hardships • Children's education • Children's emotional wellbeing • Children's involvement with CJ system • Employability • Mental health: parenting skills, suicide, substance use • Infectious disease • Injury and car accidents • Housing • Social cohesion • Crime-related stress and fear 	<ul style="list-style-type: none"> • Literature review • Secondary data analysis • Interviews • Focus groups • Observations 	Beginning in FY 2013, expand state funding for Treatment Alternative and Diversion (TAD) programs to the level of \$75 million per year.
<i>U.S. Equal Employment</i>	Adler School of	<ul style="list-style-type: none"> • Social exclusion 	<ul style="list-style-type: none"> • Literature review 	Acknowledging that criminal records are not always

<p><i>Opportunity Commission Policy Guidance: A Mental Health Impact Assessment, Illinois, 2013</i></p>	<p>Professional Psychology Institute on Social Exclusion</p>	<ul style="list-style-type: none"> • Employment • Income • Neighborhood conditions • Community mental health 	<ul style="list-style-type: none"> • Secondary data analysis • Surveys • Interviews • Focus groups 	<p>kept up-to-date, we proposed that the Policy Guidance be revised to state: only criminal background checks that come from government-sanctioned sources (e.g. police or FBI) or third-party sources required by law to stay current, should be deemed legally “relevant” during employment processes.</p>
<p><i>Rehabilitating Corrections in California: The Health Impacts of Proposition 47, California, 2014</i></p>	<p>Human Impact Partners</p>	<ul style="list-style-type: none"> • Mental health: PTSD, social withdrawal, self-worth, suicide/OD • Substance use • Mortality • Infectious disease • Obesity/chronic disease • Injury/sexual violence • Access to care, housing, income, education • Community cohesion • Public safety • Restrictions/barriers to employment, housing, public housing, government benefits, education, civic participation, expungement, resources • Social stigma • Family separation 	<ul style="list-style-type: none"> • Literature review • Secondary data analysis • Interviews • Focus groups 	<p>Allocate the full amount of designated funding to the mental health and substance abuse, truancy and dropout prevention, and victim services programs and to implement these programs according to best practices. The full health and equity benefits of the proposition will not be realized if this is not done.</p>
<p><i>A Health Impact Assessment of the Proposed Northeast New Mexico Adult Reintegration Center, New Mexico, 2015</i></p>	<p>NM Highland University School of Social Work + San Miguel County Detention Center Citizen Advisory Committee</p>	<ul style="list-style-type: none"> • Injury and hospitalization • Mortality • Mental health • Substance abuse/overdose • Chronic and infectious disease • Domestic violence/child abuse • Nutrition and exercise • Disability • Social stigma • Safety • Community cohesion 	<ul style="list-style-type: none"> • Literature review • Secondary data analysis • Interviews 	<p>With respect to health effects of addiction, the ARC should fund and provide evidence-based in-patient treatment, which should incorporate best treatment practices. Follow-up treatment and monitoring should also be provided post-release, as funding becomes available.</p>
<p><i>Turning on the Tap: How Returning Access to Tuition Assistance for Incarcerated People Improves the Health of</i></p>	<p>Human Impact Partners + Education from the Inside Out Coalition</p>	<ul style="list-style-type: none"> • Health/wellbeing • Public safety • Civic engagement • Crime reduction 	<ul style="list-style-type: none"> • Literature review • Secondary data analysis • Interviews 	<p>Increase the availability of college programs in New York State prisons, eligibility for Tuition Assistance Program funding for qualified incarcerated people should be restored. Both public and private institutions of higher education should be eligible to receive TAP</p>

<p><i>New Yorkers</i>, New York, 2015</p>		<ul style="list-style-type: none"> • Critical thinking/decision-making skills • Mental health • Self-esteem • Social networks/leadership • Employment outcomes • Children’s health and wellbeing • Socio-emotional coping skills • Education status • Material resources • Prison safety • Prison staff-incarcerated relationships 	<ul style="list-style-type: none"> • Focus groups 	<p>funds, and all students should be required to be earning course credit that can be applied towards an AA, BA, or MA degree.</p>
<p><i>Health and Public Safety Impacts of Sustaining a Women’s Jail Diversion Program in Los Angeles County</i>, California, 2015</p>	<p>County of Los Angeles Department of Public Health</p>	<ul style="list-style-type: none"> • Public safety • Community wellbeing • Family/ child wellbeing • Mental illnesses • Chronic diseases • Relationships with family, children, and peers 	<ul style="list-style-type: none"> • Literature review • Secondary data analysis • Interviews • Focus groups • Site visits 	<p>Integrated treatment services to address co-occurring mental health and substance use disorders should become the gold-standard of care for women in the criminal justice system, and are currently lacking in the Los Angeles County jail system. Continuing and/or expanding court-based diversion programs like WRC present an opportunity to address this gap in integrated treatment programs.</p>
<p><i>Potential Health Effects of Drug Sentencing Reform in Minnesota: Health Impact Assessment of Proposed Policy</i>, Minnesota, 2016</p>	<p>Council on Crime and Justice</p>	<ul style="list-style-type: none"> • Infectious disease exposure • Stress-related chronic disease • Exposure to trauma and violence • Stress • Addiction management/recovery • Mental health • Treatment capacity • Family unity • Child and family well-being • Public safety • “Social penalties”: ineligibility of employment, public housing, educational loans, and community participation 	<ul style="list-style-type: none"> • Literature review • Secondary data analysis • Interviews • Public workshop 	<p>Amending state law to reduce collateral consequences to employment in order to promote successful reentry and lower recidivism rates as recommended in the Collateral Sanctions Committee 2008 Report to the Legislature.</p>
<p>Built Facilities</p>				
<p><i>Tompkins County Jail Renovation</i>, New York, 2013</p>	<p>Design and Environmental Analysis undergraduate</p>	<ul style="list-style-type: none"> • Mental health • Job satisfaction/morale • Violence and stress 	<ul style="list-style-type: none"> • Literature review • Surveys • Interviews 	<p>The Tompkins County Jail renovation should include designs and spaces that increase perception of personal space and privacy...to decrease the perception of crowding and give inmates a sense of territory.</p>

<p><i>Utah State Prison Potential Relocation to Tooele County HIA, Utah, 2014</i></p>	<p>students, Cornell University Tooele County Health Department + Westminster College Dept of Public Health</p>	<ul style="list-style-type: none"> • Healthcare service capacity • Mental health • Infectious disease • Chronic disease • Employment • Air quality • Public services and utilities • Housing 	<ul style="list-style-type: none"> • Literature review • Secondary data analysis • Surveys • Interviews 	<p>Assess current staffing levels at healthcare facilities in Tooele County and determine if additional staffing is needed in order to accommodate influx of people in the county</p>
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