Executive Summary: Health Impact Review of SHB 2287

Establishing a Criminal Justice System Diversion Center Pilot Project

(2017-2018 Legislative Sessions)

Evidence indicates that SHB 2287 has potential to reduce recidivism for individuals with previous involvement in the criminal justice system and behavioral health needs, which in turn has the potential to improve health outcomes. The intended populations for the pilot project, as specified in the bill, disproportionately experience negative behavioral health outcomes and homelessness; therefore improving health outcomes for these populations would likely decrease health disparities.

BILL INFORMATION

Sponsors: Representatives Hayes, Ortiz-Self, Eslick, Ryu, Harmsworth, Sells, Petersen, Van Werven, Pellicciotti, Klippert, Goodman, Kloba, Tarleton, Fey, Santos, Smith, Tharinger, Dolan, Valdez, Stanford, Appleton, Lovick, Doglio, Griffey, Stonier, and Gregerson

Summary of Bill:

- Directs the Washington Association of Sheriffs and Police Chiefs to administer grant funding for two residential pilot programs (one east and one west of the crest of the Cascade Mountain Range) that serve certain individuals who are encountered by law enforcement or who are being released from jail.
- Requires that the pilot project use skilled staff to perform specified services (e.g., needs assessments, recovery support and planning) and be sited in locations that provide convenient access to relevant programming (e.g., housing, employment, and behavior health).
- Directs each grant recipient to establish approximately 40 residential beds for short term placements of up to 90 days.
- Prioritizes placement of intended populations including: "1) individuals referred by law enforcement who are suspected of having committed a non-violent crime and whose behavior is suspected to have been influenced by a behavioral health issue; 2) individuals referred by social workers embedded with law enforcement agencies who have previous involvement in the criminal justice system and who are awaiting an inpatient residential treatment bed or are working toward self-sufficiency following inpatient treatment; and 3) individuals with behavioral health issues who are being released from jail and are working with reentry services to address housing and other needs."
- Establishes minimum reporting requirements related to recidivism, behavioral health services, housing stability, and recovery services.

HEALTH IMPACT REVIEW

Summary of Findings:

This Health Impact Review found the following evidence regarding the provisions in SHB 2287:

- A fair amount of evidence that a criminal justice diversion center pilot project would likely reduce criminal justice contact (recidivism) among individuals with previous involvement in the criminal justice system (justice-involved) with behavioral health needs.
- Strong evidence that reducing criminal justice contact for justice-involved individuals with behavioral health needs would likely lead to improved health outcomes.
- Very strong evidence that improving health outcomes for justice-involved individuals with behavioral health needs would likely decrease health disparities for veterans, communities of color, and individuals experiencing homelessness.

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Health Impact Review of SHB 2287

Establishing a Criminal Justice System Diversion Center Pilot Project

February 1, 2018

Staff Contact: Caitlin Lang

Contents

Introduction and Methods

A Health Impact Review is an analysis of how a proposed legislative or budgetary change will likely impact health and health disparities in Washington State (RCW 43.20.285). For the purpose of this review 'health disparities' have been defined as the differences in disease, death, and other adverse health conditions that exist between populations (RCW 43.20.270). This document provides summaries of the evidence analyzed by State Board of Health staff during the Health Impact Review of Substitute House Bill 2287 (SHB 2287) from the 2017-2018 legislative sessions.

Staff analyzed the content of SHB 2287 and created a logic model depicting possible pathways leading from the provisions of the bill to health outcomes. We consulted with experts and contacted stakeholders with diverse perspectives on the bill. State Board of Health staff can be contacted for more information on which stakeholders were consulted on this review. We conducted objective reviews of the literature for each pathway using databases including PubMed and Google Scholar.

The following pages provide a detailed analysis of the bill including the logic model, summaries of evidence, and annotated references. The logic model is presented both in text and through a flowchart (Figure 1). The logic model includes information on the strength of the evidence for each relationship. The strength-of-evidence has been defined using the following criteria:

- **Not well researched:** the literature review yielded few if any studies or only yielded studies that were poorly designed or executed or had high risk of bias.
- **A fair amount of evidence:** the literature review yielded several studies supporting the association, but a large body of evidence was not established; or the review yielded a large body of evidence but findings were inconsistent with only a slightly larger percent of the studies supporting the association; or the research did not incorporate the most robust study designs or execution or had a higher than average risk of bias.
- **Strong evidence:** the literature review yielded a large body of evidence on the relationship (a vast majority of which supported the association) but the body of evidence did contain some contradictory findings or studies that did not incorporate the most robust study designs or execution or had a higher than average risk of bias; or there were too few studies to reach the rigor of 'very strong evidence'; or some combination of these.
- **Very strong evidence:** the literature review yielded a very large body of robust evidence supporting the association with few if any contradictory findings. The evidence indicates that the scientific community largely accepts the existence of the association.

The annotated references are only a representation of the evidence and provide examples of current research. In some cases only a few review articles or meta-analyses are referenced. One article may cite or provide analysis of dozens of other articles. Therefore the number of references included in the bibliography does not necessarily reflect the strength-of-evidence. In addition, some articles provide evidence for more than one research question so they are referenced multiple times.

Analysis of SHB 2287 and the Scientific Evidence

Summary of relevant background information

- The term behavioral health refers to "the full range of mental and emotional well-being—from day-to-day challenges of life, to treating mental health and substance use disorders."[1]
- Prebooking or precharge diversion initiatives allow law enforcement to exercise discretion in determining the appropriateness of diverting an individual into mental health treatment or connection with other services in lieu of arrest or laying of criminal charges.[2]
- Snohomish County has an established partnership between law enforcement, human services, prosecutors, and defense attorneys. Outreach efforts are underway to assist people experiencing homelessness and substance addiction in getting into treatment and subsequent housing. The program's capacity is currently limited by available bed space.[3]
- Spokane County is exploring alternatives to incarceration to support the rehabilitation of individuals with a history of criminal justice contact and behavioral health needs.[4]
- Both Snohomish County and Spokane County are consulting Pioneer Human Services to implement an evidence-based diversion model.[4]

Summary of SHB 2287

- Directs the Washington Association of Sheriffs and Police Chiefs to administer grant funding for two residential pilot programs (one east and one west of the crest of the Cascade Mountain Range) that serve certain individuals who are encountered by law enforcement or who are being released from jail.
- Requires that the pilot programs use skilled staff to perform specified services (e.g., needs assessments, recovery support and planning) siting in locations that provide convenient access to relevant programming (e.g., housing, employment, and behavior health)
- Directs each grant recipient to establish approximately 40 residential beds for short term placements of up to 90 days.
- Prioritizes placement of intended populations including: "1) individuals referred by law enforcement who are suspected of having committed a non-violent crime and whose behavior is suspected to have been influenced by a behavioral health issue; 2) individuals referred by social workers embedded with law enforcement agencies who have previous involvement in the criminal justice system and who are awaiting an inpatient residential treatment bed or are working toward self-sufficiency following inpatient treatment; and 3) individuals with behavioral health issues who are being released from jail and are working with reentry services to address housing and other needs."
- Establishes minimum reporting requirements related to recidivism, behavioral health services, housing stability, and recovery services.

Health impact of SHB 2287

Evidence indicates that SHB 2287 has potential to reduce recidivism for individuals with previous involvement in the criminal justice system and behavioral health needs, which in turn has the potential to improve health outcomes. The intended populations for the pilot project, as specified in the bill, disproportionately experience negative behavioral health outcomes and homelessness; therefore, improving health outcomes for these populations would likely decrease health disparities.

Pathways to health impacts

The potential pathways leading from the provisions of SHB 2287 to decreased health disparities are depicted in Figure 1. There is a fair amount of evidence that a criminal justice diversion center that includes the provisions outlined in SHB 2287 would likely reduce criminal justice contact (recidivism) for justice-involved individuals with behavioral health needs.[2,5-8] There is strong evidence that reducing criminal justice contact would likely improve health outcomes for a number of individual and intergenerational health indicators including depression, life dissatisfaction, heavy drinking status, and smoking status.[9-12] There is very strong evidence that improving health outcomes for justice-involved individuals with behavioral health needs would likely decrease health disparities for individuals experiencing homelessness,[30,13,14] communities of color,[12,14,17,21,24-29] and veterans.[15-20]

Due to time limitations we only researched the most direct connections between the provisions of the bill and decreased health disparities and did not explore the evidence for all possible pathways. Similarly, due to limited capacity we did not evaluate evidence for each individual component of the diversion center pilot described in the bill, but rather evaluated systematic reviews of relevant diversion programs in general. For example, potential pathways that were not researched include:

- Evidence for how implementing a criminal justice diversion center may impact use of crisis and emergency medical services.
- Evidence for how implementing a housing assistance program, specifically, may influence recidivism and use of crisis and emergency medical services.[7,21]

Magnitude of impact

Through SHB 2287, the legislature intends to test and evaluate the effectiveness of law enforcement and human services partnerships in addressing the needs of individuals who have frequent contact with law enforcement and are often homeless and impacted by behavioral health issues (e.g., opioid-use). Pilot diversion center sites will provide participants centralized access to resources to meet critical needs, including housing, behavioral health treatment, employment, and connection to other services. If successful, the pilot program will establish a template for use by other jurisdictions within Washington.

While it is unclear how many people will be served by the pilot program, data on homelessness and opioid overdose deaths reveal a high need for the populations identified in the proposal. A Department of Social and Health Services (DSHS) analysis of 2016 data from the Department of Commerce show that 42,128 Washington residents were homeless (living in an emergency shelter or unsheltered) and an additional 99,518 were unstably housed (e.g., couch surfing).[19] Of those experiencing homelessness ages 18 and older, 14,240 had a mental health treatment need; 13,574 had a substance use disorder treatment need; and 9,372 had a co-occurring mental health and substance use treatment need. Vital statistics data indicate that between 2013 and 2015 in Washington State, 1,852 individuals died from an opioid overdose.[22] Approximately 987 of these individuals died from prescription opioid overdose. The counties with the highest rates of opioid-related deaths between 2013-2015 were Clallam County (27 individuals, 13.5/100,000 [CI 95% 8.6-19.5/100,000]), Cowlitz County (40 individuals, 12.6/100,000 [CI 95% 8.9-17.0/100,000]), Skagit County (43 individuals, 12.5/100,000 [CI 95% 9.0-16.6/100,000), Douglas County (13 individuals, 11.9/100,000 [CI 95% 6.3-19.3/100,000]), and Snohomish County (277 individuals, 11.7/100,000 [CL 95% 10.4-13.2/100,000]).[22] Spokane County and Pierce County ranked 13th among counties with the highest rates of opioid-related deaths (125 individuals, 8.8/100,000 [CI 95% 7.3-10.4/100,000]; 224 individuals, 8.8/100,000 [CI 95% 7.7-10.0], respectively).[22] Rates were calculated per 100,000, age-adjusted for the United States 2000 population.

Based on 2017 population data from the Office of Financial Management, Snohomish County (City of Everett) and Spokane County (City of Spokane) meet the pilot project location criteria established by SHB 2287.[23] Snohomish County and Spokane County 2016 data show homeless populations of 3,840 and 3,004, respectively.[19] The proposed Snohomish County diversion center pilot project site would repurpose a work-release center closed last year to operate the program with 44 beds.[3] Although it is unclear what overall population the diversion centers will serve or how many participants will use the various services, Snohomish County officials estimate the center would serve more than 300 people per year through medicated assisted treatment.[3] County and City officials in Spokane are consulting Pioneer Human Services to identify one or more locations to host the pilot site.[4] Officials expect participants to stay an average of 15 days and estimate the center will serve approximately 900 participants per year.[4] If successful, officials would like to expand the program beyond its initial 40 beds pilot site.

Logic Model

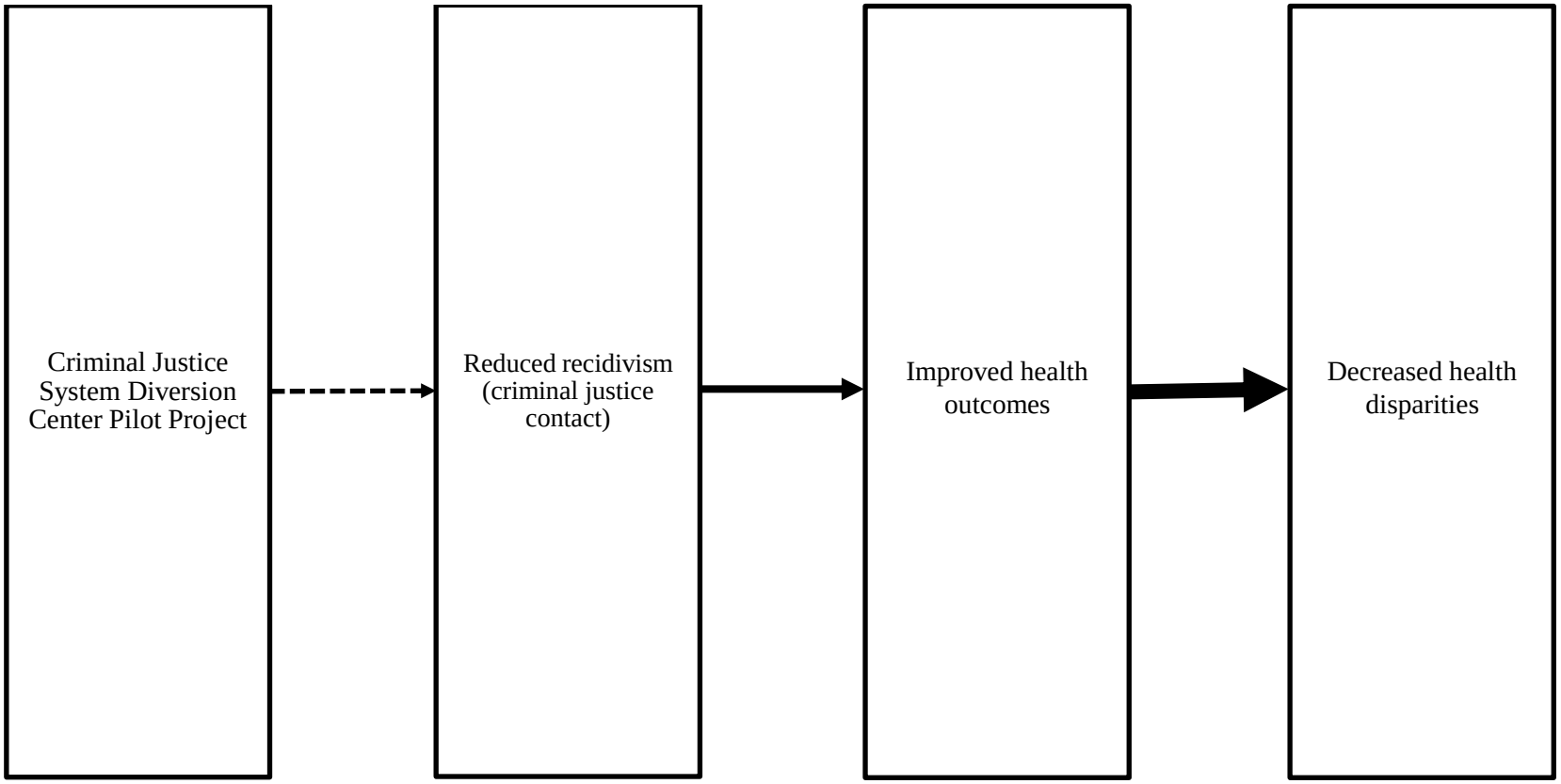

Figure 1

Substitute House Bill 2287

Establishing a Criminal Justice System Diversion Center Pilot Project

Summaries of Findings

Will establishing a criminal justice system diversion center pilot project reduce recidivism (criminal justice contact)?

There is a fair amount of evidence indicating that a criminal justice system diversion center, as outlined in SHB 2287, will likely lead to reduced recidivism. While there are many different types of diversion initiatives, programs generally aim to address underlying behavioral health concerns in order to maximize an individual's opportunity for success and to minimize the likelihood of recidivism.[24] There is a growing body of evidence that evaluates various program types and associated outcomes including criminal justice contact and recidivism.[6,25] A 2009 systematic review of diversion initiatives (prebooking and postbooking models) did not find sufficient evidence to support the use of prebooking diversion to reduce recidivism among individuals with serious mental illness.[2,26] However, available evidence supported the use of prebooking programs to reduce the amount of time those with mental health disorders spend in custody.[2,25] A 2016 review of diversion programs conducted for the State of Washington Office of Financial Management found evidence from the limited research available that suggests, in general, diverting people with behavioral health needs from jail to community-based services has the potential to reduce involvement with the criminal justice system.[7] Authors concluded that additional research was necessary to evaluate the effectiveness of program components and their association with specific outcomes.

More recently, a nonrandomized controlled evaluation was completed to determine the impact of Seattle's Law Enforcement Assisted Diversion (LEAD) program on recidivism. The first known program of its kind in the United States, LEAD is a prebooking diversion program specifically designed for substance users who are suspected of drug and prostitution offenses.[5-7] The program offers mental health services, substance use treatment, employment assistance, housing support, access to community health services, and linkages to other services. Researchers found that, compared to individuals going through the typical criminal justice system, LEAD participants had 60% lower odds of arrest during the six months following evaluation entry; and 58% lower odds of arrest and 39% lower odds of being charged with a felony over the longer term.[6] Further analysis of the LEAD program found that housing and employment serve as independently predictive and protective factors against arrest. For each additional month housed, participants were 17% less likely to have been arrested during the 6-month follow-up period.[5] Similarly, for each additional month of employment, participants were 33% less likely to have been arrested.[5] Other studies that either focus on a single component (e.g., supportive housing) of the proposed diversion center or evaluate a different type of diversion program (e.g., behavioral health courts) have found evidence that interventions which address issues of housing, co-occurring substance abuse issues, mental health treatment, and social assistance can reduce criminal recidivism.[5,8,21,27] Therefore, establishment of a criminal justice system diversion center pilot project, including use of skilled staff, proximity to housing, employment, behavioral health, and other services, would likely reduce recidivism.

Will reducing recidivism (criminal justice contact) lead to improved health outcomes?

There is very strong evidence indicating that involvement in the justice system is linked to poor health outcomes.[12,28-33] However, the majority of research compares outcomes experienced by justice-involved individuals to outcomes experienced by those without a history of criminal

justice contact. By definition, many of the populations prioritized by the pilot program will have had previous contact with the criminal justice system, so the literature may not be fully generalizable. Therefore, for the purposes of this analysis, there is strong evidence that reducing recidivism for pilot program participants will likely improve health outcomes.

Criminal justice contact can be measured by a number of indicators including, but not limited to, arrest, conviction, and incarceration.[10,34] There is a large body of evidence that supports the association between incarceration and poor health outcomes. Although individuals who are incarcerated may see some health benefits during incarceration, they also experience chronic medical conditions, infectious diseases, lower self-rated health, increased psychiatric disorders, and a greater risk of mortality upon release.[9,34,35] Research shows that those with a history of incarceration have a significantly greater likelihood of major depression, life dissatisfaction, and mood disorders when compared to individuals who do not have a history of incarceration[9,10] and that effects persist after release. Analysis of a contemporary cohort's criminal justice contact and mental health over time found arrest and incarceration, but not conviction, are independently associated with poor mental health.[10]

In addition to the literature that demonstrates an association between criminal justice involvement and physical and mental health outcomes, a growing body of research examines the intergenerational effects of incarceration and criminal justice contact. Multivariate analyses (adjusted for demographic, socioeconomic, and familial characteristics) found parental incarceration is independently associated with five health indicators for children: 1) learning disabilities; 2) Attention Deficit Disorder/Attention Deficit Hyperactivity Disorder;3) behavior or conduct problems;4) developmental delays; 5) speech or language problems.[35] An analysis of adverse childhood experiences (ACE) found having a household member incarcerated may have health consequences that persist into adulthood.[11] Controlling for age, sex, education, race/ethnicity, and other ACEs, researchers found people who had a household member incarcerated during their childhood had higher odds of being a current smoker (AOR=1.5) and higher odds of heavy drinking (AOR=1.39). Therefore, reducing criminal justice contact for justice-involved individuals with behavioral health needs has the potential to lead to improved health outcomes across generations.

Will improved health outcomes lead to decreased health disparities among justice-involved individuals with behavioral health needs?

There is very strong evidence that improving health outcomes for justice-involved individuals with behavioral health needs served by the diversion center program sites would likely decrease health disparities.[13,14,36-40] Data indicate that more than half of inmates in the U.S. have a mental health disorder and between 16-24% experience serious mental illness (e.g. chronic depression, bipolar disorder, and schizophrenia).[26,41] Specifically in Washington, a study from 2002 revealed that 16% of individuals in the state who were receiving publicly-funded mental health services had at least one felony conviction, a rate over twice that of the general population.[42] Furthermore, almost three-quarters of incarcerated adults with serious mental health disorders have a co-occurring substance use/dependence disorder, as compared with 25% of those with mental health disorders in community samples.[26] While a relatively small subset of the population, individuals with co-occurring serious mental health and substance use disorders are

at higher risk for co-morbid sexually transmitted diseases, homelessness, suicide, and numerous functional problems.[26]

Evidence indicates that individuals who experience behavioral health needs and homelessness as well as people of color and veterans are disproportionately represented in the criminal justice system.[15-18,20,41,43-46] Each identity or experience (race/ethnicity, behavioral health need, homelessness, and veteran status) is individually associated with health disparities. Therefore, health disparities associated with justice involvement are inextricably interconnected to these other experiences. This interconnectedness creates a system of overlapping exposures, which compound an individual's increased likelihood of experiencing health disparities. For example, data show that justice-involved individuals with mental health needs often cycle between jail and homelessness, in part because they lack access to case management, treatment, and rehabilitation services in the community.[7,18] By prioritizing justice-involved individuals with behavioral health needs, SHB 2287 has the potential to improve health outcomes for populations disproportionately represented in the criminal justice system, which has the potential to decrease health disparities by homelessness status, race/ethnicity, and veteran status.

Disparities by homelessness

Individuals experiencing homelessness are disproportionately affected by the criminal justice system and behavioral health needs.[13,14,18,47] One study found that 15.3% of the U.S. jail population experienced homelessness in the year prior to incarceration.[46] Data also suggest that upon release from prison, former incarcerated individuals experience homelessness at a rate higher than the general population, which can have lasting impacts on their mental and physical health.[27,41] Moreover, evidence from a peer-reviewed literature review shows that in addition to health issues such as nutrition disorders, higher rates of respiratory disorders, skin and dental problems, infectious diseases, and injuries due to environmental exposure, accident, and violence, individuals experiencing homelessness also have high rates of mental illness.[7] The National Alliance to End Homelessness estimates that approximately 50% of individuals experiencing homelessness also experience a mental health issue, and close to 25% experience serious mental disorders such as chronic depression, bipolar disorder, and schizophrenia.[47] Washington specific data (2016) indicate that of those experiencing homelessness ages 18 and older, 14,240 had a mental health treatment need; 13,574 had a substance use disorder treatment need; and 9,372 had a co-occurring mental health and substance use treatment need.[19] As a result, improving health outcomes for individuals involved with the criminal justice system who experience behavioral health needs has the potential to decrease health disparities among those experiencing homelessness.

Disparities by race/ethnicity

American Indian/Alaska Native (AI/AN) populations are disproportionately represented in the criminal justice system[45] and are more likely to die from drug overdose.[48-52] Washington state data from 2012-2016 indicate that AI/AN populations have the highest drug overdose death rates in the state.[48] Data further indicate that this association remains true for overdoses specifically related to opioids in Washington. Vital statistics data from 2011-2013 show that AI/AN populations are significantly more likely to be victims of fatal opioid overdose than any other racial/ethnic group.[51] This is true for both prescription and non-prescription opioids. Finally, data show that AI/ANs have significantly higher death rates than most other subpopulations.[52] By

increasing access to substance use treatment, SHB 2287 could help decrease the disproportionate negative impact of opioid overdoses. In turn, it may help decrease disparities experienced by AI/AN populations both for opioid overdose fatalities and for death rates in general.

Data has shown that communities of color also experience worse health outcomes than their counterparts for many health measures. In Washington, data indicate that AI/AN and black residents had some of the highest age-adjusted death rates and shortest life expectancies at birth compared to other groups in the state.[52] Further, compared to white communities in Washington, communities of color also have higher rates of current tobacco use, diabetes, obesity, and poorer self-reported overall health and mental health.[42,53-56] Additional evidence suggests that communities of color are less likely to receive needed mental health treatment and more likely to receive poor-quality care when they do receive treatment.[39] Since communities of color are disproportionately represented among justice-involved individuals and those experiencing homelessness, populations more likely to be served by the diversion program pilots, by improving health outcomes for these populations, SHB 2287 would have the potential to decrease health disparities by race/ethnicity.

Disparities by veteran status

Veterans also disproportionately experience the interconnectivity between homelessness, mental health disorders, and criminal justice system involvement.[18] Overall, evidence indicates that veterans are more likely to be diagnosed with a serious mental illness, to experience co-morbidity with another mental health concern, and to experience high rates of cardiovascular disease and tobacco use than non-veterans.[15,17] These conditions are exacerbated by homelessness, and 11% of the homeless population nationally and 10% of the homeless population in Washington State are veterans.[19,20] In addition, 66% of veterans experiencing housing instability report a history of incarceration.[18] According to a U.S. Department of Justice report, veterans were more likely to receive longer prison sentences and serve an average of 22 months longer jail time than nonveterans.[16] Veterans in state prisons were also more likely to report having received recent mental health services than nonveterans.[16] By improving health outcomes for justice-involved individuals, SHB 2287 may also have the potential to decrease health disparities for veterans.

Annotated References

1. **Division of Behavioral Health and Recovery. Available at: https://www.dshs.wa.gov/bha/division-behavioral-health-and-recovery. Accessed, 2018.**

The Washington State Department of Social and Health Services (DSHS) Division of Behavioral Health and Recovery website defines behavioral health as "a term that covers the full range of mental and emotional well-being – from day-to-day challenges of life, to treating mental health and substance use disorders."

2. **Sirotich Frank. The Criminal Justice Outcomes of Jail Diversion Programs for Persons With Mental Illness: A Review of the Evidence. *The Journal of the American Academy of Psychiatry and the Law.* 2009;37(4):2009.**

This systematic review examined whether the evidence supports the use of diversion initiatives to reduce recidivism and to reduce incarceration among adults with serious mental illness, including those with co-occurring substance abuse disorders involved with the criminal justice system. Sirotich identified 21 publications or research papers that examined the criminal justice outcomes of various diversion models. Overall, the review revealed little evidence of the effectiveness of jail diversion in reducing recidivism among persons with serious mental illness. However, evidence supports the use of prebooking programs to reduce the amount of time that mentally ill persons spend in custody with greatest support for a police-based specialized response model.

3. **Washington State Legislature House Committee on Public Safety. House Bill Report HB 2287.2018.**

This House Bill Report summarizes public testimony presented to the Public Safety Committee on January 8, 2018. Representatives from the Snohomish County Sheriff's Office, Snohomish County, the National Alliance on Mental Illness, Washington, and Washington Association of Sheriffs and Police Chiefs testified in support of the bill. According to testimony, Snohomish County has 10 percent of the state's population but 18 percent of the state's heroin deaths. "There are 100 encampments in the south part of the county, with the majority of occupants addicted to opiates and many with mental health issues." County law enforcement, human services, prosecutors, and defense attorneys are partnering to assist people experiencing homelessness and addiction to substances in getting treatment and into housing. Program efforts have resulted in "a significant reduction in recidivism." The program is currently limited by the number of available beds. Repurposing an existing facility would increase program capacity by 44 beds and is estimated to serve over 300 people per year through medicated assisted treatment and other programs.

4. **Beggs Breean. Council Member, City of Spokane. In: Lang C, ed2018.**

The interview discussed the diversion center pilot project and its potential to address the needs of Spokane County's population with a history of criminal justice contact and behavioral health needs.

5. **Clifasefi Seema L., Lonczak Heather S., Collins Susan E. LEAD Program Evaluation: The Impact of LEAD on Housing, Employment and Income/Benefits. Harm**

Reduction Research and Treatment Center, University of Washington - Harborview Medical Center;2016.

This report describes findings for Seattle's Law Enforcement Assisted Diversion (LEAD) program in terms of housing, employment, and income/benefits both prior and subsequent to their referral to LEAD. The program is a collaborative prebooking diversion program that offers individuals suspected of low-level drug and prostitution offenses legal assistance and harm-reduction-oriented case management instead of prosecution and incarceration. The primary aim is to reduce criminal recidivism. It is the first known prebooking diversion program of its kind in the United States. After controlling for sociodemographic variables, LEAD participants (N=176) were over twice as likely to have been sheltered in any given month during the 6-month follow-up period versus baseline (OR=2.08, p<.001). Analysis also showed that LEAD participants were 89% more likely to have been housed (OR=1.89, SE=.24, p<.001) at some point during the follow-up versus at baseline. LEAD participants were also "46% more likely to have been on the employment continuum (i.e., legitimately employed, in vocational training, or retired from legitimate employment; OR=1.46, SE=.22, p=.013) and 33% more likely to have received legitimate income/benefits (OR=1.33, SE=.12, p=.002) at some point during the follow-up versus at baseline." Secondary analyses examined the associations between positive participant outcomes (i.e., attainment of housing, employment and income/benefits) and involvement in the criminal justice system (i.e., recidivism). After controlling for baseline recidivism and demographic variables, "the number of months housed (OR=.83, SE=.07, p=.01) and the number of months spent on the employment continuum (OR.68, SE=.12,p=.02) were significant predictors of recidivism. For each additional month housed, participants were 17% less likely to have been arrested during the 6-month follow-up. Likewise, for each additional month on the employment continuum, participants were 33% less likely to have been arrested. The pattern held after warrant arrests were removed. Results indicate that housing and employment serve as independently predictive and protective factors against arrest.

6. **Collins Susan, Lonczak Heather, Clifasefi Seema. Seattle's Law Enforcement Assisted Diversion (LEAD): Program effects on recidivisim outcomes. *Evaluation and Program Planning.* 2017;64:49-56.**

The City of Seattle created the Law Enforcement Assisted Diversion (LEAD) program in 2011 to divert individuals experiencing substance use disorders out of the criminal justice system and into treatment programs. Collins et. al. (2017) completed a nonrandomized controlled evaluation to determine LEAD's impact on recidivism. The sample included 318 individuals suspected of low-level drug and prostitution offenses: 203 were diverted into the LEAD program and 115 individuals who went through the typical criminal justice process. LEAD's prebooking diversion program offers participants a harm-reduction model, which removes many barriers, including legal coercion for and program requirements of abstinence achievement and treatment attendance, that block engagement with other programs. Collins found that, compared to individuals going through the typical system, LEAD participants had 58% lower odds of arrest in the six months after arrest and 38% lower odds of being charged with a felony two-years after arrest. Findings indicate that LEAD is associated with positive effects for some shorter- and longer-term recidivism outcomes. Note, analysis did not evaluate program effects on health-care utilization because researchers did not obtain Health Insurance Portability and Accountability Act (HIPAA) authorization from participants.

7. **Joplin Lore, Sihler Ann, Enslow Brian, et al. Jail Diversion for People with Mental Illness in Washington State: A study conducted for the State of Washington Office of Financial Management.2016.**

Joplin Consulting conducted and summarized a brief literature review and phone interviews with national experts to identify nationally recognized jail diversion programs for individuals with mental illness. They reviewed available research examining the potential benefits of jail diversion of people with mental illness. The analysis summarized effectiveness of four specific types of diversion programs: 1) specialized law enforcement responses, such as co-response teams, in which a police officer and a mental health professional respond to calls together; 2) pretrial diversion, such as voluntary, post-charging diversion programs in which formal adjudication is avoided and charges are dismissed upon completion of a specific set of requirements, such as participating in treatment, completing community service, and paying restitution; 3) mental health courts, which use a multidisciplinary team to provide behavior health care and other services in lieu of incarceration or traditional case proceedings; and 4) assertive community treatment (ACT) teams, which provide direct treatment, rehabilitation, and supportive services in the community to people who have severe mental illness, are functionally impaired, and have a high risk of hospitalization. Forensically oriented ACT teams focus specifically on preventing the arrest and incarceration of people with severe mental illness. Evidence from the limited research conducted suggests, in general, diverting people with mental illness from jail to community-based services has the potential to 1) engage defendants in mental health treatment, 2) reduce criminal justice system costs, and 3) reduce involvement in the criminal justice system.

8. **Schneider Richard D. Mental health courts and diversion programs: A global study. *Interational Journal of Law and Psychiatry.* 2010;33(2010):201-206.**

This article highlights analysis of mental health courts and diversion programs in the United States, Canada, Australia, England and Wales, and jurisdictions with no formal initiatives. Overall, cited evaluations regarding the processes and outcomes of mental health courts have found: (1) reduced recidivism after participation in a mental health court; (2) less days spent in jail by those in the mental health court system than those processed in the traditional system; and (3) improvements in outcomes such as reduced homelessness, psychiatric hospitalizations, frequency and level of substance and alcohol abuse and improvements in psychosocial functioning. McNeil and Binder's analysis of San Francisco's Behavioral Health Court found a consistent observation that the court reduces criminal recidivism among individuals charged with more serious felony offenses by addressing issues such as adherence to psychiatric treatment, co-occurring substance abuse issues, housing, and social assistance.

9. **Yi Youngmin, Turney Kristin, Wildeman Christopher. Mental Health Among Jail and Prison Inmates. *American Journal of Men's Health.* 2017;11(4):900-910.**

Yi et al. analyzed a sample (n = 3,139) from the Fragile Families and Child Wellbeing Study (FFCWS), a longitudinal survey commonly used to study the individual and spillover consequences of incarceration, to assess how the relationship between current incarceration and self-reported mental health varies across jail incarceration and prison incarceration. Researchers found fathers incarcerated in jails "...have higher odds of depression (OR=5.06), life

dissatisfaction (OR = 3.59), and recent illicit drug use (OR=4.03)" compared to those not incarcerated. While fathers incarcerated in prisons "...have higher odds of life dissatisfaction (OR=3.88) and lower odds of heavy drinking (OR=0.32) compared with those not incarcerated." Results confirm the negative associations between incarceration and mental health and provide new insight into between-facility differences in mental health of currently incarcerated fathers. Authors conclude that further research is needed to better understand the effects of incarceration in jails and the implications for the well-being of current and former inmates' children and families.

10. **Sugie Naomi F., Turney Kristin. Beyond Incarceration: Criminal Justice Contact and Mental Health.** ***American Sociological Review.*** **2017;82(4):719-743.**

The authors examined associations between criminal justice contact and mental health using data from the National Longitudinal Survey of Youth (NLSY97). The nationally representative survey of a contemporary cohort includes information about criminal justice contact (including arrest, conviction, and incarceration) and mental health over time. Analysis showed arrest and incarceration—but not conviction—are independently associated with poor mental health. Arrests accounted for nearly half of the association between incarceration and mental health. Authors propose uncertainty and anticipatory stress are primary mechanisms that worsen mental health and deserve further study. Researchers document that criminal justice contact is socially patterned and is more common among non-Hispanic blacks than non-Hispanic whites and Hispanics. However, the associations between criminal justice contact and mental health are similar across racial/ethnic groups. Researchers found respondents' previous exposure to disadvantaged ecological contexts (i.e. counties with high proportions of residents with incomes below the poverty, unemployed civilians, female-headed households, and households receiving public assistance income) had negative consequences for mental health. The authors asserts the importance of mental health for other life course outcomes (e.g. physical health, socioeconomic status, children's wellbeing) and conclude that the consequences of criminal justice contact may extend beyond mental health and have broad intra- and inter-generational consequences.

11. **Gjelsvik Annie, Dumont Dora, Nunn Amy. Incarceration of a Household Member and Hispanic Health Disparities: Childhood Exposure and Adult Chronic Disease Risk Behaviors.** ***Preventing Chronic Disease.*** **2013;10(May).**

Researchers analyzed data collected as part of the 2009-2010 Behavioral Risk Factor Suveillance System (BRFSS) survey and optional adverse childhood events (ACEs) model to identify associations between the childhood experience of having a household member incarcerated and adult health risks (i.e., smoking status, weight status, physical activity, and drinking patterns. Of respondents (n=81,910) 6.5% had lived with an incarderated household member during childhood. Those who did were more likely to have experienced other ACEs (68% had 3-7 other ACES) compared to those who did not live with an incarcerated household member as a child (19% 3-7 ACEs). Consistent with other research, "in all age groups, black and Hispanic adults had a higher prevalence of exposure to an incarcerated household member, although the largest differences were seen in the younger age groups." Controlling for age, sex, education, race/ethnicity, and other ACES, people who had a household member incarcerated during their childhood had higher odds of being a current smoker (AOR = 1.5) and higher odds of heavy drinking (AOR=1.39). Odds of physical inactivity and being overweight or obese were null.

When stratified by race/ethnicity, no significant associations were seen among non-Hispanic black adults. Hispanic adults who had lived with an incarcerated household member as a child has higher odds of being a current smoker (AOR=1.71) and heavy drinking (AOR=3.01). However, Hispanic adults who did not report living with an incarcerated household member had less than half the odds of heavy drinking compared with their similiarly unexposed white counterparts (AOR=0.44).

12. **Esposito Michael, Lee Hedwig, Hicken Margart, et al. The Consequences of Contact with the Criminal Justice System for Health in the Transition to Adulthood.** ***Longit Life Course Stud.*** **2017;8(1):57-74.**

Esposito et al. examine the association between incarceration and health in the United States during the transition to adulthood. They applied the Bayesian Additive Regression Trees (BART) to data from The National Longitudinal Study of Adolescent to Adult Health dataset (n=10,785) to model incarceration's affect on health controlling for confounding variables (93 variables, and 36 covariates categorized as: demographic characteristics, prior health status behaviors, engagement in risky behavior, social connectedness, disposition characteristics, parental characteristics, and contextual residential characteristics). Authors examined three health outcomes: 1) an indicator for cardiovascular health (i.e. hypertension or raised blood pressure), 2) a measure of general health stauts (i.e. excellent/very good self-reported status), and 3) a measure of mental health status (i.e. depression). The analysis of two separate samples found individuals who had been incarcerated were more likely to suffer from depression, less likely to report being in excellent or very good health, and more likely to have hypertension than their peers with no history of incarceration. To examine if the health inequalities between previously incarcerated and never incarcerated individuals was a product of incarceration rather than a product of features that occurred prior to incarceration, they used the BART methodology to estimate how different the health of individuals who had experienced incarceration would be had they actually never experienced incarceration. Results suggest that elevated risk of depression among incarcerated individuals is largely a consequence of their incarceration (~5% both before and after accounting for confounders). Similarly, a prior history of incarceration appears to decrease the probability of reporting excellent/very good health (~10%), roughly half of the decrease in probability before accounting for confounders. Results show no adverse effects of incarceration on hypertension.

13. **Rhoades H., Rusow J. A., Bond D., et al. Homelessness, Mental Health and Suicidality Among LGBTQ Youth Accessing Crisis Services.** ***Child Psychiatry Hum Dev.*** **2018.**

LGBTQ youth experience increased risks of homelessness, mental health disorder symptoms, and suicidality. Utilizing data from LGBTQ youth contacting a suicide crisis services organization, this study examined: (a) rates of homelessness among crisis services users, (b) the relationship between disclosure of LGBTQ identity to parents and parental rejection and homelessness, and (c) the relationship between homelessness and mental health disorder outcomes and suicidality. A nationwide sample of LGBTQ youth was recruited for a confidential online survey from an LGBTQ-focused crisis services hotline. Overall, nearly one-third of youth contacting the crisis services hotline had experienced lifetime homelessness, and those who had disclosed their LGBTQ identity to parents or experienced parental rejection because of LGBTQ

status experienced higher rates of homelessness. Youth with homelessness experiences reported more symptoms of several mental health disorders and higher rates of suicidality. Suggestions for service providers are discussed.

14. **Survey. Washington State Healthy Youth. Healthy Youth Survey QxQ Analysis. 2016.**

Washington state Healthy Youth Survey data from 2016 indicate that White students report lower rates of depression than all other racial/ethnic groups. For example, about 24.1% (CI 95% 22.3-25.9%) of white students and over 37% (CI 95% 31.9-42.5%) of American Indian/Alaskan Native students reported feelings that are indicators of depression. AI/AN students were also more likely to contemplate or attempt suicide than any other racial/ethnic group. In addition, youth who reported living somewhere other than their own family's home (e.g. a shelter, car, campground, on the street) were more likely than their peers living in their family's home to report feelings of depression (43% versus 27.1%, respectively) and contemplate suicide (29.9% versus 16.2%, respectively).

15. **Veterans Health Administration Office of Health Equity. National Veteran Health Equity Report- FY2013.2013.**

In 2013, the Veterans Health Administration, Office of Health Equity completed a report comparing sociodemographics, health care utilization, and rates of diagnosed health conditions for all veterans recieving care at a VA facilitiy. Overall, the administration found that veterans who used VA services had higher rates of hypertension, lipid disorders, and diabetes compared to the general U.S. population. Data also indicated that veterans recieving care from a VA facility have a higher rate of mental illness diagnoses than the general population, with over 33% of veterans being diagnosed with a mental health illness compared to 30% in the general population. In addition, veterans are more likely to be diagnosed with a serious mental illness, including schizophrenia, and are more likely to have comorbidity with other mental health concerns. For example, of veterans diagnosed with a serious mental illness, over 28% also experience post-traumatic stress disorder. A review of literature concluded that veterans diagnosed with a serious mental illnesss have 14-18 years shorter life expectancy than the general population. These issues are compounded for veterans experiencing homelessness. The Veterans Health Administration also found that veterans with serious mental illness also had high rates of cardiovascular disease and tobacco use, which further contributes to health disparities among this group.

16. **Noonan M.E. and Mumola, C.J. Veterans in State and Federal Prison, 2004. U.S. Department of Justice, Bureau of Justice Statistics;2007.**

Data collected by the Bureau of Justice Statistics as part of the 2004 Survey of Inmates in State and Federal Correctional Facilities indicate that approximately 10% of individuals in U.S. state prisons reported prior military service. This percentage has been declining. Overall, the incarceration rate for male veterans is lower than the rate for male non-veterans. However, veterans were more likely to recieve longer prison sentences and serve an average of 22 months longer in prison than non-veterans. Veterans in state prison were also more likely to report having recieved recent mental health services than non-veterans, with 30% compared to 24% stating they had recently stayed overnight in a hospital, used a prescription medication, or been

treated by a mental health professional. Veterans in state prison were also more likely to be White, older, and better-educated than their non-veteran counterparts.

17. **American Public Health Association. Removing Barriers to Mental Health Services for Veterans (Policy Statement Number 201411). 2014; Available at: https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2015/01/28/14/51/removing-barriers-to-mental-health-services-for-veterans. Accessed.**

18. **Homelessness United States Interagency Council on. Reducing Criminal Justice System Involvement among People Experiencing Homelessness.2016.**

The United States Interagency Council on Homelessness was created by Congress in 1987. It serves as an independent agency within the Executive Branch, and works to coordinate a federal response to homelessness by working with federal, state, and local governments. This 2016 policy brief summarizes the relationship between criminal justice system involvement and homelessness. The report explains that the relationship between incarceration and homelessness is reciprocal and bi-direcctional- experiencing homelessness increases the likelihood of criminal justice involvement and experiencing incarceration increases the likelihood of homelessness. Low-income communities and communities of color are more likely to experience this cycle between incarceration and homelessness. To break the cycle, one strategy area for the Interagency Council on Homelessness is reforming sentencing policies. Under this strategy area, they encourage diversion policies for non-violent crimes and the expansion of "diversion services to keep youth and adults with behavioral health issues from entering the criminal justice system and connect them to permanent housing and supportive services."

19. **Commerce Washington State Department of. Snapshot of Homelessness in Washington State for January 2016.2016.**

This report presents data prepared by the Department of Social and Health Services Research and Data Analysis Division for the Washington State Department of Commerce. Data is based on the total Basic Food population and is meant to supplement the Statewide Point-In-Time Count (PIT). The Washington Basic Food Program provides benefits to individuals and families with incomes up to 200 percent of the federal poverty level (FPL) and whose resources are below established limits. The report differentiates between levels of homelessness: homeless only is defined as those who are unsheltered or living in emergency shelter while unstably housed includes individuals who are couch surfing. According to 2016 data, 42,128 individuals were identified as homeless only, while an additional 99,336 were unstably housed. Of the homeless only population ages 18 and older, 14,240 individuals had mental health treatment need; 13,574 had a substance use disorder treatment need; and 9,377 had a co-occurring mental health and substance use treatment need. Mental health treatment need is identified by "the presence of diagnoses, psychotropic medications and/or mental health services." Substance use disorder treatment need is identified by "diagnoses, procedures, prescriptions, treatment and/or arrests that reflect a possible substance use disorder." In 2016, Snohomish County was home to 3,840 homeless only individuals and an additional 7,113 unstably housed persons. Spokane County had 3,004 homless only and 9,670 unstably housed residents.

20. **FAQs about Homeless Veterans. No date.; Available at: http://nchv.org/index.php/news/media/background_and_statistics/. Accessed January 29, 2018.**

The National Coalition for Homeless Veterans provides background and statistical information about veterans experiencing homelessness and incarcerated veterans. Overall, they report that 11% of the total homeless U.S. population are veterans, and more than 20% of the male homeless population are veterans. Of veterans experiencing homelessness, 50% have been diagnosed with a serious mental illness and 70% are experiencing substance use concerns. In addition, the Coalition reports that an additional 1.4 million other veterans are at risk of becoming homless.

21. **Aidala Angela A., McAllister William, Yomogida Maiko, et al. Frequent Users Service Enhancement 'FUSE' Initiative: New York City Fuse II Evaluation Report.2013.**

In this report Aidala et al. evaluate the effectiveness of FUSE II, the second generation of New York City's Frequent Users Services Enhancement (FUSE) initiative, a collaboration between the Corporation for Supportive Housing; The New York City Departments of Homeless Services, Correction, Health and Mental Hygiene, and Housing Preservation and Development; The New York City Housing Authority; and ten non-profit providers of housing and services. Individuals were eligible for FUSE II participation if they had experienced four jail and four shelter stays over the five years prior to admission. Additional requirements were applied for different types of supportive housing (e.g., mental health needs, substance-use). Participants received permanent supportive housing with services provided either onsite or through mobile case management teams. "Housing providers were given a one-time $6,500 payment per client to allow for flexible service funding during the critical period from recruitment and engagement to linking with sustainable, comprehensive medical and mental health services, and other support services needed to promote stability and tenant success." Researchers analyzed the effect of the intervention on clients' (1) retention in permanent housing and avoiding homelessness; (2) criminal justice involvement, including arrests and returns to jail; (3) problem drinking and drug use; (4) health and mental health; (5) connection with family and other forms of social support; (6) use of health, mental health and substance abuse services; (7) over all temporal patterns of institutional involvement beyond participants' use of individual public systems, i.e., reduced cycling between institutions. Results for incarceration showed reduction in jail involvement benefiting the intervention group and most, although not all, results are statistically significant. Measured from housing placement people who received the intervention had, on average, 19.2 fewer days incarcerated (40% reduction over comparison group) and fewer jail admissions over the 24 month follow-up period compared to the comparison group. Despite an extended placement process (driven by Section 8 voucher application and approval processes), researchers found little difference in incarceration results whether measured from program enrollment or from housing placement. FUSE II program results suggest that supportive housing decreases recidivism and the use of emergency homeless, health, and behavioral health services and improves health care access for individuals cycling between homelessness and incarceration.

22. **Washington State Department of Health Center for Health Statistics. Washington State Opioid Related Deaths. Washington State Department of Health;2016.**

Vital statistics data indicate that between 2013 and 2015 in Washington State, 1,852 individuals died from opioid use. Approximately 987 of these individuals died from prescription opioid overdose. The counties with the highest rates of opioid-related deaths between 2013-2015 were Clallam County (27 individuals, 13.5/100,000 [CI 95% 8.6-19.5/100,000]), Cowlitz County (40 individuals, 12.6/100,000 [CI 95% 8.9-17.0/100,000]), Skagit County (43 individuals, 12.5/100,000 [CI 95% 9.0-16.6/100,000), Douglas County (13 individuals, 11.9/100,000 [CI 95% 6.3-19.3/100,000]), and Snohomish County (277 individuals, 11.7/100,000 [CL 95% 10.4-13.2/100,000]). Spokane County and Pierce County ranked 13th among counties with the highest rates of opioid-related deaths (125 individuals, 8.8/100,000 [CI 95% 7.3-10.4/100,000]; 224 individuals, 8.8/100,000 [CI 95% 7.7-10.0], respectively). Rates were calculated per 100,000, age-adjusted for the United States 2000 population. The county with the highest rate of opioid-related deaths was Clallham County (13.5/100,000 [CI 95% 8.6-19.5/100,000]). Statewide, American Indian/Alaska Natives (AI/AN) were significantly more likely than any other racial/ethnic group to be victims of fatal overdoses from both prescription and non-prescription opioids. The AI/AN population had an age-adjusted rate almost three times higher than that for the overall population. The numbers for the Native Hawaiian and Other Pacific Islander population were too low to calculate the rates for both prescription and non-prescription as were the numbers for the Asian population for non-prescription. The data also show a steady increase in the number of opioid overdose deaths for all populations between 1995 and 2013 with a larger increase among prescription-related overdose deaths. The rate increased from an age-adjusted death rate for all opioids of 3.3/100,000 (95% CI 2.9-3.8/100,000) in 1995 to 8.6/100,000 (7.9-9.3/100,000) in 2013. It is important to note the potential limitations of death certificate data such as possible misclassification of both race/ethnicity and cause of death.

23. **Management Washington State Office of Financial. 2017 Official Population Estimates: Population of Cities, Towns, and Counties Used for Allocation of Selected State Revenues, State of Washington.2017.**

Pursuant to RCW 43.62.030, the Office of Financial Management is required to determine the population of all cities and towns in the State of Washington by April 1 each year. As of April 1, 2017, the total population of the State of Washington was 7,310,300. Snohomish County had a population of 789,400, with the City of Everett as the largest city in the county with a population of 109,800. Spokane County had a population of 499,800, with the City of Spokane as the largest city in the county with a population of 217,300.

24. **Justice Center for Health and. No Entry: A National Survey of Criminal Justice Diversion Programs and Initiatives.2013.**

The Center for Health and Justice completed a review of criminal justice diversion programs across the United States. They looked only at programs that do not result in a conviction, and grouped diversion programs into three categories: law enforcement diversion, prosecution or pretrial diversion, and court diversion. Overall, they concluded that: (1) Most diversion programs focus on individuals with substance use and mental health issues; (2) Many diversion programs are only available to individuals with first-time or low-level offenses; (3) A lack of overarching standards or performance measures makes it difficult to evaluate diversion programs as a whole; (4) There are no standard definitions for diversion programs; and (5) Many jurisdictions are forced to consider diversion programs as a result of limited resources and a growing number of

individuals entering the criminal justice system. Although there are many different types of diversion programs, the Center for Health and Justice state that the overarching goals of all programs are to address underlying behavioral concerns in order to maximize an individual's opportunity for success and to minimize the likelihood of recidivism. As an example of a law enforcement diversion program, they present information about Seattle's Law Enforcement Assisted Diversion (LEAD) program. The LEAD program was created in 2011 with a goal to improve public safety. It diverts approximately 100 individuals with substance use disorders per year. The diversion program includes mental health services, substance abuse treatment, employment assistance, housing, access to community health centers, and linkages to other services. As of this report, LEAD had not been evaluated.

25. **Lamberti J. Steven, Weisman Robert L., Schwarzkopf Steven B., et al. The Mentally Ill in Jails and Prisons: Towards an Integrated Model of Prevention.** ***Psychiatric Quarterly.*** **2001;72(1).**

This article presents initial evaluation results of Project Link, a university-led consortium of five community agencies in Rochester, New York, which was established to prevent jail and hospital recidivism and to promote community adjustment among adults with severe mental illness and histories of criminal justice involvement. Local Monroe County data indicated that jail recidivism was associated with treatment non-adherence, substance use, psychotic symptoms, and residential instability. African American and Hispanic men were over-represented among this population. In response to this disproportionate representation, Project Link incorporates staff diversity (to reflect the patient population) and provides cultural competence training for all staff members. Project Link's mobile treatment team features a forensic psychiatrist, a nurse practitioner, a team of case advocates, and a dual diagnosis (mental health and substance-related needs) treatment residence. Admission criteria include presence of a severe mental illness, a history of criminal justice involvement, and a history of non-adherence with outpatient treatment. Additionally, the majority of participants use substances or are substance dependent. The progam incorporates elements of the assertive community treatment (ACT) model and offers 24-hour/daily availability. Estimated length of mobile treatment team enrollment is approximately two years; sufficiently stabilized patients are referred to partner health services. The following results evaluate program effectiveness among patients who completed one-year of the program (n=41). Compared to the year prior to addmission to Project Link, mean (SD) yearly jail days per patient dropped from 107.7 (133.5) to 46.4 (83.7) ($z=4.3$, $p<0.1$). Findings also showed significant reductions in average number of arrests per patient ($z=2.9$, $p<.005$). Authors conclude that preliminary evaluation results suggest Project Link may be effective in reducing recidivism among mentally ill patients with histories of arrest and incarceration.

26. **Broner Nahama, Lattimore Pamela K, Cowell Alexander J, et al. Effects of Diversion on Adults with Co-Occurring Mental Illness and Substance Use: Outocmes from a National Multi-Site Study.** ***Behavioral Science and the Law.*** **2004;22:519-541.**

This quasi-experimental non-equivalent comparison study examined outcomes for participants (n=) in eight programs conducting criminal justice diversion for people with co-occurring serious mental illness and substance use disorders compared with jail detainees eligible for diversion, but who were processed through standard criminal justice methods without diversion. Those diverted were more likely to be female, to have experienced more psychotic symptoms and serious mental

disorders, to have been hospitalized, and to have a history of a violent previous offense. Individuals in the non-diverted group were more likely to have extensive alcohol and drug use treatment histories, major mood disorders, more past arrests, and more employment experience. The study found jail diversion was not associated with any statistically significant change in criminal justice recidivism overall. However, at the 3-month follow-up, diverted participants were less likely to spend time in jail during the previous three months (10 days versus 28 days, $t=14.63$, $p<0.001$) than non-divereted participants (baseline 55 days versus 38 days for diverted and non-diverted, respectively). Additionally, results suggest that diversion resulted in increased use of services (at 3-month follow-up) and some improvements in quality of life indicators, specifically living arrangements. Overall, results indicate that persons with mental health disorders and co-occurring substance use disorders can be diverted from the criminal justice system with no increased risk for arrest during the year following the initial diversion, compared to those not diverted. Authors conclude that diversion may be an option for increasing access to services, increasing time in the community, reducing jail days, without increase in arrests, substance use, or psychiatric symptoms.

27. **Shah Melissa Ford, Black Callie, Felver Barbara. Achieving Successful Community Re-Entry upon Release from Prison.Olympia Washington2013. 11.193.**

The Department of Social and Health Services prepared this report for the Washington State Department of Commerce, Community Services and Housing Division. It examines the experience of individuals (n=12,202) over a 12-month period following thier release from a Washington State Department of Corrections (DOC) facility in State Fiscal Year 2010 or 2011. Researchers found homeless ex-offenders who recieved housing assistance and transitioned to permanent housing had lower rates of criminal recidivism and higher rates of employment, Medicaid coverage, and substance abuse treatment, compared to other homeless ex-offenders. Homeless individuals who received housing assistance and exited to permanent housing had the lowest felony conviction rate (6%) compared to those who received assistance but exited to non-permanent housing (11%), those who were homeless and did not receive housing assistance (15%), and those who did not have an identified housing need (10%). According to Washington State Patrol (WSP) data, the rate of arrest was highest for homeless ex-offenders who did not receive housing assistance (54%) and those who received assistance but exited to non-permanent housing (52%). The arrest rate was lower for ex-offenders without identified housing needs (33%) and homeless ex-offenders who received housing assistance and exited to permanent destinations (35%).

28. **London A, Myers N. Race, incarceration, and health. *Research on Aging.* 2006;28(3):409-422.**

London and Myers conducted a review of the literature around health and other outcomes for incarcerated individuals. They highlighted research that indicates that black Americans have worse health outcomes than other racial/ethnic groups, and also are disproportionately represented in the justice system. The authors also outlined data indicating the high rates of injury in jails and prison as well as the high rates of communicable disease among incarcerated and formerly incarcerated individuals. In addition, they highlight research that indicates that incarceration is associated with lower educational attainment, lower income, higher rates of unemployment, and higher involvement in jobs with high risk of injury or exposure to hazardous

working conditions. Evidence also indicates that incarceration is associated with divorce and separation of families.

29. **Murray J, Farrington DP, Sekol I. Children's antisocial behaivor, mental health, drug use, and educational performance after parental incarceration: A systematic review and meta-analysis. *Psychological Bulletin.* 2012;138(2):175-210.**

Murray et al. conducted a systematic review and meta-analysis of the literature on parental incarceration and impacts on children's later mental, emotional, and social health. They identified 40 studies that met their strict inclusion criteria. The researchers pooled the odds ratios across all samples in order to determine if children with incarcerated parents had a greater risk of each outcome than children in the control group who did not have an incarcerated parent or parents. These pooled odds ratios indicated that parental incarceration was significantly associated with antisocial behavior among their children even after controlling for covariates. In some subpopulations parental incarceration was significantly associated with children's poor academic performance, poor mental health, and drug use, but this association was not significant for every subpopulation and did not always remain significant after controlling for covariates.

30. **Roettger ME, Boardman JD. Parental incarceration and gender-based risks for increased body mass index: Evidence from the national longitudinal study of adolescent health in the United States. *American Journal of Epidemiology.* 2012;175(7):636-644.**

Roettger et al. analyzed data from the National Longitudinal Study of Adolescent Health (1994–2008). The dataset included 15,558 individuals who had completed interviews for all waves of the study, including 1,205 males and 1,472 females who reported that their biologic mother or father was incarcerated. The researchers found that females who had experienced a parent being incarcerated saw greater increase in Body Mass Index (BMI) over time for than did females whose parents had not been incarcerated. This trend remained significant even after controlling for stressful life events, internalizing behaviors, and a range of individual, familial, and neighborhood characteristics.

31. **Swisher RR, Roettger ME. Father's incarceration and youth delinquency and depression: Examining differences by race and ethnicity. *Journal of Research on Adolescence.* 2012;22(4):597-603.**

Swisher and Roettger analyzed data from the in-home portion of the National Longitudinal Study of Adolescent Health. Due to insufficient sample size for other racial/ethnic groups, only white, black, and Hispanic respondents were included in this study. The researchers found that among all racial/ethnic groups father's incarceration is associated with increased depression and delinquency for the children, even after controlling for other variables such as demographics and family background measures. In addition, when considering these results by race/ethnicity, the data indicate that among Hispanic respondents, having their father incarcerated is associated with a higher propensity for delinquency than among white and black respondents.

32. **Turney K, Wildeman C, Schnittker J. As fathers and felons: Explaining the effects of current and recent incarceration on major depression *Journal of Health and Social Behavior.* 2012;53(4):465-481.**

Turney et al. analyzed data from the longitudinal Fragile Families and Child Wellbeing study. The researchers found that currently and recently incarcerated fathers are more likely to report a change in employment status, separation from a child's mother, a change in relationship quality, and depression. The association between incarceration and depression remained significant even after controlling for variables such as demographic characteristics and history of depression.

33. **Wu E, El-Bassel N, Gilbert L. Prior incarceration and barriers to receipt of services among entrants to alternative incarceration programs: A gender-based disparity.** ***Journal of Urban Health: Bulletin of the New York Academy of Medicine.*** **2012;89(2):384-395.**

Wu et al. collected data from a random sample of adults (N=322; 83 women and 239 men) entering alternative to incarceration programs in New York City. Researchers collected data though structured interviews including information on sociodemographics, substance use, prior incarcerations, and barriers that had prevented a participant from visiting or returning to a service provider. Less than half of the participants had earned a high school diploma or GED. When analyzing collapsed data for male and female participants, they found that a greater number of prior incarcerations were significantly associated with a greater number of barriers that prevented accessing a service provider. When they analyzed the data disaggregated by sex and controlling for sociodemographic and substance use indicators, researchers found that the relationship between a greater number of prior incarcerations and greater number of service barriers experienced remained significant only for men.

34. **Natapoff Alexandra. Misdemeanor Decriminalization.** ***Vanderbilt Law Review.*** **2015;68(4):63.**

This law review found that full decriminalization, defined as reclassification of misdemeanors as civil infractions, of non-violent offences may reduce arrests, days of incarceration, and fines associated with offenses like driving while license suspended in the third degree (DWLS 3). However, Natapoff noted outcomes may vary dependent on how local jurisdictions apply the provisions. Defendants with the resources to pay fines can terminate contact with criminal justice system quickly and without the lasting effects of a criminal record. However, because Washington State incarcerates defendants for failure to pay fines, a fine-only model may translate into jail time for indigent individuals through the use of contempt proceedings (pay or appear). Incarceration due to failure to appear may exacerbate disparities in incarceration rates by disproportionately affecting people with low-incomes and people of color who may be less likely to find the time and transportation required to appear than offenders with more time and resources. Failure to pay may also negatively impact an individual's credit rating and their ability to rent an apartment, buy a car, or secure employment. An individual's records (arrest and criminal) and/or inability to reinstate their driver's license may also negatively affect employment (current and future prospects). Jurisdictional use of citations to measure performance or fines to fund the criminal justice systems and general budgets could exacerbate disparities by further racializing enforcement and serving as a regressive tax.

35. **Turney Kristin. Stress Proliferation across Generations? Examining the Relationship between Parental Incarceration and Childhood Health.** ***Journal of Health and Social Behavior.*** **2014;55(3):302-319.**

Turney conducted a multivariate analysis that incorporates children into the stress process paradigm to examine the relationship between parental incarceration and children's health. The author used data collected through the 2011-2012 National Survey of Children's Health (NSCH), a cross-sectional probability sample of non-institutionalized children ages 0-17 years in the U.S. Adjusted for demographic, socioeconomic, and familial characterstics, the analyses show parental incareceration is independently associated with 5 of 19 health conditions considered: learning disabilities, Attention Deficit Disorder/Attention Deficit Hyperactivity Disorder, behavioral or conduct problems, developmental delays, and speech or language problems. Results suggest parental incarceration is more detrimental to behavioral or conduct problems and developmental delays than parental divorce or separations. Findings add to the literature that children's health disadvantages may be an unintended consequence of mass incarceration. In addition, household member mental health problems are associated with 15 of 19 indicators of children's health. The use of a cross-sectional dataset made it impossible to determine whether the assocation is due to shared genetics, shared environments, or some combination of the two. Further research is needed to determine how mental health, incarceration, and children's mental health are associated.

36. **Behavioral Risk Factor Surveillance System. 2016; Available at: https://www.cdc.gov/brfss/brfssprevalence/. Accessed.**

Behavioral Risk Factor Surveillance System (BRFSS) data from 2016 highlight disparities in mental health. For Washington State, survey participants who reported their race/ethnicity as American Indian/Alaskan Native were more likely than any other racial/ethnic group to be told that they have a form of depression. For example, 31.0% (CI 95% 22.1-40.0%) of AI/AN participants compared to 22.7% (CI 95% 21.7-23.6%) of White participants were told they have a form of depression. Data also show that lower income participants were more likely to be told they have a form of depression. In Washington State, 36.9% (CI 95% 32.7-41.1%) of participants that made less than fifteen thousand dollars per year experienced depression compared to 17.2% (CI 95% 16.1-18.3%) of participants making greater than 50 thousand dollars per year.

37. **Prevention Centers for Disease Control and. Youth Risk Behavior Surveillance-United States, 2015. *Morbidity and Mortality Weekly Report.* 2015;65(6).**

Youth Risk Behavior Surveillance System (YRBSS) data from 2015 indicate that nationally, 17.7% of students had seriously contemplated attempting suicide during the 12 months before the survey. Overall, Hispanic students were more likely than their White or Black peers to have considered attempting suicide (18.8% [CI 95% 17.1-20.7%]) or made a suicide plan (15.7% [CI 95% 14.2-17.4%]). Although the City of Seattle has participated in this survey in past years, neither the City of Seattle nor Washington State participated in this survey in 2015.

38. **Peteet B. J. Psychosocial risks of prescription drug misuse among U.S. racial/ethnic minorities: A systematic review. *J Ethn Subst Abuse.* 2017:1-33.**

Prescription drug misuse (PDM) is the leading cause of accidental death in the U.S. One in five Americans report at least one lifetime incident of PDM. PDM has been studied extensively, yet there is limited inclusion of racial/ethnic minorities due to purportedly lower rates of PDM. However, health disparate groups often face more detrimental consequences of substance abuse

including behavioral, social, and medical/mental health (e.g., injury, HIV/AIDS, incarceration, educational attainment, and comorbidity). Failing to characterize risk factors for and consequences of PDM in racial/ethnic minorities may mask the disproportionate negative impact of this epidemic. This systematic review of three research indexes revealed 28 peer-reviewed studies published on PDM in racial/ethnic minority adults. Results indicated a high prevalence of PDM among veterans, bisexual and gay young adults, and substance abusers compared to the general population. Demographic correlates of PDM included younger age, male gender, less educated, unmarried, and those with health/emotional issues. Rates of PDM in demographically vulnerable populations suggest that broadening inclusiveness in PDM research, interventions, and clinical practice is imperative.

39. **McGuire T. G., Miranda J. New evidence regarding racial and ethnic disparities in mental health: policy implications. *Health Aff (Millwood).* 2008;27(2):393-403.**

McGuire and Miranda provide a review of the literature on racial/ethnic disparities in mental health. They cite evidence up through 2008 indicated that most communities of color reported lower rates of lifetime mental disorders than white communities. In contract to these findings, the authors cite evidence that when individuals of color do experience mental health issues they suffer from more persistent, numerous, and severe symptoms than their white counterparts. In addition the authors cite evidence that communities of color do experience higher rates of some mental health disorders (e.g. African Americans had higher rates of schizophrenia and Native Americans suffered from higher rates of posttraumatic stress disorder than Caucasians). The authors also provide evidence that communities of color are less likely to receive needed treatment and more likely to receive poor-quality care when they do receive treatment. In addition, this article mentions the possibility that underdiagnoses of some racial/ethnic groups and over-diagnosis of other racial/ethnic groups for mental health disorders may lead to a misrepresentation of the rates and an inaccurate presentation of possible disparities in prevalence.

40. **Maura J., Weisman de Mamani A. Mental Health Disparities, Treatment Engagement, and Attrition Among Racial/Ethnic Minorities with Severe Mental Illness: A Review. *J Clin Psychol Med Settings.* 2017;24(3-4):187-210.**

Maura and Weisman conducted a systematic review of 131 articles to look at differences in mental health services by race/ethinicty for individuals with severe mental illness (e.g. schizophrenia, bipolar disorder, major depressive disorder, etc.). Overall, they concluded that racial/ethnic minorities with severe mental illness experience significant disparities in mental health diagnosis, quality of service, illness outcomes, and treatment adherence. For example, they present a study that concluded that race was the strongest predictor for schizophrenia diagnosis, with Blacks more likely to be diagnosed with schizophrenia than their White counterparts. They also found a signficant amount of literature demonstrating that Blacks with severe mental illness were more likely than Whites to be involuntarily hospitalized, use crisis services, and be referred to treatment by law enforcement. The authors provide conclusions and information for each of the 131 articles, discuss general trends in the literature, and present sociocultural variables (e.g. trust in health professionals, religion/spiritual values, and family involvement) that may mediate the relationship between race/ethnicity and mental health services.

41. **Dumont Dora M., Allen Scott A., Brockmann Bradley W., et al. Incarceration, community health, and racial disparities. *Journal of Health Care for the Poor and Underserved.* 2013;24:78-88.**

Dumont et al. present an evidence-based commentary about the social determinants of incarceration and inmate morbidity and mortality within the context of health disparities in the United States. Data indicates that over half of inmates in the U.S. have a mental health issue and between 16-24% experience serious mental illness, a percentage much higher than the 5-7% estimate nationally. Further, many inmates experience co-morbidities in addition to mental illness such as untreated substance dependence and addiction. The authors also discuss potential mechanisms for the ways in which incarceration perpetuates health disparities, particularly among black, Hispanic, and low-income populations who are disproportionately represented in the criminal justice system compared to their counterparts. Upon release from prison, data shows that former prisoners experience homelessness at a rate higher than the general population. Former prisoners also experience challenges with gaining education, employment, public assistance, and health insurance. These challenges all threaten an individuals ability to regain stability following incarceration and can have lasting impacts on their mental and physical health.

42. **Health of Washington State: Mental Health. Washington State Department of Health;2008.**

Washington Behavioral Risk Factor Surveillance System (BRFSS) data from 2004-2006 indicate that American Indians and Alaska Natives and non-Hispanic black individuals reported significantly higher rates of poor mental health compared to other groups. These relationships persisted after adjusting for additional factors such as age, income, and education. Washington BRFSS data also show an association between lower annual household income and poor mental health, a relationship that was also shown with education. It is well understood that mental health is also closely related to other areas such as employment opportunities, physical health, substance abuse. This report also highlights a Washington state study from 2002 that reveal that 16% of individuals in the state who were receiving publicly funded mental health services had at least one felony conviction, a rate over twice that of the general population.

43. **Harris Alexes, Evans Heather, Beckett Katherine. Drawing blood from stones: Legal debt and social inequality in the contemporary United States. *American Journal of Sociology.* 2010;115 (6):1753-1799.**

Harris et al. analyze national and Washington state-level data to better understand the social and legal consequences of legal financial obligations (LFOs). The authors present a brief history of the use of monetary sanctions and the ways that they have changed over time. Findings show that the use of monetary sanctions is growing in the U.S. and that the dollar value assessed is substantial compared to expected earnings, which is something courts are supposed to consider when assessing LFOs but rarely do. These sanctions create long-term debt that has negative consequences such as: loss of income and heightened stress; constraint on opportunities for growth such as housing, education, and employment; and potential for further warrants, arrest, and reincarceration as a result of nonpayment. The authors conclude that additional research is

necessary to better understand the magnitude of the legal debt that is created by the entire criminal justice system.

44. **Harris Alexes. A Pound of Flesh: Monetary Sanctions as Punishment for the Poor. New York: Russell Sage Foundation; 2016.**

The focus of this book, written by sociologist Alexes Harris, is the rise of monetary sanctions as a tool of the criminal justice system and the ways in which these sanctions marginalize and penalize the poor. While Harris presents data from across the United States, she focuses her analysis on the court practices of five counties in Washington State. In order to illustrate how these monetary sanctions are perpetuating inequality, Harris draws conclusions from quantitative and qualitative data including sentencing data, legal documents, court hearing observations, and eighty-nine interviews with judges, clerks, attorneys, and defendants. Harris further uses this evidence to support two main arguments throughout the book: "(1) monetary sanctions imposed by the criminal justice system create and sustain inequality in the United States and, (2) the system of monetary sanctions is enforced by criminal justice bureaucrats whose discretion is shaped by a culture of accountability."

45. **Prison Policy Initiative. Washington Profile. 2010; Available at: http://www.prisonpolicy.org/profiles/WA.html. Accessed September 13, 2016.**

This webpage provides data on incarceration in Washington from 2010. Data show that the rate of incarceration in the state has been growing since the late 1970's and in 2010, there were approximately 139,000 people behind bars of under criminal justice supervision in the state. Racial disparities are present in the Washington criminal justice system as well. In 2010, black, Hispanic, and American Indian/Alaska Native individuals made up 18%, 14%, and 5% of persons in Washington prisons and jails although they made up only 4%, 11%, and 2% of the total Washington population, respectively.

46. **Greenberg G.A., Rosenheck, R.A. Jail Incarceration, Homelessness, and Mental Health: A National Study. *Psychiatric Services.* 2008;59(2):170-177.**

Greenberg and Rosenheck analyzed data from a national survey of jail inmates to determine the relationship between incarceration, homelessness, and mental health. The study used data from the 2002 Survey of Inmates in Local Jails conducted by U.S. Department of Justice. The authors found that 15.3% of the U.S. jail population had experienced homelessness in the year before incarceration. This rate is much higher than homeless rates for the general population. Compared to inmates that had not experienced homelessness, inmates who had experienced homelessness were more likely to have been jailed for a property crime, have past involvement with the criminal justice system, have mental health and substance use concerns, have lower levels of education, and have been unemployed. The authors concluded that homelessness increases the risk of incarceration, and incarceration increases the risk of homelessness. This relationship is mediated by mental health and substance use concerns.

47. **Bharel M, Creaven B, Morris G, et al. Health Care Delivery Strategies: Addressing Key Preventive Health Measures in Homeless Health Care Settings. Nashville: Health Care**

for the Homeless Clinicians' Network, National Health Care for the Homeless Council, Inc.;2011.

Bahrel et al. present data and evidence-based recommendations in regards to clinical practices for preventive care for individuals who are homeless or marginalized. To create this report, clinicians from the Health Care for the Homeless (HCH) Clinicians' Network created a Preventive Medicine Task Force (PMTF). This task force conducted a literature review and further evaluated the U.S. Preventive Services Task Force (USPSTF) recommendations for their potential impacts and barriers for persons experiencing homelessness. Evidence from the literature review shows that in addition to health issues such as nutrition disorders, higher rates of respiratory disorders, skin and dental problems, infectious diseases, and injuries due to environmental exposure, accident and violence, individuals experiencing homelessness also have high rates of mental illness. The National Alliance to End Homelessness estimates that, "approximately 50% of individuals experiencing homelessness have mental health issues, of which approximately 25% have serious mental disorders, including chronic depression, bipolar disorder and schizophrenia." Further, due to inadequate access to health care services, many individuals experiencing homelessness do not receive proper preventive care such as screening and treatment for chronic illness. Finally, based on the USPSTF recommendations and data from the literature, the authors put forth their own set of recommendations that they believe will contribute to the highest impact of care within homeless health care settings.

48. **Washington State Health Assessment. Washington State Department of Health;2018.**

In this draft of the 2018 State Health Assessment, death certificate data from 2012-2016 indicate that American Indian/Alaska Natives(AI/AN) had the highest drug overdose death rate followed by Blacks and whites. The authors discuss that, "In 2016, there were 4.5 times as many hospitalizations and nearly 11 times the number of visits to emergency departments for drug overdose compared to the number of deaths. In addition, many nonfatal overdoses are not treated at a hospital and, therefore, are not counted in currently available data."

49. **Northwest Portland Area Indian Health Board. American Indian/Alaska Native Community Health Profiles: Washington Substance Abuse.2014.**

The Northwest Portland Area Indian Health Board analyzed Washington state death certificate data for 2006-2010 and corrected for misclassification of AI/AN individuals using the Improving Data & Enhancing Access – Northwest Project. These data indicate that prescription opioid pain relievers contributed to 2.9% of deaths among AI/AN populations and 1.1% of deaths among non-Hispanic white populations. This report does not indicate if these differences are statistically significant.

50. **Centers for Disease Control and Prevention. Morbidity and Mortality Weekly Report November 1, 2011. Vital Signs: Overdoses of Prescription Opioid Pain Relievers--United States, 1999-2008.2011.**

The Centers for Disease Control and Prevention analyzed 2008 National Vital Statistics data and found that AI/AN populations had the highest age-adjusted rates of overdose deaths from opioid pain relievers with rates for non-Hispanic white populations being nearly as high. These rates

were nearly three times higher than those for black and Hispanic white populations. The authors cite two studies which indicate that these death rates mirror the non-medical and medical use of opioid pain relievers by subpopulations. Vital statistic data is subject to limitations such as misclassification of race/ethnicity and cause of death on death certificates.

51. **Washington State Department of Health. Vital Statistics Data.2011-2013.**

Vital statistics data indicate that between 2011 and 2013 in Washington state, 1,176 individuals died of prescription opioid overdose and 658 individuals died of non-prescription opioid overdose. American Indian/Alaska Natives (AI/AN) were significantly more likely than any other racial/ethnic group to be victims of fatal overdoses from both prescription and non-prescription opioids. The AI/AN population had an age-adjusted rate almost three times higher than that for the overall population. The numbers for the Native Hawaiian and Other Pacific Islander population were too low to calculate the rates for both prescription and non-prescription as were the numbers for the Asian population for non-prescription. Rates were calculated per 100,000, age-adjusted for the United States 2000 population. The data also show a steady increase in the number of opioid overdose deaths for all populations between 1995 and 2013 with a larger increase among prescription-related overdose deaths. The rate increased from an age-adjusted death rate for all opioids of 3.3/100,000 (95% CI 2.9-3.8/100,000) in 1995 to 8.6/100,000 (7.9-9.3/100,000) in 2013. It is important to note the potential limitations of death certificate data such as possible misclassification of both race/ethnicity and cause of death. The age-adjusted rates for 2011-2013 were as follows for opioid overdose deaths:

52. **Poel A. Health of Washington State Report: Mortality and Life Expectancy. Data Update 2015. Washington State Department of Health;2015.**

Poel presents Washington state data on mortality and life expectancy. The data show that age-adjusted death rates were higher in Washington census tracks with higher poverty rates. The state data also show that American Indian/Alaska Natives, Native Hawaiian/Other Pacific Islanders, and black residents had the highest age-adjusted death rate and shortest life expectancy at birth compared to other groups in the state.

53. **Kemple Angela. Health of Washington State Report: Diabetes. Washington State Department of Health;2016.**

Kemple presents data from Washington regarding diabetes in the state. Washington data from the Behavioral Risk Factor Surveillance System (BRFSS) from 2012-2014 show that among adults, the percentage of persons with diabetes increased as household income decreased. This relationship was also true for education. Further, BRFSS data also show that age-adjusted diabetes prevalence is highest among those who are Hispanic, American Indian/Alaska Native, and black.

54. **Serafin M. Health of Washington State Report: Self-reported Health Status. Data Update 2016. Washington State Department of Health;2016.**

Serafin presents data from Washington state on self-reported health status. The data show that after accounting for age, education, race and ethnicity, household income was a strong predictor of self-reported health status. Health status varied by race and ethnicity, with close to 35% of

Hispanics, 30% of American Indian/Alaska Natives, and 20% of Native Hawaiian/Other Pacific Islander reporting fair or poor health. Washington Behavioral Risk Factor Surveillance System (BRFSS) data from 2012-2014 also show that education was a strong predictor of self-reported fair or poor health after adjusting for age.

55. **Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System Prevalence And Trends Data: Washington-2014. 2014; Available at: http://apps.nccd.cdc.gov/brfss/page.asp?cat=XX&yr=2014&state=WA#XX. Accessed August 16, 2016.**

Behavioral Risk Factor Surveillance System (BRFSS) 2014 data from Washington state show significant correlations between lower income and a number of health indicators including: worse overall self-reported health, depression, asthma, arthritis, stroke, oral health, tobacco use, women's health indicators, health screening rates, physical activity, and diabetes. Data also show that as educational attainment increases income level also increases.

56. **Christenson T., Weisser, J. Health of Washington State Report: Tobacco Use. Washington State Department of Health;2015.**

Combined 2012-2014 Behavioral Risk Factor Surveillance System (BRFSS) data indicate that AI/AN adults in Washington have significantly higher rates of current cigarette use than their White, Black, Hispanic/Latino, and Asian counterparts. Cigarette use also decreased significantly as educational attainment or income increased. This report also indicates that smoking rates among gay, lesbian, and bisexual respondents were significantly higher than for their straight counterparts. These BRFSS data and 2014 Healthy youth survey data also show that smoking prevalence is highest in late adolescence and early adulthood, peaking among 25-34 years old for men and women. Pregnancy Risk Assessment Monitoring System (PRAMS) data from 2010-2012 indicate that the smoking rates among pregnant women before and during pregnancy are highest among mothers younger than 20 (36% [95% CI 28-45%]). Thirty-two percent of mothers age 20-24 also reported smoking before and during pregnancy (95% CI 27-37%) compared to 9% (95% CI 6-12%) of mothers 35 years or older. These data also indicate that smoking before pregnancy is highest among AI/AN (50% [95% CI 45-55%]) and low-income mothers. Because women often are not aware that they are pregnant until several weeks into their pregnancy, the smoking rates in the months leading up to pregnancy can have an important impact on fetal development and growth.