

**Health Impact Review of HB 2381
Extending coverage during the postpartum period
(2020 Legislative Session)**

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Full review

The full Health Impact Review report is available at:

<https://sboh.wa.gov/Portals/7/Doc/HealthImpactReviews/HIR-2020-12-2381.pdf>

Acknowledgements

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Executive Summary
HB 2381, Extending coverage during the postpartum period
(2020 Legislative Session)

Evidence indicates that HB 2381 would likely increase access to health insurance for income-eligible individuals who are pregnant or postpartum, which may increase access to and use of healthcare services, improve health outcomes, and decrease health inequities.

BILL INFORMATION

Sponsors: Stonier, Harris, Cody, Robinson, Macri, Leavitt, Shewmake, Thai, Frame, Bergquist, Davis, Orwall, Wylie, Doglio, Goodman, Hudgins, Riccelli, Pollet, Appleton

Summary of Bill:

- Directs Washington State Health Care Authority (HCA) to provide 12 months of medical assistance to individuals who are postpartum and reside in Washington State, have countable income equal to or below 193% of the federal poverty level, and are not otherwise eligible under Title XIX of the Federal Social Security Act.
- Specifies the amount and scope of healthcare services provided must be the same as that provided to individuals who are pregnant and postpartum under medical assistance, as defined in RCW 74.09.520 (Medical assistance—Care and services included—Funding limitations).
- Directs HCA to submit a waiver request to the federal Centers for Medicare and Medicaid Services to allow for the state to receive federal match for coverage outlined and to submit a report to the Legislature on the status of the request by December 1, 2020. Specifies that HCA shall provide coverage to all eligible individuals regardless of federal approval of the waiver request.

HEALTH IMPACT REVIEW

Summary of Findings:

This Health Impact Review found the following evidence for provisions in HB 2381:

- **Informed assumption** that HCA extending coverage under Apple Health for Pregnant Women plans from 60 days to 12 months postpartum would increase access to health insurance. This is based on insurance eligibility and information from key informants.
- **Very strong evidence** that increased access to health insurance would improve health outcomes.
- **Very strong evidence** that increased access to health insurance would increase access to and use of healthcare services.
- **Very strong evidence** that increased access to and use of healthcare services would improve health outcomes.
- **Very strong evidence** that improved health outcomes would decrease health inequities.

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 House Bill 2381 ([HB 2381](#)).

Staff analyzed the content of HB 2381 and created a logic model depicting possible pathways leading from the provisions of the bill to health outcomes. We consulted with experts and contacted key informants about the provisions and potential impacts of the bill. We conducted an objective review of published literature for each pathway using databases including PubMed, Google Scholar, and University of Washington Libraries. More information about key informants and detailed methods are available upon request.

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-evidence for each relationship. The strength-of-evidence has been defined using the following criteria:

- **Very strong evidence:** the review of literature 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.
- **Strong evidence:** the review of literature 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.
- **A fair amount of evidence:** the review of literature 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 percentage 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.
- **Not well researched:** the review of literature yielded few if any studies or only yielded studies that were poorly designed or executed or had high risk of bias.

This review was subject to time constraints, which influenced the scope of work for this review. 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 are referenced multiple times.

Analysis of HB 2381 and the Scientific Evidence

Summary of relevant background information

- The Centers for Disease Control and Prevention (CDC) defines the postpartum period as extending one year after the end of pregnancy.¹
- The Personal Responsibility and Work Opportunity Act of 1996 restricted legal immigrants' access to federally-funded health insurance for the first five years they have lawful status in the U.S. (known as the five-year-bar).²⁻⁴
- Federal law prohibits the use of federal Medicaid dollars for the provision of care for individuals who are undocumented, Deferred Action for Childhood Arrivals (DACA) recipients, and lawfully-present individuals who have not met the five-year-bar.⁵⁻⁷
- Washington State extended the Apple Health (Medicaid) program to individuals who are pregnant or postpartum, regardless of immigration status.⁷ However, currently, only individuals who are citizens and individuals who are lawfully-present immigrants who have met or are exempt from the 5-year-bar are eligible for Apple Health for Adults coverage (personal communication, Health Care Authority (HCA), January 2020).⁸
- Under Apple Health, individuals who are pregnant or postpartum and meet income-eligibility may qualify for coverage under an Apple Health for Pregnant Women plan, regardless of immigration status.⁷ HCA specifies that, "once enrolled in Apple Health for Pregnant Women, you'll be covered for 60 days after your pregnancy end date, plus whatever days are left during the month in which the 60-day period ends...this coverage will be in effect regardless of any change in your income, and you receive this postpartum coverage regardless of how your pregnancy ends."⁷
- Income eligibility requirements for Apple Health for Pregnant Women include a higher income level (countable income at or below 193% of the federal poverty level) compared to requirements for Apple Health for Adults (countable income at or below 133% of the federal poverty level).⁷
- Individuals who receive coverage on an Apple Health for Adults plan are automatically enrolled in Apple Health for Pregnant Women upon becoming pregnant. After 60 days postpartum, individuals previously on an Apple Health for Adults plan and who meet income-eligibility may continue to qualify for Apple Health on an adult plan (personal communication, January 2020). These transitions are typically seamless for individuals (personal communication, January 2020). Alternatively, some individuals may qualify for "Family Planning Only" services for 10 additional months after 60 days postpartum. Individuals who are undocumented, DACA recipients, and individuals who have not met the 5-year-bar may continue to qualify for "Family Planning Only" services (personal communication, HCA, January 2020). However, individuals who are undocumented, DACA recipients, and individuals who are legally-present but have not met the five-year-bar as well as individuals with incomes between 133% and 193% of the federal poverty level may no longer qualify for coverage under an Apple Health plan after 60 days postpartum.
- In 2016, the Washington State Legislature passed Engrossed Second Substitute Senate Bill 6534 to establish an official Maternal Mortality Review Panel (the Panel) within

Washington State Department of Health (DOH) ([RCW 70.54.450](#)). The Panel is responsible for reviewing maternal deaths, identifying factors contributing to those deaths, and producing a biennial report with findings and recommendations to prevent future maternal deaths.⁹ In 2019, the law was amended to permanently establish the Panel and the maternal mortality review in the state.

- The DOH Maternal Mortality Review Panel, American Indian Health Commission, as well as multiple national associations, including the American College of Obstetricians and Gynecologists and the American Medical Association have recommended extending Medicaid coverage for 12 months postpartum to improve maternal health outcomes.⁹⁻¹¹

Summary of HB 2381

- Directs HCA to provide 12 months of medical assistance to individuals who are postpartum and reside in Washington State, have countable income equal to or below 193% of the federal poverty level, and are not otherwise eligible under Title XIX of the Federal Social Security Act.
- Specifies the amount and scope of healthcare services provided must be the same as that provided to individuals who are pregnant and postpartum under medical assistance, as defined in RCW 74.09.520 (Medical assistance—Care and services included—Funding limitations).
- Directs HCA to submit a waiver request to the federal Centers for Medicare and Medicaid Services to allow for the state to receive federal match for coverage outlined and to submit a report to the Legislature on the status of the request by December 1, 2020. Specifies that HCA shall provide coverage to all eligible individuals regardless of federal approval of the waiver request.

Health impact of HB 2381

Evidence indicates that HB 2381 would likely increase access to health insurance for income-eligible individuals who are pregnant or postpartum, which may increase access to and use of healthcare services, improve health outcomes, and decrease health inequities.

Pathway to health impacts

The potential pathway leading from the provisions of HB 2381 to decreased health inequities are depicted in Figure 1. We made the informed assumption that HCA extending coverage under Apple Health for Pregnant Women plans from 60 days to 12 months postpartum would increase access to health insurance. This informed assumption is based on insurance eligibility and information from key informant interviews. There is very strong evidence and it is well-documented that access to health insurance leads to improved health outcomes¹²⁻²⁴ and to increased access to and use of healthcare services.^{12,13} There is also very strong evidence that increasing access to and use of healthcare services will improve health.^{12,25-29} In turn, since HB 2381 would increase access to health insurance for individuals who are undocumented, DACA recipients, and individuals who are legally-present but have not met the five-year-bar as well as individuals with incomes between 133% and 193% of the federal poverty level, there is also very strong evidence that HB 2381 will decrease inequities by geography,^{9,30-34} immigration status,^{2,3,35-42} race/ethnicity,^{9,11,32,43-55} and socioeconomic status.^{2,9,35,43,45,56-70}

Scope

Due to time limitations, we only researched the most direct connections between the provisions of the bill and decreased health inequities and did not explore the evidence for all possible pathways. For example, we did not evaluate potential impacts related to:

- Individuals who are between 60 days to 12 months postpartum who have already lost coverage and who may be eligible to reapply as a result of extended coverage.

Magnitude of impact

Approximately 700 individuals die each year in the U.S. due to pregnancy-related conditions.¹ A pregnancy-related death is a death which “occurred during pregnancy or within the first year after pregnancy from a pregnancy complication, a chain of events initiated by the pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy.”⁹ From 2011 through 2015, the national pregnancy-related mortality ratio was 17.2 maternal deaths per 100,000 live births.¹ CDC reported, “timing of death was known for 2,990 (87.7%) pregnancy-related deaths. Among these deaths, 937 (31.3%) occurred during pregnancy, 506 (16.9%) on the day of delivery, 556 (18.6%) 1–6 days postpartum, 640 (21.4%) 7–42 days postpartum, and 351 (11.7%) 43–365 days postpartum.”¹ Data show the leading causes of death varied by time relative to the end of the pregnancy.¹ Overall, cardiovascular conditions were responsible for more than 33% of pregnancy-related deaths in the U.S.¹ CDC stated, “from 6 weeks postpartum (43 days) through the end of the first year (365 days), cardiomyopathy was the leading cause of death.”¹ According to state maternal mortality review committees (MMRCs), the majority (60%) of pregnancy-related deaths are preventable.¹

Findings from the 2014-2016 Washington State Maternal Mortality Reviews indicated, “maternal mortality rates in Washington are not increasing like they are nationally.”⁹ However, “the cohort of maternal deaths for 2014-2016 is relatively small, and slight changes could have resulted in very different percentages.”⁹ Through its review, the Panel identified 100 *pregnancy-associated deaths* (i.e., deaths that occur during pregnancy or the first year after pregnancy from any cause).⁹ Of these deaths, 30 were determined by the Panel to be *pregnancy-related*, and the Panel concluded 60% of pregnancy-related deaths were preventable.⁹ The pregnancy-related death ratio was 11.2 deaths per 100,000 live births, and it reflects an expanded maternal mortality definition that included deaths due to suicide and accidental overdose in addition to deaths caused by other diseases and conditions.⁹ The leading underlying cause of death among pregnancy-related deaths (n=30) were behavioral health conditions, including suicide and overdose (30%), hemorrhage (20%), and hypertensive disorders in pregnancy (10%).⁹ Data show “the majority of pregnancy-related deaths occurred during pregnancy or delivery (30%) or within 42 days after the end of pregnancy (35%).”⁹ However, deaths from behavioral health conditions occurred, on average, 157 days after pregnancy.⁹ Of the 13 pregnancy-associated deaths from suicide, 69% occurred 43 days or more after pregnancy, “including 46% that occurred between six and 12 months after the end of pregnancy.”⁹ The panel determined that 9 (69%) of the pregnancy-associated deaths from suicide were pregnancy-related.⁹ Similarly, 60% of the pregnancy-associated deaths from accidental overdose occurred 43 days or more after the end of pregnancy.⁹ The majority of these deaths involved opioids.⁹ Of the 15 pregnancy-associated deaths from overdose, the Panel determined two were pregnancy-related.⁹ Preliminary data for 2017 indicate there are 32 potential pregnancy-associated deaths for the Panel to review.⁹

Individuals in Washington State who receive coverage on an Apple Health for Adults plan are automatically enrolled in Apple Health for Pregnant Women upon becoming pregnant. Based on the HCA expenditure forecast for fiscal year 2019, there were approximately 17,144 individuals enrolled in an Apple Health for Pregnant Women plan (personal communication, HCA, January 2020). After 60 days postpartum, individuals may qualify for “Family Planning Only” services for an additional 10 months or may qualify for Apple Health on an adult plan (personal communication, January 2020). Therefore, HB 2381 primarily provides extended access to health insurance coverage for individuals who are undocumented, DACA recipients, and individuals who are legally-present but have not met the five-year-bar as well as individuals with incomes between 133% and 193% of the federal poverty level.

Individuals may enter and remain in the U.S. under a variety of circumstances and immigration statuses, including as legal aliens, refugees, migrants, detainees, asylum-seekers, DACA recipients, or as individuals who are undocumented.⁷¹ Access to healthcare varies by immigration status, and individuals and communities experience different barriers to care based on immigration status, nativity, length of time in the U.S., and level of acculturation.^{36,37,41,72-74} The Migration Policy Institute estimates there are approximately 229,000 individuals who are undocumented living in Washington State.^{75,76} An estimated 25,000 individuals are eligible for DACA, and 17,140 (67%) had DACA status in August 2018.⁷⁷ The Washington State Office of Financial Management (OFM) estimated that, in 2017, approximately 3.5% (264,000) of the population included individuals who are undocumented, with 90.4% (242,000) of these individuals 18 to 64 years of age.^{39,78} Approximately 45% of individuals who are undocumented are female (compared to 55% of individuals who are U.S. citizens).⁷⁸ In addition, approximately 40% of individuals who are undocumented in Washington State had a family income below 200% of the federal poverty level.⁷⁸ Lastly, 40.7% of individuals who are undocumented in Washington State are uninsured.³⁹

Approximately 12.2% of Washingtonians have incomes at or below 100% of the federal poverty level; 16% of individuals have incomes at or below 125% of the federal poverty level.⁷⁹ Based on estimates from the 2000 Census, 1,492,788 Washingtonians have incomes at or below 200% of the federal poverty level.⁸⁰ In 2017, OFM reported that for Washington State, when compared with the uninsured rate of the highest income group, the uninsured rate was three to four times higher for those with incomes in the three lowest income groups (below 100% of the federal poverty level (FPL), 100-138% of the FPL, and 139-400% of the FPL).⁴³

While it is not possible to predict exactly how many individuals who are pregnant or postpartum would be impacted by HB 2381, the provisions in the bill would likely increase Apple Health caseload (personal communication, January 2020). HCA estimates that extending coverage from 60 days postpartum to 12 months postpartum would cost a total of about \$26 million dollars per year.⁸¹

Logic Model

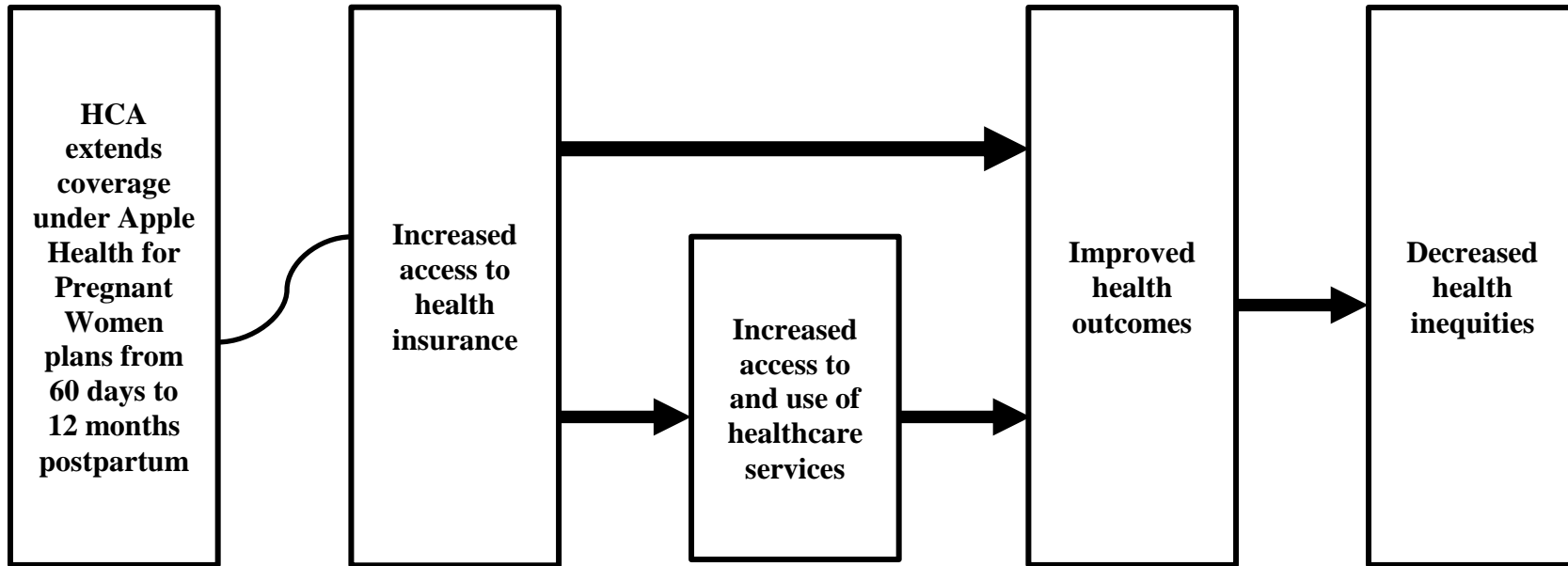
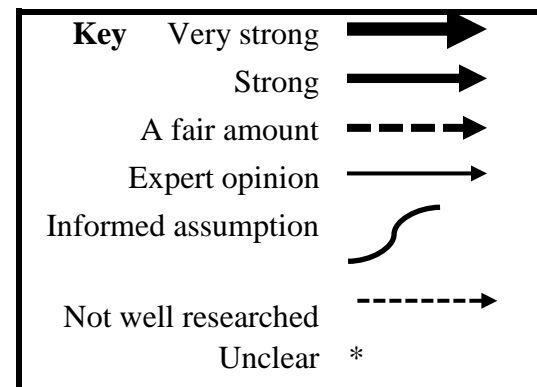


Figure 1:
Extending coverage during the postpartum period
HB 2381



Summaries of Findings

Will Health Care Authority extending coverage under Apple Health for Pregnant Women plans from 60 days to 12 months postpartum increase access to health insurance?

We have made the informed assumption that Washington State Health Care Authority (HCA) extending coverage under Apple Health for Pregnant Women plans from 60 days to 12 months postpartum would increase access to health insurance. Specifically, this change in coverage would provide increased access to health insurance for individuals who are undocumented, DACA recipients, and individuals who are legally-present but have not met the five-year-bar as well as individuals with incomes between 133% and 193% of the federal poverty level. This informed assumption is based on insurance eligibility and information from key informant interviews.

Immigrant communities in the U.S. have restricted access to health insurance.^{2,3,35-37,40,42,73,82,83} Access is primarily restricted through federal and state legislation.^{2,3,35,40,41,82,84} Federal and state legislation restricts immigrant access to health insurance coverage and care, regardless of immigration status.^{2,3,35,40,41,82,84} The Personal Responsibility and Work Opportunity Act of 1996 restricted legal immigrants' access to federally-funded health insurance for the first five years they have lawful status in the U.S. (known as the five-year-bar).²⁻⁴ However, the Act specified that Medicaid would provide emergency coverage, regardless of immigration status.³ In 2002 and 2013, the federal government issued exceptions to the Act that allowed states to waive the 5-year-bar and provide Medicaid and Children's Health Insurance Program (CHIP) coverage to immigrant pregnant women and children.³ While the ACA and corresponding Medicaid expansion increased health insurance access for many communities and enabled lawfully-present immigrants to purchase and receive subsidies for private health insurance through the Health Exchanges, it continued to exclude immigrants from receiving Medicaid for five years and made individuals who are undocumented and DACA recipients ineligible for public coverage or private insurance through the marketplace.^{2-4,82} Health coverage expansion as a result of the ACA has also been uneven across groups depending on immigration status in Washington State.³⁹

HCA defines four citizenship and immigration status groups for the purpose of health insurance coverage eligibility. These four eligibility groups include Lawfully Present "Qualified Alien," Lawfully Present "Unqualified Alien," Not Lawfully Present (Undocumented) Immigrant, and Citizen or U.S. National.⁸⁵ Currently, Washington State offers Medicaid coverage to lawfully residing children and pregnant women without the 5-year wait period, and to all pregnant women regardless of their immigration status.³ Despite these options, individuals who are undocumented, especially adults over 18 years of age who are undocumented, have the most restricted access to health care coverage in Washington State,⁸⁵ and individuals who are undocumented are 11.1 times more likely to be uninsured as U.S.-born citizens in the state.³⁹

While restricted access to insurance impacts all immigrant groups, a multi-country literature review of 66 articles published between 2004 and 2014 examining barriers to accessing health care for individuals who are undocumented concluded that the largest access barrier was "national policies excluding [individuals who are undocumented] from receiving health care."⁴¹ The study concluded that, "because insurance was generally required for affordable care or

required to receive services at all, these laws effectively barred access to care [for immigrants who are undocumented].”⁴¹

Therefore, while individuals who are pregnant may have access to health insurance through Apple Health for Pregnant Women, individuals who are undocumented, DACA recipients, and individuals who have not met the five-year-bar may have restricted access to insurance following 60 days postpartum.

Evidence also indicates that people of low socioeconomic status experience difficulty accessing healthcare.^{2,56-67} While rates of health insurance coverage have increased since the passage of the ACA, studies have found that cost of care remained a barrier even for individuals with public or private health insurance coverage.^{61,86} It has been documented that, even with Medicaid expansion, there may be a gap in coverage for individuals who may not be income-eligible for Medicaid and may not be able to afford coverage or care on the Exchanges. For example, health care reform in Massachusetts (which served as the model for the Affordable Care Act) provided subsidized health insurance for individuals with incomes at or below 300% of the federal poverty level.¹⁴ Researchers found that, even after healthcare reform, individuals with incomes at or below 300% of the federal poverty level were still less likely to report good health, to receive ambulatory health services, and to access healthcare compared to individuals with higher incomes.¹⁴ The authors concluded that further interventions may be necessary to make health insurance and healthcare more affordable.¹⁴

Overall, HB 2381 primarily provides extended access to health insurance coverage for individuals who are undocumented, DACA recipients, and individuals who are legally-present but have not met the five-year-bar as well as individuals with incomes between 133% and 193% of the federal poverty level, and it is documented that these individuals may lack access to health insurance. Therefore, we have made the informed assumption that extending coverage under Apple Health for Pregnant Women plans from 60 days to 12 months postpartum would increase access to health insurance, particularly for these groups.

Will increasing access to health insurance improve health outcomes?

There is very strong evidence and it is well-documented that access to health insurance leads to improved health outcomes. Healthy People 2020 finds that individuals who are uninsured are, “more likely to have poor health status...and more likely to die prematurely” than individuals with insurance.¹² The author of a systematic literature review of 54 analyses (in 51 distinct studies) concluded, “[t]here is a substantial body of research supporting the hypotheses that having health insurance improves health.”¹³ In addition, evidence indicates that health insurance is associated with better general,¹⁵ physical, and mental health, and that this increase in health status is greatest for participants in the lowest income group (< 300% of the federal poverty level).¹⁴ A 2019 randomized study by the National Bureau of Economic Research found that health insurance reduces mortality.¹⁶

More specifically, in a study of individuals who experienced a health shock caused by an unintentional injury or a new chronic condition, uninsured individuals reported significantly worse short-term health and were more likely to not be fully recovered and no longer in treatment at follow-up compared to those with health insurance.¹⁷ Having health insurance has

also been associated with improved health outcomes for a number of conditions including stroke, heart failure, diabetes, melanoma, heart attack, serious injury or trauma, and serious acute conditions with hospital admission.¹⁸⁻²¹ Further, having health insurance was associated with improved management and control of diabetes, hypercholesterolemia, and hypertension.²² Among patients aged 18–64 years old, those with insurance have been shown to have a significantly lower risk of death than uninsured patients for cervical,⁸⁷ head and neck,⁸⁸ breast, colorectal, lung, prostate, and bladder cancers and non-Hodgkin lymphoma.^{23,24}

Overall, increasing access to health insurance would improve health outcomes, especially for individuals who would otherwise be uninsured.

Will increasing access to health insurance increase access to and use of healthcare services?

There is very strong evidence and it is well-documented that increasing access to health insurance will increase access to and use of healthcare services. The Healthy People 2020 initiative noted that access to health insurance is the first step to improving access to health services generally as it provides entry into the healthcare system.¹² For example, individuals who are uninsured are less likely to receive medical care and more likely to be diagnosed later than individuals with insurance.¹² A systematic literature review of 54 analyses (in 51 distinct studies) found that 43 analyses reported a statistically significant and positive relationship between health insurance and medical care use and health.¹³

Access

Evidence shows that lack of insurance is among the leading barriers to healthcare access.^{13,89,90} There is very strong evidence that access to health insurance would increase access to and use of healthcare services. For example, evidence indicates that being uninsured is associated with a higher likelihood of not having a usual place for medical care and that having insurance coverage at any given time in the past year increased the likelihood that adults had a usual place for care.⁹¹⁻⁹³ One study estimated that adults aged 18 to 64 years of age who did not have health insurance for more than a year at the time of the survey were nearly six times more likely to not have a usual source of care compared to those who were continuously insured.⁹⁴ Further, evidence indicates that uninsured individuals more frequently reported delaying medical care (50.87%) and being unable to get medical care (38.87%), dental care (48.18%), mental health care (16.87%), and prescription drugs (40.23%) than insured individuals.⁹³

A 2019 CDC report also found that maternal mortality review committees (MMRCs) in 13 states recognized that, in addition to other factors, system level factors contributed to preventable pregnancy-related deaths.¹ One MMRC identified that prevention strategies to address system-level factors to improve access to and coordination and delivery of quality care included extending Medicaid coverage for pregnant women to include 1 year of postpartum care.¹

In addition, because coverage for individuals who are undocumented, DACA recipients, and lawfully-present individuals who have not met the five-year-bar are excluded from the ACA, safety net providers (e.g., federally qualified health centers, community health centers, community organizations) may face funding and reimbursement challenges through the ACA, which could result in further reduction in coverage and care for these individuals.⁴⁰ Even after evaluating different combinations of vulnerability characteristics, such as health status,

education, and region of residence, lacking health insurance had the strongest association with unmet health care needs, followed by family income and having a regular source of care.⁹¹

Use

Evidence indicates that health insurance is associated with increased use of healthcare services, such as visiting a doctor or healthcare professional.⁹² For example, health insurance has been associated with higher rates of diagnosis of diabetes, hypercholesterolemia, and hypertension among nonelderly adults.²² One study found that compared to those with continuous health insurance coverage and the same chronic conditions, persons without health insurance in the previous year were five to six times more likely to forgo needed care if they had hypertension (42.7% versus 6.7%), diabetes (47.5% versus 7.7%), and asthma (40.8% versus 8.0%).⁹⁴ Further, having health insurance has been positively associated with receiving recommended preventive care.¹⁸ A 2012 study, found that having health insurance was significantly associated with a greater likelihood of receiving the influenza vaccine; tetanus and diphtheria toxoid (Td) or tetanus, diphtheria, and acellular pertussis (Tdap) vaccine; and the pneumococcal vaccine (PPSV).⁹⁵ Further, vaccine coverage for influenza, PPSV, shingles, and human papillomavirus (HPV) were two to three times higher among those with health insurance.⁹⁵

A number of studies have used a quasi-experimental approach to evaluate use of healthcare services after statewide changes occurred following events such as the Massachusetts Health Care Reform in 2006, the Oregon Health Insurance Experiment in 2008, and Medicaid expansion. Evidence following the Oregon Health Insurance Experiment indicates that enrollment in Medicaid was associated with increased hospital admissions, outpatient visits, and prescription drug use; increased compliance with recommended preventive care; an increase in perceived access to and quality of care; and declines in exposure to substantial out-of-pocket medical expenses and medical debts.^{96,97} Further, insured participants were more likely to receive preventive screening services for body mass index (BMI), blood pressure, smoking, Pap test, mammography, chlamydia, and diabetes.⁹⁸ Finally, evidence from Medicaid expansion and the health care reform in Massachusetts indicates that an increased rate of insurance coverage is associated with increased use of healthcare services, and higher rates of diagnosis of chronic health conditions, particularly among adults with low-incomes.^{14,99}

Affordability

Increasing access to *affordable* health insurance options may also increase access to and use of healthcare services. The cost of care (including clinical visits, procedures, and co-pays) is often cited as a barrier to care, and when cost is eliminated the barrier is also eliminated.¹⁰⁰⁻¹⁰² Further, limitations in insurance coverage¹⁰³⁻¹⁰⁵ and insurance requirements^{104,106} may impact cost of care.^{35,57,60} Individuals may also experience gaps in their coverage in the form of prohibitively high deductibles,¹⁰⁷ service exclusions,¹⁰⁷⁻¹⁰⁹ or other practices that limit access to services. Health Benefit Exchange has also reported that, in Washington, premiums and deductibles continue to rise each year and, even with insurance, consumers do not access care due to high cost-sharing and deductibles.⁶⁸

A 2016 report to Congress by the U.S. Agency for Healthcare Research and Quality concluded that 70% of care affordability measures have not changed since 2010 and inequities in care persist for low socioeconomic and uninsured populations in all healthcare priority areas.¹¹⁰ While

rates of health insurance coverage have increased since the passage of the ACA, studies have found that cost of care remained a barrier even for individuals with public or private health insurance coverage.^{61,86} For example, the Washington State TAKE CHARGE program was created in 2001 to expand Medicaid coverage for family planning services to families living at or below 200% of the federal poverty level.¹¹¹ In 2015, the program completed a survey of 338 women enrolled in TAKE CHARGE to determine the reasons women remained in TAKE CHARGE after the implementation of the ACA.¹¹¹ Women reported staying on TAKE CHARGE because of the lack of employer-sponsored health insurance and cost of other insurance options.¹¹¹

Therefore, increasing access to health insurance will likely increase access to and use of healthcare services.

Will increasing access to and use of healthcare services improve health outcomes?

There is very strong evidence that increasing access to and use of healthcare services will improve health. Healthy People 2020 states that access to healthcare must be improved by increasing access to health insurance coverage, health services, and timeliness of care to promote and maintain health, prevent and manage disease, reduce unnecessary disability and premature death, and achieve health equity.¹² There is a large body of evidence supporting the positive association between use of health services for the early detection and treatment of physical and mental health disorders²⁵ and improved health outcomes. Since there is strong consensus in the scientific literature supporting this association, we are providing only a few examples here.

Findings from Washington’s maternal mortality review “revealed gaps in care and services for women after pregnancy ended, especially during the first week postpartum until nine to 12 months postpartum.”⁹ A large body of evidence shows that early identification and treatment of perinatal and postpartum depression can prevent or reverse negative effects of maternal depression for both the mother and child.^{28,29} Maternal mental health concerns and substance use are also associated with higher infant mortality rates.¹¹ In addition, other evidence has shown the efficacy of using healthcare services. For example, the U.S. Preventive Services Task Force (USPSTF) found evidence to support that screening tests for human immunodeficiency virus (HIV) are accurate and that antiretroviral therapy (ART) reduces the risk of death and sexual transmission of HIV.²⁶ Another study from USPSTF found that behavioral therapy and pharmacotherapy in combination demonstrated an 82% increase in tobacco cessation when compared to minimal intervention or usual standard of care.²⁷ While these examples do not indicate that all treatments are effective, they illustrate that evidence-based treatments are available.

Will improving health outcomes decrease health inequities?

There is very strong evidence that HB 2381 has the potential to decrease inequities by geography,^{9,30-34} immigration status,^{2,3,35-42} race/ethnicity,^{9,11,32,43-55} and socioeconomic status.^{2,9,35,43,45,56-70} Women, people of color, immigrants, and individuals living in rural communities are more likely to have low-incomes and lack health insurance.^{35,56} Furthermore, in Washington State, these communities also experience worse maternal health outcomes, including perinatal and postpartum depression. Therefore, extending Apple Health for Pregnant Women may increase access to insurance and decrease inequities for these communities.

Inequities by geography

Despite declines in uninsured rates across all geographic classifications since the implementation of the ACA, urban-rural gaps still persist with higher percentages of uninsured adults in small town/rural areas compared to urban areas.³⁰ In 2015, 19% of adults (aged 18 to 64 years) living in large towns in Washington were uninsured and 14.9% of those living in small town/rural areas were uninsured.³⁰

Evidence indicates that rural communities are disadvantaged on multiple health and health-related measures.³¹⁻³⁴ For example, in Washington State, the pregnancy-related mortality ratio was higher for those living in rural areas (15 deaths per 100,000 live births) compared to those living in urban areas (11 deaths per 100,000 live births) from 2014 through 2016.⁹ In addition, in 2014, “the number of potentially excess deaths from the five leading causes [heart disease, stroke, chronic lower respiratory disease, cancer, and unintentional injury] in rural areas was higher than those in urban areas.”³³ Lastly, data from 2001-2015 show nonmetropolitan/rural counties experienced higher suicide death rates (17.32) than in medium/small (14.86) or large metropolitan counties (11.92).³⁴

Since individuals living in rural communities in Washington State are more likely to have low-incomes and be uninsured, there is the potential that extending Apple Health for Pregnant Women may reduce health inequities experienced by this community.

Inequities by immigration status

Overall, immigrants in the U.S. are less likely to have health insurance (due to federal and state regulations and employment in jobs less likely to provide insurance), less likely to receive preventive care, and more likely to delay seeking health services.³⁵⁻³⁸ A 2019 report by OFM found that, “because of the faster health coverage gains in the citizen groups through [key ACA coverage expansion programs], the coverage disparities between the non-citizens, particularly [individuals who are undocumented], and citizens widened.”³⁹ They found that, “the gap between the [individuals who are undocumented] group’s uninsured rate and that of the U.S.-born citizen group more than doubled between 2013 and 2017. In 2017, [individuals who are undocumented] were 11.1 times as likely to be uninsured as U.S.-born citizens, when other population characteristics are held as equal.”³⁹ While approximately 5.7% of U.S.-born citizens in are uninsured, 40.7% of individuals who are undocumented in Washington State are uninsured.³⁹ Legally-present immigrants were twice as likely to be uninsured as U.S.-born citizens.³⁹

In addition to inequities in access to health insurance, individuals who are undocumented also experience higher rates of morbidity and mortality.⁴⁰ For example, individuals who are undocumented have lower immunization rates, untreated mental health issues, and are less likely to follow-up for treatment for infectious diseases, tuberculosis, and HIV.⁴¹ A systematic review found that individuals who are undocumented “are at highest risk of depressive symptoms and are disproportionately impacted by [post-traumatic stress disorder], anxiety, and depression when compared to other documented immigrants and citizens.”⁴⁰ Immigrants are also more likely to experience poor reproductive health outcomes, including unintended pregnancy, unintended birth, sexually transmitted infections, adverse birth outcomes, and longer durations of infertility

than the general population.^{2,3,36,37,42} Individuals who are undocumented experience worse reproductive health outcomes than immigrants with legal status or the general population.³⁶

Since HB 2381 extends access to health insurance coverage for individuals who are undocumented, DACA recipients, and individuals who are legally-present but have not met the five-year-bar, there is very strong evidence that HB 2381 will decrease inequities by immigration status.

Inequities by race/ethnicity

Prior to full implementation of the ACA in 2014, communities of color experienced large disparities in uninsured rates. However, uninsured rates decreased substantially among Black, Asian and Pacific Islander, and multi-racial Washingtonians following the implementation of the ACA.⁴³ In 2017, these racial groups had uninsured rates roughly equal to or just slightly higher than the rate among white Washingtonians (4.4%).⁴³ Despite overall decreases in the uninsured rates among people of color, American Indian/Alaska Native (AI/AN) Washingtonians are still 2.8 times more likely to be uninsured than white residents (down from 4.1 times in 2013).⁴³ In Washington State, 70% of AI/AN individuals do not receive care through a tribally or Indian Health Service-operated clinic (personal communication, American Indian Health Commission [AIHC], January 2020). For individuals who are uninsured, this may further limit access to healthcare services (personal communication, AIHC, January 2020).

Moreover, it is well-documented that communities of color experience worse health outcomes than their counterparts for many health measures. A report by University of California Berkeley's Henderson Center for Social Justice stated that "overall, people of color rate their health status lower than [non-Hispanic] Whites...In general, people of color report less access to health care and poorer quality health care than [non-Hispanic] Whites."⁴⁴ In Washington, data indicate that AI/AN, Native Hawaiian and Other Pacific Islander, and Black residents experience a variety of health inequities compared to other groups in the state, including higher age-adjusted death rates and shorter life expectancies at birth.^{32,45-49} Further, communities of color also have higher rates of tobacco use, diabetes, obesity, and poorer self-reported health and mental health.^{45,50-54}

Specifically, AI/AN people in Washington experience high rates of coronary heart disease deaths,⁴⁶ stroke deaths,⁴⁹ prevalence of diabetes,⁵² and poor mental health than other racial and ethnic groups.⁵⁵ In 2008, more than one-third of AI women on Medicaid who were pregnant or up to 1-year postpartum had a mental health diagnosis, which was 2.7 times the rate for all pregnant women on Medicaid.¹¹ Washington's Maternal Mortality Review Panel found that AI/AN women experienced higher maternal mortality ratios than any other race/ethnicity.⁹ AI/AN women were 6.6 times more likely to die from a pregnancy-related cause compared to white women (maternal mortality ratio of 53 deaths per 100,000 live births compared to 8 deaths per 100,000 live births, respectively).⁹

Since people of color in Washington State are more likely to have low-incomes and be uninsured, there is the potential that extending Apple Health for Pregnant Women may reduce health inequities experienced by this community, especially for AI/AN individuals.

Inequities by socioeconomic status

Evidence indicates that people of low socioeconomic status experience difficulty accessing healthcare.^{2,56-67} In 2017, OFM reported that for Washington State, when compared with the uninsured rate of the highest income group, the uninsured rate was three to four times higher for those with incomes in the three lowest income groups (below 100% of the FPL, 100-138% of the FPL, and 139-400% of the FPL).⁴³ In addition, the Health Benefit Exchange reported that individuals spend a large percentage of their income on health coverage. For example, individuals with incomes at 139% to 150% of the federal poverty level with a federal subsidy spend 14% of their income on health insurance premiums plus deductibles.⁶⁸ Individuals in this income group that do not receive a federal subsidy spend 76% of their income on health insurance premiums plus deductibles.⁶⁸

A report by the U.S. Agency for Healthcare Research and Quality stated, “more than half of measures show that [low-income] households have worse care than high-income households” and that “significant disparities continue for people [with low-incomes] compared with high-income people who report they were unable to get or were delayed in getting needed medical care due to financial or insurance reasons.”⁶² Significant correlations exist 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.⁶⁹ Further, 2015 data indicate that age-adjusted death rates were higher in Washington census tracts with higher poverty rates.⁴⁵ Household income was the strongest predictor of self-reported health status in Washington in 2016, even after accounting for age, education, and race/ethnicity.⁷⁰ Findings from Washington's Maternal Mortality Review indicated that women who had Medicaid coverage were disproportionately represented among all pregnancy-associated deaths.⁹ Moreover, data show, “the majority of women who died by suicide received insurance coverage from Medicaid.”⁹

There is strong consensus in the scientific literature that improving health outcomes for low-income populations would help decrease health disparities by income. In addition, since HB 2381 extends access to health insurance coverage for individuals with incomes between 133% and 193% of the federal poverty level, there is very strong evidence that HB 2381 will decrease inequities by socioeconomic status.

Overall, there is very strong evidence that HB 2381 has the potential to decrease health inequities by geography, immigration status, race/ethnicity, and socioeconomic status.

Annotated References

1. **Petersen Emily E. , Davis Nicole L. , Goodman David , et al. *Vital Signs: Pregnancy-Related Deaths, United States, 2011-2015, and Strategies for Prevention, 13 States, 2013-2017. U.S. Department of Health and Human Services/Centers for Disease Control and Prevention. 2019;68(18):423-430.***

In the U.S., approximately 700 women die from pregnancy-related complications every year. This CDC Morbidity and Mortality Weekly Report reports findings based on the CDC's national Pregnancy Mortality Surveillance System (PMSS) for 2011-2015. Authors calculated pregnancy-related mortality ratios (pregnancy-related deaths per 100,000 live births; PRMRs) overall and by sociodemographic characteristics; and the distribution of pregnancy-related deaths by timing relative to the end of pregnancy and leading causes of death. National data show, "For 2011–2015, the national PRMR was 17.2 per 100,000 live births. Non-Hispanic black (black) women and American Indian/Alaska Native [AI/AN] women had the highest PRMRs (42.8 and 32.5, respectively), 3.3 and 2.5 times as high, respectively, as the PRMR for non-Hispanic white (white) women (13.0)." Nationally, among pregnancy-related deaths for which timing of death is known (87.7%, N=2,990 deaths), 31.3% of deaths occurred during pregnancy, 16.9% on the day of delivery, 18.6% 1-6 days postpartum, 21.4% 7-42 days postpartum, and 11.7% 43-365 days postpartum. Cardiovascular conditions were responsible for >33% of pregnancy-related deaths. Data show, "Other leading causes of pregnancy-related death included other noncardiovascular medical conditions (14.3%), infection (12.5%), and obstetric hemorrhage (11.2%). The cause of death could not be determined for 6.7% of pregnancy-related deaths." Of those deaths that occurred "From 6 weeks postpartum (43 days) through the end of the first year (365 days), cardiomyopathy was the leading cause of death." Among 251 pregnancy-related deaths reviewed by 13 maternal mortality review committees, a determination was made for 232 (92.4%). Of these, 139 (60%) deaths were determined to be preventable and did not differ significantly by race/ethnicity or timing of death. Maternal mortality review committees identified an average of three to four contributing factors and two to three prevention strategies per pregnancy-related death. Authors categorized contributing factors and prevention strategies "at the community, health facility, patient, provider, and system levels and include improving access to, and coordination and delivery of, quality care." Specifically, "MMRC identified prevention strategies addressing system-level factors included developing policies to ensure that women deliver at a health facility with an appropriate level of maternal care and extending Medicaid coverage for pregnant women to include 1 year of postpartum care." Authors note that "no single intervention is sufficient; reducing pregnancy-related deaths requires reviewing and learning from each death, improving women's health, and reducing social inequities across the life span, as well as ensuring quality care for pregnant and postpartum women." Limitations of this report include: 1) errors in reported pregnancy status on death certificates; 2) inconsistencies in reporting race/ethnicity data (other than non-Hispanic white and non-Hispanic black) on death certificates; 3) limited information concerning injury deaths (e.g., drug overdoses, suicides, homicides) or cancer-related deaths make it difficult to determine if a death is pregnancy-related; and 4) not all preventable deaths reported by maternal mortality review committees had a prevention strategy to address contributing factors.

2. **Dehlendorf C., Rodriguez M. I., Levy K., et al. *Disparities in family planning. American Journal of Obstetrics & Gynecology. 2010;202(3):214-220.***

Dehlendorf et al. provide a descriptive summary of reproductive health disparities by race/ethnicity and socioeconomic status, and the barriers women of color and women of low socioeconomic status experience in accessing family planning services. They present background information that minority women and those with lower socioeconomic status are more likely to experience poor reproductive health outcomes, including unintended pregnancy, unintended births, abortions, and teen pregnancies. They also state that low socioeconomic status has also been associated with earlier initiation of sexual intercourse, and adolescent pregnancy and childbirth, and state that "undesired or mistimed pregnancies...significantly impact the course of a woman's life, and disparities in the ability to plan pregnancies as desired can contribute to the cycle of disadvantage experienced by vulnerable populations." Dehlendorf et al. present the barriers to accessing family planning services using a framework developed by Kilbourne 2006 to examine barriers related to patient preferences and behaviors, health care system factors, and provider-related factors. Patient preferences and behaviors include barriers such as health literacy; education level; culturally-based myths and misinformation; historical trauma and discrimination; cultural and familial differences in communication, attitudes, and practices related to reproductive health; and culturally and linguistically appropriate care and services. Health care system factors include, changes in federal and state legislation and funding (including Title X, Medicaid expansion and the Hyde Amendment), insurance status, insurance coverage of contraception, and cost of care (e.g. abortions). Dehlendorf et al. also state that "immigrants often face unique challenges accessing family planning services due to language and insurance coverage barriers." Immigrants also face barriers due to legislative changes and the Personal Responsibility and Work Opportunity Act of 1996 which, "restricted legal immigrants' access to publically financed health care for their first 5 years of residence." Dehlendorf et al. explain that immigrants are only eligible for "Emergency Medicaid" which only covers acute illnesses and obstetric delivery, not preventive services like contraception. Provider-related barriers to care include provider biases and discrimination. Dehlendorf et al. also present five potential solutions to reduce disparities in access to care: 1. Provide universal coverage for contraceptive methods (similar to the Family PACT program in California); 2. Provide public funding for abortion services; 3. Increase training related to abortions in obstetrics and gynecology and family medicine residency programs; 4. Provide information about birth control options in ways that are culturally and linguistically appropriate; and 5. Train providers to provide quality and patient-centered family planning care to all women.

3. Hasstedt K. Toward Equity and Access: Removing Legal Barriers to Health Insurance Coverage for Immigrants. *Guttmacher Policy Review*. 2013;16(1):2-8.

Hasstedt outlines current and historic federal legislation restricting immigrants' access to health insurance and health care in the United States. The 1996 Personal Responsibility and Work Opportunity Reconciliation Act states that individuals who immigrated to the United States after 1996 are ineligible for Medicaid or the Children's Health Insurance Program (CHIP) for the first five years they have "lawful status," effectively creating a "five year ban" on federally-funded health insurance. The act does specify that Medicaid will provide emergency coverage, including costs related to labor and delivery, regardless of immigration status. Also, in 2002 and 2013, the federal government issued exceptions to the law that allow states waive the 5 year ban and provide Medicaid and CHIP coverage to immigrant pregnant women and children. Washington State currently offers coverage to lawfully residing children and pregnant women without the 5-year wait period, and to all pregnant women regardless of their immigration status. While the

Affordable Care Act (ACA) does not address the five-year-ban, it does enable lawful immigrants to purchase and receive subsidies for private health insurance through the exchanges.

Undocumented immigrants remain ineligible under the ACA to purchase private insurance, and grantees under the Deferred Action for Childhood Arrivals (DACA) program are ineligible for public and private health insurance. DACA grantees and undocumented immigrants are only eligible for Medicaid in states that do not use federal dollars to fund their Medicaid program and provide coverage regardless of immigration status, or for private insurance coverage obtained outside the exchanges. In addition, "immigrants are overrepresented in low-wage jobs that are unlikely to offer employer-sponsored health coverage." As a result, approximately 45% of noncitizen immigrant women of reproductive age are uninsured, compared to 24% of naturalized immigrants, and 18% of U.S. born women. The author concludes that current policies greatly hinder immigrants to access health insurance and health care.

4. **Raymond-Flesch M., Siemons R., Pourat N., et al. "There is no help out there and if there is, it's really hard to find": a qualitative study of the health concerns and health care access of Latino "DREAMers". *J Adolesc Health*. 2014;55(3):323-328.**

Raymond-Flesch et al. completed nine focus groups with 61 Latino immigrants in California who qualified for the Deferred Action for Childhood Arrivals (DACA) program. The Affordable Care Act excluded DACA recipients from obtaining Medicaid or private insurance through the Health Care Exchanges. The purpose of the focus groups was to understand DACA recipients' access to health care and current health conditions. The authors also identified evidence-based policy changes to address the health needs of undocumented immigrant communities (including DACA recipients). The study was the first to examine the health needs of DACA recipients. The authors identified a number of barriers to accessing health care generally, including cost of care, competing financial priorities (e.g. food, tuition, rent), lack of knowledge about the health care system, low health literacy, long wait times and delays getting appointments, lack of provider knowledge and sensitivity about immigration status and health needs of immigrants, lack of a consistent medical home, lack of a driver's license, fear of discrimination, and fear of deportation or consequences for future citizenship. The authors recommend training providers in culturally-sensitive and trauma-informed care, educating providers about immigration law and status, strengthening relationships between providers and community-based organizations, creating local health care and insurance options for undocumented individuals, and educating DACA-eligible youth about health care options.

5. **Congress 111th. The Patient Protection and Affordable Care Act. *Public Law 111-148* 2010.**

Subpart B--Eligibility Determinations of the Patient Protection and Affordable Care Act outlines requirements related to citizenship and immigration status to access health coverage.

6. **Health Coverage for immigrants. 2020; Available at: <https://www.healthcare.gov/immigrants/coverage/>. Accessed.**

Through HealthCare.gov, the U.S. Centers for Medicare & Medicaid Services provides eligibility information for health insurance coverage by immigration status.

7. **Apple Health (Medicaid) coverage: Eligibility. 2020; Available at: <https://www.hca.wa.gov/health-care-services-supports/apple-health-medicaid-coverage/eligibility>. Accessed.**

Health Care Authority provides eligibility requirements for Apple Health programs, including program eligibility for adults, children, and by immigration status.

8. **Authority Washington State Health Care. Citizenship and Alien Status Guide. 2018.**

The Washington State Health Care Authority provides an overview of potentially eligible programs based on four immigration status groups: 1) U.S. citizens; 2) Lawfully-present qualified immigrants; 3) Lawfully present non-qualified immigrants; and 4) individuals who are undocumented. This summary also provides further definitions and clarifications for immigration status categories for the purpose of health insurance coverage.

9. **Health Washington State Department of. Report to the Legislature Washington State Maternal Mortality Review Panel: Maternal Deaths 2014-2016. Tumwater, Washington: Washington State Department of Health; October 2019 2019.**

Washington State law (RCW 70.54.450) created the state's Maternal Mortality Review Panel (the Panel) and requires that it submit a report to the Secretary of the Department of Health (DOH) and health committees of the Washington State Senate and House of Representatives. This 2019 report to the Legislature examines maternal deaths between 2014 and 2016 and includes data from the previously published (2017) report. Authors note, "the growing understanding of the complex role that behavioral health issues play in pregnancy led the Panel to examine maternal deaths from suicide and substance overdose for this report." The review was based on birth, hospitalization, and medical records, autopsies, and other available records. While Washington has historically tracked maternal mortality rates, "the most comprehensive review to date [in Washington] was conducted for deaths that occurred in 2014 through 2016." Overall, the Panel found "maternal mortality rates in Washington are not increasing like they are nationally." These maternal mortality reviews identified 100 pregnancy-associated deaths (i.e., "a death during pregnancy or within one year of the end of pregnancy from any cause") in 2014-2016. Of these, 30 deaths were determined by the Panel to be pregnancy-related (i.e., "death occurred during pregnancy or within the first year after pregnancy from a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy"). For the period of 2014-2016, the state pregnancy-related death ratio was 11.2 deaths per 100,000 live births. Women 30 years older had the highest maternal mortality ratio. American Indian and Alaska Native (AI/AN) women experienced higher maternal mortality ratios (53 deaths per 100,000 live births) than any other race/ethnic group (Non-Hispanic White: 8 deaths per 100,000 live births; Non-Hispanic Black: 9 deaths per 100,000 deaths; Asian or Native Hawaiian or other Pacific Islanders: 14 deaths per 100,000 live births; Hispanic: 17 deaths per 100,000; Multi racial: 19 deaths per 100,000 live births). "Women with private health insurance during or up to one year after pregnancy experienced the lowest pregnancy-related maternal mortality ratios [6 deaths per 100,000 live births] among all groups of insurance type." Those with unknown coverage experienced the highest pregnancy-related maternal mortality ratio (23 deaths per 100,000 live births), and those with Medicaid coverage had a pregnancy-related maternal mortality ratio of 18 deaths per 100,000 live births. The Panel found 69% of deaths from suicide reviewed were pregnancy-related; about half of the natural

deaths were pregnancy-related; 13% of those due to accidental substance overdose were pregnancy-related; and none of the deaths due to other injuries were pregnancy-related. Data show "the leading underlying cause of death among pregnancy-related deaths (N=30) were behavioral health conditions, including suicide and overdose (30%, n=11), hemorrhage (20%, n=6) and hypertensive disorders in pregnancy (10%, n=3)." The Panel reported, "pregnancy-related deaths from behavioral health conditions consisted of suicide and accidental substance overdose from diagnoses of substance use disorder, and depression or other mental health conditions [...] Hemorrhage deaths were caused by cervical laceration, ectopic pregnancy, uterine rupture or other hemorrhage (not otherwise specified). Among the deaths due to hypertensive disorders in pregnancy the Panel identified preeclampsia, eclampsia, and HELLP syndrome (a life-threatening pregnancy complication usually considered to be a variation of preeclampsia that can lead to liver rupture or stroke.)" Reviews found, "more than one third of the pregnancy-related deaths occurred during pregnancy (20%) or within 24 hours of a delivery (17%). One third of the pregnancy related deaths (33%) occurred within 42 days after the end of pregnancy, and 30 percent occurred beyond 43 days after the end of pregnancy." While deaths due to hemorrhage and hypertensive disorders of pregnancy occurred on average within one and three days from the end of pregnancy, respectively, "deaths related to behavioral health conditions occurred on average 157 days after the end of pregnancy, with a range from zero to 344 days." Data show, all those who died from pregnancy-related causes had health insurance coverage during pregnancy and through the first year postpartum, and the majority of health insurance coverage was through Medicaid. "Among the six women who died while pregnant, five were covered by Medicaid and one had unknown health insurance coverage." Finally, the Panel concluded that 60% of the pregnancy-related deaths were preventable. The Panel categorized contributing factors (N=112) to pregnancy-related deaths as related to systems of care (39%), provider (25%), patient/family (25%), community (6%), or facility (4%) level. Factors identified as contributing to preventable pregnancy-related deaths include "access to health care services, gaps in continuity of care (especially postpartum), gaps in clinical skill and quality of care (including delays in diagnoses, treatment, referral, and transfer), and lack of care coordination at the provider, facility, and systems levels." The review found preventable pregnancy-related deaths from behavioral health conditions were impacted by contributing factors related to knowledge (100%); access/barriers to care (67%); mental health conditions (56%); care/case coordination or management (56%); continuity of care (56%); clinical skill/quality of care (44%); screening/assessment (44%); community outreach/resources (44%); communication (33%); and social support/isolation (22%). Panel recommended six actions to help prevent maternal deaths. See recommendations in the full report. Table 4 estimates the percentage of preventable pregnancy-related deaths that could have been impacted by each type of recommendation made by the Maternal Mortality Review Panel (2014-2016). As part of Priority Recommendation 3, the Panel recommends, "the Health Care Authority (HCA) should make Maternity Support Services (MSS) available to all women who have Medicaid during pregnancy and through the first year after pregnancy." Additionally, the full Maternal Mortality Review Report provides additional information on pregnancy-associated deaths. Authors recommend interpretations of data presented should be made with caution stating, "while each death is a tragedy, the cohort of maternal deaths for 2014-2016 is relatively small, and slight changes could have resulted in very different percentages." Overall, "the Panel identified several contributing factors to deaths, including gaps in postpartum follow-up care and services, breaks in continuity of care and transfer of care to other providers, and lack of social support and support structures

during the first year after pregnancy." Authors state, "these factors affected women who died from suicide and substance overdose, hypertension in pregnancy, and sepsis, as well as women who experienced fetal loss, and loss due to legal removal of an infant from its mother's care."

10. ACOG Statement on AMA Support for 12 Months of Postpartum Coverage under Medicaid [press release]. June 12, 2019 2019.

In this press release, the American College of Obstetricians and Gynecologists (ACOG) expresses support of the American Medical Association's statement in support of extending federal Medicaid coverage from 60 days to 12 months postpartum. They state, "extending Medicaid coverage to 12 months postpartum [is] as way to improve maternal health outcomes following findings that many maternal deaths, including those linked to cardiovascular disease, cardiomyopathy, and overdose and suicide, occur in the postpartum period."

11. State American Indian Health Commission for Washington. Healthy Communities: A Tribal Maternal-Infant Health Strategic Plan. December 2010 2010.

The Maternal and Infant Health (MIH) Strategic Plan (Plan) set specific, measurable goals and objectives and outlined accepted strategies to accomplish objectives. The Plan suggested model programs and promising practices identified through: (1) a review of literature and data; (2) interviews with key informants (i.e., tribal health directors and state Department of Health [DOH] personnel, Coordinators of State Maternal and Child Health Block Grants [Title V, SSA], and others in 8 states working to improve maternal and child health through collaborations with tribes and urban Indian clinics), meetings with professional staff at tribal and urban Indian programs, and focus groups at Lummi Nation, N.A.T.I.V.E. in Spokane, and the Quinault Nation; (3) survey of Tribal and urban Indian clinic health directors; and (4) interviews with award winning tribal Women, Infants, and Children (WIC) programs. Preliminary findings and recommendations were: (1) reviewed by the MIH Workgroup and (2) tested for acceptability and informed by focus groups with teenage girls and with women who were currently or recently pregnant. Finally, the American Indian Health Commission for Washington State (AIHC) reviewed and accepted the MIH Strategic Plan for presentation, review, and discussion at the Tribal Leaders Health Summit, in November 2010. The report identified multiple barriers to AI/AN women accessing care (e.g., substance use, mental health, developmental health, distance to care, lack of transportation, limited provider availability). The report identifies six risk factors to address to produce the greatest improvements in maternal and infant health for AI/ANs: 1) mental health; 2) alcohol and/or substance use; 3) smoking; 4) threatened pre-term labor; 5) history of prior low birth weight baby, preterm delivery, or fetal death; and 6) maternal nutrition and weight. For example, in 2008, AI births on Medicaid had 3.3 times the rate of maternal alcohol and/or substance use during pregnancy or 1 year postpartum compared to all Medicaid births. Among the 18% of AI pregnant women with alcohol and/or substance use, nearly 11% had low birthweight babies in 2008. "babies of women who use alcohol and other drugs during their pregnancy have a rate of infant mortality 50% greater the first month of life, and more than twice as high in the remainder of the first year of life, compared to babies of women for whom there is no identified substance [use]." Additionally, "the mortality rate during the first month of life is 3.8 per 1,000 births for mothers who have no identified mental health [concerns], 6.7 per 1,000 births for mothers who have intermediate mental health [concerns], and 10 per 1,000 births for mothers who have severe mental health [concerns]." Moreover, individuals often have dual diagnoses, experiencing mental health concerns and self-medicating with alcohol or other drugs.

Data (2008) from the Washington State Department of Social and Human Services show that AI are disproportionately represented among pregnant women on Medicaid with alcohol and substance use treatment needs.

12. **Healthy People 2020: Access to Health Services. 2018; Available at: <https://www.healthypeople.gov/2020/topics-objectives/topic/Access-to-Health-Services>. Accessed October 2018, 2018.**

Although the Affordable Care Act of 2010 increased opportunities to access health insurance, many individuals still lack coverage. Access to health insurance and healthcare varies by race/ethnicity, socioeconomic status, age, sex, disability status, sexual orientation, gender identity, and geography. As a result, one goal of the Healthy People 2020 initiative is to improve access to healthcare by improving access to health insurance coverage, health services, and timeliness of care. Healthy People 2020 found that “access to comprehensive, quality health care services is important for promoting and maintaining health, preventing and managing disease, reducing unnecessary disability and premature death, and achieving health equity for all Americans.” Barriers to accessing healthcare “lead to unmet health needs, delays in receiving appropriate care, inability to get preventive services, financial burdens, [and] preventable hospitalizations.” Access to health insurance is the first step to improving access to health services generally as it provides entry into the healthcare system. Individuals who are uninsured are, “more likely to have poor health status, less likely to receive medical care, more likely to be diagnosed later, and more likely to die prematurely” than individuals with insurance. Improving access to health services includes ensuring people have a “usual and ongoing source of care (that is, a provider or facility where one regularly receives care.” Patients with a usual source of care experience better health outcomes, fewer health inequities, lower health costs, and better use of preventive health services. Lastly, delay in healthcare can negatively impact health outcomes and also result in, “increased emotional distress, increased complications, higher treatment costs, and increased hospitalizations.” Healthy People 2020 noted that “future efforts [to improve access to care] will need to focus on the deployment of a primary care workforce that is better geographically distributed and trained to provide culturally competent care to diverse populations.”

13. **Hadley Jack. Sicker and poorer--the consequences of being uninsured: a review of the research on the relationship between health insurance, medical care use, health, work, and income. *Medical Care Research Review*. 2003;60(June 2003):3S-75S.**

As part of this systematic review of literature more than 9,000 citations were screened for inclusion; 285 distinct, potentially relevant articles were identified for more detailed review; and 54 analyses (in 51 distinct studies) were included in the detailed review. The final set of studies of health outcomes were organized into three major groups: (1) studies of the relationship between insurance status and the outcomes of specific diseases or conditions, (2) studies of the relationship between insurance status and either general mortality or morbidity/health status, and (3) studies of the relationship between medical care use and mortality. "Overall, 43 analyses report statistically significant and positive relationship, and 11 have results that are not statistically significant. However, of those 11, 4 have quantitative estimates that are similar to those of comparable studies with statistically significant results, and 4 provide partial results supporting a positive relationship between health insurance or medical care use and health." Despite all studies reviewed suffered from methodological flaws, "one general observation

emerges: there is a substantial degree of qualitative consistency across the studies that support the underlying conceptual model of the relationship between health insurance and health." The author concludes, "there is a substantial body of research supporting the hypotheses that having health insurance improves health and that better health leads to higher labor force participation and higher income."

14. Van Der Wees Philip J., Zaslavsky Alan M., Ayanian John Z. Improvements in health status after Massachusetts health care reform. *The Milbank Quarterly*. 2013;91(4):663-689.

Van Der Wees et al. aimed to compare trends in the use of ambulatory health services and overall health status before and after health reform in Massachusetts. In 2006, Massachusetts underwent a health care reform that, among other provisions, established, "...an individual mandate to obtain health insurance if affordable, expanded Medicaid coverage for children and long-term unemployed adults, subsidized health insurance for low and middle-income residents, and a health insurance exchange to help higher-income residents obtain unsubsidized insurance." This study utilized data from the Behavioral Risk Factor Surveillance System (BRFSS) from 2001-2011 for Massachusetts as well as surrounding states that did not undergo reform (Connecticut, Maine, New Hampshire, Rhode Island, and Vermont). The total number of survey participants aged 18-64 that were included in this study was 345,211. The authors found that compared to residents in neighboring states, Massachusetts residents reported better general, physical and mental health, increased use of screening tests for cervical and colorectal cancer, and cholesterol, and a higher likelihood of being covered by insurance and having a personal doctor. These differences remained significant after adjusting for individual sex, age, race/ethnicity, income, employment, marital status, and education, and the annual unemployment rates in each state. In a subgroup analysis, the authors found that Massachusetts residents with an income less than 300% of the federal poverty level had the greatest increase in health status outcomes. The authors conclude that although health care reform in Massachusetts was associated with some meaningful gains, health disparities still exist for low-income residents and that further innovations, as well as federal health care reform, may be necessary.

15. Baker David W., Sudano Joseph J., Albert Jeffrey M., et al. Lack of health insurance and decline in overall health in late middle age. *The New England Journal of Medicine*. 2001;345(15):1106-1112.

Baker et al. conducted a prospective cohort study using data from the Health and Retirement Study, a national survey of adults age 51 to 61 in the United States (n=7577). The aim of the study was to examine the relationship between health insurance, or a lack thereof, and changes in overall health from 1992-1996. The authors found that compared to continuously insured participants, continuously and intermittently uninsured participants were more likely to report a major decline in overall health between 1992-1996 ($p < 0.001$), with the continuously uninsured being at the highest risk (adjusted relative risk, 1.63). This increased risk remained even after adjusting for sex, race and ethnicity, and income. Further, continuously uninsured participants were 23% more likely to have a new physical difficulty that affected walking or climbing stairs than privately insured participants. The authors conclude that a lack of health insurance, even intermittently, is associated with increased risk of a decline in overall health and that further efforts are needed to reform the U.S. health insurance system, particularly for older adults.

16. Goldin J., Lurie I.Z., McCubbin J. Health Insurance and Mortality: Experimental Evidence from TaxPayer Outreach. NBER Working Paper Series. National Bureau of Economic Research (NBER); 2019.

Goldin et al. conducted a randomized study of U.S. taxpayers who paid a tax penalty for not having health insurance as required by the individual mandate provision of the Patient Protection and Affordable Care Act (ACA). Of 4.5 million U.S. households that paid the penalty, 3.9 million were randomly selected to receive a letter from IRS. Researchers then analyzed data to determine the subsequent uptake of insurance and impact on mortality. They concluded, "our results provide the first experimental evidence that health insurance reduces mortality." Following the intervention, the "rate of mortality among previously uninsured 45-65-year-olds was lower in the treatment group than in the control by approximately 0.06 percentage points, or one fewer death for every 1,648 individuals in this population who were sent a letter. We find no evidence that the intervention reduced mortality among children or younger adults over our sample period." However, the authors note that using mortality as an outcome is more likely to impact middle aged adults than children or young adults.

17. Hadley Jack. Insurance coverage, medical care use, and short-term health changes following an unintentional injury or the onset of a chronic condition. *Journal of the American Medical Association*. 2007;297(10):1073-1085.

Hadley used longitudinal data from the Medical Expenditure Panel Surveys from 1997-2004 to compare medical care use and short-term health changes among both insured and uninsured adults following a health shock caused by either a new chronic condition or unintentional injury. The sample included 10,485 cases of new chronic conditions and 20,783 cases of unintentional injury. In looking at the demographic characteristics of the two populations, uninsured individuals were more likely to report being in fair or poor health, have family income below 100% of the federal poverty level, and be a racial/ethnic minority. Uninsured individuals in both the injury and chronic condition groups were significantly less likely to receive care for their new condition and less likely to receive follow-up care if it were recommended. Uninsured individuals also had fewer office-based visits and prescription medicines. At the first follow-up interview, 3.5 months after the health shock, uninsured individuals with chronic conditions reported significantly worse short-term health, and uninsured individuals in the unintentional injury group were more likely to not be fully recovered and no longer in treatment. At 7 months, the difference in health change for insured versus uninsured individuals with new chronic conditions remained significant. Hadley concludes that adverse health outcomes following a health shock may continue to persist and cause deteriorating health unless the problem of uninsurance in the United States is addressed.

18. Institute of Medicine. America's Uninsured Crisis: Consequences for Health and Health Care. Washington, DC: The National Academics Press; 2009.

In this report published by the Institute of Medicine, the authors present data from two systematic reviews that were commissioned by the Institute to look at the consequences of uninsurance on health outcomes. The primary review of interest, McWilliams 2008 (unpublished), focused on evidence from the adult U.S. population between 2002 and 2008 and resulted in a number of conclusions. First, the authors found that without health insurance, adults are less likely to receive effective preventive services and chronically ill adults are more likely to delay or forgo necessary care and medications. Next, without health insurance, adults are more

likely to be diagnosed with cancer (including breast, colorectal, and others) at a later stage and are therefore more likely to die or have poorer outcomes as a result. Without insurance, adults with cardiovascular disease or cardiac risk factors are less likely to be aware of their conditions and experience worse health outcomes, including higher mortality. Further, uninsurance is associated with poorer outcomes for stroke, heart failure, diabetes, heart attack, serious injury or trauma, and serious acute conditions with hospital admission. The report concludes this section by recognizing that even with the availability of safety net health services, there is a need to close the gap in health insurance coverage in the United States.

19. **McManus M., Ovbiagele B., Markovic D., et al. Association of insurance status with stroke-related mortality and long-term survival after stroke. *Journal of stroke and cerebrovascular diseases : the official journal of National Stroke Association.* 2015;24(8):1924-1930.**

McManus et al. used data from the National Health and Nutrition Examination Survey (NHANES) to examine the association between health insurance status and long-term mortality after a stroke. The authors used data from NHANES 1999-2004 for adults aged less than 65 years with a follow-up assessment through 2006 for mortality (n=10,786 participants). The risk of mortality from stroke was not significantly different for insured versus uninsured individuals without self-reported history of stroke at the baseline interview. After adjusting for age, sex, race, BMI, poverty-to-income ratio, number of major medical conditions, history of hypertension, and NHANES cycle, uninsured individuals without stroke at baseline were 3 times more likely to die of stroke than insured individuals, although this figure did not reach statistical significance. There was also no difference in all-cause mortality according to insurance status among stroke survivors. While the authors conclude that insurance status influences the risk of mortality from stroke as well as the all-cause mortality among stroke survivors, these findings were not considered significant and further research is needed in this area.

20. **Amini Arya, Rusthoven Chad G., Waxweiler Timothy V., et al. Association of health insurance with outcomes in adults ages 18 to 64 years with melanoma in the United States. *Journal of the American Academy of Dermatology.* 2016;74(2):309-316.**

Amini et al. analyzed data from the Surveillance, Epidemiology, and End Results (SEER) program of the National Cancer Institute (NCI) in order to investigate whether health insurance correlates with more advanced disease, receipt of treatment, and survival among persons diagnosed with melanoma. The authors included all people age 18 to 65 who were diagnosed with cutaneous malignant melanoma between January 1, 2007 and December 31, 2012 (n=61,650). Using logistic regression, the authors found that after adjusting for patient characteristics, uninsured patients compared with non-Medicaid insured patients more often presented with advanced disease, such as increasing tumor thickness and presence of ulceration, and less often received surgery and/or radiation. In the univariate analysis, the authors found that one important factor associated with worse overall and cause-specific survival was, among others, race, including Asian or Pacific Islander (p=.002 and p=.004 respectively), and insurance status (Medicaid insurance p=.001 and uninsured p=.001). The authors conclude that socioeconomic and insurance status may contribute to the disparities in treatment and survival and that policies to address issues of access and quality of care may help improve outcomes.

21. **Baker David W., Shapiro Martin F., Schur Claudia L. Health insurance and access to care for symptomatic conditions. *Archives of Internal Medicine*. 2000;160:1269-1274.**

Baker et al. developed a list of 15 symptoms that, "...a national sample of physicians had rated as being highly serious or having a large negative effect on quality of life" to include in the 1994 Robert Wood Johnson Foundation National Access to Care Survey. The survey was administered in the spring and summer of 1994 as a follow-up to the 1993 National Health Interview Survey (n=3480). Symptoms included in the survey included, for example, shortness of breath with light work or exercise, back or neck pain that makes it difficult to walk, sit, or perform other daily activities, and loss of consciousness or fainting. Respondents were asked if they had experienced any of the 15 symptoms in the last 3 months. If respondents answered yes to any of the symptoms, they were asked whether they received medical care and if not, did they think that care would have been necessary. 16.4% of respondents (n=574) indicated experience with a new serious or morbid symptom and of these, 13.1% (n=75) were uninsured. Compared to insured participants, uninsured participants were less likely to have received medical care for their symptoms and were more likely to say that they thought medical care was needed even though they did not receive it (p=.001). The most commonly cited reason for not receiving care even though they thought it was necessary among the uninsured was inability to pay for care (95.2%, p<.001). Further, uninsured participants said that not receiving the necessary care impacted their health (63.2%) and that because they could not receive care, they had personal, household, or work problems (57.1%). The authors conclude that even for serious and morbid symptoms, lack of health insurance is a major barrier to obtaining needed care.

22. **Hogan D. R., Danaei G., Ezzati M., et al. Estimating the potential impact of insurance expansion on undiagnosed and uncontrolled chronic conditions. *Health affairs*. 2015;34(9):1554-1562.**

Hogan et al. aimed to estimate the relationship between health insurance status and the diagnosis and management of diabetes, hypercholesterolemia, and hypertension using a nationally representative sample of U.S. adults. The authors analyzed data from the National Health and Nutrition Examination Survey (NHANES) from 1999-2012 for adults aged 20-64. In order to account for potential confounders, the authors used a matching approach where for each uninsured participant in the sample they, "...selected as a match from the insured population an individual who was similar in terms of the following observed characteristics: sex, age, race/ethnicity, household income, marital status, current smoking status, body mass index, and survey round." The total sample included 28,157 respondents and of this, 11,548 had complete data on diabetes, 25,327 had complete data for cholesterol, and 25,576 had complete data for blood pressure. Compared to those without insurance, participants with insurance had a probability of diagnosis that was 13.5% high for diabetes and hypercholesterolemia, and 8.8% higher for hypertension. Among those with a diagnosis, having insurance was further associated with improved management and control of these conditions. The authors conclude that this study provides data to support the relationship between health insurance and diagnosis and control of a number of chronic conditions among nonelderly adults. They further conclude that because nonelderly adults are the primary target of the Affordable Care Act (ACA), these findings suggest that the ACA could have a significant impact on the recognition and management of chronic diseases.

23. **Niu X., Roche L. M., Pawlish K. S., et al. Cancer survival disparities by health insurance status. *Cancer medicine*. 2013;2(3):403-411.**

Niu et al. utilized the New Jersey State Cancer Registry (NJSCR) to examine the association between health insurance status and survival of patients diagnosed with seven common cancers. The cohort included persons aged 18-64 with a primary diagnosis of invasive breast, cervical, colorectal, lung, prostate, and bladder cancers and non-Hodgkin lymphoma (NHL) for a total sample size of 54,002 cases. The authors found that patients without insurance had a significantly higher risk of death within 5 years of diagnosis than privately insured patients for all the examined cancer types except for cervical cancer (hazard ratios 1.41-1.97). This higher risk of death for uninsured patients remained significant after controlling for prognostic factors such as gender, age, race/ethnicity, marital status, SES, and stage of diagnosis. Similarly, patients with Medicaid also had a 21% to 198% higher risk of dying within 5 years of diagnosis than patients with private insurance for breast, colorectal, prostate, lung cancer, and NHL, even after adjusting for prognostic factors. Finally, the authors examined the 5-year cause-specific survival rates by health insurance status and cancer type for two periods of diagnosis, 1999-2001 and 2002-2004. They found that 5-year survival significantly improved or remained the same across all cancer types, except for cervical cancer, for those with private insurance while survival did not improve for those who were uninsured or Medicaid insured. The authors list a number of possible explanations for the results including, "poorer health with more comorbidity and unhealthy behaviors; no or inadequate preventive health care and management of chronic conditions prior to cancer diagnosis; barriers to receiving treatment and adhering to a treatment regimen such as high cost, inability to navigate the health care system, misinformation about and mistrust of the health care system, lack of a usual source of health care, lack of transportation, lack of time off from work; no treatment or delay in receiving treatment; not all providers accept uninsured or Medicaid insured patients; and lower quality treatment by providers primarily serving the uninsured and Medicaid insured." The authors conclude that the first step to addressing cancer survival disparities is ensuring that everyone has access to adequate health insurance, but they also acknowledge that additional measures will be needed in order to make significant strides.

24. **Cheung Min Rex. Lack of health insurance increases all cause and all cancer mortality in adults: an analysis of National Health and Nutrition Examination Survey (NHANES III) data. *Asian Pacific Journal of Cancer Prevention*. 2013;14(4):2259-2263.**

Cheung et al. utilized National Health and Nutritional Examination Survey (NHANES) III data in order to investigate the relationship between insurance status, all cause, and all cancer mortality. NHANES III was conducted between 1988-1994 and all participants were followed passively until December 31, 2006. In this time period, there were 5,291 all cause and 1,117 all cancer deaths out of a total sample of 33,994 persons. In the univariate logistic regression analysis for all cause mortality, the significant variables were age, poverty income ratio, and alcohol consumption. In the multivariate logistic regression, after controlling for additional socioeconomic, behavioral, and health status variables, the variables that remained significant predictors of all cause mortality included age, having no health insurance, black race, Mexican Americans, poverty income ration, and drinking hard liquor. When considered all together, these variables account for a 70% increase in the risk of all cause mortality associated with having no health insurance. For all cancer mortality, the significant variables in the univariate analysis were age, drinking hard liquor, and smoking. Age, having no health insurance, black race, Mexican

Americans, and smoking were the significant and independent predictors of all cancer mortality in the multivariate analysis after controlling for other potential confounders. In total, this equates to an almost 300% increased risk of all cancer death for people without any health insurance. The authors conclude that health insurance significantly impacts all cause and all cancer death and therefore universal health insurance coverage may be a way to remove this disparity in the United States.

25. American Psychological Association. Evidence-Based Practice in Psychology: APA Presidential Task Force on Evidence-Based Practice. 2006;61(4):271-285.

The American Psychological Association (APA) created a policy indicating that the evidence-base for a psychological intervention should be evaluated using both efficacy and clinical utility as criteria. The Association President appointed the APA Presidential Task Force on Evidence-Based Practice and the task force published this document with the primary intent of describing psychology's commitment to evidence-based psychological practices. This document, though, also references many research articles providing evidence for the efficacy of a number of psychological treatments and interventions. The reference list for this document highlights the growing body of evidence of treatment efficacy from the 1970s through 2006. Note that this does not indicate that all treatments are effective, but rather than there is a very large body of evidence supporting that evidence-based treatments are available.

26. R Chou, S Selph, T Dana, et al. Screening for HIV: systematic review to update the U.S. Preventive Services Task Force recommendation. Evidence synthesis No. 95. Agency for Healthcare Research and Quality. 2012.

The U.S. Preventive Services Task Force (USPSTF) is an independent panel of experts who systematically reviews the evidence and provides recommendations that are intended to help clinicians, employers, policymakers, and others make informed decisions about health care services. This review, which focused benefits and harms of screening for Human Immunodeficiency Virus (HIV) in adolescents and adults, included randomized clinical trials and observational studies. Findings indicate that screening for HIV is accurate, screening only targeted groups misses a large number of cases, and that antiretroviral therapy (ART) reduces the risk death and sexual transmission of HIV.

27. CP Patnode, JT Henderson, JH Thompson, et al. Behavioral counseling and pharmacotherapy interventions for tobacco cessation in adults, including pregnant women: a review of reviews for the U.S. Preventive Services Task Force. Evidence synthesis No. 134. Agency for Healthcare Research and Quality. 2015.

The U.S. Preventive Services Task Force (USPSTF) is an independent panel of experts who systematically reviews the evidence and provides recommendations that are intended to help clinicians, employers, policymakers, and others make informed decisions about health care services. This summary focused on the effectiveness and safety of pharmacotherapy and behavioral interventions for tobacco cessation and included a total of 54 systematic reviews. The findings indicate that behavioral interventions had a significant impact on increasing smoking cessation at 6 months (risk ratio= 1.76 [95% CI, 1.58 to 1.96]), and that various pharmacotherapy interventions also demonstrated effectiveness. In combination, behavioral therapy and pharmacotherapy demonstrated an 82% increase in tobacco cessation when compared to minimal intervention or usual standard of care. The authors conclude that behavioral and

pharmacotherapy interventions are effective interventions to improve rates of smoking cessation both individually and in combination.

28. **Goodman Janice H. . Perinatal depression and infant mental health. *Archives of Psychiatric Nursing*. 2019;33(2019):217-224.**

In this paper, Goodman provides an overview of maternal perinatal depression, the risk it poses to infant/early-childhood mental health, and strategies for intervention. Perinatal depression (i.e., maternal major and minor depression during pregnancy and/or during the first year postpartum) "affects up to 20% of perinatal women in the general U.S. population, with higher rates for women with history of major depression, and for low socioeconomic status and/or immigrant women." Specifically, "major features of perinatal depression include depressed mood, anxiety, compulsive thoughts, loss of control, feelings of inadequacy, inability to cope, irrational fears, fatigue, and despair" and in some cases "suicidal and/or infanticidal thoughts." Evidence shows that in the postpartum period, depression affects a mother's practical caregiving practices (e.g., less likely to breastfeed; less likely to follow infant safety recommendations; take their child to fewer well-child healthcare visits; read and sing to their infants less; and use less healthy sleep practices with their infant). The author cites a large body of research "demonstrating that maternal prenatal and postpartum depression are associated with increased risk for wide-ranging adverse child development effects that can affect mental health." For example, "perinatal depression has been associated with an increased risk for emotional problems, including depression and anxiety, starting in early childhood and persisting into young adulthood." Furthermore, negative effects are seen among children with clinically depressed mothers and children of mothers who have subclinical levels of depressive symptoms. The author cites evidence that compromised parenting is considered "the most critically important mechanism during the postpartum period by which maternal depression affects child mental health outcomes." Specifically, maternal sensitive responses to an infant's signals and communications is "one of the most crucial dimensions of mother-infant interaction and is known to predict positive outcomes in children, including attachment security." Maternal depression, especially if chronic, can disrupt appropriate maternal responses to an infant's cues, babbles, and behavior, interactions that are essential to healthy development. Evidence from a 2000 meta-analysis of studies found depressed mothers of infants were more irritable and hostile, more disengaged from their child, and had lower rates of play and other positive social interactions with their child. "In response, infants may alter their interactive behavior with a depressed mother, leading to broad range of infant deficits including poor emotional behavioral state regulation, fewer positive and more negative facial expressions, avoidance, and greater fussiness." This can lead to a negative pattern of mother-infant interaction. Evidence indicates that "hostile parenting behavior increases risk of child externalizing problems." The severity and persistence of depressive symptoms are both moderating factors that can affect the association between maternal depression, maternal behavior, and child outcomes. For example, "findings from a large observational study (Netsi et al., 2018) indicated an increased risk for adverse behavioral, cognitive, and emotional outcomes among children of women who had persistent PPD (define as depressed at both 2 and 8 months postpartum) compared with women whose PPD did not persist." Most perinatal depression treatment studies have focused exclusively on maternal depression outcomes and do not consider outcomes related to mother-infant relationship or child outcomes. However, "interventions aimed at improving the mother-infant

relationship and interaction have shown promise or effectiveness in lessening the negative consequences of maternal depression on the developing child."

29. **Slomian Justine , Honvo Germain , Emons Patrick , et al. Consequences of maternal postpartum depression: A systematic review of maternal and infant outcomes. *Women's Health*. 2019;15(2019):1-55.**

Slomian et al. conducted a systematic review (January 1, 2005 through August 17, 2016) to evaluate both the infant and maternal consequences of untreated maternal postpartum depression. The analysis included 122 studies that met criteria; 61 (46 cohort studies and 21 cross-sectional studies) records were included for review of maternal consequences of postpartum depression; and 67 (61 cohort studies and 12 cross-sectional studies) records were included for review of infantile consequences of postpartum depression. Nineteen studies examined both infant and maternal consequences of postpartum depression. Of the maternal focused studies, 28 of 68 were conducted in the U.S. and 22 were conducted in Europe. Of the infant focused studies 27 of 73 were performed in the U.S. and 20 were performed in Europe. Results were synthesized into three categories: (a) the maternal consequences of postpartum depression, including physical health (3 studies), psychological health (6 studies), quality of life (8 studies), relationships (7 studies), and risky behaviors (i.e., addictive behavior (4 studies) and suicidal ideation (7 studies); (b) the infant consequences of postpartum depression, including anthropometry (13 studies), physical health (10 studies), sleep (3 studies), and motor development (7 studies), cognitive development (11 studies), language development (13 studies), emotional development (5 studies), social development (4 studies), and behavioral development (12 studies); and (c) mother-child interactions, including bonding (15 studies), breastfeeding (22 studies), and the maternal role (i.e., maternal behaviors (9 studies), maternal competence (2 studies), infant health care practices or utilization measures (8 studies), maternal perception of the infant's patterns (5 studies), and the risk of maltreatment (2 studies)). Of the studies focused on maternal health, "five studies showed that higher levels of depressive symptoms were associated with an increased prevalence of suicidal ideation." Specific to infant health consequences, "of the 10 cohort studies, 9 indicated a significant association between maternal PPD and health concerns in infants." For example, "maternal depressive symptoms at 5 months seemed to predict more overall physical health concerns for infants at 9 months and a greater proportion of childhood illnesses." Additionally, results from 7 of the 11 studies indicate a significant and negative association between maternal postpartum depressive symptoms and cognitive development in children. Specific to mother-child interactions, "a total of 11 studies demonstrated a negative effect of maternal depression on mother-to-infant bonding." Additionally, "women with depressive symptoms showed less closeness, warmth, and sensitivity and a significantly lower level of mutual attunement (with regard to emotional availability) and experienced more difficulties in their relationships with their child during the first year than women without depressive symptoms." Overall, authors conclude that "maternal [postpartum depression] seems to have many negative effects on both child (up to 3 years of age) and maternal health." Specifically, postpartum depression impacts mothers' "psychological health, quality of life, and interactions with their infant, partner, and relatives." Results also show that "the health of infants and children is intimately associated with the health of their mothers." Finally, risks are greater for children in low-income populations.

30. **The Gap in Healthcare Insurance Coverage Washington State, 2011-2015. *Series on Rural - Urban Disparities*. October 2017 ed. Tumwater, Washington: Washington State Department of Health, Office of Community Health Systems; 2017.**

This Department of Health fact sheet documents rural urban disparities in health insurance coverage of adults (ages 18-64 years) from 2011 to 2015. "For large town areas, the uninsured rates declined from 24.7 percent in 2011 to 19.0 percent in 2015. For small town/rural areas, the uninsured rates declined from 30.9 percent in 2011 to 14.9 percent in 2015." However, urban-rural gaps still persist with the percent of uninsured adults increasing as the level of geography moves from urban to small town/rural areas.

31. **Series on Rural-Urban Disparities | Rural Washington: Closing Health Disparities. Tumwater, Washington: Washington State Department of Health, Office of Community Health Systems; 2017.**

This Department of Health fact sheet reports that "[o]verall, communities in rural areas are at a disadvantage on multiple health and health-related measures." In 2015, there were statistically significant differences ($p < 0.05$) in health outcomes for Washingtonians living in small towns/rural areas compared to urban residents. Specifically, those living in small towns/rural areas were less likely to have had an annual dental care visit and more likely to have not received preventative screening for breast cancer or colon cancer. Additionally, based on self-reported risk factors and health outcomes, those living in small towns/rural areas were more likely to currently smoke, be obese, and to have had coronary heart disease than urban counterparts. Adults living in large towns were also more likely to currently smoke and be obese than urban counterparts. Adults living in suburban areas were more likely to smoke than urban Washingtonians. Other health related measures were not statistically significantly different. "In general, people with high behavioral risk factors profile are very likely to have actual poor health status."

32. **Health Washington State Department of. 2018 Washington State Health Assessment. March 2018 2018.**

The *State Health Assessment* provides an overview of health and well-being of Washington residents. It outlines the changing population trends --increasing in number, becoming more racially and ethnically diverse, and aging. It also discusses disparate health outcomes experienced by various populations within Washington.

33. **Garcia Macarena C., Faul Mark, Massetti Greta, et al. Reducing Potentially Excess Deaths from the Five Leading Causes of Death in the Rural United States. *Centers for Disease Control and Prevention | Morbidity and Mortality Weekly Report*. 2017;66(2).**

This CDC MMWR, addresses the five leading causes of excess death in the United States: heart disease, stroke, chronic lower respiratory disease, cancer, and unintentional injury. In 2014, approximately 62% of all 1,622,304 deaths in the United States were related to the five leading causes of death (6). During 2014, the number of potentially excess deaths from the five leading causes in rural areas was higher than those in urban areas. Analysis found that "the percentage of potentially excess deaths from heart disease, stroke, and chronic lower respiratory disease is higher in rural than urban areas in all 10 regions of the U.S. During 2003-2012, the overall cancer-related age-adjusted death rate decreased by 1.5% per year. However, rates declined less in rural than urban areas. Authors note that age-adjusted death rates from cancer mirrored decreases

in the prevalence of risk factors like smoking tobacco. Therefore, they postulate that rural-urban difference in death rates may reflect differences in tobacco-use in rural areas and lack of access to cancer screening and other follow-up medical care. During 1999–2014, the age-adjusted death rates for unintentional injuries were approximately 50% higher in rural areas than in urban areas.

34. Ivey-Stephenson Asha Z., Crosby Alex E., Jack Shane P. D., et al. Suicide Trends Among and Within Urbanization Levels by Sex, Race/Ethnicity, Age Group, and Mechanism of Death — United States, 2001–2015. *Centers for Disease Control and Prevention / Morbidity and Mortality Weekly Report*. 2017;66(18).

Suicide is one of the top ten leading causes of death in the U.S. This CDC MMWR reports that "suicide rates increased across the three urbanization levels, with higher rates in nonmetropolitan/rural counties than in medium/small or large metropolitan counties." Specifically, in nonmetropolitan/rural and medium/small metropolitan counties, increases in suicide rates occurred during 2001–2007 and the increases accelerated in 2007 and 2008. Authors noted the Great Recession officially began in 2007 and ended in 2009. From 2001 through 2015, 114,559 total suicide deaths were recorded in nonmetropolitan/rural areas, for an overall rate of 17.32 (range 15.50 to 19.74 in 2001-03 and 2013-15, respectively). Suicide death rates over the reporting period (2001-2015) were 14.86 for medium/small metropolitan areas and 11.92 for large metropolitan areas.

35. Association National Family Planning & Reproductive Health. Policy Brief--Title X: Helping Ensure Access to High-Quality Care. 2015.

Title X of the Public Health Service Act was enacted in 1970 and is known as the "national family planning program." It is the only federal funding source for family planning services in the United States, and provides "high-quality family planning services and related preventive health care to low-income and uninsured individuals who may otherwise lack access to health care." Funding provides care for both men and women regardless of ability to pay, insurance status, or immigration status. Approximately 70% of Title X patients have incomes below 100% of the Federal Poverty Level and 63% are uninsured. This policy brief outlines service by socioeconomic status, insurance status, race and ethnicity, and geography. It states that women, women of color, immigrant women, and women living in rural or frontier areas are less likely to have health insurance. An estimated 40% of women of reproductive age with low-incomes lacked health insurance. Of all women without health insurance, 39% are immigrants due to "policies and regulations restricting access to public and private health insurance as well as the overrepresentation of immigrants in jobs unlikely to provide health insurance."

36. Munro K., Jarvis C., Munoz M., et al. Undocumented pregnant women: What does the literature tell us? *Journal of Immigrant and Minority Health*. 2013;15:281-291.

Munro et al. completed a literature review of 23 articles published between 1987 and 2010 evaluating access to prenatal and obstetric health services for undocumented pregnant migrants. The authors define migrants as, "individuals who...choose to leave their home countries and establish themselves either permanently or temporarily in another country." Based on their review, the authors found that pregnant undocumented migrants were more likely to be young, unmarried, engaged in low-income domestic work, and have unintended pregnancies. They were also less likely to access prenatal care than documented migrant women and women in the general population. Reasons for not seeking care were related to lack of legal residency status,

lack of health insurance, cost of care, fear of deportation, and confusion about healthcare policies. The authors did not consider strength of study design or quality of research as inclusion criteria for the literature review. In addition, articles included research completed in the United States, Canada, and Europe. Therefore, articles may be of varying quality and lower generalizability.

37. Mehta P. K., Saia K., Mody D., et al. Learning from UJAMBO: Perspectives on Gynecologic Care in African Immigrant and Refugee Women in Boston, Massachusetts. *Journal of Immigrant Minority Health*. 2018;20(2):380-387.

Mehta et al. analyzed results from 6 focus groups completed with 31 Congolese and Somali female immigrants in Boston, Massachusetts to understand access to and use of gynecological services. They identified a number of barriers to accessing reproductive health care, including fear of stigma (that seeking care means sexual promiscuity), concerns about privacy and sexual modesty, fear of discrimination, prior experiences with sexual trauma or violence, lack of providers who understand female circumcision/genital cutting, lack of partner support, lack of financial resources and cost of care, lack of insurance, attitudes and beliefs (including cultural beliefs about when to see a doctor and what constituted pain/discomfort), and environmental constraints (e.g. transportation, cultural limitations on mobility, lack of childcare). Recommendations to improve access include training providers in culturally humble communication and culturally-appropriate and trauma informed care, including understanding of female circumcision/genital cutting; providing health education about preventive care in community-based and religious settings; and developing peer support programs to reduce social stigma.

38. Hasstedt K., Desai S., Ansari-Thomas Z. Immigrant Women's Access to Sexual and Reproductive Health Coverage and Care in the United States. Guttmacher Institute; 2018.

In this report, the Guttmacher Institute summarize evidence related to immigrant women's access to reproductive health care. They conducted a rapid literature review of 24 published articles and grey literature since 2011. They found that "existing research suggests immigration status influences women's sexual and reproductive health coverage, care, and outcomes." The authors highlight two main findings: 1) "A smaller proportion of immigrant women-- including both undocumented and those lawfully present-- have health insurance coverage and are less likely to use sexual and reproductive health services, compared with U.S.-born women." The report cites data from 2016 that 34% of noncitizen immigrant women of reproductive age in the U.S. were uninsured, compared to 9% of U.S.-born women. 2) "Among immigrant women who do obtain contraceptive care, they are significantly more likely than their U.S.-born counterparts to visit publicly funded family planning centers." They cite data that 41% of immigrant women who obtained contraceptive coverage used safety-net family planning centers, compared to 25% of U.S.-born women. Approximately 70% of immigrant women reported safety-net providers as their usual source of care. The authors recommend improving access to reproductive health care for immigrant women by expanding insurance eligibility, providing additional support to health care safety net providers, and supporting community health workers.

39. Yen W. Health Coverage Disparities Associated with Immigration Status in Washington State's Non-elderly Adult Population: 2010-17. Washington State Health

Services Research Project. Washington State Office of Financial Management; May 2019 2019.

The Washington State Office of Financial Management (OFM) provided a summary of health coverage from 2010 to 2017 for four immigration groups in Washington State: U.S.-born citizens, naturalized citizens, legal immigrants, and individuals who are undocumented. Overall, they found that the percentage of individuals who were uninsured decreased across all four sub-groups as a result of the Patient Protection and Affordable Care Act (ACA). Approximately 40.7% of individuals who are undocumented in Washington State are uninsured. OFM also found that, "because of the faster health coverage gains in the citizen groups through [key Affordable Care Act coverage expansion programs], the coverage disparities between the non-citizens, particularly [individuals who are undocumented], and citizens widened." The found that, "the gap between the [individuals who are undocumented] group's uninsured rate and that of the U.S.-born citizen group more than doubled between 2013 and 2017. In 2017, [individuals who are undocumented] were 11.1 times as likely to be uninsured as U.S.-born citizens, when other population characteristics are held as equal." Legally present immigrants were twice as likely to be uninsured. While approximately 5.7% of U.S.-born citizens are uninsured, 40.7% of individuals who are undocumented in Washington State are uninsured. Prior to the Affordable Care Act, legally present immigrants and individuals who are undocumented accounted for 22.1% of individuals who were uninsured in Washington State. Following the ACA, this percentage increased to 34.7% of Washington State's uninsured population. OFM concluded that, "as gains in expanding coverage among citizens become hard to achieve because of their current very low uninsured rates, new policy considerations aimed at further reducing overall uninsured and health care costs may need to search for ways to reduce the health coverage disparities associated with immigration status."

40. Martinez O., Wu E., Sandfort T., et al. Evaluating the impact of immigration policies on health status among undocumented immigrants: a systematic review. *J Immigr Minor Health*. 2015;17(3):947-970.

Martinez et al. completed a literature review of 40 articles published between 1990 and 2012 to determine how immigration laws impact access to health services and health outcomes for undocumented immigrants. The review included research from multiple countries, including the United States. Thirty articles were related to access to health services. The authors noted barriers including policies that limit or restrict access to insurance or care, financial barriers and cost of care, complex administrative procedures to apply for care, fear of deportation or legal action, harassment and discrimination from providers, institutionalized discrimination, cultural differences, language barriers, low health literacy and knowledge of the health care system, presence of police checkpoints at health departments, identification requirements to receive care, and criminalization of undocumented status. Specific to the Affordable Care Act, the authors note, "healthcare safety net hospitals and clinics, which are the main providers of health care and services for undocumented immigrants, might face funding and reimbursement challenges by [Affordable Care Act], making it impossible to continue providing services to undocumented immigrants. [Affordable Care Act's] exclusion and denial of participation of undocumented immigrants may lead to further marginalization of undocumented immigrants and alienation from health services..." The authors also noted recommendations from the literature. They recommend revising national policies to extend access to comprehensive primary care (including preventive care like vaccinations and infectious disease screening), prenatal care, and chronic

disease management to decrease risk to public health and reduce the cost of emergency care. They recommend developing culturally and linguistically appropriate programs and training providers in cultural competency, linguistic competency, and cultural diversity. They also recommend that health care providers develop relationships and referral systems with community organizations to connect immigrants with information about their rights, citizenship pathways, and educational opportunities. Lastly, they recommend developing new support strategies for safety-net health care facilities (e.g. federally qualified health centers, community health centers).

41. **Hacker K., Anies M., Folb B. L., et al. Barriers to health care for undocumented immigrants: a literature review. *Risk Management and Healthcare Policy*. 2015;8:175-183.**

Hacker et al. completed a literature review of 66 articles published in the 10 years prior to this review to examine barriers to accessing health care for undocumented immigrants, and identifying strategies to address these barriers. Articles in the review included research from multiple countries, including the United States. Policy barriers to accessing health care included health insurance laws and documentation requirements to get services. Health system barriers included constraints related to work conflicts and transportation, constraints related to lack of translation services and culturally competent care, discrimination in the clinic environment, and complex paperwork or registration systems to receive care. Individual level barriers included fear of deportation, stigma, shame about seeking services, lack of social capital, lack of financial capital to pay for services, limited health literacy or knowledge about the health care system, limited English proficiency, and cultural differences. Overall, the largest barrier identified through the review was "national policies excluding undocumented immigrants from receiving health care" with the majority of policies restricting access to health insurance. The authors state, "because insurance was generally required for affordable care or required to receive services at all, these laws effectively barred access to care [for undocumented immigrants]." The authors identified five categories of recommendations: 1. Change policies; 2. Extend insurance options; 3. Expand the safety net; 4. Train providers; 5. Educate undocumented immigrants on navigating the health care system. Specific to changing policy, recommendations include expanding health care access regardless of immigration or citizenship status, giving full rights to health care for all immigrants, and delaying deportation until care is completed. Recommendations related to insurance included allowing all immigrants access to a state funded health plan, providing insurance to all workers regardless of immigration status, providing a limited insurance option to preventive care or by disease, and offering sliding-scale payment systems. Safety net recommendations included expanding the capacity of clinics (e.g. federally qualified health centers, public hospitals, community health centers, state and local public health clinics) to provide care to immigrants through additional state support, and providing health education in alternative settings (e.g. faith-based organizations). Training recommendations included educating providers to understand the specific medical needs of immigrant communities, to use interpretation services, and to understand immigration laws. Health literacy recommendations included educating immigrants about the health care system and their right to health care as well as connecting immigrants with "culturally appropriate navigators in health care environments" to help navigate services. The authors note that an important limitation is that, "many of the recommendations we have identified in the reviewed articles have not been tested so it is difficult to ascertain whether or not they would be deemed successful."

42. **Ho J. R., Hoffman J. R., Aghajanova L., et al. Demographic analysis of a low resource, socioculturally diverse urban community presenting for infertility care in a United States public hospital. *Contracept Reprod Med.* 2017;2:17.**

Ho et al. summarized the literature about access to infertility care. They stated that only 24% of the demand for assisted reproductive technologies are met in the United States and that geography, income, insurance status, language and cultural barriers, and bureaucracy within the public health system all create barriers to accessing infertility care. As part of this study, Ho et al. also recruited women who were presenting for infertility treatment at a public, county-based, low resource clinic and at a high resource infertility clinic in San Francisco. They surveyed 87 patients and collected information related to English proficiency, parity, ethnicity, immigrant status, income level, and education level. They compared these demographics with length of infertility and infertility diagnosis to determine if there were differences by subgroup. Length of infertility served as a proxy for difficulty in accessing health services. Patients at the low-resource clinic were more likely to speak a language other than English, to have immigrated to the United States, to have a lower annual income, and to have less than a college degree as compared to patients at the high resource clinic. They found that, "after controlling for age at the initiation of pregnancy attempt, lower education level, lower income, and immigrant status were significantly correlated with a longer duration of infertility." For example, the authors found that, "[patients] reporting an income [greater than or equal to] \$100,000 presented to clinic approximately 6 months earlier than those with an income [less than] \$100,000 ($\beta = -6.2$, $p = 0.04$)." They also found that, "women with insufficient income to pay for [assisted reproductive technologies] services experience an insurmountable gap in access to care." They note that infertility treatments are excluded from coverage under the Affordable Care Act, and that most county, state, and federal public health programs do not cover basic infertility services. The authors state, "in the US, price is a barrier that separates those that are able to pay for standard of care treatment vs those that must accept substandard or no care in many cases." In addition to cost of care, the authors also point out that provider bias and implicit assumptions about income, patient ability to navigate the health care system, and low health literacy may also serve as barriers to receiving care.

43. **Yen Wei, Mounts Thea. Washington State Health Services Research Project | Three Years' ACA Impact on Washington State's Health Coverage. Washington State Health Services Research Project. Olympia, Washington: Washington State Office of Financial Management; 2018.**

This OFM research brief details the reduction of uninsured Washingtonians since the implementation of key provisions of the Patient Protection and Affordable Care Act (ACA) in 2014. The overall uninsured rate in Washington declined from 14.0 percent in 2013 prior to the ACA to 8.2 percent in 2014. It decreased to 5.4 percent in 2016 and was expected to stay approximately constant in 2017. With few exceptions, the decrease in uninsured rates was seen in all demographic groups assessed. All age groups under age 65 years (i.e., age at which individuals are eligible for Medicare) experienced declines in their uninsured rates in 2014 and 2015. "In particular, the 18-25 age group's uninsured rate declined from 24.6 percent in 2013 to 9.9 percent in 2015 and, in the 26-45 age group, from 23.7 percent to 10.1 percent." In 2016 and 2017, changes were not statistically significant. In regards to family income, both those with income below 100% of the Federal Poverty Level (FPL) and those with income at 100-138% of the FPL had uninsured rates above 25% prior to Medicaid expansion in 2013. The uninsured

rates among these two groups were approximately “10 percentage points higher than that of the next higher income group (139-400 percent FPL) in 2013.” By 2017, uninsured rates among families with income ≤100-139% FPL were either statistically no different from or very close to the rate of the latter group (139-400% FPL). OFM data also show large disparities in the uninsured rates by race/ethnicity before 2014. The uninsured rates among communities of color were about two to five times as high as the rate of 7.3 percent for the white group in 2013 (Figure X).¹ In 2014 and 2015, uninsured rates among black, Asian and Pacific Islanders, and multi-race groups decreased to “the same level or just slightly higher than the white group’s rate, which itself declined to [5%].”¹ However, American Indian/Alaska Native (AI/AN) and the non-specified “other one-race” group, “still had high uninsured rates in 2015 despite having had remarkable drops from the high rates in 2013” (30.2% to 14.9% for AIAN and 36.6% to 21.7% for “other one-race”).¹

44. The Henderson Center for Social Justice Berkeley Law. Equal opportunity: The Evidence- a summary of key ideas , current research, and relevant information for those who aim to promote and protect equal opportunity. University of California Berkeley; 2012.

University of California Berkeley's Henderson Center for Social Justice provided an overview and history of equal opportunity efforts in the U.S. They use the term "equal opportunity" to include both affirmative action and equal opportunity efforts. Affirmative action and equal opportunity programs began as a result of the Kennedy Administration's Executive Order 10925, which required government contractors to "take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin." This report summarizes information related to contracting, education, wealth, homeownership, and other factors. It stated that "overall, people of color rate their health status lower than Whites ([non-Hispanic]). The life expectancy at birth for African Americans is five years less than for Whites...In general, people of color report less access to health care and poorer quality health care than Whites ([non-Hispanic])." The report found that, "although the effect of [state affirmative action] bans are complicated to assess, there is a recurring pattern of decreased diversity." The report presents some research on Washington State. For contracting, transportation contracts awarded to minority-owned and women-owned businesses increased under affirmative action and decreased sharply after I-200 passed in 1998. Similarly, applications and enrollment by people of color decreased at University of Washington, and to a lesser degree at other public universities. For public employment, the authors note that, "in Washington, the diversity of state employees before and after the passage of the anti-equal opportunity Initiative 200 in 1998 has not been tracked." They noted that Washington State began tracking this information in 2006, and that the current state workforce is similar in diversity to the private sector, though people of color were slightly less represented.

45. 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 tracts 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. Children 1-4 and 5-14 experience the lowest mortality

rates, with no difference between sexes. However, in each of the remaining age groups, death rates among men are higher than death rates for women, including among those aged 85 or older.

46. Kemple Angela. Health of Washington State Report: Coronary Heart Disease. Tumwater, Washington: Washington State Department of Health; 17 February 2016 2016.

Kemple presents data from Washington regarding coronary heart disease in the state.

Washington data from the Behavioral Risk Factor Surveillance System (BRFSS) from 2012-2014 combined, age-adjusted coronary heart disease death rates were 1.7 times higher for Washington residents in census tracts where less than 15% of the population were college graduates compared to rates in census tracts where 45% or more of the population were college graduates. Further, BRFSS data also show that age-adjusted diabetes prevalence is highest among Native Hawaiians and Other Pacific Islanders, American Indian/Alaska Native, and Blacks. The numbers and rates of coronary heart disease deaths in Washington increase with age. In each age group, men have higher rates than women

47. Prather Cynthia, Fuller Taleria R., Marshall Khiya J., et al. The Impact of Racism on the Sexual and Reproductive Health of African American Women. *Journal of Womens Health (Larchmt)*. 2016;25(7):664-671.

Prather et al. use the socioecological model to describe racism and its effect on African American women's sexual and reproductive health. Authors examine the historical context of racism (e.g., medical experimentation) as well as institutional racism (society), personally mediated racism (neighborhood/community), and internalized racism (family/interpersonal supports and individual). Authors concluded, "[i]n both historical and contemporary contexts, race-based mistreatment has been shown to place African American women at increased risk for HIV/STIs, pregnancy-related complications, and early mortality."

48. Eichelberger Kacey Y., Doll Kemi, Ekpo Geraldine E., et al. Black Lives Matter: Claiming a Space for Evidence-Based Outrage in Obstetrics and Gynecology. *American Journal of Public Health*. 2016;106(10):1771-1772.

This AJPH perspective provides an overview of why authors believe the phrase "Black Lives Matter" should inform obstetric and gynecological care.

49. Kemple Angela. Health of Washington State Report: Stroke. Tumwater, Washington: Washington State Department of Health; 2016.

Kemple presents data from Washington regarding stroke 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 stroke 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 black and American Indian/Alaska Native. The rate for Native Hawaiian and other Pacific Islander residents is also high (81 deaths per 100,000 people), but subject to greater random variation than rates for other groups because of small numbers. Men ages 45–74 have higher stroke death rates than women, and women ages 85 and older have higher stroke death rates than men.

50. 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/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, and 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.

51. Christensen Trevor, Weisser Justin. Health of Washington State Report: Tobacco Use. Washington State Department of Health; 2015.

Christensen et al. report Washington state Behavioral Risk Factor Surveillance System (BRFSS) data from 2012 to 2014 indicate that prevalence of smoking decreases as income and levels of education increase. Further, American Indians and Alaska Natives (AI/AN) and Native Hawaiian/Other Pacific Islander populations have significantly higher smoking rates than white, black, Hispanic, and Asian populations.

52. 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.

53. VanEenwyk J. Health of Washington State Report: Socioeconomic Position in Washington. Washington State Department of Health; 2016.

VanEenwyk presents data about socioeconomic position in Washington State including differences within the state as well as statewide differences compared to national data. Data indicate that compared to the United States as a whole, fewer Washington residents are living in poverty and a higher percentage of residents ages 25 and older have college degrees. However, these economic resources are not evenly distributed among all Washington residents. Females in Washington were more likely to be living in poverty than males and were also more likely to have lower wages. Further, American Indian and Alaska Native, Hispanic, and black residents had higher percentages of living in poverty and lower median household incomes compared to other groups. Data also indicated that counties in eastern Washington were more likely to have high poverty rates and high rates of unemployment than counties in western Washington.

54. Ellings Amy. Health of Washington State Report: Obesity and Overweight. Washington State Department of Health; 2015.

Ellings reports Washington state Behavioral Risk Factor Surveillance System (BRFSS) data from 2002-2014, which shows that obesity rates are the highest among low income families and that as income increases, rates of obesity decrease. Further, individuals that graduated college or

attended some college had lower rates of obesity than those who had a high school education or less. Black, American Indian and Alaska Native, and Hispanic Washington residents had higher rates of obesity even after accounting for gender, income, education, and age.

55. Health of Washington State Report: Mental Health. Tumwater, Washington: Washington State Department of Health; 2007.

This document presents data from Washington regarding poor mental health in the state. Washington data from the Behavioral Risk Factor Surveillance System (BRFSS) 2004-2006 show that among adults, the percentage of adults who report 14 or more days of poor mental health in the previous month increased as household income decreased. The relationship of mental health and education is similar to that of mental health and income. American Indians and Alaska Natives reported significantly higher rates of poor mental health (19% ±4%) than other racial and ethnic groups.

56. Gynecologists The American College of Obstetricians and. Committee Opinion: Access to Contraception. 2015.

In this brief, the American College of Obstetricians and Gynecologists (ACOG), Committee on Health Care for Underserved Women summarizes barriers to accessing contraceptive care and presents recommendations to improve access. In general, ACOG recognizes that barriers to contraceptives include lack of knowledge and misperceptions by individuals, lack of knowledge about the risks and benefits of contraceptives by providers, restrictive legal rulings and legislation, costs and insurance coverage, religious and ethical beliefs, appropriate payment and reimbursement for clinician services, and unnecessary medical practices. ACOG states that the unintended pregnancy rate for low-income women is five times the rate for women in the highest income bracket. They state that low-income women are less likely to be insured, and that federal programs like Title X and Medicaid are underfunded and cannot provide coverage for all women. Specific to increasing access for low-income women, ACOG recommends continued funding for the federal Title X family planning program and Medicaid family planning services.

57. Bahn K, Kugler A, Mahoney M, et al. Linking Reproductive Health Care Access to Labor Market Opportunities for Women. Center for American Progress; 2017.

This Center for American Progress report examines the relationships between economic status and reproductive health. The report concludes that, "women's economic empowerment, as measured by women's labor force participation, earnings, and mobility, is correlated with stronger measures of upholding reproductive rights and health care access." They found that states with better access to reproductive health care also have the greatest economic opportunity for women. Low-income women face barriers due to lack of insurance and restrictive state laws that have economic implications (e.g. requirements that women have multiple doctors offices or unnecessary waiting period before receiving an abortion result in additional costs for travel, child care, missed work, etc.). These barriers "affect those who already have the least resources and face the most barriers to receiving medical care, exacerbating economic inequality." While income is a barrier to accessing reproductive health care, receiving reproductive health care also impacts a women's future economic opportunities. For example, access to contraception and abortion "has serious economic consequences for women, in both immediate costs as well as long-term effects on economic stability and progress." This suggests that the relationship between socioeconomic status and access to reproductive health care is cumulative and cyclic.

58. Akinyemiju T. F., Soliman A. S., Yassine M., et al. Healthcare access and mammography screening in Michigan: a multilevel cross-sectional study. *International Journal for Equity in Health*. 2012;11(16).

Socioeconomic status and access to healthcare may contribute to disparities in use of available mammography screening. Women of lower socioeconomic status and women living in neighborhoods of lower socioeconomic status are less likely to have mammography screening. Akinyemiju et al. analyzed data from the 2008 Michigan Sepcial Cancer Behavioral Risk Factor Survey (modeled after the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance Survey) with women aged 40 or older to determine risk factors, family history, screening behaviors, and cancer knowledge. Access to health care was measured by health insurance status, having a usual place of care, and having a usual healthcare provider. Socioeconomic status was measured at the individual and county levels based on measures of affluence, disadvantage, and immigration. Overall, Their analysis found that having no usual source of care reduced the likelihood of receiving a mammogram by 54% (OR= 0.46, 95% CI= 0.21-0.99), having no healthcare provider reduced the likelihood of recieving a mammogram by 68% (OR= 0.32, 95% CI= 0.15-0.69), and having no health insurance reduced the likelihood of recieving a mammogram by 73% (OR= 0.27, CI= 0.14-0.54). None of the county level factors (including county level socioeconomic status) were significant. The authors concluded that the primary barriers to mammography screening were lack of health insurance and not having a usual healthcare provider.

59. Henry K.A., Sherman R., Farber S., et al. The joint effects of census tract poverty and geographic access on late-stage breast cancer diagnosis in 10 US states. *Health and Place*. 2013;21:110-121.

Henry et. al. evaluated the impact of poverty and geographic access to mammography on stage of breast cancer diagnosis. They cite previous research showing disparities in breast cancer stage at diagnosis by race and ethnicity, insurance status, income, education, and neighborhood conditions (area socioeconomic status and residential segregation). They state that access to mammography screening plays a role in early detection of breast cancer, and assumed that late-stage diagnosis of breast cancer could be indicative of disparate access to mammography services. The authors noted that stage at diagnosis is an imperfect measure of access to mammography facilities, but use this indicator due to data availability. Using state cancer registry data, Henry et. al. evaluated breast cancer data for 161,619 women aged 40 or older from 10 states (Arkansas, California, Idaho, Iowa, Kentucky, New Hampshire, New Jersey, New York, North Carolina, and Oregon). They examined the relationship between stage at breast cancer diagnosis, geographic accessibility (measured by relationships between distance from a mamography facility location and road travel times), rural/urban residence, and census tract poverty. Overall, they found that, "stage differed significantly by age, race/ethnicity, insurance, census tract poverty, rural/urban residence, travel time to the nearest mammography facility, geographic access based on our derived access score, and state." They found a direct relationship between poverty and late-state breast cancer diagnosis, such that the odds of being diagnosed with late-stage breast cancer is 1.3 times (95% CI= 1.26-1.34) greater in census tracts with poverty rates >20% than the odds of being diagnosed in census tracts with poverty rates <5%. They authors also found that, "after adjusting the models for census tract poverty, there was no evidence that geographic access measures were associated with late-stage diagnosis of breast

cancer." They suggest that, "specific interventions, such as the introduction of mobile mammography units or new permanent facilities in rural areas may have reduced travel time to mammography facilities to a level that improves any historical disparities among rural versus urban women." Poverty remained a significant, independent predictor of late-stage diagnosis. Similarly, the authors state that increased odds of late-stage breast cancer diagnosis in high poverty areas are the same for all women regardless of geographic accessibility. Therefore, the authors concluded that women in high poverty areas and women without health insurance were at greatest risk of being diagnosed at a late stage of breast cancer.

60. **Zimmerman M. S. Information Poverty and Reproductive Healthcare: Assessing the Reasons for Inequity between Income Groups. *Social Work in Public Health*. 2017;32(3):210-221.**

Zimmerman provided a summary of the literature examining the relationship between socioeconomic status and access to reproductive health care services. Her literature review identified barriers including, women's attitudes and beliefs; knowledge of services; lack of social support; transportation; clinic environment; existing laws and legislation; cost of care; insurance status; communication with healthcare workers; gender inequality; and intimate partner violence. She states that, "it is commonly known that in the United States women who are of low-income do not access reproductive healthcare services to the same advantage as women who are of higher income." She also cites previous research suggesting that income is a greater predictor of access to healthcare than race, and that low-income women were less likely to access reproductive care than higher-income women. As part of this study, Zimmerman completed 15 in-depth interviews with women of various socioeconomic status to determine barriers to accessing reproductive healthcare services and information. She conducted semi-structured interviews with women in North Carolina to learn about how women seek reproductive healthcare, their experiences, and barriers to accessing care. Ten of the interviews were completed with women with an income below 200% of the federal poverty limit. She took extensive notes during the interview process, coded and analyzed all responses, and presented results by theme, following best practices for qualitative research. Despite use of best practices, this study has three main limitations, including small sample size, low generalizability, and the use of general or theoretical questions, rather than asking specifically about personal experience. Based on her in-depth interviews, she concluded that the primary barriers low-income women face in accessing reproductive health care include: clinical staff attitudes, knowledge of care available, cost of care, and lack of insurance. Zimmerman offers two solutions to address these barriers: 1. Work with social workers to increase awareness of and education about available healthcare and services within communities: 2. Train medical providers to positively engage with patients to improve understanding.

61. **Phillippi J. C., Myers C. R., Schorn M. N. Facilitators of prenatal care access in rural Appalachia. *Women and Birth*. 2014;27(4):e28-35.**

Phillippi et al. completed 29 qualitative interviews with pregnant women receiving prenatal care at a birth center in rural Appalachia to determine what factors facilitate access to care. The authors concluded that, "women were willing to overcome barriers to access care that met their needs." The identified a number of barriers to accessing prenatal care, including insurance status, cost of care (e.g. Private insurance had more out-of-pocket expenses than Medicaid), service availability (e.g. women valued being able to choose the type of prenatal care they wanted), provider

availability (e.g. 20% of counties in Tennessee do not have any prenatal care provider, 39% of counties in Tennessee have provider shortages, study participants went to the only birth center in a 50 mile radius), competing priorities (e.g. other children and childcare needs, housing), transportation, work schedules, and social support. They suggest that factors that increase access include insurance (e.g. Medicaid eligibility provided greater access), patient-centered care (e.g. personalized, compassionate, not rushed, willing to answer questions), and welcoming clinic environments (e.g. minimal wait times, family-friendly). The authors align their findings with the Healthy People 2020 report that describes access as "a three step process, including: gaining entry into the health care system, accessing a place where needed services are provided, and finding a provider with whom the individual can communicate and trust."

62. Quality Agency for Healthcare Research and. 2016 National Healthcare Quality and Disparities Report. Rockville, MD: U.S. Department of Health and Human Services; 2017.

The National Healthcare Quality and Disparities Report is mandated by Congress and has been published every year since 2003. The intent of the report is to summarize the quality of healthcare received by people in the United States, and to identify disparities in care and access to care by priority populations. It evaluates quality of healthcare in six core areas: person-centered care, patient safety, healthy living, effective treatment, care coordination, and care affordability. The report uses four main measures for access to care: having health insurance, having a usual source of care, encountering difficulties when seeking care, and receiving care as soon as wanted. Over time, the report has found disparities in access to care based on race and ethnicity, socioeconomic status, age, sex, disability status, sexual orientation, gender identity, and residential location. The 2016 report concluded that, while disparities in health insurance status decreased since 2014, about 70% of care affordability measures have not changed since 2010 and disparities in care persisted for poor and uninsured populations in all priority areas. The report stated, "poor people experienced worse access to care compared with high income people for all access measures except one" and "more than half of measures show that poor and low-income households have worse care than high-income households." Further, the report concluded that "significant disparities continue for poor people compared with high-income people who report they were unable to get or were delayed in getting need medical care due to financial or insurance reasons."

63. Ethics Committee of the American Society for Reproductive Medicine. Disparities in access to effective treatment for infertility in the United States: an Ethics Committee opinion. *Fertil Steril.* 2015;104(5):1104-1110.

The Ethics Committee of the American Society for Reproductive Medicine summarized disparities in accessing fertility treatments in the U.S. The Committee reports that approximately 11% of women and 9.4% of men of reproductive age experience difficulty with fertility, but only 38% of women experiencing fertility problems use infertility services and only 24% of the need for assisted reproductive technology (ART) is being met. They found that disparities in accessing infertility service and ART exist due to race, ethnicity, geography, and socioeconomic status. However, "economic factors are the chief contributors to disparities in access to effective treatment." Barriers include differential counseling and referrals from providers (e.g. based on assumptions about an individual's or couple's socioeconomic status, whether a person deserves to be a parent or can raise a child, marital status, and sexual orientation/gender identity), lack of

health insurance coverage (e.g. the Affordable Care Act does not include infertility care as an essential health benefit, public insurance (including Medicaid) does not cover ART), cost of care (e.g. in vitro fertilization costs can exceed \$19,000 out-of-pocket), transportation costs, ability to take time off from work, distance from clinics or providers (e.g. 16 states had 5 or fewer IVF providers, with most providers centered in areas of high median income), fear of stigmatization (e.g. aversion to being labeled as "infertile"), limited English proficiency, cultural or religious beliefs, lack of service availability at religiously-affiliated hospitals and clinics, and lack of federal policy and restrictive state policies (e.g. some states provide mandated insurance coverage, other states require a 2-year wait period). The Ethics Committee also proposed recommendations to reduce these disparities, including increasing insurance coverage (e.g. state mandated insurance coverage has been shown to increase the use of fertility services threefold), reducing the cost of treatment, increasing partnerships between providers and non-profit organizations that can reduce costs for patients, improving provider awareness of treatment disparities, training providers in cultural competency, improving referrals to providers and institutions that can provide ART, improving data collection (e.g. race and ethnicity are only captured 65% of the time according to data from the Society for Assisted Reproductive Technology Clinic Outcomes Reporting System), and improving public education to increase understanding about prevention, signs, and treatment of infertility.

64. Todd Ana, Stuifbergen Alexa. Breast Cancer Screening Barriers and Disability. *Rehabilitation Nursing*. 2012;37(2):74-79.

Authors Todd and Stuifbergen (2012) review and summarize the barriers to breast cancer screening for women with disabilities. The following categories emerged: finances, environment, physical limitations, health care providers' attitudes and lack of knowledge, and psychosocial issues. Financial: with 41% of women with disabilities living at or below the national poverty line, financial barriers are particularly salient. Lack of insurance coverage and cost were cited by many studies as barriers to receiving mammograms (yet post-ACA research may yield different results due to differences in coverage). Environmental: transportation-related barriers included unreliable or limited public transportation (especially for women in rural areas and those for whom fatigue is a barrier to daily activities), needing to schedule ahead for transportation, and relying on family members for transportation. Equipment also posed a barrier to many, especially those who cannot stand to use standard mammography equipment. Physical: those with more severe disabilities, especially motor impairments, were less likely than those without disability to receive a mammogram (13% versus 44%). Providers: many providers treat women with disabilities in a condescending manner, ignore routine female screening needs, and fail to recommend mammograms. Women with disabilities are less satisfied with their care and thus more likely to delay or forgo care in the future. Psychosocial: women with disabilities are more likely to have depression than those without disabilities (30% versus 8%), and women who are depressed are less likely to receive mammograms.

65. Drew J. A., Short S. E. Disability and Pap smear receipt among U.S. Women, 2000 and 2005. *Perspect Sex Reprod Health*. 2010;42(4):258-266.

Drew and Short (2010) analyzed data from the National Health Interview Surveys in order to determine the relationship between disability and Pap tests. The authors selected data from the 2000 and 2005 National Health Interview Surveys. The NHIS is an annual household survey conducted in person by interviewers from the US Census Bureau. This analysis included a total

of 9,661 women aged 21-64. Disability was defined in four categories: 1) mobility; 2) sensory, mental, cognitive, or social; 3) a combination of the two; and 4) physical limitations unrelated to mobility. Eighteen percent of participants reported having one or more disability, and most were mobility limitations. The findings were conflicting in this study. Those with disabilities were only 60% as likely to have a Pap test as those without disabilities. Women with both mobility and sensory/mental/cognitive/social limitations had lower rates of Pap tests than those with only mobility limitations. Having a disability, however, was positively associated with receiving recommendation for a Pap test from a physician (1.2 times as likely as those without disability). Yet disabled women who did receive a recommendation only had a 50% chance of actually receiving a Pap test. Of those who did not receive a Pap test, women with disabilities more frequently cited cost or lack of insurance as the reason compared to those who did not have a disability (31% vs 13%). The authors discuss previous research indicating that Pap test recommendation is the strongest factor in Pap test receipt, and disabled women are less likely to receive a recommendation. Yet this analysis reveals that Pap test recommendations are relatively high among disabled women although screening rates remain low.

66. Goin D., Long S.K. Health Care Access and Cost Barriers for Adults with Physical or Mental Health Issues: Evidence of Significant Gaps as the ACA Marketplace Opened their Doors. Health Reform Monitoring Survey. The Urban Institute; 2014.

This report by The Urban Institute summarizes data from the 2013 Health Reform Monitoring Survey related to barriers to care for adults with physical and mental health issues after the implementation of the Affordable Care Act (ACA). They cite evidence that, in 2012, approximately 35.9% of U.S. adults aged 18-64 reported that their physical health and 38.5% reported that their mental health was not good for one or more days in the last month. The report concludes that adults with physical and mental health issues face more barriers to accessing health care, even with insurance, than their healthier counterparts. They drew three conclusions: 1. Adults with health problems reported difficulties accessing and affording health care. For adults with mental health problems, 50.8% reported trouble affording health care, compared to 37.8% of adults with no health issues. 2. Adults with health issues that also had low socioeconomic status had a harder time obtaining care. 3. Adults with health issues experienced barriers in accessing care, regardless of insurance status. For example, 29.8% of uninsured adults and 29.9% of insured adults with health issues reported difficulty accessing care; 80% of uninsured adults and 60% of insured adults with health issues reported difficulty affording care. These numbers are all significantly higher than adults without health issues.

67. Sutter M. B., Gopman S., Leeman L. Patient-centered Care to Address Barriers for Pregnant Women with Opioid Dependence. *Obstet Gynecol Clin North Am.* 2017;44(1):95-107.

Sutter et al. summarize literature addressing substance use during pregnancy. Estimates suggest that, between 2013 and 2014, approximately 5.3% of pregnant women used illicit drugs during pregnancy, and 2% using drugs other than marijuana. These estimates likely under-report substance use by pregnant women, and drug use during pregnancy can have negative pregnancy, birth, and maternal health outcomes. Women with substance use disorders encounter many barriers to seeking prenatal care services, including unstable housing, low socioeconomic status, job insecurity, competing financial priorities, transportation, experiences of violence (intimate partner violence), lack of social support, difficulty enrolling in Medicaid, low health literacy,

mental health issues, stigma (from society and health care providers), lack of provider training (related to screening, recognition, or treatment of substance use disorders), lack of confidentiality, incarceration and/or recidivism, and fear of criminal justice involvement (including removal of children and incarceration). Homelessness during pregnancy is associated with lack of prenatal care and substance use, and is considered a contributing factor to high-risk pregnancies. The authors note, "homeless women have 2.9 times increased risk of having a preterm birth, 6.9 times for birth weight less than 2000 [grams], and 3.3 times for newborn small for gestational age" and that these odds increase more for homeless pregnant women who also have substance use disorders. The authors recommend implementing programs that are multidisciplinary, harm-reduction focused, and trauma-informed.

68. MacEwan P., Altman J. Washington Health Benefit Exchange: Presentation to Senate Health & Long-Term Care Committee. 2019.

In this presentation to the Senate & Long-Term Care Committee, Health Benefit Exchange presented summary information about Washington's market. They report that 7 insurance issuers provide coverage on the Exchange, and 4 provide coverage off the Exchange. While there are no bare counties in Washington State, 14 counties have only one issuer, including: Asotin, Chelan, Clallam, Douglas, Ferry, Garfield, Grays Harbor, Island, Okanogan, Pacific, Pend Oreille, San Juan, Skagit, and Wahkiakum Counties. From 2017 to 2018, there was a decrease of 35,000 individuals enrolled in the private market and a decrease of 55,000 individuals enrolled in Medicaid. The greatest decrease occurred among "young invincibles" under 35 years of age, and among individuals who did not receive a federal insurance subsidy. Of individuals that disenrolled, 35% reported not being able to afford coverage. The presentation also reported the percentage of income individuals spend on health insurance premiums plus deductibles. Overall, individuals spend a large percentage of their income on health coverage. For example, individuals with incomes at 139%-150% of the federal poverty level and with a subsidy spend 14% of their income on insurance premium plus deductible; those at this income level without a subsidy spend 76% of their income on insurance premium plus deductible. Health Benefit Exchange also reports that premiums and deductibles continue to rise each year and, even with insurance, consumers do not access care due to high cost-sharing and deductibles. To address affordability, they recommend offering state procured plans through the Exchange to offer more affordable premiums, while ensuring quality of care.

69. 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.

70. 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 20% of Native Hawaiian/Other Pacific Islander reporting fair or poor health.

71. Officials Association of State and Territorial Health. Immigration Status Definitions. 2010.

The Association of State and Territorial Health Officials (ASTHO) developed a resource of terminology used to describe the documentation status of immigrants in the United States. It is intended as a reference for state and territorial health agency officials, decision-makers, and staff about the eligibility and qualification of immigrants for federal and state programs. The definitions were compiled from the United States Citizenship and Immigration Services, Department of Health and Human Services, and Congressional Research Service. An Immigrant is defined as individuals that have entered the United States legally as well as those that have entered the United States without inspection. The document provides definitions for various immigration terms and statuses, including legal alien, illegal alien, undocumented individual, lawful permanent resident, parolee, asylee, refugee, non-immigrant, qualified immigrant, non-qualified immigrant, sponsor, public charge, native-born citizen, and naturalized citizen.

72. Thiel de Bocanegra H., Carter-Pokras O., Ingleby J. D., et al. Addressing refugee health through evidence-based policies: a case study. *Annals of Epidemiology*. 2018;28(6):411-419.

The American College of Epidemiology convened an international workgroup of experts in refugee health, epidemiology, policy, and program administration from the United States, Canada, and the European Union to examine literature published between 1999 and 2016 related to examples and challenges of providing health services to refugees. They organized their results by eight key lessons learned for epidemiologists: 1. Definitions for "refugee" and "asylum seeker" vary. 2. Efficient systems are needed to identify health needs and begin integration into the health system upon arrival at port of entry. This should include questions about pregnancy, pregnancy intention, contraception needs, and chronic diseases. US federal policy only requires documentation of pregnancy status, and states can require more comprehensive assessments of reproductive health needs. 3. Data sources need to be linked in order to allow for ongoing monitoring of refugee health indicators, and data about refugee status should be collected consistently and in additional sources. 4. A "health in all policies" approach is needed to ensure health-promoting environments for refugees and asylum seekers. 5. Refugees and asylum seekers must have equitable access to health services. The authors cite evidence showing that migrants often lack information about how to navigate the health care system and do not receive culturally appropriate care. 6. Health services for refugees and asylum seekers must be integrated into the existing health care system and be culturally appropriate. 7. Initiatives to improve access to care need to be evaluated. 8. Epidemiologists need training to engage with policymakers and the public.

73. Perez-Escamilla R., Garcia J., Song D. Health Care Access Among Hispanic Immigrants: ¿Alguien esta escuchando? [Is anybody listening?]. *NAPA Bulletin*. 2010;34(1):47-67.

Perez-Escamilla et al. completed a systematic literature review of 77 articles related to health care access for Hispanic immigrants in the United States. Major barriers to accessing health care included lack of health insurance, stigma, fear of deportation, and low English proficiency. For

adolescents, parental citizenship and immigration status has also been identified as a barrier to accessing health care, even for children who are U.S. citizens. Eleven articles examined barriers to accessing women's health care. In addition to general barriers, the review found additional barriers specific to access of women's health services like mammography and prenatal care, including: lack of culturally competent services (including outreach practices), low self-efficacy, lack of social support, and mobility. The authors also note that, "deeply rooted cultural beliefs about the origin of health and disease within the context of limited access to health insurance may be associated with more prevalent use of traditional healing...as alternative means to access care." Studies have found that language differences, differences in cultural beliefs about health, and perceived discrimination may limit access to health care in the U.S. Based on their review, the authors note that "programs relying heavily on community health workers, also known as promotoras, have improved health care access."

74. Wojnar D. M. Perinatal experiences of Somali couples in the United States. *J Obstet Gynecol Neonatal Nurs.* 2015;44(3):358-369.

Wojnar completed a literature review and conducted interviews with 48 Somali immigrants (26 women and 22 men) who had arrived in the United States within the past five years to understand their experience with perinatal care (care during and after birth). The review of literature cited past research that identified barriers to Somali immigrants accessing reproductive health care, including lack of transportation, limited access to interpretation services, lack of provider understanding of female genital cutting/circumcision, fear of Western medicine and procedures (e.g. cesarean section). All interviewees lived in the Pacific Northwest and had at least one child born in the United States. He found that access to perinatal care was complicated by language access, cultural beliefs and preferences (e.g. family size), fear of discrimination or bias, distrust of medical providers and practices, misinformation, limited access to resources, and exclusion of husbands from prenatal education and care. Recommendations to improve access include offering prenatal education in a culturally appropriate setting (ie. separate classes for men and women), training providers in culturally-appropriate care, and training providers in the care of patients with female genital cutting/circumcision.

75. Gelatt J., Zong J. Fact Sheet: Settling In—A profile of the Unauthorized Immigrant Population in the United States. Migration Policy Institute; 2018.

This report by the Migration Policy Institute presents population estimates and sociodemographic characteristics for unauthorized immigrants living in the U.S. The Migration Policy Institute, in collaboration with Pennsylvania State University and Temple University, developed a methodology to estimate whether an individual is authorized to be in the U.S. Their methodology uses a multiple imputation statistical model to compare measures in the Census Bureau's American Community Survey with measures in the Census Bureau's Survey of Income and Program Participation, which asks participants to report whether they have Lawful Permanent Resident status. They compare measures such as country of birth, year of U.S. entry, age, gender, and educational attainment between the two surveys to estimate unauthorized status. Migration Policy Institute presents data for the U.S. overall, for 41 states, and for 135 counties with the largest population of unauthorized immigrants. This factsheet presents information about country of origin, U.S. designations, length of U.S. residence, educational attainment, English proficiency, employment, income, and homeownership. Overall, Migration Policy Institute estimates there are 11.3 million unauthorized immigrants living in the U.S. Nationally,

the majority (53%) of individuals who are undocumented arrive from Mexico, and Yakima County, Washington has the highest share of unauthorized immigrants from Mexico (97% of unauthorized immigrants in Yakima County are from Mexico). The majority of individuals who are undocumented in Washington work in agriculture. Washington is also among the top 10 states with children under the age of 18 who have at least one parent who is undocumented. Migration Policy Institute estimates that 88,000 children in Washington State have at least one parent who is undocumented, and approximately 30% of this group has two parents who are unauthorized.

76. Profile of the Unauthorized Population: Washington. 2018; Available at: <https://www.migrationpolicy.org/data/unauthorized-immigrant-population/state/WA>. Accessed 11/19/2018.

The Migration Policy Institute, in collaboration with Pennsylvania State University and Temple University, provides population estimates and sociodemographic characteristics for unauthorized immigrants living in the U.S. The Migration Policy Institute estimates that 229,000 individuals who are undocumented live in Washington State. Of these individuals, 55% were born in Mexico, 68% are employed, 47% are female, 8% are under the age of 18, and 46% are uninsured.

77. Deferred Action for Childhood Arrivals (DACA) Recipients and Program Participation Rate, by State. 2018; Available at: <https://www.migrationpolicy.org/programs/data-hub/deferred-action-childhood-arrivals-daca-profiles>. Accessed 11/19/2018.

The Migration Policy Institute, in collaboration with Pennsylvania State University and Temple University, provides population estimates and sociodemographic characteristics for unauthorized immigrants living in the U.S. Nationally, Migration Policy Institute estimates that 1.3 million individuals are eligible for DACA, and 699,350 (54%) had DACA status in August 2018. For Washington State, they estimate that 25,000 individuals are eligible for DACA, and 17,140 (67%) had DACA status in August 2018.

78. Yen W. Washington State's Immigrant Population: 2010-2017. Washington State Health Services Research Project. Washington State Office of Financial Management March 2019 2019.

The Washington State Office of Financial Management (OFM) provided a summary of immigrants residing in Washington State between 2010 and 2017. Approximately 14% (1,000,000 individuals) of Washington State's population is immigrants, including naturalized citizens, legal immigrants, and individuals who are undocumented. This percentage has stayed relatively stable over time from 2010 to 2017. OFM provided information by four immigration status groups, including U.S.-born citizens, naturalized citizens, legal immigrants, and individuals who are undocumented. In 2017, approximately 3.5% (264,000 individuals) of Washington State's population included individuals who are undocumented. Adults 18 to 64 years of age made up the majority (90.4%) of individuals who are undocumented in Washington State. Approximately 40% of individuals who are undocumented had a family income below 200% of the federal poverty level.

79. Bureau U.S. Census. Selected characteristics of people at specified levels of poverty in the past 12 months: 2013-2017 American Community Survey 5-year estimates. In: Bureau USC, ed2017.

The U.S. Census Bureau provides percentages of Washingtonians living at less than 50%, 100%, and 125% of the federal poverty level.

80. Bureau U.S. Census. Poverty status in 1999 of individuals: 2000 Census 2000 Summary File 3. In: Bureau USC, ed2000.

The U.S. Census 2000 provided data about the number of Washingtonians living at various poverty levels in the state.

81. Authority Washington State Health Care. Individual State Agency Fiscal Note: HB 2381, Extending coverage during the postpartum period. 2020.

The Washington State Health Care Authority (HCA) submitted a fiscal note for HB 2381, Extending coverage during the postpartum period. HCA estimates a total of about \$26 million dollars per year to provide extended coverage to individuals who are postpartum in Washington State. This estimate includes anticipated costs for extending coverage for three groups of clients: individuals receiving coverage through Apple Health for Pregnant Women ("Pregnancy-Only" coverage); individuals receiving "Family Planning Only" coverage (one-year postpartum); and individuals on any other Apple Health plan ("Other Apple Health"). They estimated "total additional member months and average monthly cost for months 3-12 post pregnancy were estimated to be 117,521 and \$228.63, respectively."

82. Dennis A., Blanchard K., Cordova D., et al. What happens to the women who fall through the cracks of health care reform? Lessons from Massachusetts. *Journal of Health Politics, Policy, and Law*. 2013;38(2):393-419.

In 2006, Massachusetts created Commonwealth Care, which expanded coverage to people living in Massachusetts with an income at or below 300 percent of the federal poverty level, without access to employer-sponsored health insurance, and not eligible for other public insurance (including Medicaid). Under the Commonwealth Care program, primary and preventive services are covered, including family planning services, prescription contraceptives, and abortion care. This system served as a model for the Affordable Care Act. The authors evaluated the impact of Massachusetts health care reform on the ability of low-income women to access health insurance and reproductive health services. They completed a review of all Commonwealth Care plans, conducted surveys with family planning staff from 12 Massachusetts Department of Public Health family planning clinics, completed in-depth interviews with 16 family planning staff, and held nine focus groups with low-income women. The authors found that, while access increased overall, immigrants, minors and young adults, and women living outside urban areas had less access to health services. The authors found four main barriers for immigrant women to access health care: lack of plan information available in Spanish, lack of insurance options available to immigrants, fear of deportation or other legal action, and lack of awareness about services available at public health clinics. The authors state the family planning clinics and other safety-net providers (defined as those that provide a significant level of care to low-income, uninsured, and vulnerable populations) can help to reduce barriers to access and "are critical for helping the newly insured navigate their insurance plans while also providing affordable services to those ineligible for subsidized plans or who are temporarily uninsured." The authors also state, "our

results suggest that immigrants who do not qualify for coverage may be unaware that they can continue to get low- or reduced-cost care at safety net providers." They also support recommendations to simplify Medicaid eligibility forms and to extend the period between eligibility checks to make it more likely that individuals receive continuous coverage.

83. Harvey S. M., Branch M. R., Hudson D., et al. Listening to immigrant latino men in rural Oregon: exploring connections between culture and sexual and reproductive health services. *American Journal of Mens Health*. 2013;7(2):142-154.

Harvey et. al. completed 49 in-depth interviews with male, 18-30 year old, Latino immigrants in rural Oregon to explore access to and use of reproductive health services. The authors cite previous research about barriers to Latino immigrants accessing health care generally, including cost of care, lack of health insurance, language barriers, fear of discrimination and stigma, lack of time to seek services, misinformation, and lack of knowledge about available services. Based on their in-depth interviews with male immigrants, the authors identified barriers to accessing reproductive health care at the individual and structural levels. Individual level barriers included lack of knowledge about services, care and treatment options, clinic locations, and financial assistance; low perception of risk; lack of understanding about what "family planning" entails; cultural norms and beliefs (including *machismo*-related beliefs); and fear and potential shame of diagnosis. The authors state, "when combined with a cultural history that has not embraced the male role in sexual and reproductive health, the cultural belief of *machismo* perpetuates the idea that Latino men do not have to be responsible for their own sexual health or that of their partner." Structurally, the authors identified the importance of *confianza* or privacy, confidentiality, and trust when interacting with providers and front desk staff at clinics. Other structural barriers included lack of formative sexual health education, lack of respect by clinic staff and providers, being treated differently or receiving different counseling due to racism, cost of care, unemployment, lack of health insurance, concerns about documentation, lack of bilingual and/or male providers, and lack of translators (especially male translators). Interviewees also talked about clinic-related barriers, including distance from the clinic, wait times, and clinic hours. The authors suggest that using promotores or other lay health workers to provide reproductive health education may not be successful with male immigrants, especially due to cultural beliefs and norms. They recommend provider training to improve culturally appropriate care, and to create a "client-provider partnership as a mechanism for Latino men to gain a sense of control over their own health by acting collaboratively."

84. Rich E. Policy Solutions to Improving Access to Coverage for Immigrants. National Family Planning and Reproductive Health Association; 2016.

This report from the National Family Planning and Reproductive Health Association outlines policy solutions to improve access to health coverage for immigrants in the United States. The report states that access to health coverage and care for immigrants was strongly limited by the 1996 Personal Responsibility and Work Opportunity Reconciliation Act. The act prevented and delayed many immigrants from accessing federal health insurance coverage and care. Other barriers to accessing services include immigration status, limited English proficiency, socioeconomic status, geography, stigma, marginalization, reimbursement rates, provider shortages, and cultural competency. The report states that, without federal changes, states and safety-net providers will continue to be responsible for filling gaps in care. Recommendations to improve access include, establishing a State Basic Plan, which would provide coverage for the

ten categories of essential health services outlined in the Affordable Care Act to low-income individuals who have completed or are in the five-year-bar and provide federal dollars for coverage; eliminate the five-year-bar on Medicaid and CHIP enrollment; allowing all immigrants regardless of status the opportunity to purchase marketplace plans with tax credits; and remove proof of citizenship requirements to enroll in health coverage.

85. Citizen and immigration status definitions. 2018; Available at: <https://www.hca.wa.gov/health-care-services-supports/program-administration/citizen-and-immigration-status-definitions>. Accessed June 2018.

Washington State Health Care Authority defines four citizenship and immigration status groups for the purpose of health insurance coverage eligibility. In Washington State, the four eligibility groups include Lawfully Present "Qualified Alien," Lawfully Present "Unqualified Alien," Not Lawfully Present (Undocumented) Immigrant, and Citizen or U.S. National. For the purposes of insurance coverage, a Lawfully Present "Qualified Alien" includes any non-citizen presently permitted to remain in the U.S. and who has met or is exempt from the 5-year-bar to apply for federal health insurance (Medicaid and Children's Health Improvement Plan (CHIP)). In addition, certain immigrants are exempt from the 5-year-bar, including Hmong or Highland Laotian Tribe members born before May 8, 1975 and their spouses and unmarried dependent children under age 19; Cuban/Haitian individuals approved for the Haitian Family Reunification Parole program; and Iraqi and Afghan Special Immigrants. Lawfully Present "Qualified Aliens" are eligible to apply for federal health insurance (Medicaid and CHIP), to purchase and receive subsidies on the Exchanges, and to enroll in employer-sponsored health insurance. A Lawfully Present "Non-qualified alien" includes any non-citizen presently permitted to remain in the U.S. and who has not met or is not exempt from the 5-year-bar. These individuals are ineligible for federal health insurance, though they can access Alien Emergency Medical program coverage for certain emergencies and can access temporary 8-month coverage under the Refugee Medical Assistance program if they meet eligibility requirements. "Non-qualified aliens" are also eligible to purchase and receive subsidies on the Exchanges, and to enroll in employer-sponsored health insurance. In addition, in Washington State, "non-qualified alien" pregnant women and children can receive a waiver from the state to enroll in Medicaid during the 5-year-bar. Lastly, not lawfully present (undocumented) immigrants are ineligible for federal health insurance and cannot purchase coverage on the Exchanges. They can access Alien Emergency Medical program coverage for certain emergencies. Undocumented immigrants include recipients of Deferred Action for Childhood Arrivals (DACA). In Washington State, undocumented pregnant women can receive a waiver from the state to receive Medicaid coverage during their pregnancy and three months postpartum.

86. Ostrach B., Cheyney M. Navigating social and institutional obstacles: Low-income women seeking abortion. *Qualitative Health Research*. 2014;24(7):1006-1017.

Ostrach and Cheyney completed surveys and key informant interviews with women seeking abortion care in Oregon to determine economic, logistical, and social barriers to seeking abortion care as well as strategies used to overcome barriers. They conducted 238 surveys and 11 semistructured interviews with women seeking care at one abortion clinic in Oregon. They also conducted 8 surveys and 4 interviews with clinic staff. About 70% of women surveyed lived at or below 185% of the federal poverty level. At the time of the study, women living in poverty in Oregon were eligible for publicly-funded abortion care, and 60% of women surveyed were aware

that the state Medicaid program would pay for their care. Women identified many barriers to seeking abortion care, and experienced barriers in "deeply intertwined and synergistic ways that tended to complicate each other." Economic barriers included the cost of the procedure (even with Medicaid), cost of gas or transportation to the clinic, and cost of the meal clinic staff recommended eating before their first dose of antibiotics. Logistical barriers included difficulty in applying for Medicaid coverage, wait periods to receive Medicaid coverage, requirements for multiple visits (especially when Medicaid delays pushed women into a later trimester of pregnancy), travel arrangements (including need for someone to drive patients to and from their appointment), distance from the clinic, time off work or school, and childcare. Social barriers included uncertainty about the decision to seek an abortion, lack of social support, hostility from a partner or friend or family member, physical or psychological violence, intimate partner violence, harassment from anti-abortion protesters, unresponsive case workers, and social stigma and judgement. Women who experienced social barriers tended to seek abortion later in the pregnancy and to encounter more barriers than women with social support. In addition, women of lower socioeconomic status reported experiencing more barriers and having greater difficulty in overcoming obstacles to abortion.

87. Churilla T., Egleston B., Dong Y., et al. Disparities in the management and outcome of cervical cancer in the United States according to health insurance status. *Gynecologic oncology*. 2016;141(3):516-523.

Churilla et al. aimed to characterize the presentation, management, and outcomes of patients with cervical cancer with regard to insurance status. The authors analyzed data from the National Cancer Institute Survival, Epidemiology, and End Results (SEER) database for women aged 18-64 who were diagnosed with invasive cervical cancer between 2007-2011 (n=11,714). Among patients with early stage disease, uninsured patients were less likely to receive surgical management, however, after adjusting for clinical and demographic variables, this association was no longer significant. Among patients that presented with later stage disease, patients that were uninsured were significantly less likely to receive optimal radiation treatment and this association remained significant after adjusting for clinical and demographic variables. Further, patients with Medicaid or who were uninsured were more likely to present with advanced stage cervical cancer. Finally, overall survival at a median follow-up of 21 months was significantly higher among insured patients (86.6%) versus Medicaid (75.8%) or uninsured patients (73.0%). The authors conclude that health insurance remains an important barrier for receipt of treatment and outcomes for cervical cancer. The authors also suggest that further studies may be necessary in order to understand the impact that the Affordable Care Act may have on insurance coverage and cervical cancer care.

88. Inverso G., Mahal B. A., Aizer A. A., et al. Health insurance affects head and neck cancer treatment patterns and outcomes. *Journal of oral and maxillofacial surgery : official journal of the American Association of Oral and Maxillofacial Surgeons*. 2016;74(6):1241-1247.

Inverso et al. conducted a retrospective study using Surveillance, Epidemiology, and End Results (SEER) data to examine the effect of insurance status on the stage of presentation, treatment, and survival among individuals with head and neck cancer. The cohort included 34,437 individuals diagnosed with head and neck cancer between 2007-2010 who were under the age of 65. Uninsured individuals were more likely to present with metastatic cancer than insured

individuals, which remained significant even after adjustment for patient demographic data and socioeconomic factors (adjusted odds ratio, 1.60; CI, 1.30 to 1.96). Uninsured patients without metastatic cancer were more likely to not receive definitive treatment after adjusting for patient demographics, socioeconomic factors, and tumor characteristics (AOR, 1.64; 95% CI, 1.37 to 1.96). Head and neck cancer specific mortality was significantly lower among insured patients and remained significant after adjustment. The authors conclude that this gap in treatment and outcomes for uninsured individuals should serve as a target for future health policy reform.

89. Gelman A., Miller E., Schwarz E. B., et al. Racial disparities in human papillomavirus vaccination: does access matter? *J Adolesc Health*. 2013;53(6):756-762.

Gelman et al. used nationally representative data from the National Survey of Family Growth to assess HPV vaccination initiation in 2,168 females aged 15-24 years. Researchers performed a series of regression analyses to determine the independent effect of race/ethnicity on HPV vaccination. They found significant racial/ethnic disparities in HPV vaccination. US-born Hispanics, foreign-born Hispanics, and African Americans were less likely to have initiated vaccination than were whites ($p < .001$). Sociodemographic characteristics and health care access measures (i.e., insurance status and whether the participant had a usual place for receiving health care) both independently reduced disparities for both US-born and foreign-born Hispanics. Adjusting for sociodemographic variables increased the odds of vaccination among Hispanics (AOR, .88; 95% CI, .48-1.63); adding health care access variables into the model further increased the odds of vaccination (AOR, 1.03; 95% CI, .54-2.00). However, African-Americans remained significantly less likely to have initiated vaccination after adjusting for sociodemographic factors and health care access measures (OR, .46, 95% CI, .27-78 ; AOR, .47, 95% CI, .27-82; and AOR, .51, 95% CI, .29-88, respectively). The disparity persists among younger (aged 15-18 years) and older (aged 19-24 years) African-Americans. Authors note that other analyses suggest that HPV vaccination patterns are changing rapidly among adolescent girls, with the greatest increase in vaccination initiation among Hispanics and African-Americans. Authors conclude that sociodemographic factors and health care access measures largely explain disparities in HPV vaccination among Hispanics (US- and foreign-born), but further research is needed to understand disparities experienced by African-American adolescents.

90. Jadav S., Rajan S. S., Abughosh S., et al. The Role of Socioeconomic Status and Health Care Access in Breast Cancer Screening Compliance Among Hispanics. *J Public Health Manag Pract*. 2015;21(5):467-476.

Jadav et al. completed a retrospective pooled cross-sectional analysis of 2000-2010 Medical Expenditure Panel Survey data of women aged 40 years and older. Researchers used the Nonlinear Blinder--Oaxaca decomposition method to identify and quantify the contribution of each individual-level factor (predisposing characteristics: race/ethnicity, marital status, age; enabling characteristics: education, employment, income, insurance status, usual source of care, metropolitan statistical area, region; and need characteristics: health status and obesity) toward racial-ethnic disparities in breast cancer screening use among Hispanic versus non-Hispanic White (NHW) women. Authors cite evidence identifying lack of insurance coverage, cultural and linguistic differences, and underrepresentation of Hispanics in health care fields as significant barriers to health care access for Hispanics. Researchers used mammogram screening (MS) and breast cancer screening (BCS), defined as the receipt of both MS and a clinical breast exam, as

outcome indicators. Hispanic women included in the study were statistically significantly younger, less likely to be married, less educated, less likely to be employed, more likely to be uninsured, less likely to have a usual source of care, more likely to live in urban areas, less likely to have a good health status, and predominantly overweight or obese, and had lower income as compared with the NHW women. Researchers found "the enabling characteristics (especially education, income, insurance, and having a usual source of care) explained most of the disparities between Hispanics and NHWs." For example, the analysis indicates that "if Hispanic women were insured at the same rate as the NHW women, then the disparity in screening would have reduced by 76.8% for MS and 69.18% for BCS." Furthermore, "If the Hispanic women had similar access to usual source of care as the NHW women, this would have reduced the disparity in MS by 48.92% and BCS by 52.87%." The analysis suggests that if the Hispanic study participants had access to the same enabling resources as the NHWs, "the Hispanics might have a better compliance with screening guidelines than the NHWs." Researchers identified education, income, insurance, and having a usual source of care as the most important factors leading to breast cancer screening disparities between Hispanics and NHWs. Note, cultural beliefs, preferences, and provider characteristics were not incorporated into the analysis due to database limitations, yet they also influence screening rates.

91. **Hoffman C., Paradise J. Health insurance and access to health care in the United States. *Annals of the New York Academy of Sciences*. 2008;1136:149-160.**

Hoffman and Paradise present a synthesis of the literature from the late 1980's to 2006 regarding the evidence that health insurance is associated with access to health care in the United States. Articles are summarized in subgroups relating to access to primary care, acute and trauma care, managing chronic conditions, health outcomes, and premature mortality. The most relevant finding was that a number of studies indicated that uninsured adults reported greater unmet health needs and a large proportion of adults stated that the cost of insurance is the main reason for being uninsured. Further, uninsured adults were twice as likely to report that they, or a family member, skipped treatment, cut pills or did not fill a prescription medication some time in the last year because of cost. The authors indicate that there are great personal benefits to having health coverage although health insurance alone is not enough to eliminate disparities or equalize access to care across subgroups of Americans.

92. **Villarroel Maria A., Cohen Robin A. Health Insurance Continuity and Health Care Access and Utilization, 2014. Hyattsville, MD: National Center for Health Statistics; 2016.**

Villarroel et al. present a data brief from the National Center for Health Statistics using data from the 2014 National Health Interview Survey. Adults aged 18-64 who were insured for more than a year were more likely than those who were insured at the time of the interview but had a period of uninsurance in the past year to have a usual place for medical care (90.8% versus 73.6%). This difference was even greater when they compared those currently insured versus those currently uninsured but had a period of insurance in the past year and those uninsured for more than a year (57.8% and 44.3% respectively). Next, the authors found that having insurance for more than a year was associated with being more likely to have visited a doctor during the past year compared to those with any period of being uninsured. One in five adults in the sample reported an unmet medical need due to cost in the past year, and this was more likely to be reported by those with any period without health insurance than those with coverage for more than a year. Finally, persistent coverage was associated with a higher likelihood of having been vaccinated

against the flu. The authors conclude that the presented data reflect the experiences of those without health insurance and the barriers they may face to receiving health services.

93. **Wang Tze-Fang, Shi Leiyu, Zhu Jinsheng. Race/ethnicity, insurance, income and access to care: the influence of health status. *International Journal for Equity in Health*. 2013;12(29).**

Wang et al. examined health care access disparities in relation to health status and the presence of functional limitations using data from the 2009 Family Core component of the National Health Interview Survey (NHIS). The authors limited the sample to adults who had visited a doctor or health care professional in the previous two weeks in order to attenuate the differences between those with and without health care experience. The main indicators analyzed with regards to access to care were defined as: (1) no usual place of care, (2) unable to get medical care, (3) delayed medical care, (4) unable to get dental care, (5) unable to get mental health care, and (6) unable to get prescription drugs. The main finding was that participants who were uninsured more frequently reported being unable to get medical care, dental care, mental health care, prescription drugs, and were more likely to have no usual place of care and delaying medical care than insured participants. Further, participants in the lowest income bracket (<\$20,000) had the largest proportion of participants reporting an inability to get medical care, dental care, mental health care, and prescription drugs as well as delaying medical care. In conclusion, the authors noted that insurance and health status were the two most important factors that were associated with access to care and that the Affordable Care Act is expected to contribute even further to reducing these disparities.

94. **Centers for Disease Control and Prevention. Vital Signs: Health Insurance Coverage and Health Care Utilization- United States, 2006-2009 and January-March 2010. *MMWR*. 2010.**

In this Morbidity and Mortality Weekly Report (MMWR), published by the Centers for Disease Control and Prevention, the authors use data from the National Health Interview Survey (NHIS) to look at the association between lack of health insurance and delaying or forgoing health care. Data from NHIS was analyzed from 2006 through the first quarter of 2010 with an average participation rate of 82.2% in 2009. Data indicated that adults aged 18 to 64 who did not have health insurance for more than a year at the time of the survey were nearly six times as likely to not have a usual source of care compared to those who were continuously insured (55.2% versus 9.3%). Further, compared to those with continuous coverage and the same chronic conditions, persons without health insurance in the previous year were five to six times as likely to forgo needed care if they had hypertension (42.7% versus 6.7%), diabetes (47.5% versus 7.7%) and asthma (40.8% versus 8.0%). Even short periods of being uninsured showed meaningful differences. Currently insured persons who had a 1 to 3 month gap in coverage were twice as likely to not have a usual source of care (16.4% versus 9.3%) and three times as likely to delay seeking care due to the cost compared to those with continuous coverage (26.5% versus 7.1%). These differences in care seeking behavior persisted irrespective of family income level. The authors conclude that the requirements of the Affordable Care Act may help reduce the proportion of uninsured persons in the United States but that outreach will be necessary to increase enrollment and retention in programs such as Medicaid. They further conclude that continuous health care coverage will allow for increased access to preventative services and will reduce long-term health care costs down the line.

95. **Lu P. J., O'Halloran A., Williams W. W. Impact of health insurance status on vaccination coverage among adult populations. *American journal of preventive medicine.* 2015;48(6):647-661.**

Lu et al. analyzed data from the 2012 National Health Interview Survey (NHIS), which had a response rate of 61.2%. The authors used the data to estimate vaccination coverage among adults over the age of 18 by health insurance status for seven routinely recommended vaccines: influenza, pneumococcal (PPSV), tetanus and diphtheria toxoid (Td) or tetanus, diphtheria, and acellular pertussis (Tdap), hepatitis A (Hep A), hepatitis B (Hep B), herpes zoster (shingles), and human papillomavirus (HPV). Having health insurance was significantly associated with a greater likelihood of receiving the influenza vaccine, Td, Tdap, and PPSV, even after adjusting for age, gender, race/ethnicity, marital status, education, employment status, poverty level, number of physician contacts in the past year, usual source of care, self-reported health status, U.S.-born status, and region of residence. Further, vaccine coverage for influenza, PPSV, shingles, and HPV were two to three times higher among those with health insurance. Overall, individuals who reported having a regular physician were more likely to have received the recommended vaccines, regardless of their insurance status. The authors conclude that comprehensive strategies need to be tailored to improve vaccination coverage among adults, especially those without health insurance.

96. **Baicker Katherine, Taubman Sarah L., Allen Heidi L., et al. The Oregon Experiment — effects of Medicaid on clinical outcomes. *New England Journal of Medicine.* 2013;368(18):1713-1722.**

Baicker et al. examined the effects of health insurance coverage on health care use and health outcomes approximately 2 years after the Oregon Medicaid lottery. The Oregon Health Plan Standard is a Medicaid program for adults aged 19-64 who have an income below 100% of the federal poverty level. The program closed to new enrollment in 2004 but began a waiting list in 2008 to fill a limited number of new openings. Between March and September of 2008, approximately 30,000 people were selected through a lottery drawing from the waiting list of nearly 90,000 names. This lottery process allowed for a quasi-experimental approach to studying the effects of insurance on health with the use of a random assignment. The authors of this study interviewed a sample population of 12,229 people in Portland, Oregon, half of which were selected in the lottery and half of which were not, between September 2009 and December 2010. The findings indicated that Medicaid coverage did not have a significant effect on the prevalence or diagnosis of hypertension or high cholesterol levels but did increase the probability of a diagnosis for diabetes and the use of medications to control diabetes. Further, Medicaid coverage was associated with a substantial reduction in the risk of a positive screening for depression. Compared to those without coverage, Medicaid coverage was associated with a 7.84% increase in the proportion of people who indicated that their health was the same or better than 1 year previously. Finally, Medicaid coverage led to a reduction in financial strain from medical costs, and an increase in the number of prescription drugs received, office visits made in the previous year, perceived access to care, and use of preventative services such as cholesterol screening, mammograms, and pap smears in women. The authors conclude that while Medicaid coverage led to no significant improvements in measured physical health, it did increase access to and utilization of health care and can serve as evidence of the effects of expanding Medicaid to low-income adults in the United States.

97. **Finkelstein Amy N., Taubman Sarah L., Wright Bill J., et al. The Oregon Health Insurance Experiment: evidence from the first year. *Quarterly Journal of Economics*. 2012;127(3):1057-1106.**

Finkelstein et al. utilize data from the Oregon Health Insurance Experiment to examine the effects of expanding access to public health insurance on health care utilization, financial strain, and health outcomes of low-income adults. The Oregon Health Plan Standard is a Medicaid program for adults aged 19-64 who have an income below 100% of the federal poverty level. The program closed to new enrollment in 2004 but began a waiting list in 2008 to fill a limited number of new openings. Between March and September of 2008, approximately 30,000 people were selected through a lottery drawing from the waiting list of nearly 90,000 names. This lottery process allowed for a quasi-experimental approach to studying the effects of insurance on health with the use of a random assignment. In this study, the authors obtained individual-level hospital discharge data for the entire state of Oregon from January 2008-September 2009. The authors matched this data to the lottery list based on information such as full name, zip code, and date of birth. In addition, the authors obtained credit records, mortality data from the Oregon Center of Health Statistics, and mailed out a supplemental survey to nearly all individuals selected through the lottery. In total, the authors were able to survey 29,834 individuals who were selected by the lottery and 45,088 who were not selected and acted as controls. The data indicate that enrollment in Medicaid is associated with an increased hospital admissions, outpatient visits, and prescription drug use, and increase in compliance with recommended preventative care, improvement in self-reported mental and physical health measures, perceived access to and quality of care, and overall well-being. Further, the authors found a decline in substantial out-of-pocket medical costs and total medical debts. The authors conclude that these results provide meaningful insights into the benefits of Medicaid but also call for a careful cost-benefit analysis of Medicaid expansion taking into account the inputs provided in this study.

98. **Marino M., Bailey S. R., Gold R., et al. Receipt of preventive services after Oregon's randomized Medicaid experiment. *American journal of preventive medicine*. 2016;50(2):161-170.**

Marino et al. assessed the long-term impact of the Oregon Health Insurance Experiment on the receipt of 12 preventative care services. The Oregon Health Plan Standard is a Medicaid program for adults aged 19-64 who have an income below 100% of the federal poverty level. The program closed to new enrollment in 2004 but began a waiting list in 2008 to fill a limited number of new openings. Between March and September of 2008, approximately 30,000 people were selected through a lottery drawing from the waiting list of nearly 90,000 names. This lottery process allowed for a quasi-experimental approach to studying the effects of insurance on health with the use of a random assignment. In this study, the authors probabilistically matched individuals aged 19-64 who were selected from the lottery reservation list to an individual in the Oregon Community Health Information Network (OCHIN), which is a network of health systems that supports over 300 community health centers. The total sample included in this study was 4,049 patients selected by the lottery and 6,594 patients from OCHIN who were not selected. The primary outcomes of interest were whether or not the individual had received the following services in the post-lottery period: "...screenings for cervical, breast, and colorectal cancer (fecal occult blood testing and colonoscopy); screenings for diabetes (glucose and hemoglobin A1c [HbA1c]), hypertension, obesity, and smoking; lipid screening; chlamydia

testing; and receipt of influenza vaccination." The results indicate that patients who were selected by the lottery were significantly more likely to receive preventives screening services for BMI, blood pressure, smoking, Pap test, mammography, chlamydia and HbA1c. After adjusting for age and the number of chronic conditions diagnosed prior to the selection date, where appropriate, all of the previously mentioned services remained significant with the addition of fecal occult blood testing. The authors indicate that while community health centers provide quality health services for millions of uninsured and underinsured persons, continued efforts are needed to expand access to health insurance for vulnerable populations.

99. **Wherry L. R., Miller S. Early coverage, access, utilization, and health effects associated with the Affordable Care Act Medicaid expansions: a quasi-experimental study. *Annals of internal medicine.* 2016;164(12):795-803.**

Wherry et al. used data from the National Health Interview Survey (NHIS) from 2010 to 2014 to evaluate whether state Medicaid expansion was associated with changes in insurance coverage, access to and utilization of care, and self-reported health. The authors used data for adults aged 19-64 with incomes below 138% of the federal poverty level in states that did and did not expand Medicaid. Compared with nonexpansion states, respondents in expansion states reported significant increases in diagnoses of diabetes and high cholesterol but no differences in diagnoses of hypertension, access to care, health status, or mental health. Medicaid expansions were also associated with significant increases in visits to a general physician. The authors conclude that these data provide evidence that the Affordable Care Act Medicaid expansions are associated with an increase in insurance coverage and health care utilization and that fully understanding the impacts of the expansion are crucial to future policy debates.

100. **Ralph L. J., Brindis C. D. Access to reproductive healthcare for adolescents: establishing healthy behaviors at a critical juncture in the lifecourse. *Curr Opin Obstet Gynecol.* 2010;22(5):369-374.**

Ralph and Brindis (2010) present a review of recent research on adolescent's access to reproductive healthcare, identifying a number of structural and perceived barriers: insurance status, primary care providers, adolescent's knowledge, and provider perceptions. Insurance status is a barrier to adolescents seeking care, with those uninsured receiving inconsistent and inadequate care. Among adolescents who do see a provider regularly, pediatricians are the main source (age ≤ 14) or a large source (age > 14) of that care, yet the quality and comprehensiveness of reproductive services varies substantially, with most pediatricians not providing the full range of appropriate services. Adolescents often lack the knowledge to navigate the healthcare system, have a fear of disclosure of confidential information, and are uncertain about their ability to receive services without parental consent. Providers' limitations include perceive inadequacies in their training, lack of ability to provider confidential care, and concern about legal restrictions on confidentiality. Authors recommend that healthcare providers must play a critical role in providing care and developing new models for adolescents to access reproductive healthcare.

101. **Goodman M., Onwumere O., Milam L., et al. Reducing health disparities by removing cost, access, and knowledge barriers. *Am J Obstet Gynecol.* 2017;216(4):382 e381-382 e385.**

Goodman et al conducted a secondary analysis on the Contraceptive CHOICE Project database to determine the effect of removing barriers to access (cost, availability, and education) for long-

acting reversible contraception (LARC) among White and Black adolescent girls (aged 15-19). The results revealed drastic reductions in overall pregnancy rates, and elimination of disparities due to race. The authors conducted secondary analysis of Contraceptive CHOICE Project database, and compared it with data from National Vital Statistics reports and National Survey of Family Growth. CHOICE is a longitudinal cohort study of sexually active girls and women (n = 9256) age 14-45 in St. Louis, MO. Authors selected girls age 15-19 for their analysis. Participants were informed and educated about long-acting reversible contraception (LARC), including the efficacy, side effects, benefits and risks associated with each method. Participants chose the method, and were offered same-day insertion at no cost. Analysis of the national data revealed a national decline in teen pregnancies, with larger decreases seen in White teens. On average, Black teens had 2.5 times the rate (RR, 2.5) of unintended pregnancy as White teens. In the CHOICE program, pregnancy rates were drastically lower than national averages among both Whites and Blacks: 18.2 pregnancies per 1000 in 2008-09 combined in CHOICE compared to 158.5 and 145.9 in 2008 and 2009 nationally. By 2012-2013, there was essentially no disparity in pregnancy rates by race in the CHOICE participants (RR, 0.95) compared to the national average (RR, 2.5) and compared to CHOICE participants at the beginning of the study (RR, 3.7). This analysis indicates that not only are cost, availability, and education barriers to accessing LARC, but that these barriers are more prevalent for Black teens than White. Eliminating these barriers is possible and will have a significant and large effect on teen pregnancy rates.

102. **Ferrer Harriet Batista, Trotter Caroline, Hickman Matthew, et al. Barriers and Facilitators to HPV vaccination of young women in high-income countries: a qualitative systematic review and evidence synthesis. *Bio Medical Center Public Health*. 2014;14(700).** Ferrer et al conducted a qualitative systematic review and evidence synthesis to understand factors affecting decision-making of HPV vaccination of young women. Forty-one studies were included in the review, with the majority from the US (n = 24), and the rest in other high-income countries. Research was conducted in healthcare, community, school, and government settings, with participants including parents, healthcare professionals, and young women. The decision to vaccinate girls against HPV is largely influence by policymakers, physicians, and parents; girls themselves have very little influence over the decision. The authors grouped the influencing factors and barriers into the following groups: financial considerations, sexual mores (social norms and values surrounding sex), trust (in vaccination programs and providers), and consent. There were racial disparities in uptake of the HPV vaccine, with racial and ethnic minority girls receiving the vaccine less often. The authors postulate that in the US, African Americans may lack trust in healthcare professionals due to a history of racism and mistreatment. Judgments by healthcare professionals about whether or not to recommend the vaccine had an especially large impact on a young woman's access to the vaccine. This decision was based on cultural values, assumptions about the family's values, and race (providers are less likely to recommend to ethnic minorities). The authors recommend addressing the issues of provider recommendation and need for parental consent, as these were regarded as the largest barriers to vaccination.

103. **Swaine J. G., Dababnah S., Parish S. L., et al. Family caregivers' perspectives on barriers and facilitators of cervical and breast cancer screening for women with intellectual disability. *Intellect Dev Disabil*. 2013;51(1):62-73.**

Swaine et al (2013) interviewed caretakers of women with intellectual disabilities about barriers to cancer screenings. The interviewers conducted 20-60min semi-structured qualitative

interviews of female familial caregivers (n=32). The barriers were analyzed by screening type: breast exam, mammogram, pelvic exam and Pap test. Breast exams and mammography: The most common reason for not receiving a breast exam was the caretaker's belief that it was unnecessary. Of the women who were old enough to require a mammogram but had not received one, the caretaker reported that the woman was uncomfortable with the procedure or that the caretaker had not yet scheduled the exam. Pelvic exams and Pap tests: The most common reason for nonreceipt was lack of sexual activity, and belief that the test was unnecessary for women with intellectual disabilities. Many women with intellectual disabilities were uncomfortable with pelvic exams (due to embarrassment, feeling a lack of privacy, or fear of physical pain), but having a doctor or caregiver explain the procedure improved comfort. For receipt of healthcare in general, caretakers most commonly reported that issues with Medicare coverage prevented access.

104. Nosek Margaret A., Simmons Darrell K. People with Disabilities as a Health Disparities Population: The Case of Sexual and Reproductive Health Disparities. *Californian Journal of Health Promotion*. 2007;5(Special Issue (Health Disparities & Social Justice)):68-81.

Authors Nosek and Simmons (2007) look into the characteristics and causes of sexual health disparities in people with disabilities, and offer six recommendations. Many health disparities for those with disabilities are due to misconceptions both generally and held by health care providers. There is the assumption that all disabled people are unhealthy, public health should only focus on prevention of disabling conditions, and the lack of perceived need for a standard definition of disability, among many others. Specifically in the context of sexual health, those who are disabled are perceived to be asexual, unable to have sex, and not in control of their sexual desires. Pregnancy is not perceived as an option or concern for disabled women. Disparities may also be caused due to lack of access to the same formal education as non-disabled people, where many non-disabled people receive their sex education. Healthcare providers receive very little training on disability and especially lack knowledge of sexuality in the context of disability. Structural barriers also include lack of accessible facilities, limitations in insurance coverage/reimbursement, and insurance requirements such as seeing a primary care provider for a referral. The authors offer the following six approaches to eliminate such disparities: 1) include education on wellness in the context of disability in the formal education received by health care providers. 2) empower people with disabilities. 3) promote compliance with the ADA. 4) remove barriers to participation of people with disabilities in research and education. 5) recognize people with disabilities as a health disparities population and consider their issues in national health care policy. 6) improve media coverage of disability health issues and the portrayal of healthy and successful people with disabilities.

105. Gynecologists The American College of Obstetricians and, Gynecologists The American Congress of Obstetricians and. Increasing Access to Contraceptive Implants and Intrauterine Devices to Reduce Unintended Pregnancy. In: Group CoGPL-ARCW, ed. Washington, DC: The American College of Obstetricians and Gynecologists; 2018.

This Committee Opinion from The American College of Obstetricians and Gynecologists's Committee on Gynecologic Practice's Long-Acting Reversible Contraception Working Group provides guidance to Obstetricians-gynecologists to encourage consideration of implants and intrauterine devices for all appropriate candidates, including nulliparous women and adolescents.

The committee notes, "[t]he convenience and subsequent high continuation rates of LARC placement immediately postpartum or after second-trimester abortion may outweigh the disadvantage of higher IUD expulsion rates." Additionally, "[t]he uptake of immediate postpartum LARC has been slowed by the difficulties hospitals and obstetrician-gynecologists encounter in receiving reimbursement and payment for devices and services separate from the global fee for delivery."

106. **Mitra M., Smith L. D., Smeltzer S. C., et al. Barriers to providing maternity care to women with physical disabilities: Perspectives from health care practitioners. *Disabil Health J.* 2017;10(3):445-450.**

Mitra et al (2017) conducted interviews in order to characterize providers' views of the barriers to providing maternity care to women with disabilities, as well as provide recommendations for reducing barriers. The authors conducted semi-structured phone interviews with 14 healthcare providers who provide maternity care to women with physical disabilities. The providers had an average of 22 years of experience in specialties including obstetrics/gynecology, maternal-fetal medicine, certified nurse midwifery, and medical genetics, and saw a varying volume of women with disabilities. Each interview lasted about 45min, and focused on both the perceptions of barriers to providing care to patients with disabilities for maternity care and birth, as well as perceptions on developing guidelines to address such barriers. The authors identified four levels of barriers: practitioner, clinical practice, system, and lack of scientific evidence. Practitioner: lack of training/education related to maternity care and general needs for women with disabilities, unwillingness or lack of confidence in providing services, inadequate coordination of care between providers. Clinical practice: inaccessible equipment and facilities, and lack of training/education of office staff related to maternity care for women with disabilities. System: lack of time, and insurance reimbursement policies (e.g. low payment rates and complex reimbursement processes). Lack of Scientific Evidence: lack of maternity practice guidelines for women with disabilities, lack of disability-specific clinical research, and lack of research on interactions between disability and pregnancy. The authors highlight the importance of not only making maternity clinics and equipment physically accessible to women with disabilities. More importantly, they emphasize the need for education and training of healthcare providers and clinic staff and further clinical research specifically on the effects of specific disabilities on pregnancy. Research and education should lead to the development of practice guidelines as well as reduction in provider biases. This study does not capture the perceptions of providers who choose not to or are unable to provide maternity care to women with disabilities, and thus may not accurately reflect barriers that prevent providers from providing this care.

107. **Nahata Leena, Quinn Gwendolyn P., Caltabellotta Nicole M., et al. Mental Health Concerns and Insurance Denials Among Transgender Adolescents. *LGBT Health.* 2017;4(3):188-193.**

Nahata et al. conducted a retrospective medical record review (2014-2016) to examine: "(1) the prevalence of mental health diagnoses, self-injurious behaviors, and school victimization and (2) rates of insurance coverage for hormone therapy, among a cohort of transgender adolescents at a large pediatric gender program, to understand access to recommended therapy." Researchers identified 79 records (51 transgender males, 28 transgender females) that met inclusion criteria (mean age: 15 years, range 9-18). According to authors, gonadotropin-releasing hormone (GnRH) analogues, or "puberty blockers," are often recommended in the early stages of puberty

to "prevent or alleviate dysphoria, by averting permanent changes to the body that misalign with identified gender." While long-term outcome data have not yet been collected in the U.S., "a Dutch group found that adolescents managed in a multidisciplinary healthcare setting with puberty suppression followed by gender affirming hormone therapy had similar mental health outcomes to those observed in the general population." Data indicate decreases in depressive symptoms, reduced behavioral and emotional problems, and an improvement in general functioning among adolescents following administration of puberty blockers. Authors cite evidence that "socially transitioned prepubertal transgender children had similar mental health outcomes as age-matched controls." Review of medical records found 92.4% of patients had been diagnosed with one or more of the following mental health conditions: depression, anxiety, PTSD, eating disorders, ASD, and bipolar disorder. Additionally, 74.7% of subjects reported suicidal ideation, 55.7% exhibited self-harm, and 30.4% had a history of at least one suicide attempt. Of the 27 patients prescribed GnRH analogues, 8 (29.6%) received insurance coverage (median age: 15.3 years, range: 12.8-17.3 years) and began therapy. One patient who did not receive insurance coverage paid out of pocket. "Of the remaining 18 patients, 2 had no documented information about coverage and 16 were denied coverage (mean age: 15.3 years, range: 10.8-18.8 years) and could not start treatment." Of the 16 patients who were denied insurance coverage for GnRH analogues, "4 subsequently had documentation of beginning gender-affirming hormone therapy; the median time between...insurance denial and start date for hormone therapy was 9 months (range: 8-20 months)." Despite the cohort's high risk for suicide attempts, suicidal ideation, and self-harm and clear recommendations from professional organizations as to the importance of hormonal therapy, insurance companies denied access to puberty blockers for the majority of transgender adolescents in this study. Authors conclude, low insurance coverage rates and prohibitively high out-of-pocket costs for puberty suppression leaves many youth unable to access treatment.

108. Kates Jen, Ranji Usha, Beamesderfer Adara, et al. Health and Access to Care and Coverage for Lesbian, Gay, Bisexual, and Transgender Individuals in the U.S.: The Henry J. Kaiser Family Foundation; 2015:1-27.

This Kaiser Family Foundation issue brief provides an overview of the challenges sexual and gender minorities experience in accessing health care. The analysis categorizes barriers as structural, economic, or social and examples include gaps in insurance coverage, cost-related hurdles, and poor treatment from health care providers, respectively. Authors also discuss the intersection of sexual orientation and gender identity with other factors (e.g., sex, race/ethnicity, and class) that shape an individual's health, access to care, and experience with the health care system. The brief also details recent changes within the legal and policy landscape that have increased access to care and insurance for LGBT individuals and their families (i.e., passage of the Affordable Care Act [ACA]; the 2013 U.S. Supreme Court [Court] ruling on the Defense of Marriage Act [DOMA; U.S. v. Windsor]; and 2015 Court ruling recognizing same-sex marriages [Obergefell v. Hodges]). For example, prior to the Windsor ruling, "same-sex married couples were only able to obtain coverage for their spouse as a domestic partner, if their employer provided such coverage, and these benefits were considered taxable income." Evidence indicates 39% of firms that offered health insurance provided benefits to unmarried same-sex domestic partners in 2014, an 18% increase from 2009. The *Obergefell* and *Windsor* rulings mean that "married same-sex couples no longer face a higher tax burden at the federal and state levels." These rulings also expanded coverage to same-sex couples within federal and state insurance

markets. However, neither decision is binding on employers. Therefore, "there remains some question about whether employers can legally limit spousal coverage to opposite-sex spouses." According to many experts, offering health benefits to opposite-sex spouses but not to same-sex spouses would likely violate Title VII of the Civil Rights Act, which prohibits discrimination based on sex. Authors also discuss barriers to care experienced by the transgender population, which is much more likely to live in poverty and less likely to have health insurance than the general population. One survey found that 48% of transgender respondents had postponed or went without care when they were sick because they could not afford it. Additionally, authors found evidence that "many health plans include transgender-specific exclusions that deny transgender individuals coverage of services provided to non-transgender individuals, such as surgical treatment related to gender transition, mental health services, and hormone therapy."

109. Puckett Jae A., Cleary Peter, Rossman Kinton, et al. Barriers to Gender-Affirming Care for Transgender and Gender Nonconforming Individuals. *Sexuality Research and Social Policy: Journal of NSRC*. 2017(August).

Puckett et al. examined rates of trans/gender nonconforming (TGNC) individuals pursuing or desiring to pursue different forms of gender-affirming care as well as qualitative responses regarding barriers encountered. Researchers conducted an analysis of data from an ongoing research study evaluating the impact of stigma on psychosocial issues effecting TGNC individuals. Data were collected during the baseline survey of the daily diary study and a one-time survey. Participants included 256 TGNC individuals (78.9% White, ages 16-73, Mean age = 28.4). Among participants, 61.3% were receiving hormone therapy, 22.7% had undergone top surgery (chest reconstruction), and 5.5% had undergone bottom surgery (vaginoplasty, phalloplasty, metoidioplasty, or other specific procedures). Authors cite evidence that TGNC individuals experience discrimination within health care setting in many forms, including "misgendering or being referred to as an inappropriate gender (e.g., being referred to as a man/male when a person is female identified) in providers' offices, unnecessarily invasive scrutiny into patients' personal lives, and outright denial of care to TGNC patients." TGNC individuals face many of the barriers to care that transgender men and transgender women do, but lack of knowledge and education related to genderqueer or non-binary identities can limit patient access to quality care. Overall, 166 participants reported barriers to pursuing hormone therapy, 134 participants reported barriers to top surgery, 85 reported barriers to bottom surgery, and 22 reported barriers to puberty blockers (note, few participants considered puberty blockers, possibly due to age). Responses were grouped thematically into barriers. The financial cost of care was the most commonly cited barrier to receiving gender-affirming care (i.e., cost of lab work, doctor's visits, therapist visits to receive a letter of support for obtaining hormone therapy or surgeries). Insurance was the next most commonly endorsed barrier often coupled with challenges to employment. Even those with insurance experienced barriers including, having limited providers, having transgender specific exclusions, limiting the total expenditures on transgender-related healthcare to amounts below the cost of procedures. Limited availability of care (i.e., lack of competent providers willing to care for TGNC patients) often caused travel-related challenges to access services. Other barriers discussed include: bias and stigma from medical professionals (i.e., physicians, nurses, office staff, pharmacy staff); lack of provider education (e.g., feel the need to educate their providers about care needs); unnecessary exams (e.g., breast exams); mental health professionals as "gatekeepers"; requirements related to diagnoses (e.g., Gender Identity Dysphoria) and letters of recommendation from a psychologist

and psychiatrist; lack of social support and fear of repercussions (i.e., family); fear of ridicule and discrimination; concern about quality of outcomes; lack of information about gender-affirming care; having other medical issues also presents barriers; age and timing of care (e.g., parental consent requirements, physician bias, lack of knowledge of puberty blockers). Authors state that "[g]iven the benefits of gender-affirming care, it is important to assess and overcome the barriers that prohibit TGNC individuals from pursuing services, if they choose to do so." Authors recommend providers and frontline staff improve cultural competency to work with all patients (e.g., preferred language, resources, and protocol changes), professional organizations (e.g., institute guidelines for working with TGNC patients), state and federal polices (prohibit discrimination based on gender identity and expression), and health insurance (i.e., remove exclusions to gender-affirming care).

110. Discrimination in America: Experiences and Views of LGBTQ Americans. National Public Radio, Robert Wood Johnson Foundation, Harvard T.H. Chan School of Public Health; 2017.

This report is part of a series titled "Discrimination in America", which is based on a survey conducted for National Public Radio, the Robert Wood Johnson Foundation, and Harvard T.H. Chan School of Public Health. "The survey was conducted January 26 – April 9, 2017, among a nationally representative, probability-based telephone (cell and landline) sample of 3,453 adults age 18 or older." This report presents the results specifically for a nationally representative probability sample of 489 LGBTQ adults. "While many surveys have explored Americans' beliefs about discrimination, this survey asks people about their own personal experiences with discrimination." A subset of survey questions address discrimination experienced in health care settings. Overall, 18% of LGBTQ Americans report they have avoided doctors or health care out of concern they would be discriminated against. That experience was reported at a higher rate among transgender respondents (22%). Additionally, 31% of transgender individuals surveyed said they have no regular doctor or form of health care and 22% said they were currently uninsured. More broadly, 16% of LGBTQ Americans surveyed said they have been personally discriminated against when going to the doctor or health clinic because they are LGBTQ. Approximately a third of LGBTQ people surveyed said that transgender people in their area often experience discrimination when going to a doctor or health clinic (31%). Moreover, "LGBTQ women are significantly more likely to say that both LGB and transgender people often face discrimination when going to a doctor or health clinic: 23% of LGBTQ women say that where they live, gay, lesbian, or bisexual people are often discriminated against when going to a doctor or health clinic, compared to only 7% of LGBTQ men." Additionally, 43% of LGBTQ women reported that transgender people are often discriminated against at the doctor or health clinic, while only 17% of LGBTQ men shared this perspective. Among transgender individuals, 20% said that transgender people often face discrimination when going to a doctor or health clinic and 10% report being personally discriminated against because they are transgender when accessing health care. In regards to the quality of available doctors or health care services in their area, 11% of LGBTQ Americans surveyed said their community environment was worse than in other places to live and 35% reported it to be better than other places. Researchers report non-response bias and question wording and ordering as potential sources of non-sampling error. Researchers compensated by weighting sample data by cell phone/landline use and demographics (sex, age, education, and Census region) to reflect the true population.

111. Cawthon L. TAKE CHARGE: Health Insurance Survey.: Washington State Department of Social and Health Services, Services and Enterprise Support Administration, Research and Data Analysis Division.; 2015.

The Washington State TAKE CHARGE program was created in 2001 to expand Medicaid coverage for family planning services to families living at or below 200% of the Federal Poverty Level. In 2015, the program completed a survey of women enrolled in TAKE CHARGE to determine the reasons women remained in TAKE CHARGE after the implementation of the Affordable Care Act instead of obtaining insurance coverage through the Washington Health Benefit Exchange or Medicaid expansion. They surveyed 338 women (response rate= 18%) to describe gaps in health insurance coverage for family planning services. The survey concluded that: "A small number of women in Washington continue to have clear needs for family planning coverage that are not being met, except through the TAKE CHARGE family planning program. Limited assets and high debts are common problems in the United States that influence affordability of health insurance. Many women least able to afford health insurance are the same women with the greatest need to prevent unintended pregnancy." The main reasons women remained enrolled in TAKE CHARGE included: 1. Lack of employer-sponsored health insurance; 2. Difficulty navigating or getting information through Washington Health Benefit Exchange; 3. Cost of other health insurance plans; and 4. Cost of other bills, debt, and basic necessities taking precedence over paying for health insurance. The survey also found that 98% of TAKE CHARGE respondents stated that access to birth control and family planning services was a "very important" or "somewhat important" factor in choosing a health insurance plan, and were concerned that private insurers did not provide adequate coverage.