JULY
2019

HEALTH IMPACT
Assessment

Creating a State-Level Refundable
EARNED INCOME TAX CREDIT IN ARKANSAS

ARKANSAS ADVOCATES FOR CHILDREN & FAMILIES

CHILDREN'S HealthWatch 20 YEARS

ABOUT THIS REPORT

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ACKNOWLEDGEMENTS The authors would like to thank the staff and leaders of Arkansas Advocates for Children and Families, Children's HealthWatch, Human Impact Partners, and The Pew Charitable Trusts including: Jennifer Ferguson, Brooke Edwards, Nayab Ahmad, Logan Harris and Emily Bever for their thoughtful review of this work.

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DISCLAIMER The Health Impact Assessment is supported by a grant from the Health Impact Project, a collaboration of the Robert Wood Johnson Foundation and The Pew Charitable Trusts. The views expressed are those of the authors and do not necessarily reflect the views of the Health Impact Project, The Pew Charitable Trusts or the Robert Wood Johnson Foundation.

SUGGESTED CITATION Cook J, Sheward R, Showers B, Ochoa E. Health Impact Assessment of Creating a State-Level Refundable Earned Income Tax Credit in Arkansas. Arkansas Advocates for Children and Families & Children's HealthWatch. 2019.

CONTENTS

ABBREVIATIONS

AACF — ARKANSAS ADVOCATES FOR CHILDREN AND FAMILIES

CHW — CHILDREN'S HEALTHWATCH

EITC — EARNED INCOME TAX CREDIT

HIA — HEALTH IMPACT ASSESSMENT

Creating a State-Level Refundable

EARNED INCOME TAX CREDIT IN ARKANSAS

EXECUTIVE SUMMARY

STATEMENT OF PURPOSE

Arkansas Advocates for Children and Families and Children's HealthWatch have conducted the following Health Impact Assessment to estimate the potential health-related impacts of creating a state-level, refundable Earned Income Tax Credit for the approximately 300,000 qualifying low-income Arkansas households. This Health Impact Assessment also identifies appropriate actions to manage those effects.

BACKGROUND

What is a Health Impact Assessment?

The International Association of Impact Assessment defines Health Impact Assessment (HIA) as "a combination of procedures, methods and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, program or project on the health of a population and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects."[1] The HIA process consists of six steps:

1. Screening determines the need for and value of a health impact assessment.
2. Scoping determines which health impacts to evaluate, analysis methods, a work plan, and generates a pathway diagram.
3. Assessment profiles existing health conditions and evaluates potential health impacts.
4. Recommendations are provided to identify strategies to address health impacts.

5. Reporting includes the development of the health impact assessment report.
6. Monitoring tracks how the health impact assessment influences decision-making processes and decisions, as well as the effects on health.

Source: Human Impact Partners[2]

What is the Earned Income Tax Credit?

The Earned Income Tax Credit (EITC) is a federal tax credit that rewards low-income working families for their work effort.[3] The credit equals a fixed percentage of earnings from the first dollar of earnings until the credit reaches its maximum, which is paid until earnings reach a specified level, after which it declines with each additional dollar of income until no credit is available.

What is a State-Level Earned Income Tax Credit?

In addition to the federal EITC, 29 states, the District of Columbia, Guam and Puerto Rico have state-level EITCs. Most of these states "piggyback" on the federal EITC by using the same eligibility requirements and set state-level credits at some percentage of the federal EITC. Recipients in these states receive both the federal and state credit.

Health Impact Assessment Methodology

Arkansas Advocates for Children and Families and Children's HealthWatch, informed by an advisory committee and other stakeholders, completed a systematic literature review. We focused our review of the existing literature to ascertain the baseline health conditions of Arkansans, and the positive, negative and neutral health effects of Earned Income Tax Credits. While the existing evidence suggests Earned Income Tax Credits is associated with improvements in the health of children and adults, there is limited evidence available and a need for continued research.

Arkansas Target Counties

Arkansas Advocates for Children and Families and Children's HealthWatch focused the scope of the HIA on Arkansas as a whole as well as the following 11 target counties identified by the Health Impact Project: Chicot, Crittenden, Desha, Jackson, Jefferson, Lafayette, Lee, Mississippi, Monroe, Phillips, and St. Francis.

Current State of the EITC in Arkansas

During 2017, 287,000 eligible workers and families in Arkansas received about $767 million in federal EITC benefits.[4] The average amount of federal EITC received nationwide per household was about $2,445, while the average in Arkansas was about $2,672.[4] The EITC participation rate among eligible worker households in Arkansas in tax year 2014 (latest year of available data) was 80.6%,[5] compared to the national participation rate of 79%.

Previously, researchers estimated* a refundable, state-level EITC in Arkansas would cost approximately $39 million if set at 5% of the federal credit,[6] $77 million if set at 10% of the federal credit, and $155 million if set at 20% of the federal credit. However, new research shows that effects of the EITC contain self-financing attributes[7] **through decreases in public assistance received by mothers and increases in payroll and sales taxes paid, which would reduce the sticker price of a refundable state-level EITC in Arkansas to $5 million if set at 5% of the federal credit, $10 million if set at 10% of the federal credit, and $20 million if set at 20% of the federal credit.**

* Estimates for FY2019.

What Is the Connection Between the EITC and Health?

The EITC has successfully lifted many poor families out of poverty, reducing participation in public assistance programs, while largely paying for itself. This led researchers to explore connections between the EITC, poverty, and health.[7 - 9] Recent evidence supports the hypothesis that receipt of the EITC can improve health, particularly among children and single mothers.[10, 11]

"A growing number of studies show the EITC improves health, particularly among single mothers and children."

A growing body of research demonstrates the relationship between expansions of the federal EITC and introductions of state EITCs and improved maternal and child health outcomes.[12] A 2015 study found that expansions of the federal EITC led to a 2-3% decline in the rate of low-birthweight births for every $1,000 in benefits.[10] More recent studies have found that state EITCs improve birth outcomes, including increased birthweights.[11, 13] Expanding the EITC has been linked to improved self-reported health status and reduced self-reported symptoms of depression among mothers.[14, 15] Research also demonstrates associations between EITCs and higher rates of specific health behaviors, including better diet and food security.[16] A 2016 study found that EITCs are associated with increases in private health insurance coverage among children ages 6 - 14, decreases in public coverage, and improvements in children's reported health status.[17]

HEALTH IMPACT ASSESSMENT QUESTIONS AND FINDINGS

Following are the questions Arkansas Advocates for Children and Families and Children's HealthWatch sought to answer with this health impact assessment, and the findings.

Baseline Health Conditions & Health Impact Findings

- **What proportion of adults in Arkansas have reported their health status as "fair or poor" as opposed to "excellent, very good, or good"? Can receiving additional resources via a state EITC match change that proportion?**

The HIA raises the question whether Non-Latinx** Black households may exhibit greater health resilience at these lowest income levels than their Non-Latinx White peers. This may suggest that at these lowest levels of income, a relatively modest addition of financial resources, such as provided by a state-level match to the federal EITC, might also help shift more Non-Latinx Black working households into a higher health status category. If that occurred, it would very likely also lead to a reduction in health services utilization, and in overall health care costs in this vulnerable subpopulation.

- **What proportion of children in Arkansas have their health status reported as "fair or poor" (caregiver-reported)? Can receiving additional resources via a state EITC match change that proportion?**

To the extent that state-augmented EITC benefits can be received by single-mother families, espe-

** Latinx (la-TEEN-ex) is a gender-neutral term sometimes used in lieu of Latino or Latina (referencing Latin American cultural or racial identity).

cially in the target counties, extant evidence indicates a high likelihood that the health and health behaviors of the mothers, and their children, will be improved in several ways. A state supplement to the federal EITC would unquestionably improve economic conditions for single-parent families in these priority counties as in others. Moreover, the magnitude of improvement is likely to also help shift more households with children into a higher health status category. If that occurred, it would very likely also lead to a reduction in health services utilization, and in overall health care costs.

- **What proportion of women have reported or been observed to have maternal depressive symptoms? Can receiving money from a state EITC change this?**

A state supplement to the federal EITC for working families in Arkansas would help recipients support the common practice of "self-insurance" against the next year's economic insecurity, and in the process reduce the prevalence and severity of depression among working family heads in the state.

- **What proportion of children in Arkansas were born with low birth weight? Can receiving additional resources via a state EITC match change that proportion?**

If an Arkansas state supplement to the federal EITC can be enacted into law, it is highly likely to have a very positive effect on the prevalence of low-birthweight births among mothers in all race-ethnicity subgroups in the state. Furthermore, the evidence suggests that it would very likely be accompanied by greater improvements in low-birthweight birth rates among Non-Latinx Black mothers.

- **What proportion of children have been observed to have developmental delays or concerns? Can additional family resources from a state EITC match change that proportion?**

There is evidence that the EITC can lead to improvements in children's developmental trajectories. A 2015 study using data from the National Longitudinal Survey of Youth examined associations between EITC benefits and two measures relevant to child development: the Behavior Problems Index

(BPI), which is an assessment of a child's behavior and the Home Observation Measurement of the Environmentinventory (HOME), which is an assessment of a child's homeenvironment. The researchers found that larger EITC payments were associated with improved BPI (child behavior) scores at two-year follow-up, and with better HOME (child home environment) scores at four-year follow-up.

- **What proportion of adults in Arkansas have been told by a clinician that they are obese? How can receiving additional money from a state EITC match change that proportion?**

While it is hard to put reductions in adult prevalence of obesity in the state forward as a primary argument for a state supplement to the federal EITC, given the other, much more likely benefits discussed in this assessment, even minor reductions in adult obesity could be a large advantage. It is also very likely that the benefits a state supplement to the EITC would have on child health, development, and education attainment discussed herein would enable children whose parents received the state supplement to the EITC to avoid obesity and live much healthier lives as adults.

Additional Research Questions & Health Impact Findings

- **How many Arkansans are currently eligible to receive the EITC? If a state supplement is approved, will this change?**

In tax year 2014, 366,444 workers and families were eligible to receive the EITC. If a state supplement is approved, EITC eligibility will likely remain unchanged.

- **How many Arkansans would likely file for and receive a state supplement to the federal EITC?**

In tax year 2014, 366,444 workers and families were eligible to receive the EITC.The EITC participation rate among eligible worker households in Arkansas in tax year 2014 was 80.6%,[5] compared to the national participation rate of 79%. If a state supplement is approved, EITC eligibility will likely remain unchanged.

- **How much money would Arkansas tax filers receive from a refundable Arkansas EITC at 5, 10, 15, 20, 25, & 30% matches of federal EITC?**

The latest year of data available is tax year 2014. In Arkansas during tax year 2014, tax filers would have received the following amounts of EITC at the corresponding percentage of the federal credit (see Table 1).

TABLE 1: How much money would Arkansas tax filers receive from a refundable Arkansas EITC?

EITC PERCENTAGE	STATE-WIDE EITC SUM	AVERAGE AMOUNT OF EITC PER FILER
5 percent	$38,530,000	$131
10 percent	$77,062,000	$261
15 percent	$115,594,000	$392
20 percent	$154,125,000	$522
25 percent	$192,656,000	$653
30 percent	$231,187,000	$783

Source: Earned Income Tax Credit (EITC) interactive and resources. The Brookings Institution. https://www.brookings.edu/interactives/earned-income-tax-credit-eitc-interactive-and-resources/.Published 2016.

- **How much would Arkansans in different types of households, with different numbers of children receive from the Arkansas and federal EITC combined, at different proportional state matches?**

In Arkansas during the most recent tax year (2018), the following illustrative examples of tax filing households would have received the following amounts of combined federal and state EITC at the corresponding percentage of the federal credit (see Table 2).

- **Are there likely to be unintended negative consequences of addition of a state supplement to the federal EITC? Might it push some families "off the benefit cliff"? How could this be avoided?**

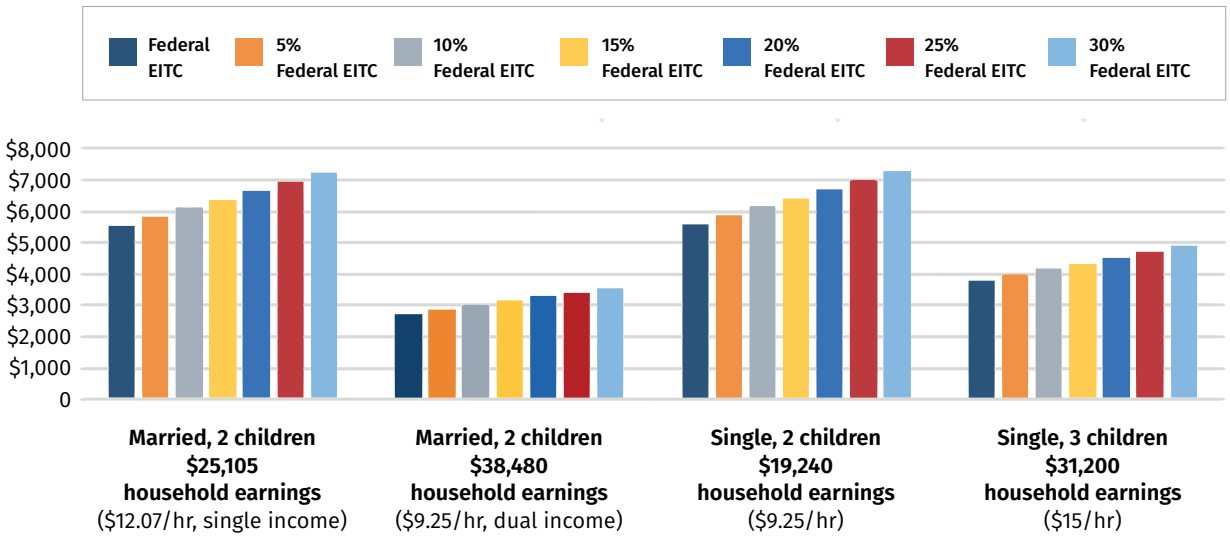
Research studies of the EITC in relation to other public assistance programs confirm that the EITC's gradual transition off benefits as earnings increase serves to better support work and stabilize families, while reducing cliff effects. Researchers also found the benefit cliff occurs only for workers receiving a wide range of government assistance whose components can phase out at the same time - comprising very few low-wage families with children who "receive the EITC *and* SNAP *and* housing aid *and* have earnings in the range where all of these benefits are phasing out simultaneously, creating very high marginal tax rates."[18]

TABLE 2: How much would Arkansans in different types of households, with different numbers of children receive from the Arkansas and federal EITC combined?

	POVERTY LINE	MINIMUM WAGE	MINIMUM WAGE	
EITC PERCENTAGE	MARRIED, 2 CHILDREN - $25,105 HOUSEHOLD EARNINGS ($12.07/HR., SINGLE INCOME)	MARRIED, 2 CHILDREN - $38,480 HOUSEHOLD EARNINGS ($9.25/HR., DUAL INCOME)	SINGLE, 2 CHILDREN - $19,240 HOUSEHOLD EARNINGS ($9.25/HR.)	SINGLE, 3 CHILDREN - $31,200 HOUSEHOLD EARNINGS ($15/HR.)
Federal EITC	*$5,553*	*$2,741*	*$5,597*	*$3,784*
+5 percent	$5,831 ($278 increase)	$2,878 ($137 increase)	$5,876 ($280 increase)	$3,973 ($189 increase)
+10 percent	$6,108 ($555 increase)	$3,015 ($274 increase)	$6,157 ($560 increase)	$4,162 ($378 increase)
+15 percent	$6,386 ($833 increase)	$3,152 ($411 increase)	$6,437 ($840 increase)	$4,352 ($568 increase)
+20 percent	$6,664 ($1,111 increase)	$3,289 ($548 increase)	$6,716 ($1,119 increase)	$4,541 ($757 increase)
+25 percent	$6,941 ($1,388 increase)	$3,426 ($685 increase)	$6,996 ($1,399 increase)	$4,730 ($946 increase)
+30 percent	$7,219 ($1,666 increase)	$3,563 (822 increase)	$7,276 ($1,679 increase)	$4,919 ($1,135 increase)

Source: Earned Income Tax Credit (EITC) interactive and resources. The Brookings Institution. https://www.brookings.edu/interactives/earned-income-tax-credit-eitc-interactive-and-resources/. Published 2016.

FIGURE 1: Combined Federal & State EITC Amount for Example Arkansas Households



Source: Policy Basics: The Earned Income Tax Credit. CBPP. https://www.cbpp.org/research/federal-tax/policy-basics-the-earned-income-tax-credit. Published 2018. • Living Wage Calculation for Arkansas. MIT. http://livingwage.mit.edu/states/05. • Poverty Guidelines. US Department of Health and Human Services. https://aspe.hhs.gov/poverty-guidelines. Published 2019.

RECOMMENDATIONS

Considering the potential health impacts of creating a state-level, refundable Earned Income Tax Credit for the approximately 300,000 qualifying low-income Arkansas households, Arkansas Advocates for Children and Families and Children's HealthWatch identified the following recommendation should Arkansas decide to enact a state-level, refundable Earned Income Tax Credit.

ENACT A STATE-LEVEL REFUNDABLE EITC AT 15% OF THE FEDERAL CREDIT

We recommend a state-level, refundable EITC set at 15% of the federal credit in order to maximize potential health benefits to Arkansans at a reasonable cost to the state. A state-level refundable EITC set at 15% of the federal credit equates to an average amount of $392 per household in addition to an average of $2,610 in federal EITC, resulting in a total federal/state EITC amount of $3,002. For a

typical household headed by a single adult with two children earning the state minimum wage ($19,240 annually, or $9.25/hr.), the total federal/state EITC amount would be $6,437 ($840 increase resulting from 15% state EITC). A state-supplement to the federal EITC would unquestionably improve economic conditions for Arkansas households, and would very likely result in improved health outcomes among children and their caregivers.

The Arkansas state-level, refundable EITC set at 15% of the federal credit would cost approximately $117 million. However, the self-financing attributes through decreases in public assistance received by mothers, lower healthcare costs and costs of lost productive work time, and increases in payroll and sales taxes paid, **would reduce the sticker price of a refundable state-level EITC in Arkansas to $15.2 million — a modest 0.05% of the FY2018 state budget.**[19]

CONCLUSION

The creation of a state-level refundable EITC may be one of the most effective ways to address the poor health outcomes experienced among Arkansans. This HIA concludes that a state-level, refundable EITC will counteract many poor health outcomes manifested by longstanding poverty, fewer health care resources and longstanding barriers to care. Arkansas has an opportunity to join the 29 states plus the District of Columbia (D.C.) that have enacted state-level EITCs. While a modest investment in creating a working families tax credit has big payoffs in terms of reducing poverty, this HIA will enable lawmakers to better understand how an EITC may also improve the health of low-income Arkansans.

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SUGGESTED CITATION Cook J, Sheward R, Showers B, Ochoa E. Health Impact Assessment of Creating a State-Level Refundable Earned Income Tax Credit in Arkansas. Arkansas Advocates for Children and Families & Children's HealthWatch. 2019.

I. SCREENING

Potential Health Impacts of an Arkansas Earned Income Tax Credit

WHAT IS A HEALTH IMPACT ASSESSMENT?

The International Association of Impact Assessment defines Health Impact Assessment (HIA) as "a combination of procedures, methods and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, program or project on the health of a population and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects."[1] The HIA process consists of six steps:

1. Screening determines the need for and value of a health impact assessment.
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5. Reporting includes the development of the health impact assessment report.
6. Monitoring tracks how the health impact assessment influences decision-making processes and decisions, as well as the effects on health.

Source: Human Impact Partners[2]

Purpose

This screening summary describes how Arkansas Advocates for Children and Families (AACF) and Children's HealthWatch (CHW) decided the Health Impact Assessment will focus on the potential creation of a state Earned Income Tax Credit (EITC) in Arkansas. Specifically, this summary describes:

1. How key stakeholders were engaged during screening,
2. A description of the potential state-level EITC in Arkansas that will be informed by the HIA,
3. The timeline for the potential creation of a state-level EITC in Arkansas, and
4. A summary of the final reasons for selecting the creation of a state-level EITC in Arkansas for an HIA.

1. How Key Stakeholders Were Engaged During Screening

AACF has a history of very productive relationships with a broad range of stakeholder organizations throughout Arkansas. CHW has a 20-year history of researching factors that adversely impact young children's health and that of their mothers, and of effectively communicating research findings to policy makers and the public. CHW has several years of experience coordinating a Healthy Families EITC Coalition in the state of Massachusetts and of working with a broad variety of stakeholders and state and local decision makers to achieve a significant increase in the state's match of the national EITC.

Together we examined a range of state-level policy options for addressing poverty and its associated hardships and concluded that state supplements to the EITC have proven to be very effective as an anti-poverty policy, especially in concert with the national EITC and other available national assistance programs. Moreover, it is highly regarded by state and national policy decision makers because it encourages work among eligible people able to work. We then assessed the knowledge level and support for the state EITC supplement among a broad range of stakeholders throughout the state and among state policy decision makers.

2. Description of the Potential State-Level EITC in Arkansas That Will Be Informed by the HIA

EITCs help all kinds of working people and their children. About 32,000 veteran and military families in Arkansas receive the federal EITC or the similar Child Tax Credit and would benefit from adopting a state EITC.[20] There are also nearly 300,000 children in Arkansas who would be helped. Rural areas, where low-wage jobs are more common, also have many low-income, working people who would financially benefit from a state EITC. About 143,000 families living in rural areas would qualify for this type of state credit.[21]

3. Timeline for the Potential Creation of a State-Level EITC in Arkansas

Despite an increasingly conservative environment, AACF made greater progress than ever with its EITC campaign in the 2019 regular legislative session. During the previous session in 2017, AACF worked with legislators, business leaders, national partners, local media and advocates to bring an EITC bill all the way to the House floor. This type of progress was unheard of in all previous sessions, where capital gains, tax cuts and special interest breaks were more the norm. More recently AACF reports, dialogue with key legislators, and testi-

mony on the EITC at the Tax Task force this year have all contributed to a growing number of decision makers who are knowledgeable and supportive of a state EITC in Arkansas.

There were two bills aimed at reducing tax liability for low-income taxpayers during the 2017 legislative session: tax credits and tax rate cuts. The Governor's "Tax Reform and Relief Act of 2017" (Act 79),[22] a $50 million tax cut for those making less than $21,000 a year in taxable income prevailed. Although the EITC failed during the 2017 session, AACF succeeded in shaping the debate to include serious consideration of low-income families. This was the first year that the EITC passed out of committee and was debated on the House floor.

AACF also ended up seeing multiple conservative legislators question the alternative $50 million tax proposal because of AACF research on the merits of the EITC. As a part of this tax proposal, the Arkansas legislature created a 16-member task force to "examine and identify areas of potential reform within the tax laws of the State of Arkansas." The task force is charged with recommending any potential further tax legislation for the 2019 legislative session. Several legislators who supported a state EITC are members of the task force, including the primary sponsor of the 2015 and 2017 state EITC bills.

While the task force did not ultimately include a state-level EITC in their final recommendations, AACF leveraged the outreach and education we did with the task force to garner support for EITC legislation during the 2019 legislative session. The work we did with the task force helped us gain new allies, most prominently the Senate President Pro Temp Jim Hendren, who was the primary sponsor of SB571, the legislation that would have created a state-level EITC. This legislation made it through the Senate committee and the full Senate before dying on the house side due to concerns over how it would fit into the overall budget given the other tax cuts that had been passed earlier in the session.

However, this is farther than any state-level EITC legislation has ever made it through Arkansas's state legislature. In addition, health outcomes and health spending were a critical part of the conversation around the EITC legislation. We believe that the HIA project can be utilized as an advocacy and education tool between now and the 2021 legislative session, where we will push for the state-level EITC again.

4. Summary of the Final Reasons for Selecting the Creation of a State-Level EITC in Arkansas for an HIA

As a result of the screening process, AACF and CHW selected the creation of a state-level EITC in Arkansas as an appropriate focus for an HIA, and advantageous given the timing. An April 2018 poll released by AACF found more than three out of four (79%) Arkansans – including 79% of independents and 72% of Republicans – support enacting a state-level EITC.[23] Based on each organization's previous work, together we agreed this salient policy decision might result in reduced adverse impacts of household hardships associated with a lack of income among working families in Arkansas, improved health outcomes, health care cost savings, reductions in persistent poverty, and increases in upward economic mobility for low-income Arkansans.

Furthermore, CHW had seen prior success in re-framing state EITCs in the context of child health improvement. Following a planning grant process in 2014, Children's HealthWatch led the Massachusetts Healthy Families EITC Coalition, a statewide, nonpartisan network of advocates working to improve the health and well-being of Massachusetts children and families. The Coalition successfully led a campaign to increase the state's EITC by 50%, allowing more than 400,000 individuals and families in the Commonwealth access to state benefits to improve their health and well-being. The bill increased the state EITC level from 15 to 23% of the federal EITC, increasing the maximum state credit from $951 to $1,459. After years of collaborative efforts in Massachusetts to increase the state EITC, a re-imagining of the credit as an issue of promoting health was integral to its expansion. We envision a HIA on the creation of a state-level EITC in Arkansas to have a similar effect in Arkansas.

II. SCOPING

Potential Health Impacts of an Arkansas Earned Income Tax Credit

PURPOSE

This scoping summary describes how Arkansas Advocates for Children and Families and Children's HealthWatch identified issues and methods for assessment and communication, including the strategy for stakeholder engagement. Based on a preliminary review of health outcomes research on the Earned Income Tax Credit, we identified three scenarios that illustrate the potential pathways between receipt of the EITC and health outcomes. Based upon the scenarios, we selected a set of research questions to evaluate the potential pathways and conduct the assessment. Our pathway diagram is included in Appendix F.

According to the definition laid out in "Health Impact Assessment: A Guide for Practice," our scoping summary builds upon screening and answers the following questions:

- **Who will conduct the analysis (if not already determined)? Under what oversight?**

CHW will conduct the analysis with assistance and guidance from AACF. Oversight will be provided by the Advisory Committee (Appendix D).

- **Which specific decision alternatives will beevaluated?**

We will evaluate the impact of an Arkansas EITC at 5, 10, 15, 20, and 25% of the federal credit.

- **Which potential health impacts will be analyzed?**

We currently have a list of health impacts, included below in Appendix L, that we consider our highest priorities. These health impacts are connected to the most frequently identified social determinants of health in current literature regarding health care reforms and quality improvement (i.e., food insecurity, housing instability, energy insecurity, lack of adequate transportation, and ability to access and afford health care).

- **What are the geographical and temporal boundaries for impact analysis?**

We will place emphasis on the 11 target counties in Arkansas, but the assessment will ultimately be statewide. When necessary data are available at the county level, we will specifically address conditions in Arkansas counties, highlighting these priority counties.

- **Who are vulnerable affected populations?**

Arkansas residents whose income levels are below the federal poverty level, and racial and ethnic minorities eligible to receive the EITC are the populations we considered.

- **What data, methods and analytic tools will be employed?**

We list the data sources used in Appendix L. We relied heavily on research results in the published literature.

- **How will the HIA characterize health effects?**

We will rely on reported prevalence of health conditions and diseases from national surveys by individual and household characteristics (e.g., income levels, including relative to poverty thresholds, whether married couple households, presence of children in the household, ages of household members, and race/ethnicity). We are sensitive to the relevance of racial and ethnic equity considerations and will attempt to include these characteristics when data availability permits.

- **Which experts and key informants will be engaged?**

Following our review of the literature, we will engage experts participating in our Advisory Committee as well as key informants participating in our four focus groups. We will also consult with colleagues at CHW, who include pediatricians, behavioral / developmental psychologists, public health professionals and public policy experts.

- **What is the plan for stakeholder engagement and public review of the HIA?**

We have established an Advisory Committee (see appendix D) comprised of organizations from across Arkansas and have scheduled four separate focus groups to provide stakeholder engagement (see appendices E, and G-J). Not only will these groups inform the HIA, we will encourage their review of the HIA as well. We will provide copies of near-final drafts to the Advisory Group members and request their review and feedback on the draft document. We will also provide a summary of our research findings to all participants in the focus groups and invite their review and feedback. We will provide a short list of specific questions for the focus group participants to respond to, with a clearly stated deadline for receipt of their input. We will also provide options for focus group participants to either email or phone AACF to provide their feedback. In addition, all work products will be reviewed by principal investigators and colleagues and staff at our respective organizations.

III. ASSESSMENT

Baseline Health Conditions in Arkansas, Health Impacts of Arkansas Earned Income Tax Credit

ASSESSMENT METHODOLOGY

Arkansas Advocates for Children and Families and Children's HealthWatch, informed by an advisory committee and other stakeholders, completed a systematic literature review. We focused our review of the existing literature to ascertain the baseline health conditions of Arkansans, and the positive, negative and neutral health effects of Earned Income Tax Credits. We reviewed the existing literature to identify the strength of evidence associated with the potential health impacts. While the existing evidence suggests Earned Income Tax Credits may be associated with improvements in the health of children and adults, there is limited evidence available and a need for continued research.

EITC-SPECIFIC PREVALENCE

Current Status of the EITC in Arkansas

During 2017, 287,000 eligible workers and families in Arkansas received about $767 million in federal EITC benefits.[4] The average amount of federal EITC received nationwide per household was about $2,445, while the average in Arkansas was about $2,672.[4] The EITC participation rate among eligible worker households in Arkansas in tax year 2014 (latest year of available data) was 80.6%,[6] compared to the national participation rate of 79%.

- **How Many Arkansans Are Currently Eligible to Receive the EITC? If a State Supplement Is Approved (I.E., a State-Level EITC That Acts**

as a "Piggyback" on the Federal EITC by Using the Same Eligibility Requirements and Set State-Level Credits at Some Percentage of the Federal EITC), Will This Change?

In tax year 2014, 366,444 workers and families were eligible to receive the EITC. If a state supplement is approved, EITC eligibility will likely remain unchanged.[24]

- **How Many Arkansans Would Likely File for and Receive a State Supplement to the Federal EITC?**

In Arkansas during tax year 2014, 295,353 eligible workers and families received EITC. The EITC participation rate in Arkansas in tax year 2014 was 80.6%. The number of eligible workers and families within the HIA target counties who received the EITC in 2014 is included in Table 3.

- **How Much Money Would Arkansas Tax Filers Receive from a Refundable Arkansas EITC at 5, 10, 15, 20, 25, and 30% Matches of Federal EITC?**

In Arkansas during tax year 2014, tax filers would have received the following amounts of EITC at the corresponding percentage of the federal credit (see Table 4).

In Arkansas during tax year 2014, tax filers within the HIA target counties would have received the following amounts of EITC at the corresponding percentage of the federal credit (see Table 5).

TABLE 3: How Many Arkansans Would Likely File for and Receive a State Supplement to the Federal EITC?

ARKANSAS TARGET COUNTY	NUMBER OF ELIGIBLE WORKERS AND FAMILIES PARTICIPATING IN EITC IN 2014
All target counties	**38,673**
Chicot	1,595
Crittenden	7,955
Desha	1,713
Jackson	1,473
Jefferson	9,973
Lafayette	818
Lee	1,166
Mississippi	5,985
Monroe	1,053
Phillips	3,088
St. Francis	3,854

Source (Table 3): Earned Income Tax Credit (EITC) interactive and resources. The Brookings Institution. https://www.brookings.edu/interactives/earned-income-tax-credit-eitc-interactive-and-resources/. Published 2016. • Source (Tables 4 & 5): Earned Income Tax Credit (EITC) interactive and resources. The Brookings Institution. https://www.brookings.edu/interactives/earned-income-tax-credit-eitc-interactive-and-resources/. Published 2016.

TABLE 4: How Much Money Would Arkansas Tax Filers Receive from a Refundable Arkansas EITC?

EITC PERCENTAGE	STATE-WIDE EITC SUM	AVERAGE AMOUNT OF EITC PER FILER
5 percent	$38,531,262	$131
10 percent	$77,062,524	$261
15 percent	$115,593,787	$392
20 percent	$154,125,049	$522
25 percent	$192,656,311	$653
30 percent	$231,187,574	$783

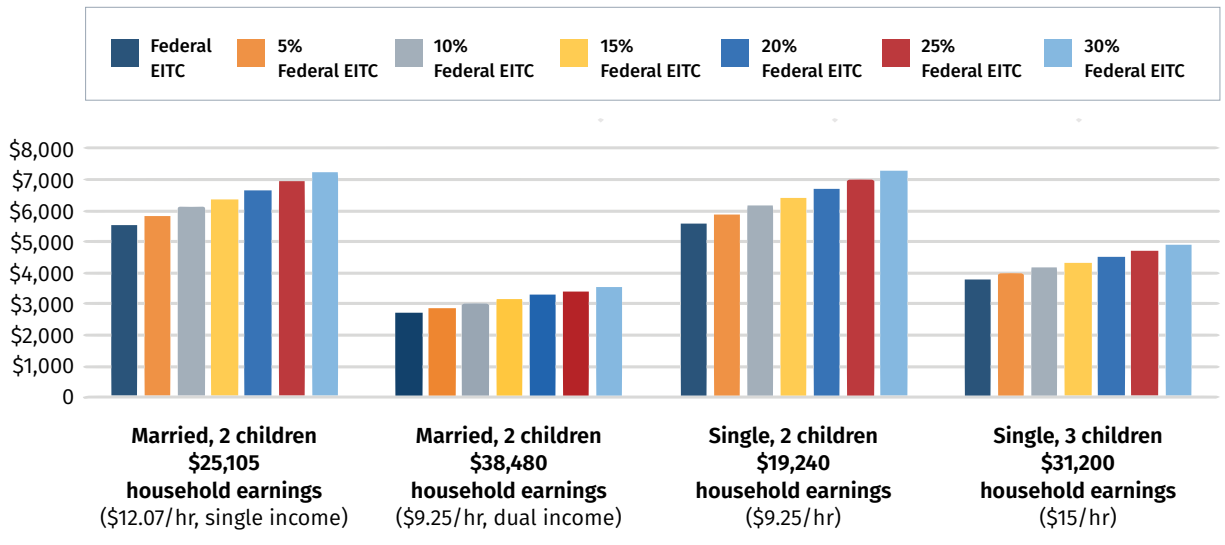
TABLE 5: How Much Money Would Arkansas Tax Filers Receive from a Refundable Arkansas EITC?

EITC PERCENTAGE	EITC SUM IN TARGET COUNTIES	AVERAGE AMOUNT OF EITC PER FILER IN TARGET COUNTIES
5 percent	$5,645,505	$144
10 percent	$11,291,101	$288
15 percent	$14,936,515	$433
20 percent	$22,582,021	$577
25 percent	$28,227,526	$721
30 percent	$33,873,031	$865

TABLE 6: HOW MUCH WOULD ARKANSANS IN DIFFERENT TYPES OF HOUSEHOLDS, with Different Numbers of Children Receive from the Arkansas and Federal EITC Combined?

	POVERTY LINE	MINIMUM WAGE	MINIMUM WAGE	
EITC PERCENTAGE	**MARRIED, 2 CHILDREN** - $25,105 HOUSEHOLD EARNINGS ($12.07/HR., SINGLE INCOME)	**MARRIED, 2 CHILDREN** - $38,480 HOUSEHOLD EARNINGS ($9.25/HR., DUAL INCOME)	**SINGLE, 2 CHILDREN** - $19,240 HOUSEHOLD EARNINGS ($9.25/HR.)	**SINGLE, 3 CHILDREN** - $31,200 HOUSEHOLD EARNINGS ($15/HR.)
Federal EITC	***$5,553***	***$2,741***	***$5,597***	***$3,784***
+5 percent	**$5,831** ($278 increase)	**$2,878** ($137 increase)	**$5,876** ($280 increase)	**$3,973** ($189 increase)
+10 percent	**$6,108** ($555 increase)	**$3,015** ($274 increase)	**$6,157** ($560 increase)	**$4,162** ($378 increase)
+15 percent	**$6,386** ($833 increase)	**$3,152** ($411 increase)	**$6,437** ($840 increase)	**$4,352** ($568 increase)
+20 percent	**$6,664** ($1,111 increase)	**$3,289** ($548 increase)	**$6,716** ($1,119 increase)	**$4,541** ($757 increase)
+25 percent	**$6,941** ($1,388 increase)	**$3,426** ($685 increase)	**$6,996** ($1,399 increase)	**$4,730** ($946 increase)
+30 percent	**$7,219** ($1,666 increase)	**$3,563** (822 increase)	**$7,276** ($1,679 increase)	**$4,919** ($1,135 increase)

FIGURE 1: COMBINED FEDERAL & STATE EITC AMOUNT for Example Arkansas Households



Sources (Figure 1): Policy Basics: The Earned Income Tax Credit. CBPP. https://www.cbpp.org/research/federal-tax/policy-basics-the-earned-income-tax-credit. Published 2018. • Living Wage Calculation for Arkansas. MIT. http://livingwage.mit.edu/states/05. • Poverty Guidelines. US Department of Health and Human Services. https://aspe.hhs.gov/poverty-guidelines. Published 2019.

Source (Table 6): : Earned Income Tax Credit (EITC) interactive and resources. The Brookings Institution. https://www.brookings.edu/interactives/earned-income-tax-credit-eitc-interactive-and-resources/. Published 2016.

- **How Much Would Arkansans in Different Types of Households, with Different Numbers of Children Receive from the Arkansas and Federal EITC Combined, at Different Proportional State Matches?**

In Arkansas during the most recent tax year (2018), the illustrative examples in Table 6 of tax-filing households would have received the amounts shown in combined federal.

- **Do Arkansans Generally Have a Positive, Negative, or Neutral Opinion or View of the Federal EITC, and of Its Potential to Improve Health in Their Families and Communities?**

During the fall of 2018, Arkansas Advocates for Children and Families conducted four focus groups in the following Arkansas counties: Chicot, Crittenden, Desha, and Lee. The purpose of these focus groups was to ascertain Arkansans' opinions of the federal EITC and its potential to improve health in their families and communities.

Chicot County

- The focus group participants overall expressed positive opinions about the EITC and how it was utilized in their community. The most common use of the EITC was to "pay down bills," or to "pay off debt."
- Other uses were viewed contextually, and it was noted that sometimes people will use the windfall of cash to make up for times of lack.

Crittenden County

- The initial impressions of the EITC among this group were not entirely positive.
- The perception, at least initially, was that people wasted their "income taxes" on things like cars and clothes.
- There is a casino nearby, and it seemed everyone knew someone who had used their EITC gambling.
- There was recognition that an increase in income would help the community in various ways. However, the EITC specifically as a tool to increase income was viewed skeptically for the reasons described above.

Desha County

- Similar to the focus group in Chicot County, the most common use of EITC was to "pay down bills," or to "pay off debt."
- Paying utility bills and rent were the uses this community cited the most.
- Another issue that came up was the minimum wage increase that is on the ballot in Arkansas (note: it has now passed). This group thought of that as addressing health issues related to stress from the problems associated with having low incomes.

Lee County

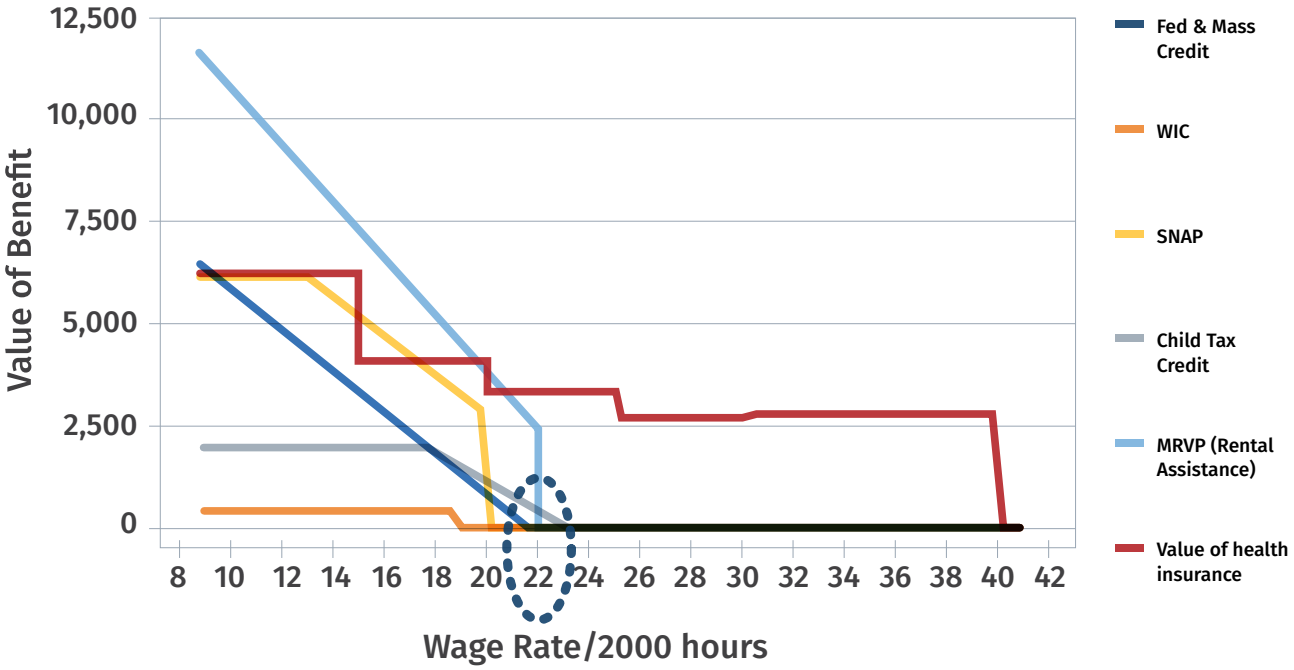
- There were concerns from some focus group participants that additional income without a change in behavior would not help their neighbors' and community members' situation.
- There was a lot of discussion around EITC spending decisions, particularly with respect to buying things like "new" cars.
- However, one participant stated, "I think the credit is beneficial to people, because it is a windfall of cash that helps a lot of people, but you might splurge or do something you wouldn't otherwise do, but that's because you've suffered and gone without so you might make some poor choices. But at least you have something to look forward to, some resources coming your way that maybe keeps your hopes up the rest of the year."
- After this comment, the conversation shifted significantly toward the positive benefits of the EITC. Even folks who were skeptical of the ways

it was used began to talk about how it benefits the local economy and how it helps reduce the stress associated with things like choosing between paying for medicine or paying rent.

- **Are There Likely to Be Unintended Negative Consequences of Addition of a State Supplement to the Federal EITC? Might It Push Some Families "Off the Benefit Cliff"? How Could This Be Avoided?**

By design, means-tested public assistance program participants lose eligibility for programs (such as the Supplemental Nutritional Assistance Program (SNAP) and Medicaid) as their incomes rise. However, the benefit cliff effect occurs when a small increase in income leads to a sharp reduction or loss of benefits, leaving participants no better — and in some cases much worse — than before a wage increase.[25] Research studies of the EITC in relation to other public assistance programs confirm that the EITC's gradual transition off of benefits as earnings increase serves to better support work and stabilize families, while reducing cliff effects. The Center on Budget and Policy Priorities has demonstrated that "since the EITC and Child Tax Credit rise more for families as earnings increase than their SNAP benefits decline, their assistance from government policies rises as they work more.[18] The Center on Budget and Policy Priorities has also found the benefit cliff occurs only for workers receiving a wide range of government assistance whose components can phase out at the same time — comprising very few low-wage families with children who "receive the EITC *and* SNAP *and* housing aid *and* have earnings in the range where all of these benefits are phasing out simultaneously, creating very high marginal tax rates."[18] One example of this scenario for a Suffolk County, Massachusetts, family of three is presented by the Center for Social Policy, based at the University of Massachusetts Boston:

FIGURE 2: VALUE OF BENEFITS FOR A FAMILY OF THREE Suffolk County, MA



Sources: Albelda R, Carr M. Between a Rock and a Hard Place: A Closer Look at Cliff Effects in Massachusetts. Center for Social Policy. https://www.umb.edu/editor_uploads/images/centers_institutes/center_social_policy/Rock_and_a_Hard_Place_Sept_2016.pdf. Published 2016. • Cliff Effects. University of Massachusetts Boston. https://www.umb.edu/csp/research.

We conclude that unintended negative consequences of a state supplement to the federal EITC are highly unlikely. Further, the likelihood that a state EITC might push some families "off the benefit cliff" is very minimal.

BASELINE HEALTH CONDITIONS

What Proportion of Adults in Arkansas Have Reported Their Health Status as "Fair" or "Poor," as Opposed to "Excellent," "Very Good," or "Good"? Can Receiving Additional Resources via a State EITC Match Change that Proportion?

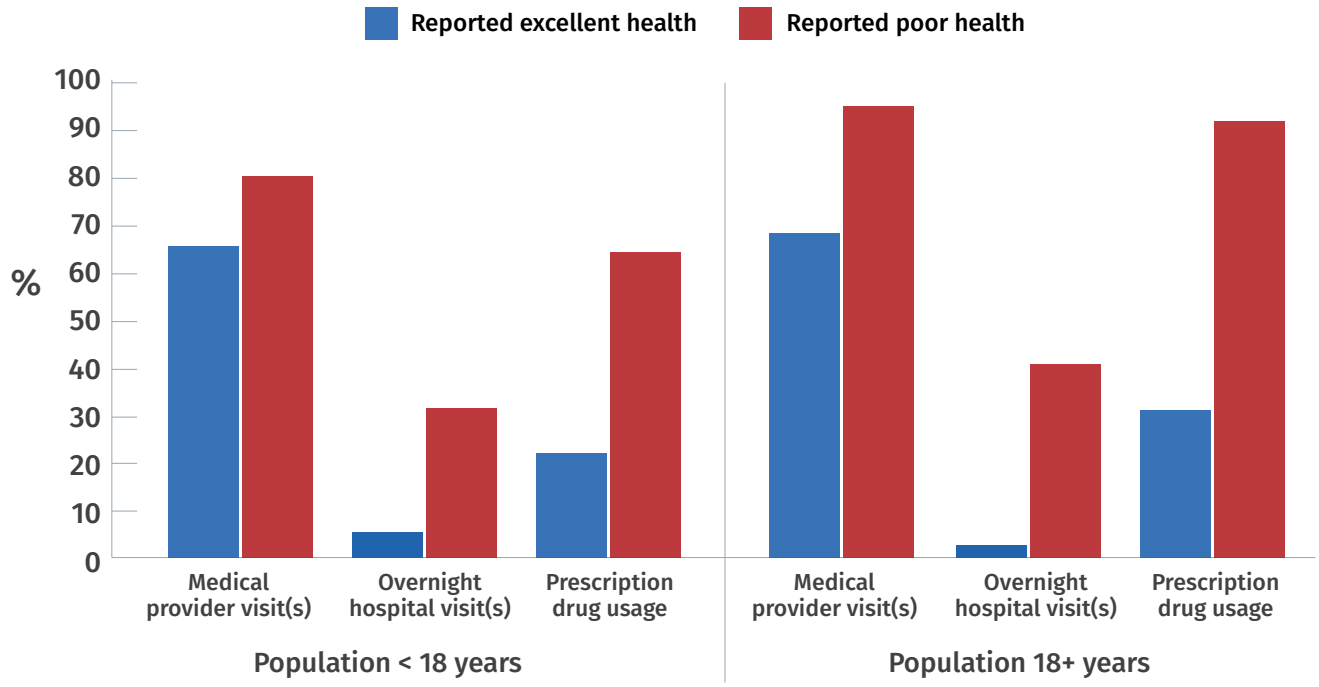
Self-assessed health status (SAHS) among adults, and proxy-assessed health status among children, is a relatively simple and straightforward, but generally valid and reliable, indicator of overall health. The measure is included in the National Health and Nutrition Examination Survey (NHANES), and in other national surveys, including the Survey of Income and Program Participation,[26] and the Behavioral Risk Factor Surveillance System (BRFSS).[27] The question (with only slight variations over time) asked is, "Would you say that in general your (this child's) health is: Excellent, very good, good, fair, or poor?" Responses to the question are sometimes collapsed to form two or three categories such as "Excellent, very good, good" versus "Fair or poor." It also is not uncommon for the question to be asked, as it is in the Children's HealthWatch survey questionnaire, with only four response alternatives: excellent, good, fair, or poor.

Though not a perfect measure of overall health, SAHS is widely used and has a long history of application in the US and other countries. A large body of international research has found this health status question significantly and independently associated with specific health problems, use of health services, and changes in functional status, recovery from episodes of ill health, mortality, and sociodemographic characteristics of respondents.[28] There is some evidence that respondents with different levels of cognitive ability, and of different ages and socioeconomic status, may respond differently to the question when it is asked by an interviewer in a face-to-face interview versus in a self-administered questionnaire.[29] Respondents with these different characteristics may also select slightly different response alternatives when presented with the question multiple times over different time intervals.[34] However, differences in responses under these varying circumstances are relatively small.

A multivariate analysis comparing responses to the health status question among Latinx respondents interviewed in Spanish, Latinx respondents interviewed in English, Non-Latinx Blacks, and Non-Latinx Whites in the 2011-2012 National Survey of Children's Health, found that Latinx respondents interviewed in Spanish were significantly more likely to report their children's health as "fair or poor" and "good" than respondents in the other three groups. Adjusting for demographic and socioeconomic characteristics and a measure of acculturation eliminated the subgroup differences in "fair or poor" health reporting, but not "good" health. After adjusting for these covariates, Latinx respondents interviewed in Spanish were still more likely to report their children's health as "good" rather than "excellent" or "very good."[30]

SAHS is highly correlated with health services utilization in the US population, though its relationship to use of different services varies by age and socioeconomic status.[1] Differences in medical

FIGURE 3: AT LEAST ONE HEALTH SERVICE UTILIZATION, by Age and Health Status in U.S., 2010



Source: US Census Bureau, Survey of Income and Program Participation, 2008 Panel, Wave 7.

provider visits, overnight hospital stays, and long-term prescription medication use among respondents reporting their or their children's health as "excellent" compared to those reporting their or their children's health status as "poor" are large (Figure 3). These differences translate into different health care cost profiles, with costs among adults and children whose health status is reported as "fair/poor" notably higher than costs among those whose health status is reported as "excellent, very good, or good" indicating significant cost-savings when health status can be improved.

In its 2019 County Health Rankings report, the Robert Wood Johnson Foundation, partnering with the University of Wisconsin Population Health Institute, reports on a variety of health outcomes for all counties in Arkansas.[31] The proportion of adults in those data reporting their health status as "fair/poor" was higher in all 11 of the target counties than the proportion in the state as a whole in 2016, though in 2017 the proportions in six of the priority counties declined (Table 7). In most of the priority counties the average number of "physically unhealthy days" reported is also higher than the state average, though this is not true for the average number of "mentally unhealthy days" reported in those counties. It is also unlikely that the average numbers of "physically unhealthy days" for each county is statistically significantly different from the state average.[a]

a. 95% confidence intervals for all the priority counties overlap substantially with that of the state average (data available at the link in reference 6, but not shown here).

SAHS varies by household income level, race-ethnicity categories and other household characteristics. In 2011, for example, among all people in US households with incomes below 200% of the Federal Poverty Level (FPL), 85% reported their health status as "Excellent, Very Good, or Good," and 15% as "Fair or Poor." Among people in households with incomes at or above 200% of FPL, 92% reported their health as "Excellent, Very Good, or Good," and only 8% as "Fair of Poor."[32] The same source reports that same year that 90% of all people in non-Latinx White US households nationally reported their health as "Excellent, Very Good, or Good," and 10% as "Fair or Poor;" while, among people in non-Latinx Black households, 87% reported their health as "Excellent, Very Good, Good," and 13% as "Fair or Poor." Interestingly, among people in Latinx households in these same national data, 91% reported their health as "Excellent, Very Good, or Good" and only 9% as "Fair or Poor."[7]

TABLE 7: Proportion of Adults 18 Years and Older in Arkansas and in Pew's Priority Counties Reporting Their Health Status as "Fair/Poor" versus "Excellent, Very Good, or Good" in 2016, with Average Number of Physically and Mentally Unhealthy Days Reported by Respondents in Each County the Same Year

	PERCENT OF ADULTS REPORTING HEALTH STATUS "FAIR/POOR", 2016	PERCENT OF ADULTS REPORTING HEALTH STATUS "FAIR/POOR", 2017	AVERAGE NUMBER OF PHYSICALLY UNHEALTHY DAYS PER MONTH, 2016	AVERAGE NUMBER OF MENTALLY UNHEALTHY DAYS PER MONTH, 2016
Arkansas	**24%**	**23%**	**5 days**	**5 days**
Chicot Co.	29%	27%	5 days	5 days
Crittenden Co.	25%	23%	5 days	5 days
Desha Co.	30%	29%	6 days	5 days
Jackson Co.	25%	28%	5 days	5 days
Jefferson Co.	27%	24%	5 days	5 days
Lafayette Co.	26%	31%	5 days	5 days
Lee Co.	29%	23%	6 days	5 days
Mississippi Co.	27%	28%	5 days	5 days
Monroe Co.	28%	32%	5 days	5 days
Phillips Co.	31%	32%	6 days	5 days
St. Francis Co.	27%	23%	5 days	5 days

Source: RWJF 2019 County Health Rankings (http://www.countyhealthrankings.org/), 2016. Arkansas State Department of Health, 2017.

While the RWJF County Health Rankings data provide very important information at the county level regarding SAHS in Arkansas, the county-level data are limited in that they cannot be disaggregated by household characteristics such as race-ethnicity or income levels. However, examining state-level BRFSS data for Arkansas does allow such disaggregation and yields valuable information about SAHS in different race-ethnicity and income-level subpopulations (Table 8). Examining the proportions within each race-ethnicity subgroup reporting their health as "Excellent, Very Good, or Good" versus "Fair or Poor" with all income levels combined, there appears to be very little difference across the three main race-ethnicity subgroups (Non-Latinx Whites, Non-Latinx Blacks and Latinx) in the proportions reporting each of these two combined status categories.

However, when the data are stratified by income level and different race-ethnicity subgroups are examined within each income level, a different picture emerges. It appears that in the highest income group ($50,000 per year and above), there is little difference in the proportions reporting "Excellent, Very Good, or Good" versus "Fair or Poor." However, looking at the proportions reporting each of the individual status categories (in the right-hand-side of Table 8), clear differences emerge. Notably larger proportions of Non-Latinx Whites report their health as "Excellent or Very Good," but a larger proportion of Non-Latinx Blacks report their health as "Good." When the top three categories are aggregated, these differences are masked.

In the next income category ($35,000 to <$50,000), a larger proportion of Non-Latinx Whites report their health as "Excellent, Very Good, or Good;" but most of the difference is in the one "Excellent" subcategory, with little difference in the "Very Good" and "Good" categories. In the $25,000 to <$35,000 income category, it appears that a much larger proportion of Non-Latinx Blacks report their health as "Excellent, Very Good, or Good" than do Non-Latinx Whites; but here again, all of the difference is in the "Good" category, with hardly any Non-Latinx Blacks (2%) reporting their health as "Excellent," far fewer reporting their health as "Very Good" than Non-Latinx Whites, but a much larger proportion (63% versus 34%) reporting their health as "Good." Thus, all the difference in the proportion of Non-Latinx Blacks reporting the combined "Excellent, Very Good, or Good" category again comes from the one "Good" category.

In the $15,000 to <$25,000 income category, a larger proportion of Non-Latinx Blacks do report their health as "Excellent," with negligible differences in the other two "Good" categories, yielding a higher proportion of Non-Latinx Blacks reporting the combined "Excellent, Very Good, or Good" category than Non-Latinx Whites. Moreover, in the lowest income category (<$15,000), larger proportions of Non-Latinx Blacks report their health as "Excellent," "Very Good," and "Good" than do Non-Latinx Whites, resulting in a much larger proportion (64% versus 44%) of Non-Latinx Blacks than Non-Latinx Whites reporting the combined "Excellent, Very Good, or Good" category in this lowest income subgroup.

HEALTH IMPACT FINDINGS:

These data raise the question whether Non-Latinx Blacks may exhibit greater health resilience at these lowest income levels than their Non-Latinx White peers. This may suggest that at these lowest levels of income, a relatively modest addition of financial resources, such as what would be provided by a state-level match to the Federal EITC, might also help shift more Non-Latinx Black working households into a higher health status category. If that occurred, it would very likely also lead to a reduction in health services use, and in overall health care costs in this vulnerable subpopulation.

What Proportion of Children in Arkansas Have Their Health Status Reported as "Fair or Poor" (Caregiver-Reported)? Can Receiving Additional Resources via a State EITC Match Change that Proportion?

Child health status is "proxy reported," usually by a parent or adult caregiver. Though the question is not included in the Youth BRFSS, it is included in several national surveys, including the Survey of Income and Program Participation (SIPP), the National Health Interview Survey (NHIS), and the National Survey of Children's Health (NSCH). However, due to sample designs, results from these national surveys are only available at the national and state levels. Moreover, limited sub-sample sizes for some states render some estimates from these surveys unreliable due to resulting large standard errors.

Results from the NSCH for the State of Arkansas in 2017 show 88.8% of all children in the state under age 18 had their health reported as "Excellent or Very Good," 9.7% as "Good," and 1.5% as "Fair or Poor." However, the 1.5% result for "Fair or Poor" is deemed of questionable reliability due to the magnitude of its standard error. Data from the NHIS show national estimates for all children in the US of 85.1% "Excellent or Very Good," 13.3% "Good," and 1.6% "Fair or Poor." The same source reports 1.4% of all Non-Latinx White, 2.4% of Non-Latinx Black, and 1.7% of Latinx children under 18 years of age in the US had their health reported as "Fair or Poor" in 2017. Among children in families with incomes below the Federal Poverty Level, 4.0% had their health reported as "Fair or Poor." By age, in the NHIS, 1.2% of all children ages 0-4 years, 1.4% of children ages 5-11 years, and 2.1% of children 12-17 years had their health reported as "Fair or Poor" nationally in 2017.

TABLE 8: Percent of Arkansas Adults Ages 18 Years and Above Reporting Their Health Excellent, Very Good, Good, Fair, or Poor in 2016, by Race-Ethnicity Category and Income Level

Income Categories and Weighted Sample Sizes	Race-Ethnicity	% Excellent, Very Good, or Good	% Fair or Poor	% Excellent	% Very Good	% Good	% Fair	% Poor
All Income Levels								
1,439,859	White, Non-Latinx	75%	25%	14%	31%	30%	17%	8%
288,027	Black, Non-Latinx	75%	25%	15%	26%	34%	18%	7%
108,431	Latinx	75%	25%	23%	21%	31%	19%	6%
70,403	Other Races	66%	34%	10%	24%	32%	13%	21%
Total: 1,906,720	**Totals**	**75%**	**25%**	**15%**	**29%**	**31%**	**17%**	**8%**
$50,000 or More								
575,159	White, Non-Latinx	89%	11%	17%	42%	30%	9%	2%
55,652	Black, Non-Latinx	88%	12%	14%	36%	38%	9%	3%
36,236	Latinx	N/A	N/A					
15,915	Other Races	73%	27%	25%	13%	35%	11%	16%
Subtotal:682,962	***Subtotals***	***89%***	***11%***	***17%***	***40%***	***32%***	***8%***	***3%***
$35,000 to <$50,000								
200,662	White, Non-Latinx	81%	19%	17%	29%	35%	16%	3%
31,587	Black, Non-Latinx	73%	27%	10%	28%	35%	22%	5%
12,783	Latinx	N/A	N/A					
9,433	Other Races	N/A	N/A					
Subtotal:254,465	***Subtotals***	***81%***	***19%***	***16%***	***30%***	***35%***	***16%***	***3%***
$25,000 to <$35,000								
200,809	White, Non-Latinx	75%	25%	10%	31%	34%	18%	7%
30,870	Black, Non-Latinx	86%	14%	2%	21%	63%	12%	2%
10,281	Latinx	N/A	N/A					
7,107	Other Races	N/A	N/A					
Subtotal:249,067	***Subtotals***	***75%***	***25%***	***9%***	***28%***	***38%***	***17%***	***8%***
$15,000 to <$25,000								
281,138	White, Non-Latinx	62.5%	37.5%	13.5%	19%	30%	25%	12.5%
87,165	Black, Non-Latinx	74%	26%	26%	19%	29%	19%	7%
21,921	Latinx	N/A	N/A					
24,882	Other Races	84%	16%	9%	34%	41%	11%	5%
Subtotal:415,106	***Subtotals***	***66.5%***	***33.5%***	***17%***	***19%***	***30.5%***	***23%***	***10.5%***
<$15,000								
182,091	White, Non-Latinx	44%	56%	8%	15%	21%	34%	22%
82,753	Black, Non-Latinx	64%	36%	10.5%	28%	25.5%	24%	12%
27,209	Latinx	N/A	N/A					
13,066	Other Races	N/A	N/A					
Subtotal:305,119	***Subtotals***	***50%***	***50%***	***11%***	***18%***	***21%***	***31%***	***19%***

Source: CDC, BRFSS Web-Enabled Analysis Tool (https://nccd.cdc.gov/weat/#/).

NOTE: The Census Bureau estimates the total population of Arkansas in 2016 was 2,990,410. The BRFSS weighted sample numbers reflect the adult state population ages 18+ years only. N/A indicates inadequate sample size for valid estimate.

RESULTS FROM CHILDREN'S HEALTHWATCH DATA

Children's HealthWatch has collected data continuously at Arkansas Children's Hospital in Little Rock, Arkansas for more than 20 years. Data collection activities at Arkansas Children's Hospital, and the four other Children's HealthWatch research sites, are "sentinel surveillance" activities, aimed at monitoring family economic circumstances and assessing their relationships to child and maternal health conditions.

Since Arkansas Children's Hospital is a "children's hospital," it serves children from the entire state, confirmed by examination of ZIP codes of respondents to the Children's HealthWatch survey. In data collected by Children's HealthWatch over the period from June 1998 to June 2018 on 15,631 caregiver-child dyads in which the children are all under the age of 4 years, ***13% of all adult caregivers interviewed reported their children's health as "Fair or Poor" (Table 9)***. In addition, in interviews administered June 1998 through December 2018, ***21% of caregivers interviewed at Arkansas Children's Hospital reported their own health status as "Fair or Poor" (Table 9)***.[b] The distribution of caregivers across major race-ethnicity categories includes 41% Non-Latinx Black, 45.9% Non-Latinx White, and 8.7% Latinx (Table 10).

Though they come to Arkansas Children's Hospital from throughout the state, the caregivers interviewed by Children's HealthWatch over this approximate 20-year period appear to be predominantly from "working poor" households. For

b. These data are from unpublished internal data management reports; Children's HealthWatch Semi-Annual Data Summary Report, June 1998-June 2018, and Children's HealthWatch Semi-Annual Data Summary Report, June 1998-December 2018.

TABLE 9: Prevalence of Selected Outcome Variables from Children's HealthWatch Data Based on Interviews Conducted at Arkansas Children's Hospital, June 1998 – June 2018

OUTCOME		LITTLE ROCK (N=15, 631)
HH Food Insecurity		18%
Child Food Insecurity		8%
Child At Risk Underweight		15%
Child Overweight	(Weight/age>=75 %tile)	27%
	(Weight/age>=90 %tile)	13%
Mean Child Z Weight/Age		-0.1%
Child Health Fair/Poor		**13%**
Caregiver Health Fair/Poor		**21%**
Child Hospitalized Since Birth		28%
Child Admitted on Day of Interview		19%
Maternal Depression Symptoms (Kemper scale)		26%
PEDS	(Path A, 1 Sig. Concern)	19%
	(Path B, 2 or more Sig. Concerns)	12%
Energy Insecurity	Moderate	15%
	Severe	11%
Housing Insecurity	Moderate	22%
	Severe	5%
Cumulative Hardship	Moderate	43%
	Severe	5%
Not a "Well Child"*		55%
Trade-Off due to Medical Care		18%
Behind on Rent/Mortgage		22%
CSHCN Screen Positive**		19%

Source: Children's HealthWatch data collected at Arkansas Children's Hospital, 1998-2018.

* "Well child" is defined as no hospitalizations since birth, not at risk of underweight, not overweight, excellent or good health status, no developmental concerns.

** Children with Special Healthcare Needs.

TABLE 10: Demographic Characteristics of Children's HealthWatch Data Based on Interviews Conducted at Arkansas Children's Hospital, June 1998 – June 2018

OUTCOME		LITTLE ROCK (N=15, 631)
Child	Male	54%
	Female	46%
Caregiver Race/Ethnicity		
	Hispanic	8.7%
	Hispanic & Black	0.3%
	Hispanic & White	0.7%
	Hispanic & Other/Mixed Race	0.3%
	Black, non Hispanic	41.0%
	White, non Hispanic	45.9%
	Asian, non Hispanic	0.7%
	Native American, non Hispanic	0.3%
	Multiple Races, non Hispanic	1.9%
	Missing	0.4%
Mother US Born		92%
Married / Partnered / Cohabiting		51%
Caregiver Employed		53%
Caregiver Education	Some HS	17%
	HS Degree	36%
	Tech School / College / Masters	46%
Mother's Average Age (Yrs.)		26.4 Yrs.
Child's Average Age (Months)		15.8 Months
Child Breastfed		52%
Child Low Birth Weight (<2500g)		16%
Child Insurance	Private Private	21%
	Public	72%
	None	7%
Receives	TANF	6%
	SNAP	41%
	WIC	58%
	Housing Subsidy	13%
	LIHEAP	9%
	Childcare Subsidy	29%

Source: Children's HealthWatch data collected at Arkansas Children's Hospital, 1998-2018.

example, 72% of caregivers reported having public health insurance, 58% reported either they or the reference child received WIC, and 41% reported receiving SNAP (Table 10). A majority (53%) of caregivers reported they were employed at the time of the interview, and 62% reported at least one other adult in the household was employed (data not shown). Education attainment of caregiver respondents was 17% less than High School diploma, 36% High School diploma, and 46% some type of post-secondary degree ("Tech School" degree, undergraduate college degree, or Master's degree) (Table 10).

In separate analysis of data collected from January 2009 to June 2018 at Arkansas Children's Hospital, 51.8% of caregiver respondents reported their household income as <$2,000 per month, 26.9% reported incomes of $2,000 – <$4,000 per month, and 21.4% reported incomes of ≥$4,000 per month. In those data the mean number of people in each household was 4.2 people (median = 4.0). In 2018 the Federal Poverty Threshold for a family of four people with two children was $25,465, implying that these income categories are approximately equivalent to, 1) <94% of the 2018 poverty threshold for a family of four people with two children, 2) 94% of that poverty threshold to <188% of the poverty threshold, and 3) 188% of the poverty threshold or above. These numbers imply (disregarding inflation) that approximately 52% of caregivers and children in these data lived in households with incomes below the poverty threshold, 27% in households with incomes ranging from just below the poverty threshold up to 188% of the poverty threshold, and 21% had incomes 188% of the poverty threshold or above. By the convention used in reports from the NHIS, approximately

52% were "poor" (had incomes below the poverty threshold), 27% were "near poor" (had incomes above the poverty threshold but less than 200% of the threshold), and approximately 21% were not poor (had incomes near 200% of the threshold or above). Note that the income cutoff for receipt of WIC is 185% of the poverty thresholds.

Comment on Prevalence of "Fair or Poor" Health Status in Adult Caregivers and Young Children in Children's HealthWatch Data Collected at Arkansas Children's Hospital

The prevalence of self-reported "Fair or Poor" health reported by adult caregivers in Children's HealthWatch data from Arkansas Children's Hospital (21%, Table 9) is somewhat lower than most of those reported for various adult subgroups in the BRFSS data, though not all. The prevalence of "Fair or Poor" health reported by adult caregivers interviewed by Children's HealthWatch at Arkansas Children's Hospital for their young children (13%), on the other hand, is notably higher than any prevalence of reported "Fair or Poor" health in children from any of the national surveys examined. However, in the 20 years we have collected data at Arkansas Children's Hospital, we have encountered no reason to question or doubt the accuracy of that prevalence. Moreover, the sociodemographic information provided by caregiver respondents indicates they are predominantly from working poor families, with approximately 52% earning incomes below the poverty thresholds, and another 27% with incomes between 94% and 188% of the poverty thresholds. These income levels place approximately 80% of the caregiver respondents in either poor (<100% of the poverty threshold), or "near poor" (100% - <200% of the poverty threshold) income-to-poverty ratio categories.

Finally, the prevalence of these young children being categorized as "not a well child" (55), meaning they failed to meet at least one of the following criteria: no hospitalizations since birth, not at risk for underweight, not overweight, health status reported as "excellent or good," and no developmental concerns; together with the prevalence of positive screens on the "CSHCN" (Children with Special Healthcare Needs CSHCN) screen (19%) (Table 9), suggests the 13% prevalence of "Fair or Poor" health is accurate. When considered together with the other outcomes in Table 9, including prevalence of adverse health conditions, and of family hardships (food insecurity 18%, child food insecurity 8%, having been behind on rent or mortgage payments 22%, energy insecurity 26%, and medical care tradeoffs 18%), it is not difficult at all to believe that 13% of the young children had their health accurately reported as "Fair or Poor."

Can Receiving Additional Resources via a State EITC Match Change the Proportion of Either Adults or Children Whose Health Status Is Reported as "Fair or Poor"?

The extent to which additional resources received from a state match to the federal EITC in Arkansas can change the proportion of adults or children whose health is reported as "Fair of Poor" depends on the nature of any state-level match that might be approved and adopted by the Arkansas state government (e.g., the level of the match, and even more important, whether the state match is refundable). It also depends on employment and

work conditions in the state for potential and actual EITC recipients (e.g., how steady recipients' employment has been, and wage and earnings conditions), as well as the state population health conditions (e.g., the actual prevalence of "Fair or Poor" health and other health conditions among different population subgroups, and whether health care is readily accessible and affordable). Finally, the number of families receiving the federal and state EITC depends on basic socioeconomic and demographic characteristics of the state population (e.g., distribution of family types and numbers of children in families of different types, and prevalence of poverty within different family-type subgroups).

EITC RECEIPT IN ARKANSAS

In tax year 2017, 287,000 eligible working people received the federal EITC benefit in Arkansas. The average amount received per tax filer from the federal EITC was $2,672. If there had been a refundable Arkansas state match of 10% of the federal EITC, filers receiving this average federal EITC amount would have received an additional $262 from the state match, bringing their total amount received up to $2,939. Data from the Census Bureau's American Community Survey[c] (ACS) indicate approximately 10,600 families with children in the 11 priority counties of Arkansas had incomes

c. We relied on data from the American Community Survey 2017 five-year average series for its increased stability and accuracy of relevant indicator estimates at the county level.

TABLE 11: Number and Percent of Families with Children, All Race-Ethnicity Categories Combined, and Incomes Below Poverty Level by Family Type in Select Arkansas Counties: Averages Over 2013-2017

PRIORITY COUNTY	NUMBER / PERCENT OF MARRIED-COUPLE FAMILIES WITH CHILDREN IN POVERTY		NUMBER / PERCENT OF SINGLE-MOTHER FAMILIES WITH CHILDREN IN POVERTY		NUMBER / PERCENT OF SINGLE-FATHER FAMILIES WITH CHILDREN IN POVERTY	
Chicot Co.	39	7%	458	74%	47	47%
Crittenden Co.	228	7%	1470	51%	104	25%
Desha Co.	198	24%	507	67%	17	29%
Jackson Co.	151	16%	300	56%	58	34%
Jefferson Co.	537	14%	1674	50%	207	40%
Lafayette Co.	21	7%	195	66%	16	39%
Lee Co.	79	13%	227	61%	0	0.0%
Mississippi Co.	301	11%	1493	59%	160	29%
Th Monroe Co.	62	20%	191	51%	3	3%
Phillips Co.	107	11%	800	64%	67	36%
St. Francis Co.	302	25%	507	44%	78	30%
Totals	**2,025**	**13%**	**7,822**	**56%**	**757**	**31%**

Source: Census Bureau, American Community Survey 2017, Five Year Averages

below their poverty thresholds in 2017 (Table 11). The mean poverty threshold for families of four people, including two children, during the period covered by these ACS data (2013-2017) was $24,173 per year, or $2,014 per month. The mean threshold for families of three people, including two children, was $19,205 per year, or $1,600 per month. For families with children whose incomes were near these thresholds, the hypothetical average state-augmented EITC benefit ($2,939) would have been equivalent approximately to an additional 1.5 to 1.8 months of earnings and would have lifted many of these families out of poverty.

EITC AND HEALTH OUTCOMES

Mothers of young children have been a focus of much of the research on relationships of EITC to health, with several studies examining EITC's associations with perinatal health, particularly among single-mother households. As Table 11 indicates, single-mother families comprise a large portion (74% - calculations not shown) of all families in the 11 priority Arkansas counties with incomes below the Federal Poverty Level (FPL). **To the extent that state-augmented EITC benefits can be received by single-mother families in these counties, extant evidence indicates high likelihood that the health and health behaviors of the mothers, and their children, will be improved in a number of ways.**

A large body of research literature reports numerous ways in which receipt of the EITC improves health in adults and children, though a few studies fail to confirm hypothesized positive relationships, and an even smaller number find some negative effects (mainly in overweight adults). A 2011 study used receipt of EITC benefits in data from the Survey of Income and Program Participation (SIPP) and the Current Population Survey (CPS) to assess whether a short-term boost to income led to significant improvements in SAHS or reports of functional limitations in working-age adults.[33] This study found that pre-tax income was significantly associated with health status and that receipt of EITC was associated with improvements in functional limitations. However, the study's results did not indicate significant changes in adults' SAHS at the national level associated with distribution of the EITC.

A 2016 study examined the cost-effectiveness of state-level supplements to the EITC as health policy. Though the study did not include SAHS, it did assess state EITC matches' influence on health-related quality of life (HRQL) and longevity.[34] Using data from the BRFSS in regression models, and extending analyses via microsimulation modeling, the researchers found that, as total EITC payout to families increased with larger state matches and family size, so did their HRQL and Quality-Adjusted Life Expectancy (QALE). Results showed state supplements to the federal EITC to be far more cost effective as means of improving HRQL, health, and QALE than many interventions widely considered to be cost-effective.

A 2017 study specifically examining associations of state EITC matches with maternal and child health found statistically significant, though modest, improvements in mothers' health behaviors (early prenatal care, reduced maternal smoking, and adequate weight gain), but large and highly significant improvements in several measures of infant health. Those measures included birth weight and gestation weeks, with larger birth weight improvements occurring among infants with lowest birth

weights, and in states with higher state EITC matches.[35] These researchers also found larger positive effects among children of second or higher parity births, suggesting that those effects might be a result of greater propensity to work among mothers with multiple children, encouraged by receipt of increased EITC benefits.

A 2015 study examined the effects of the EITC on perinatal health using data on mothers from the 1979 National Longitudinal Survey of Youth and their children born 1986-2000.[36] The study's results indicated higher EITC payments are associated with significantly higher likelihood of pregnancies going to term, increased birthweight, and increased likelihood of breastfeeding. These researchers propose several potential pathways for the EITC generally, and state EITC supplements particularly, to lead to these health improvements. Those pathways include improved nutrition, reduced maternal smoking, and reduction of maternal stress levels related to financial difficulties. The authors note that other research has shown that receipt of EITC benefits is connected to improvements in maternal mental health and improvements in physiological markers of maternal stress.[14]

FAMILY TYPE AND POVERTY

A major focus of our concern in this Health Impact Assessment is families with children. Given the emphasis on family type (i.e., married-couple families versus single-parent families, and single-mother families) in the research on relationships between

TABLE 12: Number and Percent of All Families in 11 Priority Counties of Arkansas by Family Type

COUNTY	TOTAL FAMILIES ALL TYPES WITH AND WITHOUT CHILDREN	FAMILIES WITH CHILDREN UNDER 18 YEARS		FAMILIES WITH CHILDREN - MARRIED-COUPLE FAMILIES		FAMILIES WITH CHILDREN - SINGLE-PARENT FAMILIES		FAMILIES WITH CHILDREN - SINGLE-MOTHER FAMILIES		FAMILIES WITH CHILDREN - SINGLE-FATHER FAMILIES	
Chicot	**2825**	1290	46%	567	44%	723	56%	623	48%	100	8%
Crittenden	**12099**	6474	54%	3166	49%	3308	51%	2889	45%	419	7%
Desha	**3365**	1632	49%	816	50%	816	50%	757	46%	59	4%
Jackson Co.	**3714**	1672	45%	970	58%	702	42%	533	32%	169	10%
Jefferson	**16781**	7572	45%	3730	49%	3842	51%	3321	44%	521	7%
Lafayette	**1828**	659	36%	322	49%	337	51%	296	45%	41	6%
Lee	**2180**	1011	46%	591	59%	420	42%	371	37%	49	5%
Mississippi	**11201**	5711	51%	2640	46%	3071	54%	2527	44%	544	10%
Monroe	**1935**	776	40%	310	40%	466	60%	376	49%	90	12%
Phillips	**4802**	2427	51%	993	41%	1434	59%	1248	51%	186	8%
St. Francis	**5776**	2614	45%	1212	46%	1402	54%	1142	44%	260	10%
Totals	**66506**	31838	48%	15317	48%	16521	52%	14083	44%	2438	8%

Source: Census Bureau, American Community Survey 2017, Five Year Averages

EITC benefits and health, and the demonstrable economic disadvantages that single-parent families face in today's economy, it is helpful to consider the potential for a state supplement to the federal EITC to help address some of the financial imbalance inherent in single-parent families, especially single-mother families.

In the 11 priority counties this analysis focuses on, an unquestionably large proportion of all families with children are single-parent families (Table 12). This is generally true for all counties in Arkansas, but especially so in these priority counties. In these counties the percent of all families with children that are single-parent families ranges from 42% to 60%. Overall, 52% of families with children in the 11 priority counties are single-parent families, with 44% of all families with children in these counties single-mother families. The proportion of families with children that are single-father families is relatively small by comparison (Table 12).

The prevalence of single-parent families in any geographic area is primarily a function of recent economic conditions and the area's economic history.[d] For young people to marry and establish a household and family of their own, they must be able to afford housing and other necessities. Many extended families help young couples establish and maintain their own households, but it has historically been the norm in the US for children

d. It is important to understand that racism, racial segregation, and racial inequity generally, are based on economic factors.

TABLE 13: Number and Percent of Married-Couple Families in Priority Counties with Children Under 18 Years, and Incomes in Different Income-to-Poverty Ratio Categories

COUNTY	TOTAL NUMBER OF MARRIED COUPLE FAMILIES WITH CHILDREN UNDER 18 YRS.	MARRIED COUPLE FAMILIES WITH CHILDREN UNDER 18 YRS.- INCOMES < 100% FPL	INCOMES 100% - < 130% OF FPL	INCOMES 130% - < 150% OF FPL	INCOMES 150% - < 185% OF FPL	INCOMES > 185% OF FPL
Chicot Co.	**567**	39 7%	83 15%	32 6%	81 14%	332 59%
Crittenden Co.	**3166**	228 7%	345 11%	83 3%	351 11%	2159 68%
Desha Co.	**816**	198 24%	109 13%	25 3%	65 8%	419 51%
Jackson Co.	**970**	151 16%	34 4%	82 9%	65 7%	638 66%
Jefferson Co.	**3730**	537 14%	257 7%	85 2%	251 7%	2600 70%
Lafayette Co.	**322**	21 7%	21 7%	10 3%	39 12%	231 72%
Lee Co.	**591**	79 13%	43 7%	39 7%	35 6%	395 67%
Mississippi Co.	**970**	151 16%	34 4%	82 9%	65 7%	638 66%
Monroe Co.	**3730**	537 14%	257 7%	85 2%	251 7%	2600 70%
Phillips Co.	**322**	21 7%	21 7%	10 3%	39 12%	231 72%
St. Francis Co.	**591**	79 13%	43 7%	39 7%	35 6%	395 67%
Totals	**15775**	**2041 13%**	**1247 8%**	**572 4%**	**1277 8%**	**10638 67%**

Source: Census Bureau, American Community Survey, 2017, Five Year Averages.

TABLE 14: Number and Percent of Single-Parent Families in Priority Counties with Children Under 18 Years, and Incomes in Different Income-to-Poverty Ratio Categories

COUNTY	TOTAL NUMBER OF SINGLE-PARENT FAMILIES WITH CHILDREN UNDER 18 YRS.	SINGLE-PARENT FAMILIES WITH CHILDREN UNDER 18 YRS.*									
		INCOMES < 100% FPL		INCOMES 100% - < 130% OF FPL		INCOMES 130% - < 150% OF FPL		INCOMES 150% - < 185% OF FPL		INCOMES > 185% OF FPL	
Chicot Co.	**723**	45	6%	506	70%	13	2%	39	5%	120	17%
Crittenden Co.	**3308**	207	6%	1633	49%	141	4%	251	8%	1076	33%
Desha Co.	**816**	46	6%	627	77%	12	2%	61	8%	70	9%
Jackson Co.	**702**	257	37%	191	27%	62	9%	77	11%	115	16%
Jefferson Co.	**3842**	327	9%	2061	54%	211	6%	359	9%	884	23%
Lafayette Co.	**337**	38	11%	221	66%	16	5%	24	7%	38	11%
Lee Co.	**420**	9	2%	291	69%	19	5%	59	14%	42	10%
Mississippi Co.	**3071**	484	16%	1536	50%	96	3%	270	9%	685	22%
Monroe Co.	**466**	52	11%	199	43%	26	6%	44	9%	145	31%
Phillips Co.	**1434**	51	4%	961	67%	52	4%	194	14%	176	12%
St. Francis Co.	**1402**	57	4%	682	49%	48	3%	214	15%	401	29%
Totals	**16521**	**1573**	**10%**	**8908**	**54%**	**696**	**4%**	**1592**	**9.5%**	**3752**	**22.5%**

Source: Census Bureau, American Community Survey, 2017, Five Year Averages. *Includes both single-mother and single-father families.

of working families to establish and maintain new households upon marriage, primarily independently.[37] If economic conditions in a particular geographic area (state or county) are such that young couples cannot earn enough to achieve basic economic self-sufficiency, many are deterred from marrying and attempting to establish independent households. In addition, many marriages dissolve, to varying degrees, as a result of adverse economic conditions.[44]

The Great Recession of 2007-2009 had devastating and lasting effects on many young adults, especially those with lower levels of education attainment, low skill levels, low participation in the labor force, and less employment experience. Many of the financially damaging effects of the Great Recession carried over into young people's decisions and behaviors regarding marriage, family and household formation, with a large increase in young couples, including young married couples living in subfamilies.[38,39]

Though the Great Recession led to persistent changes in living arrangements among many people, especially young adults, decisions whether to marry, and marriage rates remain heavily influenced by economic conditions. A recent (2018) study examined the influence that county-level factors have on marriage rates among "millennial" young adults in the US. Among factors shown to have strong influence on young people's deci-

sions whether to marry are economic security in terms of labor force participation rates, employment rates, area employment conditions including availability of full-time work, wages and earnings, area poverty rates and poverty status of prospective marriage partners, and availability of affordable housing.[40]

It should be noted, however, that nationally more adults have postponed marriage in recent years, continuing an upward trend in the median age at first marriage that began around 1960. In 1960 the median age at first marriage was just over 20 years for women and around 23 for men. By 2018 median age at first marriage had increased to 27.8 years for women and 29.8 for men. One consequence of this increase in median age at first marriage is that in 2018, nationally only 29% of young adults ages 18-34 years were married, compared to 59% in 1978.[41]

The economic difficulties and imbalances faced by single-parent families are prevalent among all three major race-ethnicity subgroups in the 11 priority counties (Black/African American, Non-Latinx White, and Latinx). The extent to which economic security factors have been unfavorable to marriage in the 11 priority counties in this assessment has had, and will continue to have, strong influ-

TABLE 15: Number and Percent of Married-Couple and Single-Parent Families in Priority Counties by Race-Ethnicity Subgroup with Children Under 18 Yrs. and Incomes Below the Federal Poverty Line.

INCOMES BELOW FPL												
	BLACK/AFRICAN AMERICAN FAMILIES WITH CHILDREN UNDER 18 YRS.				NON-LATINX WHITE FAMILIES WITH CHILDREN UNDER 18 YRS.				LATINX FAMILIES WITH CHILDREN UNDER 18 YRS.			
PRIORITY COUNTY	MARRIED COUPLE FAMILIES		SINGLE-PARENT FAMILIES		MARRIED COUPLE FAMILIES		SINGLE-PARENT FAMILIES		MARRIED COUPLE FAMILIES		SINGLE-PARENT FAMILIES	
Chicot Co.	13	5%	426	74%	26	13%	45	36%	0	0%	34	65%
Crittenden Co.	135	12%	1248	56%	65	4%	207	30%	28	26%	20	77%
Desha Co.	119	37%	460	70%	14	4%	46	34%	58	51%	18	50%
Jackson Co.	0	0%	101	45%	136	16%	257	56%	14	22%	0	0%
Jefferson Co.	290	16%	1535	53%	203	12%	327	42%	38	28%	19	28%
Lafayette Co.	11	17%	173	72%	10	4%	38	40%	0	0%	0	0%
Lee Co.	68	29%	185	57%	10	3%	9	14%	0	N/A	0	0%
Mississippi Co.	92	16%	1096	59%	185	10%	484	45%	24	28%	69	77%
Monroe Co.	14	13%	128	47%	48	24%	52	31%	0	0%	14	47%
Phillips Co.	73	16%	793	64%	34	7%	51	30%	0	0%	0	0%
St. Francis Co.	137	28%	522	48%	160	23%	57	21%	5	46%	0	0%
Totals	**952**	**17%**	**6667**	**58%**	**891**	**10%**	**1573**	**39%**	**167**	**27%**	**174**	**45%**

Source: Census Bureau, American Community Survey, 2017, Five-Year Averages.

ence on marriage rates in these counties. Even more important, if the federal and state EITC can have favorable effects on the economic security factors that influence marriage rates, they will contribute to reductions in the high prevalence of single-parent families in the priority counties, and in the state of Arkansas.

The principal relevance of marriage rates and prevalence of single-parent families for this assessment is highlighted in the proportions of single-parent families with children whose incomes fall in different income-to-poverty ratio categories in comparison with married-couple families (Tables 13 and 14 above). Among the married-couple families with children in the 11 priority counties (Table 13), large majorities have incomes 185% of the FPL or above in all counties, and overall 75% have incomes 150% of the FPL or above. In contrast, among the single-parent families with children (Table 14), majorities in all the priority counties have incomes below 130% of the FPL, with 63.4% overall in this category, and only 32 have incomes at or above 150% of FPL.

Comparisons of the proportions of single-parent families with children whose incomes are below the federal poverty level (FPL) with those for married-couple families by major race-ethnicity categories show notably larger proportions of single-parent families with children with incomes below the FPL in each race-ethnicity subgroup (Table 15).

HEALTH IMPACT FINDINGS

The prevalence of poverty is higher overall among Black/African American single-parent families than the other two race-ethnicity subgroups, but the prevalence in Non-Latinx White and Latinx single-parent families is also very high. We emphasize, however, that both the prevalence of single-parent families and the income levels of single-parent families are a function of economic conditions in and economic histories of these counties. Both the prevalence of single-parent families and their income levels can be changed favorably by changing the economic conditions in these counties favorably**. A state-supplement to the federal EITC would unquestionably improve economic conditions for single-parent families in these priority counties as in others. Moreover, the magnitude of improvement is likely to be highest among single-mother families and their children.**

What Proportion of Women Have Reported or Been Observed to Have Maternal Depressive Symptoms? Can Receiving Money from a State EITC Change This?

Depression is a serious and debilitating illness that affects adults' ability to function normally in a variety of contexts. It involves mood, and cognitive and physical symptoms and is associated with higher rates of chronic disease, increased health care utilization, and impaired functioning.[42,43] Rates of treatment remain low, and the treatment received is often inadequate.

Depression is measured in several ways and diagnosed as mild, moderate, or severe, or as "major depressive disorder."[20] There are a number of clinical screeners that identify depressive symptoms in people of different ages and in different circumstances. In the US, the overall prevalence of depression as measured in the population ages 12 years and over by the National Health and Nutrition Examination Survey (NHANES) 2009-2012e was **7.6%**, however the prevalence varies considerably across gender, race-ethnicity, and income subgroups. Within all subgroups, however, the prevalence is consistently higher among women than men.[44]

Overall, in the 2009-2012 NHANES data, **5.6% of men** and **9.5% of women** reported having moderate or severe depression in the past two weeks. During that period, depression was least prevalent among children ages 12-17 years and adults ages 60 years and over. The prevalence increased across the age range between these two subgroups up to its highest level among adults 40-59 years of age.

e. The NHANES 2009-2012 used a ten-question screener for depression symptoms.

Among adults ages 60 years and over, the prevalence declined to just below that for children ages 12-17 years. Among adult women, **9.3%** at ages 18-39 years reported depression in the previous two weeks, while **12.3%** of women ages 40-59 years and **7.1%** of women ages 60 years and above reported depression.[52]

Among the three race-ethnicity groups included in this assessment, **26.8%** of Non-Latinx Blacks reported either mild, moderate, or severe depression in the NHANES 2009-2012, **26.1%** of Latinx respondents, and **21.5%** of Non-Latinx Whites. Within each race-ethnicity subgroup, depression was more prevalent among respondents living in households with incomes below the poverty level than in those with incomes at or above the poverty level. Among Non-Latinx Blacks**, 16.4%** of those with incomes below the poverty level reported either moderate or severe depression, but only **7.3%** of those with incomes at or above poverty level did. Among the Latinx population, **13.4%** of those with incomes below the poverty level, and **7.6%** of those with incomes at or above poverty level experienced moderate or severe depression. Among Non-Latinx Whites, **16.5%** of those with incomes below poverty level and **5.9%** of those with incomes at or above poverty level experienced moderate or severe depression.[52]

Depression has emerged as one of the primary causes of lost work productivity and work time among US workers. The phenomenon of "presenteeism," being present at one's workplace, but not being productive, is very high among adults suffering from depression. Compared to absenteeism, or being absent from work due to illness, presentee-

ism can be even more costly to employers since the employee is present and being paid normal wages, but productivity is diminished.[45] A 2003 study using data from the American Productivity Audit (Aug 2001 - July 2002) estimated that employees with depression at work the week before the survey cost employers approximately $44 billion per year in lost productive time (in 2002 dollars), $31 billion per year more than their non-depressed peers. The authors note that this is an underestimate because it does not include costs associated with short- and long-term disability.[46]

The BRFSS screens for depression among adults ages 18 years and above. Data from the BRFSS indicate that in the 11 priority counties, overall, **25.6%** of the adult population (ages 18 years and above) suffered from some level of depression symptoms in 2017. The BRFSS estimate for the total adult population in Arkansas was **24.2%** (Table 16, below). We are unable to disaggregate these prevalence estimates by race-ethnicity, or income level, but the results would likely vary in ways similar to those reported above for the national population, i.e., higher prevalence among women, higher among Non-Latinx Black and Latinx adults, and higher among those with incomes below poverty level.

Among the female adult caregivers interviewed by Children's HealthWatch at Arkansas Children's Hospital from June 1998 through June 2018 (92% biological mothers of the reference child), **25.5%** screened positive for depressive symptoms on the Kemper Scale of Depression Symptoms. This is consistent with both the overall Arkansas state prevalence, and prevalences in the 11 priority counties in Table 16. Data from Children's HealthWatch interviews over this 20-year period also indicate 18% of respondents experienced household food insecurity and 8% more severe child food insecurity, 27% reported either moderate or severe housing instability, 26% reported either moderate or severe household energy insecurity, and 18% reported adverse tradeoffs due to medical care expenses (Table 9 above). Moreover, 48% of respondents reported combinations of these hardships leading to scores of either moderate or severe on a composite cumulative hardship indicator.[47]

These family hardships have been linked to higher prevalence of maternal depressive symptoms in research conducted by Children's HealthWatch over the past 20 years,[f] and by others. Household food insecurity in particular is a prominent predictor of maternal depressive symptoms,[48, 49] as is housing instability.[50, 51] Financial hardships among working families are also prevalent predictive factors for parental stress, especially among single-mother families.[52] Maternal depression is, in turn, prominently related to other chronic and acute health problems,[22, 23] and a major predictor of behavioral and developmental problems in children.[53, 54]

Maternal depression is a critical link in the chain of intergenerational poverty. Mothers' depression during the perinatal period places their children at risk for cognitive, behavioral and developmental problems that can lead, in turn, to the child experiencing and manifesting depression in childhood, adolescence and adulthood.[55] A key element in this intergenerational transmission of depres-

f. The peer-reviewed journal articles published over the past 20 years describing that research can be viewed at http://childrenshealthwatch.org/category/peer-reviewed-journal-articles/.

sion is trauma and toxic stress associated with adverse childhood experiences (ACEs).[36, 56] A second key element is the debilitating effect that mothers' depression has on their ability to provide the attention, care and engagement that infants and toddlers require to achieve secure attachment, a developmental process that is the basis for social competence, sympathy, and self-control in interpersonal conflict.[35]

TABLE 16: Estimates of the Adult Population of the 11 Priority Counties with Number and Percent of Adults Experiencing Depressive Disorders

COUNTY	ADULT (18+) POPULATION ESTIMATE (2017)	DEPRESSIVE DISORDER	
STATE OF ARKANSAS*	2,298,739	555,251	24%
Chicot	8,270	1,347	16%
Crittenden	35,370	10,273	29%
Desha	8,725	1,112	13%
Jackson	13,665	3,918	29%
Jefferson	53,726	12,642	24%
Lafayette	5,571	1,015	18%
Lee	7,471	1,556	21%
Mississippi	31,081	9,750	31%
Monroe	5,584	978	18%
Phillips	13,755	1,360	10%
Saint Francis	91,234	26,351	29%
Totals	**27,4452**	**70,302**	**26%**

Source: BRFSS, 2017, https://www.cdc.gov/surveillancepractice/reports/brfss/brfss.html

* State percentages calculated using county totals and may differ slightly from state-level BRFSS estimates.

ADVERSE CHILDHOOD EXPERIENCES, DEPRESSION AND POVERTY IN ARKANSAS

Table 17 above shows prevalences of affirmative responses to several questions from the 2017 Arkansas High School Youth Risk Behavior Survey. These data are indicative of large proportions of Arkansas high school students being subjected to serious adverse childhood experiences. Overall, in the 12 months prior to the survey, 12% of students indicated they were threatened or injured with a weapon, 27% were in a physical fight, 20% were electronically bullied, 27% were bullied at school, 19% were ever physically forced to have sexual intercourse, 19% experienced sexual violence, 12% experienced dating violence, 40% felt sad or hopeless almost every day for two weeks or more to the extent they stopped doing some usual activity, 23% seriously considered attempting suicide, and 16% attempted suicide one or more times.

For several of the questions in Table 17, the prevalence of affirmative responses by female students are higher than those for male students, though this varies by race-ethnicity. The bottom three rows of the table indicate large prevalences of severe depression within these high school students, and a disturbingly high prevalence of suicidal ideation, and attempted suicide in all three race-ethnicity subgroups, among both males and females.

Assuming the prevalence data in Table 17 are accurate, it is not an exaggeration to say that a large number of high school students in Arkansas have had adverse experiences that do not bode well for successful academic achievement, educational attainment, or employment. The confluence of maternal depression, adverse child experiences, and poverty cannot be understated.

TABLE 17: Prevalence of Affirmative Responses to Select Questions in the 2017 Arkansas Youth Risk Behavior Survey

SELECT YOUTH RISK BEHAVIOR QUESTIONS	ALL RACE-ETHNICITY SUB-GROUPS COMBINED			BLACK / AFRICAN AMERICAN STUDENTS			NON-LATINX WHITE STUDENTS			LATINX STUDENTS		
	TOTAL	F	M	TOTAL	F	M	TOTAL	F	M	TOTAL	F	M
Were threatened or injured with a weapon on school property (e.g., a gun, knife, or club, 1+ times in the 12 months before the survey)	12%	8%	14%	10%	12%	7%	10%	7%	14%	15%	11%	19%
Were in a physical fight (one or more times during the 12 months before the survey)	27%	19%	33%	30%	24%	38%	24%	16%	31%	30%	23%	34%
Were electronically bullied (e.g., being bullied through texting, Instagram, Facebook, or other social media, during the 12 months before the survey)	20%	24%	16%	18%	22%	14%	19%	24%	15%	25%	33%	17%
Were bullied on school property (during the 12 mo. before the survey)	27%	31%	21%	20%	25%	15%	28%	35%	21%	31%	32%	30%
Were ever physically forced to have sexual intercourse (when they did not want to)	19%	22%	16%	15%	12%	19%	20%	24%	16%	22%	25%	18%
Experienced sexual violence by anyone (being forced to do sexual things they did not want to do by anyone, one or more times during the 12 months before the survey)	19%	22%	14%	6%	9%	N/A	17%	23%	11%	29%	34%	23%

Continued on the following page

TABLE 17 *(continued)*: Prevalence of Affirmative Responses to Select Questions in the 2017 Arkansas Youth Risk Behavior Survey

SELECT YOUTH RISK BEHAVIOR QUESTIONS	ALL RACE-ETHNICITY SUB-GROUPS COMBINED			BLACK / AFRICAN AMERICAN STUDENTS			NON-LATINX WHITE STUDENTS			LATINX STUDENTS		
	TOTAL	F	M	TOTAL	F	M	TOTAL	F	M	TOTAL	F	M
Experienced physical dating violence (being physically hurt on purpose by someone they were dating or going out with, one or more times during the 12 months before the survey, among students who dated or went out with someone during that period)	12%	13%	10%	13%	14%	N/A	10%	12%	9%	14%	N/A	N/A
Felt sad or hopeless (almost every day for 2 weeks or more in a row so that they stopped doing some usual activities, during the 12 months before the survey)	40%	47%	33%	13%	14%	N/A	39%	47%	32%	49%	47%	50%
Seriously considered attempting suicide during the 12 months before the survey)	23%	27%	19%	36%	45%	26%	24%	27%	22%	24%	27%	20%
Attempted suicide (1+ times during the 12 months before survey)	16%	17%	14%	19%	21%	15%	14%	16%	13%	18%	20%	15%

Source: Arkansas, High School Youth Risk Behavior Survey, 2017. Some questions were modified to conserve space.

Can Receiving Money from a State EITC Change This (The Number and Percent of Adults in Arkansas Who Experience Depression)?

Depression involves mood, cognitive, and physical symptoms and is associated with higher rates of chronic disease, increased health care utilization, and impaired functioning. Rates of treatment remain low, and the treatment received is often inadequate.[22] Most depression emerges early in life and persists. Though treatable, its etiology is complex and involves genetic, hormonal, and environmental factors. A large part of the variation both in its prevalence and its expression results from gene-environment interactions.[35]

Considered among the earliest and most important environmental factors in early child development is maternal attachment: the bond of trust and dependence children form with parents at a very early age.[57] Secure attachment is necessary for infants to learn and develop the ability to self-regulate emotions and behavior. It results through an elaboration of the innate predisposition to seek proximity to and contact with specific familiar figures, most immediately the mother, whose taste, smell, feel and sounds are already familiar from the intrauterine environment. Secure attachment is also considered a critical early deterrent that can help prevent gene-environment interactions from bringing forth depression and other emotional and behavioral problems.

Security of attachment emerges and is facilitated in babies through a constellation of factors that prominently include touch (skin-to-skin contact, as optimized in breastfeeding, holding, cuddling, stroking, etc.), eye-to-eye contact as occurs with close proximity (as when the baby is held and cuddled, and fed), observing and mimicking facial expressions (as when a parents faces are in close proximity and their attention is focused on the baby), and through hearing and mimicking sounds, especially parents' voices.

Parental sensitivity is considered the most important early factor for babies' development of secure attachment.[67] That sensitivity is expressed by parents and perceived and learned by the baby, through parents' nurturing interactions with them. Among the very broad range of desirable parent-child interactions, one type stands out: so-called "serve and return" interactions in which the baby "serves" a behavior (e.g., sound, expression, or movement) to the parent, and the parent "returns" the behavior to the baby, with elaboration. Over time, combined with other nurturing and caring interactions, these intimate "serve and return" interactions become an important part of the foundation on which the child builds secure attachment.[58]

Factors that interfere with children's development of secure attachment, with parents initially, and other adults later, can put the child at risk for a variety of developmental, behavioral, and emotional problems. Mothers', and fathers', but especially mothers' sensitivity, attention, and interactions with their baby is, as stated above, the most important early factor in developing secure attachment, and maternal depression can be a major deterrent to that sensitivity.[35] On the other hand, factors that enable mothers to avoid depressive symptoms can increase their baby's likelihood of developing secure attachment and the skills and capacities that depend on it. **If a state-supplemented EITC can help mothers and fathers avoid**

depression, it will increase their babies' chances of forming secure attachments, and reduce their risks of developmental concerns and problems in infancy, toddlerhood, and as older children. This in turn can help reduce the risk of depression later in life, and potentially reduce household poverty and improve health.

A very important 2018 study used in-depth, qualitative interviews of 115 lower-income working families in the Greater Boston area to understand better how families viewed and used their EITC refunds.[59] What emerged from this research is a clear picture of families' very rational "resource management" decisions to make "in-kind" investments in their near-term (over the next year) economic security. What may have appeared to researchers looking at data on these families' uses of their EITC refunds as "consumption expenditures" turned out, upon closer inspection, to be more clearly understood as investments in a complex form of "self-insurance" against the recurring expense shocks and earnings shortfalls they routinely faced.

By saving, purchasing durable goods, stockpiling household staples, and paying off overdue bills and debts to kin and creditors at tax refund time, families were able to leverage their tax refund dollars into multiple forms of self-insurance against economic insecurity they knew was likely to arise over the upcoming year. In so doing, interviewees (mainly women, and many single mothers) reported they were able to "buy some breathing space," or reduce the stress of having to juggle expenditures so closely for a while. One single mother reported, for example, not having to worry about expenditures such as school clothing for her child that she knew would be needed over the next year, because she went ahead and bought the clothes with part of the EITC refund. Another reported buying a more dependable, used car so she would have reliable transportation to her work since her current, older car was beginning to have problems. Another reported stocking up on frozen and canned food as a hedge against food insecurity she knew was likely to come later in the year.[70]

HEALTH IMPACT FINDINGS

These EITC refund recipients were making very rational decisions within the tightly constrained financial realities they had to cope with routinely. By making the "in kind" investments they made, they were ensuring basic needs would be met and that they would be able to rely on family members for help over the next year, if needed. The result was an informal form of "self-insurance," which reduced their stress and gave them a better chance of avoiding depression, which many experienced and were familiar with.

Similarly, if the Arkansas state government were to pass a state supplement to the federal EITC for working families in Arkansas, they would help refund recipients support their "self-insurance" against the next year's economic insecurity, and in the process reduce the prevalence and severity of depression among working family heads in the state.

What Proportion of Children in Arkansas Were Born with Low Birth Weight?

Low-birth-weight (LBW) births involve high risks for a variety of adverse health outcomes, for mothers and infants. CDC data from the Metropolitan Atlanta Congenital Defects Program indicated singleton births weighing <2500 g were at 1.8 times higher risk of having birth defects than those ≥2500 g.[60] Expenditures for perinatal health care among LBW babies are far higher than those for normal-weight babies. In 2015, the average cost per hospital stay in the state of Arkansas for Major Diagnostic Category (MDC) #15, "Newborns and other neonates with conditions originating in the perinatal period" was $3,915 per stay. The average cost per hospital stay that same year in Arkansas for Clinical Classification Software (CCS) diagnosis #219, "Short gestation, low birth weight, and fetal growth retardation" was $79,341 per stay.[61] These higher costs arise in part from the necessity of admitting most LBW babies to Neonatal Intensive Care Units (NICUs) for care, the higher costs per day in NICUs, and longer stays required by LBW babies. The mean length of stay for MDC #15 in Arkansas in 2015 was 3.21 days, whereas the mean length of stay for CCS #219 was 37.65 days.[73]

The most prevalent determinant of LBW births is short gestation, or pre-term birth. In 2016 and 2017, the percentages of all births to women ages <20 years in the US that were preterm births were 10.40% (7.20% "late preterm" — 34-36 weeks, and 3.20% "early preterm" — <34 weeks) and 10.32% (7.15% "late preterm," and 3.19% "early preterm"), respectively. These rates of preterm birth were higher than for women of all ages combined, and higher for all five-year age groups up to ages 35-39 years.[62] Thus women giving birth in their teen years (ages <20 years) are at relatively high risk for preterm and LBW births.[75]

Disorders related to short gestation and LBW are the second most prevalent cause of infant mortality in the US, accounting for 16.8% of all infant deaths in 2017.[63] Over the period 2013-2015, the overall infant mortality rate in Arkansas was 7.63 deaths per 1000 live births, statistically significantly higher than the overall US rate of 5.89. During this period, the infant mortality rate among Non-Latinx White mothers in Arkansas was 7.04 deaths per 1000 live births, statistically significantly higher than the rate of 4.95 for the US. Among Non-Latinx Black mothers, the rate in Arkansas was 11.04 deaths per 1000 live births, slightly though not statistically significantly below, the US rate of 11.10 over this period. The infant mortality rate among Latinx mothers in Arkansas over the period 2013-2015 was 5.39 deaths per 1000 live births, somewhat but not statistically significantly higher than the US rate of 4.99.[64]

The prevalence of LBW births is higher in all 11 of the priority counties under consideration in this assessment than for the state of Arkansas as a whole (9.0%), though it varies across major race-ethnicity categories (Table 18). The overall average prevalence across the 11 counties is 12.1%, varying from a low of 9.3% in Jackson to a high of 14.3% in Desha County. The overall average prevalence among Non-Latinx Black women (15.3%) is nearly twice the prevalence among Non-Latinx White women (7.8%). There is very limited county-level data available on LBW births from the source used for Table 18 for Latinx women, though additional information is reported below.

In 2017, at 32.7 births per 1000 women ages 15-19 years, the state of Arkansas had the highest teenage birth rate of any state in the US. That same year, Arkansas also had the highest birth rate among women ages 20-24 years of all US states, at 107.7 births per 1000 women in this age group.[65] Ages 15-19 years comprise a period when young people of both sexes are making critical decisions, changes and preparations related to education, education attainment and general human capital accumulation. The age period 20-24 years is a time when post-secondary education (technical school, community college, undergraduate/four-year college) is being completed. Giving birth during these years has very real and strong practical implications for young people's ability to complete high school and/or post-secondary education. That, in turn, has major implications for their education attainment, which is the main determinant of labor-force preparedness and competitiveness and for lifetime earnings and income.[66]

We want to emphasize the counter-productive nature of efforts to reduce teenage births by shaming or otherwise stigmatizing young mothers and other teenagers. The solution to high teenage birth rates lies in evidence-based interventions that support young people in decisions to defer sexual activity and to become effective users of contra-

TABLE 18: Percent of Births in Priority Counties and State of Arkansas That Were Low-Birth-Weight Births, 2011-2017

	LOW BIRTH WEIGHT (<2500 GRAMS)			
COUNTY	ALL BIRTHS	BIRTHS TO BLACK / AFRICAN AMERICAN WOMEN	BIRTHS TO LATINX WOMEN	BIRTHS TO NON-LATINX WHITE WOMEN
STATE OF ARKANSAS*	9.0%	N/A	N/A	N/A
Chicot	11%	14%	-	4%
Crittenden	14%	17%	-	8%
Desha	14%	20%	-	7%
Jackson	9%	15%	-	8%
Jefferson	13%	14%	14%	10%
Lafayette	12%	16%	-	8%
Lee	12%	15%	-	6%
Mississippi	11%	15%	8%	9%
Monroe	12%	15%	-	9%
Phillips	12%	14%	-	9%
Saint Francis	12%	14%	-	8%
Averages over the 11 counties	**12%**	**15%**	**N/A**	**8%**

Source: National Center for Health Statistics; Natality Files, 2011-2017. From RWJ Foundation's County Health Rankings, 2019.

TABLE 19: Percent of Male Births That Were Low-Birth-Weight (<2,500 Grams) in Arkansas Priority Counties by Race-Ethnicity, 2009-2018

	LOW BIRTH WEIGHT (<2500 GRAMS)					
	ALL MALE BIRTHS		MALE BIRTHS TO NON-LATINX BLACK WOMEN		MALE BIRTHS TO NON-LATINX WHITE WOMEN	
COUNTY	MOTHER USED TOBACCO (% LBW)	MOTHER DID NOT USE TOBACCO (% LBW)	MOTHER USED TOBACCO (% LBW)	MOTHER DID NOT USE TOBACCO (% LBW)	MOTHER USED TOBACCO (% LBW)	MOTHER DID NOT USE TOBACCO (% LBW)
Chicot	13%	9%	30%	11%	0%	4%
Crittenden	12%	10%	16%	12%	9%	6%
Desha	14%	13%	23%	17%	8%	7%
Jackson	12%	5%	15%	8%	12%	5%
Jefferson	16%	11%	19%	12%	12%	7%
Lafayette	18%	19%	15%	23%	19%	15%
Lee	9%	11%	13%	12%	5%	7%
Mississippi	10%	8%	16%	11%	9%	6%
Monroe	9%	13%	14%	15%	7%	11%
Phillips	12%	12%	16%	15%	8%	5%
Saint Francis	17%	10%	19%	12%	14%	6%
Combined Counties	**13%**	**10%**	**18%**	**12%**	**10%**	**7%**

Source: Arkansas Department of Health, Vital Statistics Section, Web Query System. (http://healthstats.adh.arkansas.gov/scripts/broker.exe?_service=default&_program=arcode.birth_welcome_live.sas&_debug=). Accessed April 19, 2019.

Note: All birth data in this system for years 2009-2018 are identified by the system as "provisional".

ception. Creating expectations of academic success and education attainment that include clear presentation of the evidence on relationships between education attainment and lifetime earnings is a key component of such interventions.

That poverty and poor health outcomes generally are worse among racial and ethnic minorities is well-established.[67 - 70] They are the result of a long history of systemic racism and discrimination on the basis of skin color throughout the US. It would be a grave error of omission not to acknowledge that reality in this report, and to stress the significant potential for remediation of racial inequity afforded by state supplementation of the federal EITC. Most of the health impacts discussed in this report are more prevalent among Non-Hispanic Black people. However, it is undeniable that practically all are also intolerably prevalent among low-income Non-Latinx White and Latinx people in the state as well. A state supplement to the federal EITC could be a very effective tool for addressing racial inequity in health in Arkansas.

TABLE 20: Percent of Female Births That Were Low-Birth-Weight (<2,500 Grams) in Arkansas Priority Counties by Race-Ethnicity, 2009-2018

	LOW BIRTH WEIGHT (<2500 GRAMS)					
	ALL FEMALE BIRTHS		FEMALE BIRTHS TO NON-LATINX BLACK WOMEN		FEMALE BIRTHS TO NON-LATINX WHITE WOMEN	
COUNTY	**MOTHER USED TOBACCO** (% LBW)	**MOTHER DID NOT USE TOBACCO** (% LBW)	**MOTHER USED TOBACCO** (% LBW)	**MOTHER DID NOT USE TOBACCO** (% LBW)	**MOTHER USED TOBACCO** (% LBW)	**MOTHER DID NOT USE TOBACCO** (% LBW)
Chicot	19%	12%	36%	15%	8%	9%
Crittenden	18%	11%	30%	14%	11%	7%
Desha	18%	13%	20%	17%	16%	8%
Jackson	11%	8%	33%	11%	8%	7%
Jefferson	21%	13%	26%	14%	17%	8%
Lafayette	11%	8%	0%	13%	18%	4%
Lee	20%	12%	30%	13%	11%	10%
Mississippi	16%	9%	19%	13%	15%	6%
Monroe	14%	12%	21%	15%	9%	8%
Phillips	19%	13%	22%	15%	16%	7%
Saint Francis	13%	10%	16%	11%	11%	7%
Combined Counties	**17%**	**11%**	**23%**	**14%**	**13%**	**7%**

Source: Arkansas Department of Health, Vital Statistics Section, Web Query System. (http://healthstats.adh.arkansas.gov/scripts/broker.exe?_service=default&_program=arcode.birth_welcome_live.sas&_debug=). Accessed April 19, 2019.

Note: All birth data in this system for years 2009-2018 are identified by the system as "provisional".

Prevalence of LBW births also varies by sex of the child and by mothers' risk behaviors during pregnancy, particularly whether the mother smoked tobacco during pregnancy. In data from the Arkansas State Department of Health Vital Statistics Section, among all male births in the 11 priority counties, the prevalence of LBW births is higher among male babies born to women who reported smoking tobacco during pregnancy (Table 19).[g] The prevalence of LBW male births for all 11 counties combined over the period 2009-2018 was 13% among mothers who smoked tobacco, compared to 10% among mothers who reported not using tobacco (Table 19). Among male births to Non-Latinx Black women, the prevalence was higher for both

g. The source for these data does not, however, indicate how frequently mothers smoked, or for how many months of the pregnancy they smoked, only that they used tobacco during the pregnancy.

mothers who used tobacco and those who did not than for all male births combined, and so was the difference in prevalence between those who used tobacco (18%) and those who did not (12%). The overall prevalence of LBW male births among Non-Latinx White mothers who smoked tobacco in the 11 counties (10%) was higher than that among mothers who did not use tobacco (7%), and both were lower than the respective prevalence among all male births and those to Non-Latinx Black women (Table 19).

The prevalence of LBW among all female births was higher in the 11 counties among mothers who smoked (17%) and in those who did not smoke (11%) than among comparable male births (Tables 19 and 20). Moreover, the prevalence of LBW female births to Non-Latinx Black mothers who smoked tobacco (23%) and who did not (14%) were higher than among any other subgroups of either male or female births (Table 20). The prevalence of LBW female births among Non-Latinx White mothers who smoked tobacco (13%) was higher than the

TABLE 21: Total LBW Births (Both Sexes) to All Latinx Mothers (Smokers and Non-Smokers) in 11 Priority Counties of Arkansas, 2009-2018

COUNTY	**TOTAL LOW-BIRTH-RATE BIRTHS** (BOTH SEXES) **TO ALL LATINX MOTHERS** (BOTH SMOKERS AND NON-SMOKERS)	**TOTAL LIVE BIRTHS** (BOTH SEXES) **TO ALL LATINX MOTHERS** (BOTH SMOKERS AND NON-SMOKERS)	**% LOW-BIRTH-RATE BIRTHS** (BOTH SEXES) **TO ALL LATINX MOTHERS** (BOTH SMOKERS AND NON-SMOKERS)
Chicot	5	86	6%
Crittenden	7	85	8%
Desha	4	80	5%
Jackson	3	49	6%
Jefferson	21	160	13%
Lafayette	0	0	N/A
Lee	0	0	N/A
Mississippi	11	229	5%
Monroe	1	24	4%
Phillips	0	0	N/A
Saint Francis	1	35	3%
Combined Counties	**53**	**748**	**7.09%**
Grand Total	**62**	**816**	**7.60%**

Source: Arkansas Department of Health, Vital Statistics Section, Web Query System. (http://healthstats.adh.arkansas.gov/scripts/broker.exe?_service=default&_program=arcode.birth_welcome_live.sas&_debug=). Accessed April 19, 2019.

Note: All birth data in this system for years 2009-2018 are identified by the system as "provisional".

prevalence among Non-Latinx White mothers who did not smoke tobacco (7%), and these were both higher than the prevalence of comparable male LBW births (Tables 19 and 20).

The limited data on births to Latinx mothers in the Arkansas DOH Vital Statistics Section database did not permit disaggregation of those data by sex of child, or tobacco use of mothers. By summing the limited data available, we were able to produce overall LBW birth prevalences for most of the 11 priority counties (Table 21). Two summary rows are included at the bottom of Table 21, a Combined Counties row that aggregates all births assigned to the specific counties, and a Grand Total row that also includes some births that were only shown as part of the sum for all counties, but not assigned to any particular county. These data reflect very low prevalence of tobacco use among Latinx mothers; thus that distinction likely does not carry the same meaning in this subpopulation as among Non-Latinx Black or White mothers. The two overall prevalence estimates (7.09% and 7.60%) differ by approximately 0.5%, and either is likely to be very close to the actual prevalence of LBW births in this subpopulation (Table 21).

Can Receiving Additional Resources via a State EITC Match Change the Proportion of Children in Arkansas Born with LBW?

In examining the question of what proportion of births in Arkansas, and in the 11 priority counties, are LBW births, we found that the question to be richer and more complicated than it might have initially seemed. Without determining the sex of pregnancies *in utero*, it would not be possible to address the male-female difference in LBW births. However, there are several dimensions of this costly public health issue that can be influenced by a state supplement to the federal EITC.

The EITC generally has been shown to be an effective anti-poverty tool, with positive effects on health and several particular health outcomes. Among the health outcomes that have been most extensively studied, LBW births are especially responsive to increases in the EITC. In a 2009 study researchers found that each 10% increase in the EITC resulted in a reduction of 23.2 LBW births per 100,000 live births.[71] Among single mothers with education attainment below high-school level, the EITC is especially effective and has been associated with reductions in LBW births of 6.7% - 10.8%.[72] In a 2015 study examining the influence of New York State's and New York City's EITC matches to the federal credit, modest but statistically significant reductions in LBW births were related to increases in state and city EITC benefits in neighborhoods with longstanding resistance to improvements in their LBW rates.[73]

Birth weight is strongly associated with mothers' diet and nutrition during pregnancy, and even before pregnancy, in the internatal period. In addition, as shown in Tables 19 and 20 above, mothers' tobacco use is an important determinant of LBW births. A 2014 study using data from the National Health and Nutrition Examination Survey (NHANES) connected receipt of EITC benefits to improvements in women's food security and reductions in their tobacco use. Both these results provide support for EITC receipt reducing the likelihood of preterm, LBW births.[74]

A very recent (2019) study used data from the 1994-2013 US National Vital Statistics System to specifically examine the effects of state-level

EITC supplements in 23 states on birth outcomes among women with high school education or less, stratifying by race and ethnicity. This research found that, across all subgroups, any level of state EITC supplement to the federal credit is associated with better birth outcomes, with the largest effects seen among states with larger matches. Non-Latinx Black mothers experienced the greatest percentage-point decreases in probability of LBW and increases in gestation duration. Among mothers with high-school education or less, the study's results translated into 3,760 fewer LBW babies among Non-Latinx Black mothers and 8,364 fewer LBW births among Non-Latinx White mothers per year at the most generous state-level EITC levels (10% of the federal EITC amounts or more, and refundable). Moreover, Latinx and Non-Latinx mothers experienced similar positive effects of the higher state EITC supplements on birth outcomes.[75]

Another 2019 study explored the manner in which Washington, D.C., increased its EITC supplement in distinct increments over a period of eight years to design a "natural experiment" to assess the effects of those changes on birth outcomes. The research results showed a pattern of significant monotonically increasing improvements in percent of live births that were LBW, mean birth weight, and mean gestation weeks over that period. These "dose-response-like" relationships between increases in the D.C. supplement to the federal EITC and the three birth outcomes strengthen the likelihood that the EITC increases played a causal role in the improvements in birth outcomes.[76]

In Children's HealthWatch data from caregiver interviews conducted at Arkansas Children's Hospital over the 20-year period June 1998 to June 2018, 16% of the reference children were born with LBW (<2500g) (Table 10). In January 2009 we began asking caregivers to report their household's income, and over the 10-year period 2009-2018, 16.2% of children whose caregivers reported incomes less than $2,000 per month were born with LBW, 12.2% of those whose caregivers reported incomes $2,000 -3,999 were LBW, and 11.3% of those whose caregivers reported incomes of $4,000 per month or higher were born with LBW. Though other factors in addition to household income level influence mothers' risk of giving birth to LBW babies, income is clearly an important factor.

As the research reviewed briefly above indicates, augmenting working mothers' income through state supplements to the federal EITC, especially single mothers with low levels of education attainment whose earnings are relatively low, is very likely to reduce their risk of giving birth to LBW babies. Moreover, the evidence indicates a "dose-response-like" relationship between the amount of states' match of the federal EITC and the reduction in LBW risk. This means that the higher the level of EITC supplement Arkansas were to adopt, the greater the reduction in prevalence of LBW births among EITC recipient mothers.

A prominent factor reflected in the data in Tables 11-14 differentiating risk, or likelihood of LBW births in the 11 priority counties is race. The prevalence of LBW births among Non-Latinx Black mothers is notably higher than the prevalence among either Non-Latinx White mothers or Latinx mothers, regardless of tobacco use. However, adding tobacco use amplifies the differences across race-ethnicity groups and raises additional possibilities for positive change. The research summarized above

strongly suggests that state supplements to the federal EITC can have particularly strong benefits for Non-Latinx Black mothers' perinatal health and birth outcomes. Reduction in tobacco use among all mothers with low levels of education attainment, particularly Non-Latinx Black mothers, was a notable correlate of state EITC supplements. If an Arkansas state supplement to the federal EITC can be enacted into law, it is highly likely to have a very positive effect on the prevalence of LBW births among mothers in all race-ethnicity subgroups in the state. Furthermore, the evidence suggests that it would very likely be accompanied by greater improvements in LBW birth rates among Non-Latinx Black mothers. If enactment of a state EITC match also included any kind of incentives to reduce tobacco use, the magnitude of accompanying reductions in LBW births would be even greater.

HEALTH IMPACT FINDINGS

Two additional dimensions of the LBW birth issue may also be amenable to influence by a state EITC supplement: teen births and single-parent families, which are likely interrelated. It is clear from the data we examined that Arkansas has high overall rates of births to teenage women. It is also clear, from data described and discussed earlier in this document, that Arkansas has a high prevalence of single-parent families with children. Moreover, data on high school students' experiences of health risk factors associated with high risk of teenage pregnancies from the Youth Risk Factor Surveillance system (Table 17) indicate a large potential for reducing teenage births through evidence-based interventions such as the CDC's **"Promoting Science-Based Approaches to Teen Pregnancy Prevention Using Getting to Outcomes (PSBA-GTO)".**[a] **If, for example, a state supplement to the federal EITC were to be funded by revenues from increases in tobacco or other "sin taxes," devoting a small fraction of those revenues to supporting teen pregnancy prevention programs, such as PSBA-GTO, could provide strong support for multiple health objectives, in the 11 priority counties and in the entire state.**

a. This intervention is described in detail at https://www.cdc.gov/teenpregnancy/practitioner-tools-resources/psba-gto-guide/ .

What Proportion of Children Have Been Observed to Have Developmental Delays or Concerns?

Returning to Table 9 above, the prevalence of caregivers' reports of developmental concerns obtained from administration of the Parents Evaluation of Development Status (PEDS) screening tool are shown in the row with heading "PEDS." The PEDS screener asks parents whether they have concerns about several domains of their child's development (Figure 4). If the caregiver responds affirmatively to any of the questions, that is taken as an indicator of mild concern and followed up in subsequent visits with professional advice. If the respondent affirms or expresses concerns in two or more of the eight PEDS questions/developmental areas, the responses are interpreted as indicating moderate to severe concerns, depending on how many questions are affirmed. Clinicians might follow up this more severe "path" with further diagnostic testing or referral to appropriate evaluation or remedial services.[h]

h. The PEDS was developed by Frances P. Glascoe. Additional information about the PEDS, including links to validation and reliability testing research on the PEDS is available at https://pedstest.com/static/research/peds-standardization.html

FIGURE 4: QUESTIONS FROM THE PARENTS EVALUATION OF DEVELOPMENT STATUS (PEDS) SCREENER FOR DEVELOPMENTAL DELAYS

2. Do you have any concerns about how your child talks and makes speech sounds?
a☐Yes b☐No c☐A little xx☐DK/Refused zz☐TBD

3. Do you have any concerns about how your child understands what you say?
a☐Yes b☐No c☐A little xx☐DK/Refused zz☐TBD

4. Do you have any concerns about how your child uses his or her hands and fingers to do things?
a☐Yes b☐No c☐A little xx☐DK/Refused zz☐TBD

5. Do you have any concerns about how your child uses his or her arms and legs?
a☐Yes b☐No c☐A little xx☐DK/Refused zz☐TBD

6. Do you have any concerns about how your child behaves?
a☐Yes b☐No c☐A little xx☐DK/Refused zz☐TBD

7. Do you have any concerns about how your child gets along with others?
a☐Yes b☐No c☐A little xx☐DK/Refused zz☐TBD

8. Do you have any concerns about how your child is learning to do things for himself/herself?
a☐Yes b☐No c☐A little xx☐DK/Refused zz☐TBD

DEVELOPMENTAL CONCERNS ASKED IN THE CHILDREN'S HEALTHWATCH SURVEY INTERVIEW

The prevalence of caregivers' responses indicating Path A concerns in the data collected by Children's HealthWatch at Arkansas Children's Hospital is **19%.** The prevalence of caregivers indicating Path B, or concerns in two or more areas, is **12%.** These latter responses are considered to merit referral for further developmental evaluation. They also have been shown to exhibit positive predictive value of approximately 37% for referral to special education services. Based on these prevalence values, we could estimate that approximately 12% of young children (ages 2-4 years) in the state of Arkansas likely have developmental concerns that merit further evaluation and possible intervention.

Additional information on the prevalence of behavioral and developmental problems among older children in Arkansas is available from the 2017 National Survey of Children's Health, in data accessible from the Data Resource Center for Child and Adolescent Health.[77] In those data, **8.7%** of adult respondents answered affirmatively to the question "*Is this child taking medication for ADD/ADHD, autism/ASD, or difficulties with emotions, concentration, or behavior, age 3-17 years?*" In addition, **8.3%** of respondents answered affirmatively to the question "*Is this child currently receiving services under a special education or early intervention plan, age 1-17 years?*"; and **9.8**% answered affirmatively to the "*Currently has the condition*" option for the question "*Does this child currently have Attention Deficit Disorder (ADD) or Attention-Deficit/Hyperactivity Disorder (ADHD), age 3-17 years?*", while another **2.3%** affirmed the *"Ever told, but does not currently have condition"* response option. Finally, **1.5%** of adult respondents responded affirmatively to the question "*Does this child currently have Autism or Autism Spectrum Disorder (ASD) including Asperger's Disorder, Pervasive Developmental Disorder, age 3-17 years?*" though the prevalence estimate is not considered reliable due to its large standard error.

Taken together, these prevalence estimates indicate that approximately **8 - 12%** of children in Arkansas have been observed to have developmental delays or concerns, though we lack sufficient information to characterize them or their families in terms of socioeconomic or demographic categories. The **12%** of young children in the Children's HealthWatch data whose caregivers expressed concerns in two or more developmental areas on the PEDS screener share many of the characteristics described in Tables 3 and 4 above. They live in working families with modest means, and a sizeable proportion of them live in families with incomes below the poverty thresholds.

Can Additional Family Resources from a State EITC Match Change the Proportion of Children in Arkansas Coping with Developmental Delays or Concerns?

There is evidence that the EITC can lead to improvements in children's developmental trajectories.[78] A 2015 study using data from the National Longitudinal Survey of Youth examined associations between EITC benefits and two measures relevant to child development: the Behavior Problems Index (BPI) and the Home Observation Measurement of the Environment (HOME) inventory. The BPI is a 28-item questionnaire that measures the degree to which a child exhibits problems in six domains: antisocial behavior, headstrongness,

hyperactivity, immature dependency, peer conflict, and anxiousness/depression. Mothers of children 4-14 years of age answered the questions about their child's behavior in the past 3 months.

The HOME inventory is not a measure of child development, but measures support in the home for children ages 0-14 years and conditions that are supportive of healthy development. The HOME involves objective questions scored by an interviewer about conditions and practices in the home environment. Some questions are asked directly of the mother (e.g., how often the mother reads to the child), and others are based on objective observations of the physical environment (e.g., whether the home is cluttered) by trained interviewers. The researchers found that larger EITC payments were associated with improved BPI scores at two-year follow-up, and with better HOME scores at four-year follow-up. Testing for effect modification by marital status, they found that children of unmarried women were more likely to demonstrate improved BPI scores at two-year follow-up and improved HOME scores at four-year follow-up than children of married women. This finding is relevant to circumstances in Arkansas where a large proportion of families in poverty are single-mother families (Table 14).

The evidence on health-related benefits of the EITC generally, and state supplements to the federal EITC particularly, focus mostly on adults, and on perinatal outcomes in children. However, a growing body of evidence emphasizes the potential for improvements in the health and health behaviors of mothers, and subsequent associated improvements in their children's physical and mental health. The pathways for these effects include nutrition, health behaviors such as reducing tobacco use and efforts to lose weight, and reduction of stress among parents, including stress related specifically to parenting. Based on this evidence, we expect that a state supplement to the federal EITC in Arkansas would yield significant improvements in mothers' health, with concomitant improvements in the physical and mental health of their children. These improvements would almost certainly include reductions in behavioral and developmental problems in the children.

What Proportion of Adults in Arkansas Have Been Told by a Clinician That They Are Obese?

Obesity (BMI ≥30) is at epidemic stage in the US (and in much of the world), with an average of 29% of adults in all 50 states (and the US territories) suffering from the disease in 2015. The prevalence of obesity ranged from a low of 19.9% in Colorado to a high of 36% in Louisiana in 2015.[79] Obesity is an extremely complex disease with multiple causes and comorbidities including diabetes, high blood pressure, cardiovascular disease, orthopedic problems and many more. The prevalence of obesity among adults in the state of Arkansas was 35% in 2015 overall, placing it fifth highest among all 50 states and the territories.

The average prevalence of adult obesity in the 11 priority counties in this assessment was 41% in 2015 and ranged from a low of 37% to a high of 47% (Table 22). The Z-scores in the third column of Table 15, based on the overall mean and standard deviation for all counties in Arkansas, indicate adult obesity prevalence in all 11 counties is well above the overall county mean. Obesity has been found positively associated with food insecurity, among adult women particularly, and the food insecurity

prevalence in each of the priority counties is included in Table 22 for reference. Compared to the overall statewide prevalence (17%), food insecurity prevalence is notably higher in all 11 counties. These high food-insecurity prevalence rates are a likely a contributing factor in the high rates of adult obesity in the 11 counties, and to the extent that a state match to the federal EITC reduced food insecurity in these counties, it could also reduce obesity among adult women.

The causes of obesity range across practically every aspect of human life, however, and they are grossly oversimplified by the term "unhealthy lifestyles."[80] Obesogenic foods, foods that have been characterized as "nutrient sparse" and "energy dense," often made "hyper-palatable" by inclusion of large amounts of sugar, fat and salt, are cheap to produce, market, and purchase, and they are heavily advertised and marketed to low-income populations, particularly Non-Latinx Black and Latinx populations.[80]

TABLE 22: Percent of Adults in 11 Priority Counties That Are Obese, with Percent of Households Food Insecure

COUNTY	ADULTS WITH OBESITY (2015)		FOOD ACCESS AND INSECURITY		ADULTS WHO SMOKED TOBACCO (2016)	
	%	Z-SCORE (IN STANDARD DEVIATION UNITS)	% OF ALL PEOPLE WITH LIMITED ACCESS TO HEALTHY FOODS (2015)	% OF ALL PEOPLE FOOD INSECURE (2016)	%	Z-SCORE (IN STANDARD DEVIATION UNITS)
STATE OF ARKANSAS	35%	-	9%	17%	24%	-
Chicot	41%	1.56	33%	27%	23%	1.10
Crittenden	41%	1.47	5%	25%	24%	1.65
Desha	39%	0.74	20%	27%	25%	2.39
Jackson	37%	0.13	10%	21%	24%	1.57
Jefferson	42%	1.69	7%	26%	22%	0.77
Lafayette	41%	1.37	9%	23%	21%	-0.12
Lee	39%	0.83	27%	28%	26%	2.71
Mississippi	42%	1.78	7%	24%	22%	0.77
Monroe	37%	0.07	6%	24%	22%	0.82
Phillips	45%	2.61	31%	30%	26%	2.96
Saint Francis	47%	3.31	15%	25%	25%	1.97
County Average	**41%**	**-**	**15%**	**25%**	**24%**	**-**

Source: RWJF County Health Rankings, 2019. Based on data from the CDC Diabetes Interactive Atlas, 2015; USDA Food Environment Atlas, 2015; Feeding America, Map the meal Gap, 2016; BRFSS, 2016.

Obesity is highly correlated with poverty, yet not limited to low-income populations. It is both a function of diet and of activity levels, and factors that influence or constrain these are prevalent throughout US society.

How Can Receiving Additional Money from a State EITC Match Change That Proportion?

There is some evidence that increases in income are accompanied by increases in consumption of obesogenic foods and may involve weight gain in the short term.[54] However, the evidence on health effects of receipt of EITC benefits indicates positive effects on health behaviors among mothers overall, including increased weight-loss efforts and reduced tobacco smoking in some studies. However, given the notably high prevalence rates of adult obesity in the 11 priority counties, and in the state as a whole, it seems unlikely that a state supplement to the EITC would lead to major reductions in the obesity prevalence rates in the short term.

Yet the magnitude of the adverse health correlates and comorbidities of obesity, and the extremely high prevalence of the disease in Arkansas overall, and in the 11 priority counties especially, constitute an urgent necessity to apply all solutions that hold any hope at all of reducing the incidence of the disease. Thus, while it is hard to put reductions in adult prevalence of obesity in the state forward as a primary argument for a state supplement to the federal EITC, given the other much more likely benefits discussed in this assessment, even minor reductions in adult obesity could be seen as a significant benefit. It is also very likely that the benefits a state supplement to the EITC would have on child health, development, and education attainment discussed above would enable children whose parents received the state supplement to the EITC to avoid obesity and live much healthier lives as adults.

Arkansas is facing a number of extraordinarily difficult physical and mental health issues that accompany high rates of poverty, namely LBW and teenage births, single-parent families, and obesity. Successfully addressing these health issues will require extraordinary efforts likely to be accompanied by high costs of several kinds. However, state policy decision makers should carefully weigh the significant short-term costs that will be required to successfully overcome these health issues against the far greater costs that are certain to arise in the future if they are not addressed. Even more compelling are the short- and long-term benefits certain to accrue to the people of Arkansas if its leaders are willing and able to take up this challenge. There is no better way to begin the process of addressing these health issues than approving and implementing a state supplement to the federal EITC as quickly as possible.

IV. POLICY RECOMMENDATIONS

ENACT A STATE-LEVEL, REFUNDABLE EITC AT 15% OF THE FEDERAL CREDIT

State matches to the federal EITC are usually adopted and applied as a percentage of the federal EITC amount received (e.g., 5%, 10%, 15%, 20%, etc.). States also must decide whether to make their match refundable. If the state match is refundable, eligible tax filers receive the amount of the match to their federal EITC even if they do not owe any taxes, i.e., regardless of whether they have any tax liability. Whether a state's match to the federal EITC is refundable can be an even greater determiner of its effectiveness within the recipient population than the size of the match, since tax filers eligible for the EITC often have very low tax liability and do not owe much at all in taxes. If a state match is not refundable, recipients may receive very little from a state match, even if its level of matching is high.

As of 2018, 29 states; Washington, D.C.; and Puerto Rico had state matches to the federal EITC, and all but six of these 31 offered refundable credits. Maryland provides an option for filers to apply for a refundable credit, or a non-refundable credit at a higher level of match. State matching amounts range from a low of 3% in Montana, to as high as 85% in California under certain conditions. Washington, D.C. offers a match of 100% of the federal

credit for adults without dependents, and South Carolina's match will grow to 125% of the federal credit in 2023. However, South Carolina's large percentage match is not refundable, making it worth only about 5% of the federal EITC amount or less, since most low-income working people who file for the EITC in South Carolina have very little tax liability. This highlights the advantage of refundable state EITC matches.

Considering the potential health impacts of creating a state-level refundable Earned Income Tax Credit for the approximately 300,000 qualifying low-income Arkansas households, Arkansas Advocates for Children and Families and Children's HealthWatch identified the following recommendation, should Arkansas decide to enact a state-level refundable Earned Income Tax Credit.

ENACT A STATE-LEVEL, REFUNDABLE EITC AT 15% OF THE FEDERAL CREDIT

We recommend a state-level, refundable EITC set at 15% of the federal credit in order to maximize potential health benefits to Arkansans at a reasonable cost to the state. A refundable state EITC set at 15% of the federal credit equates to an average amount of $392 per household in addition to an average of $2,610 in federal EITC, resulting in a total federal/state EITC amount of $3,002. **For a typical household headed by a single adult with two children earning the state minimum wage ($19,240 annually, or $9.25/hr.), the total federal/state EITC amount would be $6,437 ($840 increase resulting from a 15% state EITC). A state-supplement to the federal EITC would unquestionably improve economic conditions for Arkansas households and very likely result in improved health outcomes among children and their caregivers.**

The Arkansas state-level, refundable EITC set at 15% of the federal credit would cost approximately $117 million. However, the self-financing attributes through decreases in public assistance received by mothers and increases in payroll and sales taxes paid **would reduce the cost of a refundable state-level EITC in Arkansas to $15.2 million — a modest 0.05% of the FY2018 state budget.**[19]

The creation of a state-level refundable EITC may perhaps be one of the most effective ways to address the poor health outcomes experienced among Arkansans. This HIA concludes that a state-level, refundable EITC would counteract many poor health outcomes manifested by longstanding poverty, fewer health care resources and longstanding barriers to care. Arkansas has an opportunity to join the 29 states plus the District of Columbia (D.C.) that have enacted state-level EITCs.

V. MONITORING AND EVALUATION PLAN

PROJECT BACKGROUND

Arkansas Advocates for Children and Families is working with Children's Health Watch and Pew Charitable Trusts to conduct a "Health Impact Assessment," (HIA) to investigate how financially-related family hardships impact health care costs, health outcomes, and economic mobility for low-income Arkansans. This research will also be used to determine how a state-level match to the federal Earned Income Tax Credit (EITC) might address these adverse outcomes.

Purpose

The purpose of this HIA Monitoring and Evaluation Plan is to plan for 3 types of evaluation that can be done within HIA: process, impact, and outcome evaluations.

1. *Process Evaluation:* scores the overall quality of the HIA and indicates if AACF and CHW complete the HIA as originally planned.
2. The *impact evaluation* will assess the HIA's impact on decision-making, specifically regarding the merits of a state EITC as discussed at the Arkansas Capitol during the 2019 legislative session and beyond.

3. The *outcome evaluation* will focus on the time period of this grant plus the six-month period following the end of the grant period. If practicable, it will reflect how any changes approved by the Arkansas legislature will have influenced the health status of children and families in the target counties of Arkansas during that period. In the event legislative action is not taken to approve a state match to the federal EITC, we will assess discernible changes in support for such legislation, and the likelihood or its success in the future.

1) Process Evaluation Plan

AACF and CHW created a stakeholder engagement plan and a timeline of action at the beginning of the HIA project. The process evaluation will examine how closely we followed this plan, met deadlines and completed tasks as indicated along the way. This evaluation will also include information about challenges faced during the HIA, and the strategies and methods we used to address those challenges. Finally, this part of the evaluation will also include information on opportunities for future improvement and anything we could have done differently.

Questions we will address in the evaluation process include the following:

- Screening: What were the reasons for conducting the HIA?
- Scoping: How were health issues identified and prioritized?
- Assessment: How were health impacts assessed and characterized? How were impacts to marginalized populations assessed?
- Recommendations: How were recommendations prioritized?
- Reporting: How were stakeholders involved in reviewing and communicating findings?
- HIA Process: How much time and money were spent on each phase of the HIA?
- Did the project assess equity implications and were limitations of the data acknowledged?
- What methods were used to communicate and translate findings? Were those methods effective and were the data used in some way? Why or why not?
- Stakeholder Engagement: How were affected populations involved? Did the HIA include community experience as evidence? Did the focus groups conducted include a broad range of stakeholders? Were results from the focus groups included in further action aimed at producing EITC legislation?
- Was the decision-making process transparent (not just among partners, but broader)? If not, would you recommend anything to ensure transparency?

2) Impact Evaluation Plan

HIA practitioners will monitor the following indicators:

INDICATOR/QUESTION: HIA'S IMPACT ON DECISION	AGENCY RESPONSIBLE FOR MONITORING	STATUS *(TO FILL IN)*
Were health outcomes established by HIA considered by Arkansas legislature during discussions regarding an EITC?	AACF and CHW	
Were health outcomes established by HIA considered by Arkansas Governor during discussions regarding an EITC?	AACF and CHW	
Did a state EITC become part of the final draft of any bill?	AACF and CHW	
If created, how far did that EITC bill make it in the process towards law/ did EITC become law?	AACF and CHW	
Were health outcomes established by HIA considered during discussions of size of potential state EITC matches (5, 10, 15% etc.)?	AACF and CHW	
Were health outcomes established by HIA considered by other decision-makers?	AACF and CHW	

3) Outcome Evaluation Plan

INDICATOR/QUESTION: HIA'S IMPACT ON DECISION	AGENCY RESPONSIBLE FOR MONITORING	STATUS *(TO FILL IN)*
Were measurable changes in infant mortality and premature birth rates detected by state or national monitoring activities?	AACF and CHW	
Were measurable changes in depression rates (broken out when possible by age and sex) detected by state of national monitoring surveys?	AACF and CHW	
Were measurable changes in social and emotional development (especially ages 0-3) detected by state or national monitoring surveys?	AACF and CHW	
Were measurable changes in blood pressure morbidity detected by state or national monitoring surveys?	AACF and CHW	
How many Arkansans received the Arkansas EITC?	AACF and CHW	
What was the average Arkansas and federal EITC amount?	AACF and CHW	
Were measurable changes in breastfeeding rates detected by state or national monitoring surveys?	AACF and CHW	
Were measurable changes in child asthma rates detected by state or national monitoring surveys?	AACF and CHW	

Evaluation Questions To Be Used

Process evaluation can provide lessons about why and how the HIA worked, including:

- **How was the HIA undertaken – including details of time, place, geographic area/population group affected by the proposal, what the proposal sought to achieve, and the methods used?**
- **What evidence was used, and how did it inform the development of recommendations?**
- **Which issues were addressed, which issues of importance to the community were not addressed and why? How were decisions related to modifications in the scope made?**
- **How were decision makers involved and engaged in the process, what were their expectations, and were they fulfilled with the limited resources available?**
- **How and when were the recommendations delivered to relevant decision makers?**

Based on: Taylor, L., Gowman, N. & Quigley, R. (2003). Learning from practice bulletin: Evaluating health impact assessment. London: Health Development Agency. Available at: http://www.who.int/hia/evidence/en/practice.pdf

APPENDICES

APPENDIX A

STAKEHOLDER ENGAGEMENT PLAN

OVERALL GOAL

To make evidence-informed recommendations we will embark on a four month "listening tour" to gain a thorough understanding of the diverse perspectives and community-member voices that will inform the HIA work. Our e fforts will focus on the Arkansas counties considered places of interest as per the PEW RFP (Chicot, Crittenden, Desha, Jackson, Jefferson, Lafayette, Lee, Mississippi, Monroe, Phillips, St. Francis).

Goal 1: To engage a diverse coalition of stakeholders, including: policymakers, policy experts, academics, health care organizations, direct social service organizations, and most importantly, Arkansans who currently receive the federal EITC and would qualify for a state EITC.

- **Strategy 1:** Adapt current AACF event plans when possible to include stakeholder engagement elements. These event options include policy cafes, advocacy academies, action academies, pre and post-legislative sessions, and radio shows. See below detail.
- **Strategy 2:** Piggyback on partner events, such as the Arkansas Public Policy Panel, to reach a wider audience of influencers.
- **Strategy 3:** Implement a two-pronged contact plan. The first prong is to engage a key group of leaders to form an Advisory Committee (such as provider or trade associations, membership organizations, state advocacy/organizing groups, etc.— that are more likely to have local mem-

bers or representatives in our target counties). The second prong involves, with the guidance of the advisory committee, facilitating feedback from "on the ground" stakeholders (calls, meetings, focus groups follow up interviews etc.). See below for initial list of potential partners.

Contact Plan Outline:

1. Prioritize key partners from contact list. Email or call contact agency heads and key stakeholders in target counties to gauge interest. See list of potential partners below.
2. Advisory committee:
   - Identify "high value" stakeholders and invite them to participate in an advisory committee.
   - Coordinate monthly 1-hour calls/ meetings with AC to get feedback on HIA progress and written materials. Also plan for two in-person half-day meetings (policy café and training) in July 2018.
   - Advisory committee will participate in a training and provide feedback on written materials, pathway diagram, and focus group strategies.
3. Focus groups and on the ground feedback
   - The goal of the focus groups is to gain feedback on pathways and collect qualitative information about the experiences of provider and people who would potentially qualify for a state EITC in the target counties.
   - Arkansas Advocates for Children and Families will cooperate with Advisory Committee on existing events where we could hold interviews.
   - Arkansas Advocates for Children and Families will conduct up to 3 focus groups in the target counties.

Goal 2: Identify pathways for HIA investigation and data needs. Focus on specific locations and areas of need to gain thorough feedback on the potential child and adult health impact of a state EITC.

- **Strategy 1**: Engage stakeholders who work on the primary areas of concern for family economic security: food insecurity, housing insecurity, energy insecurity, and foregone health care. Use relationships with partners to help access data, other stakeholders, and recognize pathways.
- **Strategy 2:** Identify opportunity to have at least one in-person event (i.e. Action Academy or focus group) in target counties. In person events in all counties will be too time-intensive. AACF will instead hold calls or webinars in counties where we cannot have in-person events.
- **Strategy 3:** Identify the key set of research questions (including current and future potential obstacles to EITC) that the HIA will inform, and gauge current desire and need for EITC from different partners in the context of HIA. Answer: how well do stakeholders understand the connection between financial security and health currently? How well do they understand the potential economic benefit to their area?

Goal 3: Identify legislative targets that could promote a bill in the 2019 session.

- Strategy 1: Identify current partners and map their influence on potential legislative targets. Use current supporter/partner network to identify influencers in target districts.
- Strategy 2: Move influencers along ladder of engagement by identifying interests, connecting them with AACF issues, acting as a resource, inviting to events, and sharing resources.

POSSIBLE CHALLENGES AND SOLUTIONS

1. Potential challenge: Lack of awareness about EITC policy or HIA process. Stakeholders and direct consumers of the EITC may not have a lot of knowledge about the actual program, even if they benefit from it.
    a. Solution: We could include a preface and general information on the EITC and HIA process in the initial contact emails.
    b. Solution: Policy cafes and outreach events from AACF can also help with understanding and awareness of the EITC and HIA process in target communities.
2. Potential challenge: Effectively engaging stakeholders, hearing their assessments, observations and ideas, and accurately recording/preserving them is going to be time-consuming.
    a. Solution: Piggybacking on events already scheduled can be effective, it will require diligence in securing sufficient time/space on the agenda for the HIA discussions. It will also be critical to effectively preserve and record comments and responses from stakeholders.
    b. Solution: We will filter out the most high-value partners. We can narrow down our partner list to a shorter prioritized group. That group can function as our advisory committee.
3. Potential challenge: Gathering balanced perspectives from stakeholders, and not exclusively from allies or supporters from the EITC will be more challenging. There may be some negative consequences that we have not foreseen.
    a. Solution: One of our main objectives during this stakeholder outreach phase of the HIA will be to solicit from stakeholders their views on the range of health outcomes that might be affected by a state EITC supplement, both positively and negatively. Because of this our partner list includes legislators from target districts who voted against the most recent EITC bill, and local chambers of commerce who are unlikely to be strong supporters.

TIMELINE

- February 2018
    - Start of legislative session (fiscal session only) - February 12, 2018
    - HIA meeting in DC (AACF and CHW) - February 25 - March 3, 2018
- March 2018
    - Finalize Engagement plan and screening summary.
    - Fiscal session ends unless legislature votes to extend - March 13, 2018
- April 2018
    - **Engagement plan**[i] - PEW deliverable deadline: April 2018
    - **Screening summary**[j] - PEW deliverable deadline: April 2018

i. Stakeholder engagement plan: Grantees will design and implement a plan for engaging stakeholders at each stage in the HIA process, including identification of stakeholders and strategies to engage them; methods to ensure clear communication with each group; and consideration of barriers and challenges that the grantee anticipates to engaging each group, as well as possible solutions.

j. Screening summary: Grantees will select a decision that the HIA will inform. The summary includes a discussion of how key stakeholders were engaged during screening, a description of the decision or decisions that will be informed by the HIA and the timeline for these decisions, and a summary of the final reasons for selecting these decisions for a HIA.

- Begin implementation of engagement plan – 4 months

- June 2018
  - State agency budget requests: State agencies receive budget request forms and instructions from the Governor and the Department of Finance and Administration (DFA).
- July 2018
  - Executive review: The DFA Budget Office and the Governor review the agencies' requests during July and continuing through November.
- September 2018
  - **Monitoring and evaluation plan**[k]- PEW deliverable deadline: September 2018
  - **Scoping summary**[l] - PEW deliverable deadline: September 2018
  - Final report of state Legislative Tax Reform Taskforce is due: September 1, 2018
- October 2018
  - Legislature begins pre-session state agency budget hearings. The hearings of the Legislative Council (LC) usually begin in the first week or so of October. The Joint Budget Committee (JBC) sits with the LC as voting participants in the hearings. Each agency which received an appropriation by the last legislature presents its request for the next biennium.
- November 2018
  - Governor submits proposed budget (with tax cuts and revenue forecast for FY20 and 21)
  - The Director of DFA is required by law to present the Official General Revenue Forecast no later than 60 days prior to the beginning of the legislature (which starts in January 2019).
- December 2018
  - Finalize HIA Framework for release in January 2019
- January 2019
  - **Dissemination and communications strategy** - PEW deliverable deadline: January 2019
  - Arkansas legislative session (full legislative session) begins
- March 2019
  - **Assessment** - PEW deliverable deadline: March 2019
  - **Recommendations** - PEW deliverable deadline: March 2019
- April 2019
  - **HIA report draft** - PEW deliverable deadline: April 2019

k. Monitoring and evaluation plan: Each grantee is expected to determine the effectiveness of the HIA process, track impacts of the HIA on the decision-making process and final decisions and develop a plan to monitor the effects of the implemented decision on health and health determinants. Note: Grantees will complete and disseminate their HIA reports within the first 18 months of the grant period, and in time to inform the decision-making process that is the focus of the HIA. This will allow six months for grantees to participate in monitoring and evaluation activities before the end of the two-year grant period. The last six months of the two-year grant period are reserved for implementing the monitoring and evaluation plan developed during the HIA process and grantees should ensure their budgets allocate sufficient staff time and any other resources necessary for the monitoring and evaluation step. Grantees may complete self-evaluations or allocate resources in the grant budget to partner with external evaluators.

l. Scoping summary: Identify and prioritize the key set of research questions that the HIA will inform The HIA... scope will include: the populations likely to be affected by the decision(s) informed by the HIA, a description of the health issues that will be addressed and a summary of any health issues that were considered but will not be analyzed in depth in the HIA, the role of the grantee and partners in conducting the HIA, data sources and analytic methods that will be used, and a summary of how stakeholders were involved in developing the scope. This may also include a list of assessment research questions, pathway diagrams, or logic models.

- **HIA report** - PEW deliverable deadline: June 2019
- **Legislature adjourns in April**.

- December 2019
  - **Process and impact evaluation** - PEW deliverable deadline: December 2019

Outreach Event Options

Participants are generally local advocates, service providers and community leaders. Depending on the location, people who are EITC recipients who also attend as local advocates. These options are structured so that additional specific presentations can be easily added to the program. For instance, we frequently change the number of event tables at policy cafes and would add a specific HIA table for a focus group discussion.

Issue-Specific Policy Events — These would be held in key legislative districts, featuring panel discussions with a member of AACF policy staff, a local partner/provider in that policy area, and a legislator to discuss the issue.

Policy Cafés — Working with a local partner, we bring the latest research, recap recent legislative sessions, and lead discussions on future legislation in Arkansas. We will have several tables in the room and will assign a topic area to each of the tables. The table leader will be an expert in one of our major issue areas. Event attendees can travel from table to table as a part of a small group to gather important information to make them a more effective child advocate. We go through two or three (depending on time) rotations at each table so you never miss an issue that's important to you. These are essentially highly participatory mini conferences, where attendees are a part of the conversation and not lectured to. Participants leave with an understanding of the role that policy plays in the lives of Arkansas children and families, past successes, future policy campaigns, and how to get involved and take action. All advocates take part in a tax and budget training, so that they understand fully the connection between the budget and every other issue.

Advocacy Academies — Participants learn how to engage elected officials, the media, and like-minded individuals to advocate for children and families in Arkansas as well as how to join The Kids Count Coalition in our fight to protect and improve children's opportunities in the coming legislative session and beyond. The presentation will include a component about lobbying guidelines for 501(c)(3) organizations where applicable.

Action Academy — Action Academy takes the best elements of Policy Cafés and Advocacy Academy, providing participants not only with up-to-date information about policies that impact children and families, but also tools that participants can use to take direct action. Policy staff will be on hand to talk in a town-hall format about important policy issues of importance to Arkansans, such as health care changes, education, and tax and budget policies that impact families.

But what makes Action Academy different from Policy Cafés, aside from the absence of table rotations, is that the emphasis is on TAKING SPECIFIC ACTION. Participants will learn information they can use, not only about the policies themselves, but how they can personally influence the decision-making process.

Pre-Legislative Conferences — Preview the upcoming legislative session including a discussion on the state budget and issues impacting low and middle-income kids and families that are expected to be debated. Legislator panels, policy expert panels and journalist panels will discuss the issues.

Post-Legislative Conferences — Policy experts, legislators, and advocates will recap the 2019 legislative session: which bills passed, which ones didn't, what it all means for kids in our state, and what comes next. Child health, juvenile justice, child welfare, education, and economic issues are among the topics that will be explored.

APPENDIX B

RECRUITMENT INFORMATION FOR ADVISORY COMMITTEE MEMBERS

Many Arkansans are disproportionately burdened with household hardships associated with a lack of income, such as food insecurity, housing insecurity, energy insecurity, and foregone health care.

Because of this, Arkansas Advocates for Children and Families is working with Children's Health-Watch and Pew Charitable Trusts to conduct a "Health Impact Assessment," (HIA) to investigate how these hardships impact health care costs, health care outcomes, and economic mobility for low-income Arkansans. This research will also be used to determine how a state-level Earned Income Tax Credit (EITC) might address these adverse outcomes. We are happy to answer any further questions about the HIA or Advisory Committee plans. Please send any inquiries to ewheeler@arsadvocates.org.

Why Are We Forming an Advisory Committee?

We value collaborative decision-making, research and reporting processes within HIA, and we believe that your participation on an Advisory Committee will strengthen the ultimate products we

create and their value to advancing health equity. That's why we're reaching out to you. We hope that by having stakeholders from a diverse range of fields on our Advisory Committee (like academia, direct social services, educators, and child care) we can gain a thorough understanding of the different ways a financial hardship can contribute to adverse health outcomes.

When?

Tentative plans are for the Advisory Committee to meet monthly [every third Thursday, starting May 17th through March 2019]. Most of these meetings will be one-hour calls or video conferences. We propose one in-person half day meeting, tentatively scheduled for July 6th or 7th 2018. The schedule is subject to change based on what's best for the group.

What?

Specific activities for the Advisory Committee include:

- Participating in Advisory Committee meetings. We propose monthly meetings by video-conference or phone and one half-day in-person meeting. However, we'll talk at our 1st meeting about what's best for the group.
- Guiding, reviewing, and sharing feedback on the research questions, methods, and findings for this process.
- Helping identify policy recommendations to address the impacts identified.
- Sharing feedback on communications materials, including a draft Health Impact Assessment report.
- Sharing findings to your networks and other appropriate audiences

Time Commitment

We estimate a 20-hour commitment for these activities. There may be additional activities that emerge that we might also request your help with; for example, developing HIA reporting materials that would be most useful for informing decision-makers, helping organize focus groups or surveys, or communicating HIA findings in campaigns. Any additional time commitments are based on the interest and availability of each Advisory Committee member.

APPENDIX C

ADVISORY COMMITTEE INTRODUCTION

DATES AND GOALS FOR ADVISORY COMMITTEE MEMBERS

Thank you for agreeing to collaborate with Arkansas Advocates for Children and Families and Children's Health Watch in this effort to improve health equity in Arkansas. The following is a general outline of the advisory committee activities:

- Monthly check-in calls for feedback on HIA progress and written materials. Tentative plans are for the Advisory Committee to meet monthly [every third Thursday, starting May 17th through March 2019]. Most of these meetings will be one-hour calls
- A one-day HIA training facilitated by PEW on July 6th
- Occasional feedback on written materials, pathway diagram, focus group strategies, and communications materials, including a draft Health Impact Assessment report.
- Sharing ultimate HIA findings with your networks and other appropriate audiences

Screening Summary

This screening summary describes how Arkansas Advocates for Children and Families (AACF) and Children's HealthWatch (CHW) decided the Health Impact Assessment (HIA) will focus on the potential creation of a state Earned Income Tax Credit (EITC) in Arkansas. Specifically, this summary describes:

- A description of the potential state-level EITC in Arkansas that will be informed by the HIA
- The timeline for the potential creation of a state-level EITC in Arkansas
- A summary of the final reasons for selecting the creation of a state-level EITC in Arkansas for a HIA

1. Description of the Potential State-Level EITC in Arkansas That Will Be Informed by the HIA

Together we examined a range of state-level policy options for addressing poverty and its associated hardships and concluded that a state EITC is likely to be very effective as an anti-poverty policy. The EITC helps all kinds of working people and their kids. There are nearly 300,000 kids in Arkansas and about 143,000 families living in rural areas in Arkansas that would qualify for this type of state credit.[21]

2. Timeline for the Potential Creation of a State-Level EITC in Arkansas

Despite an increasingly conservative environment, AACF has set the table for a successful EITC campaign in the 2019 session. During the previous session in 2017, AACF worked with legislators, business leaders, national partners, local media and advocates to bring an EITC bill to the house floor. This was the first year that the EITC passed out of committee and was debated on the House floor.

There were two bills aimed at cutting taxes for low-income taxpayers in the 2017 legislative session: tax credits and lowering nominal tax rates. The Governor's "Tax Reform and Relief Act of 2017" (Act 79),[22] a $50 million tax cut for those making less than $21,000 a year in taxable income prevailed. As a part of this tax proposal, the Arkansas legislature created a 16-member task force to "examine and identify areas of potential reform within the tax laws of the State of Arkansas." The task force is charged with recommending any potential further tax legislation for the 2019 legislative session. Several legislators who supported a state EITC are members of the task force, including the primary sponsor of the 2015 and 2017 state EITC bills.

The task force is required to submit a final report of recommendations and findings to the Governor, Speaker of the House, and the Senate President Pro Tempore by September 1, 2018.[81] The Tax Task Force has already discussed the creation of a state-level EITC for inclusion in the final recommendations.

As the 2019 legislative session begins in January 2019, we concluded during our screening process, that an HIA would add value and strength to the task force's recommendations and help inform the legislature's consideration of a new state EITC. There is currently no concerted effort to understand how a state EITC might impact the health of Arkansans.

3. Summary of the Final Reasons for Selecting the Creation of a State-Level EITC in Arkansas for a HIA

Most recently, an April 2018 poll released by AACF found more than three out of four (79%) Arkansans – including 79% of independents and 72% of Republicans – support enacting a state-level EITC.[23] Together we agreed that a state EITC would reduce the adverse impacts of hardships associated with a lack of income among working families in Arkansas, improve health outcomes, save in health care costs, reduce persistent poverty, and increase upward economic mobility for low-income Arkansans.

Furthermore, CHW has seen success in re-framing state EITCs in the context of child health improvement. Following a planning grant process in 2014, CHW led the Massachusetts Healthy Families EITC Coalition, a statewide network of advocates working to improve the health and well-being of Massachusetts children and families. The Coalition successfully led a campaign to increase the state's

EITC by 50%, allowing more than 400,000 individuals and families in the Commonwealth the ability to access state benefits to improve their health and well-being. The bill increased the state EITC level from 15% to 23% of the federal EITC, increasing the maximum state credit from $951 to $1,459. After years of collaborative efforts in MA to increase the state EITC, a re-imagining of the credit as an issue of promoting health was the secret sauce that helped lead to its expansion. We envision a HIA on the creation of a state-level EITC will have a similar effect in Arkansas.

ENGAGEMENT PLAN

To explore the different ways that an EITC impacts public health in Arkansas, we will embark on a four month "listening tour." The goal is to understand the diverse perspectives and community-member voices that will inform the HIA work. Our efforts will focus on the Arkansas counties considered places of interest as per the PEW RFP (*Chicot, Crittenden, Desha, Jackson, Jefferson, Lafayette, Lee, Mississippi, Monroe, Phillips, St. Francis*).

- AACF will conduct up to 3 focus groups in the target counties in collaboration with the Advisory Committee, potentially collaborating on existing events. The goal of the focus groups is to collect qualitative information about the experiences of providers and people who would potentially qualify for a state EITC in the target counties.
- Identify the key set of research questions (including current and future potential obstacles to EITC) that the HIA will inform, and gauge current desire and need for EITC from different partners in the context of HIA.

Timeline for Engagement Plan

- May 2018

Advisory Committee introductory call

- June 2018
  - Advisory Committee monthly check in call
  - State agency budget requests: State agencies receive budget request forms and instructions from the Governor and the Department of Finance and Administration (DFA).
- July 2018
  - Advisory Committee monthly check in call
  - Advisory Committee HIA training facilitated by PEW on July 6th
  - Executive review: The DFA Budget Office and the Governor review the agencies' requests during July and continuing through November.
- August 2018
  - Advisory Committee monthly check in call
  - Arkansas Advocates for Children and Families will conduct up to 3 focus groups in the target counties
- September 2018
  - Advisory Committee monthly check in call
  - Final report of state Legislative Tax Reform Taskforce is due: September 1, 2018
- October 2018
  - Advisory Committee monthly check in call
  - Legislature begins pre-session state agency budget hearings. The hearings of the Legislative Council (LC) usually begin in the first week or so of October. The Joint Budget

Committee (JBC) sits with the LC as voting participants in the hearings. Each agency which received an appropriation by the last legislature presents its request for the next biennium.

- November 2018
  - Advisory Committee monthly check in call
  - Governor submits proposed budget (with tax cuts and revenue forecast for FY20 and 21)
  - The Director of DFA is required by law to present the Official General Revenue Forecast no later than 60 days prior to the beginning of the legislature (which starts in January 2019).
- December 2018
  - Advisory Committee monthly check in call
  - Finalize HIA Framework for release in January 2019
- January 2019
  - Advisory Committee monthly check in call
  - Arkansas legislative session (full legislative session) begins
  - HIA Framework (preliminary report) released
- February 2019
  - Advisory Committee monthly check in call
  - March 2019
  - Advisory Committee monthly check in call
- April 2019
  - HIA final report released
  - Legislature adjourns in April.

APPENDIX D

ADVISORY COMMITTEE MEMBERS

Steve Copley — Faith Voices Arkansas

Candace Williams — Arkansas Rural Community Alliance

Brandy Ivy — ASU Mid-South Home Visiting Coordinator, West Memphis, Crittenden County

Beatrice Shelby — Boys, Girls, Adults CDC, Marvell, Phillips County

Patty Barker — Arkansas Hunger Relief Alliance

Stephanie Loveless — UAMS East, Helena, Phillips County

Wendy Von Kamel — Southern Bancorp, Helena, Phillips County

LeCole White — Home Visiting Association

Kymara Seals — Arkansas Public Policy Panel

Abby Hughes Holsclaw — Asset Funders Network

Marilyn Copeland — Project Launch, Mississippi County

Ora Barnes Stevens — Lee County Cooperative Clinic, Lee County

Scott Hinson — ASU Newport, Jackson County

APPENDIX E
FOCUS GROUP SCRIPT

IQ: introductory question | TQ: transition question | KQ: key question | CQ: closing question

SCRIPT/QUESTIONS	REMARKS/RATIONALE
Introduction "Hello everybody, my name is Rebecca, and this is [Bruno/Jennifer/Ellie]. We work at a nonprofit called Arkansas Advocates for Children and Families and we do research and advocacy on issues that impact kids and families in the state. We invited you all to talk about what kinds of health and financial issues are the most important in your community, because we are partnering with another nonprofit, Children's Health Watch, to do research on how health and income might be connected and if there are any new state policies that could improve the health and income of people in Arkansas. Your opinions and ideas will be a big help to this research. I am going to facilitate the discussion, and [Bruno/Jennifer/Ellie] will take notes. Does that sound ok with everyone? I will ask you several questions. Your personal opinions and views are very important for us. There are no right or wrong answers. Please feel welcome to express yourself freely during the discussion. This conversation will be recorded, so we can make sure we don't miss anything important in our notes. Only [Jennifer/Bruno/Ellie] and I will listen to the recording. Is that alright with everyone?	Introduction to the project and informing participants of the purpose of the study, the confidentiality agreement, and other practical issues regarding the focus group.

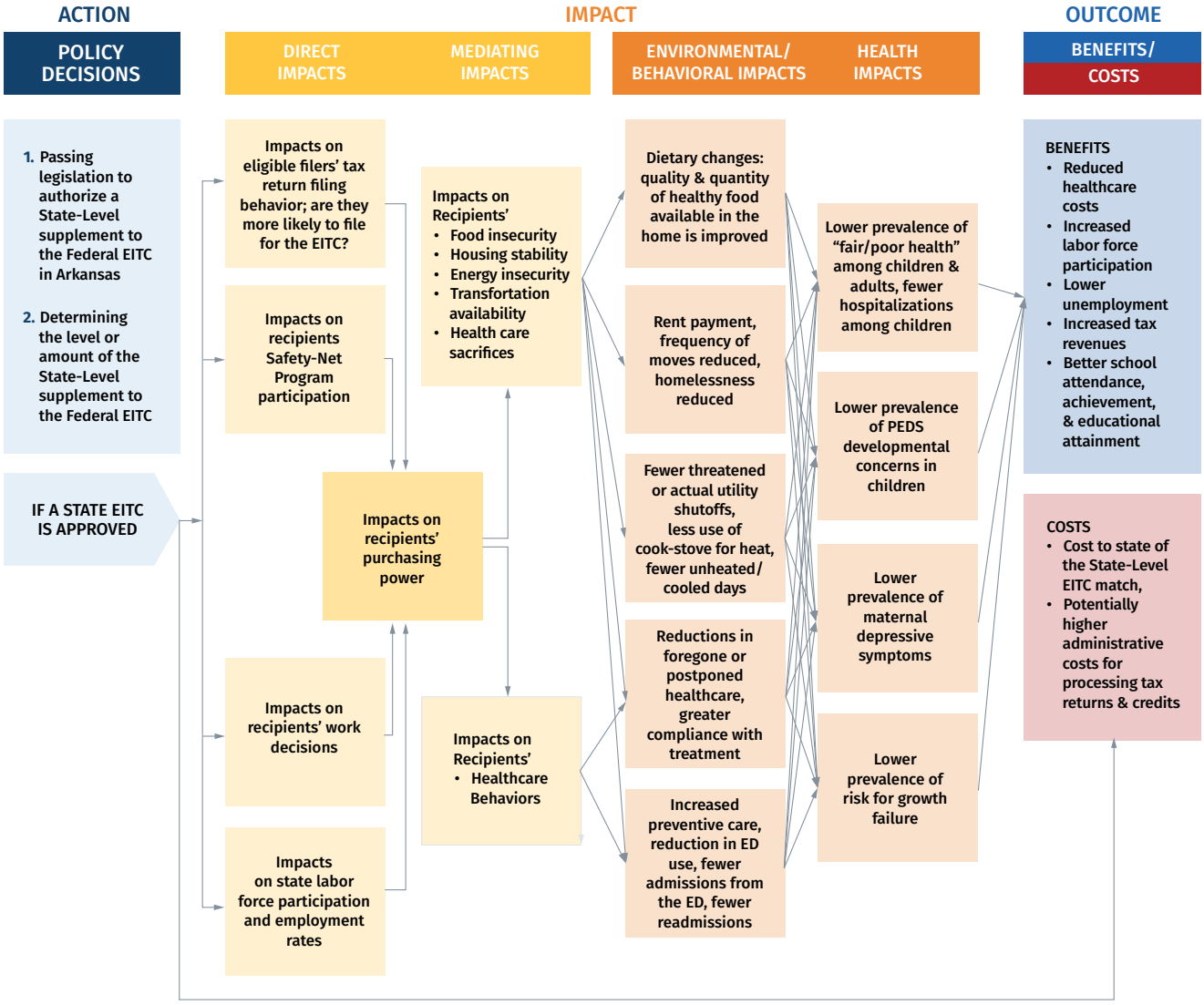
SCRIPT/QUESTIONS	REMARKS/RATIONALE
Introduction *(continued)* A few other things: the discussion will last for about two hours. We ask you to please turn the ringer off on your phone or put it on vibrate. We want this to be a discussion between all of you. So feel free to talk with each other. I am only here to assist in the discussion. But we do ask that everyone gets the chance to share their views. Does that sound ok? One last thing before we get started, we wanted to ask you if you would be willing to be quoted in the research paper. We will only put the quote next to your first name. We will not include your last name. If you are willing to be quoted, please take a second to complete the form in front of you and let me know if you have any questions.	
IQ: Let's get started. Can we go around and share your names, where you're from, and what you do?	*For acquaintance with the participants/break the ice*
IQ: What do you see as the most serious health problems in your community? Serious health problems could be personal health problems (for example, diabetes, asthma, obesity, or other chronic conditions) or environmental health problems (for example, poor air quality, long distances to reach doctors or hospitals). Follow up questions: What kinds of health problems are kids struggling with the most in your neighborhood, town, county? What about adults or parents?	Some more acquaintance-building (talking about their communities) but also transition to meat of the HIA questions
TQ: There were several health problems mentioned. Now think about things in our lives that can make us healthier. What types of things (affordable prescription medicines, easy access to health care, affordable copays) do you see as improving this list of health conditions: Infant mortality, blood pressure, depression and stress?	If the prior conversation brings up different health issues, moderator could ask about those instead. Purpose is to get participants thinking about solutions and not just problems, transitioning to key questions

SCRIPT/QUESTIONS	REMARKS/RATIONALE
KQ: Are you familiar with the Earned Income Tax Credit or EITC? If so, do you know people who have received it?	
In case someone asks what the Earned Income Tax Credit is: The Earned Income Tax Credit, or EITC, is a credit or money that working people with low to moderate income can get when they file their federal tax return. To get it, you have to meet certain requirements and file a tax return. EITC reduces the amount of taxes a person might owe and may give them a refund of money back.	Explores overall level of understanding of EITC in target communities
KQ: If so, how do you think the EITC is used in your community? Follow up questions: What are the benefits or drawbacks of getting an EITC, and how do EITC funds impact families in your community?	To evaluate group opinions on positive/negative aspects of the EITC
KQ: What ways, if any, do you think the health problems we discussed at the beginning could be improved by increased incomes?	Open-ended question to get participants to think about connection between EITC and health
TQ: Moderator gives a short summary of the major takeaways of the discussion and then asks: Does this summary sound complete, do you have any changes or additions?	
CQ: Our goal is to understand the connections between health and income, and if getting a state EITC in addition to the national one, might affect those connections. Do you think we've we missed anything?	Opportunity for participants to give last remarks, suggestions, questions, etc.

APPENDIX F
PATHWAY DIAGRAM

FIGURE 5: HIA Causal Framework / Pathway Diagram: Implementing a State-Level Supplement to the Federal EITC in Arkansas

ASSUMPTIONS 1. Both federal and state EITC benefits are received together, once a year, in one lump sum, at "tax time". 2. Not everyone who is elegible to file for and receive the EITC is aware of their elegibility or knows how to apply for it. • **EXTERNAL FACTORS** 1. Availability of The IRS Volunteer Income Tax Assistance (VITA) and the Tax Counseling for the Elderly (TCE) programs may not be universally available to all AR residents who need assistance filing their tax returns and may need to be expanded.



APPENDIX G

FOCUS GROUP NOTES

WEST MEMPHIS FOCUS GROUP — 9/20/18

Participants

This group was recruited mostly from participants of a class for new parents. This group was composed entirely of those who we might expect to benefit from a state-EITC.

Q: Most serious health needs in your community

This group was slightly more 'urban' than the others, as West Memphis is included in the Memphis MSA, and some of these differences showed. Although access to services did come up, especially specialist services like maternity care and early childhood care, overall access to services was less meaningful for this group than for others.

Costs were the overriding concern for this group – the cost of care, the cost and quality of housing, the cost of healthy food. The inequitable provision of city services was also a topic of concern, especially with respect to affordable quality housing and the quality of community amenities.

Q: What are the solutions?

There was little consensus surrounding how to address the health issues facing West Memphis. Some participants noted that addressing homelessness among mothers and children would have a meaningful impact; others thought the solutions would be to connect more residents of West Memphis to services in Memphis, where there are more options and more services available.

Q: What is the EITC?/How could increased income help?

The initial impressions of the EITC among this group were not entirely positive. The perception, at least initially, was that people wasted their 'income tax-

es' on things like cars and clothes. There is a casino nearby, and it seemed everyone knew someone who had used their EITC gambling.

There was recognition that an increase in income would help the community in various ways. However, the EITC specifically as a tool to increase income was viewed skeptically for the reasons described above.

EUDORAH FOCUS GROUP — 9/25/18

Participants

This group was composed of parents involved in voluntarism at their local school and a few local educators. Overall this group skewed more heavily towards those who we might expect to receive an EITC.

Q: Most serious health needs in your community

The health concerns expressed in this group ran the gamut from health conditions like heart disease, diabetes, and mental health issues, to structural issues like a lack of ambulatory services and maternal care locally. Transit costs due to the distance from a hospital also came up several times. However, the most serious and repeated concern was the state of their city water system; for a long time (at least a year, maybe more than two) they have been forced to buy bottled water in order to cook and clean. They have not been made aware what the issue with their water system is, but everyone fears negative health consequences.

Q: What are the solutions?

The main thing that this group wanted was more access to services closer to home; for example, they noted that their town lacked alcohol or drug counseling services, which they thought were needed. But nearly all of their solutions noted that there were need to be something done about the lack of nearby services – a non-exhaustive list of the things they thought the community needed better access to were; prenatal services/early childcare/maternal care for new mothers; better counselors in schools; emergency care. One repeated reason for the necessity of having these things closer to home were the lack of transit options/the barriers to transit locals face.

Q: What is the EITC? / How could increased income help?

Not everyone in this group was aware of the EITC program by name, but most were familiar after having it described to them. The group overall expressed positive opinions about the EITC and how it was used in their community — the most common usage of it cited was to "pay down bills," or to "pay off debt." Other uses were viewed contextually, and it was noted that sometimes people will use the windfall of cash to make up for times of lack, e.g., some people said they knew recipients of the EITC that would use it to buy Christmas presents they were unable to afford at Christmas time.

One concern a few members of the group expressed with respect to an expanded EITC was that in order to qualify for the EITC, you need to be working. But they were concerned that there were no jobs in the area, and the same transit barriers that make accessing health care hard make it hard to find employment.

LEE COUNTY FOCUS GROUP — 9/18/18

Q: Most serious health needs in your community

The overarching concern for this group was the lack of affordability in health care per se. The cost of insurance and cost of prescription drugs came up multiple times from multiple sources. While there was some discussion over the necessity of educating people what their health coverage options were, the consensus was that more outreach and education could only go so far without doing something to address cost.

> Clyde: In a rural area where income is low, and when you have to decide where your money is going. Now, if you had the choice to going to the doctor, or paying your rent, or taking care of your kid's needs, which would you do? You talk about educating folks, but you have to have the means to provide before you can get to health care. You gotta pay your rent, your car note, save for your kid's college... Which do you choose?

In terms of specific health conditions, obesity, diabetes, hypertension, heart issues were all considered problems unanimously for both children and adults.

Q: What are the solutions?

The education vs finance discussion continued here, with less consensus around the potential solutions to the problems discussed above. The overarching idea was that solutions had to preventative and had to reach children/youth early to be effective; most of the proposals were local to the community, like how to provide opportunities for youth to be outside.

There was also a lot of conversation over educating parents on things like eating and shopping habits. Everyone acknowledged this would require outreach on the part of government entities, but that the funding was not present to do it.

Q: What is the EITC?/How could increased income help?

I believe everyone in this group was aware of the EITC, which makes sense given this is the focus group that was composed of the grass tops/community leaders.

There were concerns from some participants that additional income without a change in behavior would not help the situation. There was a lot of discussion around EITC abuse, particularly with respect to buying things like 'new' cars.

But the conversation turned after

> Clyde: I think the credit is beneficial to people, because it is a windfall of cash that helps a lot of people, but you might splurge or do something you wouldn't otherwise do, but that's because you've suffered and gone without so you might make some poor choices. But at least you have something to look forward to, some resources coming your way that maybe keeps your hopes up the rest of the year.

After this, the conversation shifted significantly towards the positive benefits of the EITC. Even folks who were skeptical of the ways it was used began to talk about how it benefits the local economy, and how it helps reduce the stress associated with things like choosing between paying for medicine or paying rent.

DUMAS FOCUS GROUP — 10/4/18

Participants

This was the smallest group we conducted a focus group with. There was a relatively even mix between 'community leaders' and those we would anticipate would benefit directly from an EITC.

Q: Most serious health needs in your community

Most of the health concerns expressed by this group came down to economic conditions – the lack of jobs and especially good-paying jobs in the area lead to mental health and addiction issues according to participants. There was also concern that the good-paying jobs in the area were dangerous factory jobs that threatened workers health. Another repeated theme was a wider environmental concern about cancer due to pollution from the factories and mills in the area. Cost burdens were mentioned, but not much specifically with respect to medical care or services – transportation barriers were a more common problem in this group.

Q: What are the solutions?

This group was the most receptive to the idea that more income could help alleviate these problems in their community and the associated health consequences. They were very conscious of a sort of tradeoff between health and economic security, as in their community the (relatively) well-paying jobs are in paper mills or factories where dealing with hazardous materials or particulate pollution are daily tasks. The other jobs that are available in the community are in retail or service sector, and the focus group participants did not think they could earn enough income to raise a family on that income.

Q: What is the EITC?/How could increased income help?

This was another group where not everyone was aware of the EITC program by name, but most were familiar after having it described to them. The responses here were most similar to the focus group in Eudora, in that the most common usage of it cited was to 'pay down bills,' or to 'pay off debt.' Paying utility bills and rent were the uses this community cited. Another issue that came up was the minimum wage increase that is on the ballot in Arkansas (note: it has now passed). This group thought of that as addressing health issues related to stress from the problems associated with having low-income.

APPENDIX H

LEGISLATIVE POLICY BRIEF

ESTIMATING THE HEALTH IMPACTS OF AN ARKANSAS EARNED INCOME TAX CREDIT

See the following four pages (non-numbered for the purposes of standalone distribution)

LEGISLATIVE POLICY BRIEF

ESTIMATING THE HEALTH IMPACTS OF AN ARKANSAS EARNED INCOME TAX CREDIT

A 2019 Health Impact Assessment will enable lawmakers to better understand how a working families tax credit may improve the health of low-income Arkansans

In 2019, Arkansas Advocates for Children and Families and Children's HealthWatch will release a Health Impact Assessment estimating the potential health impacts of creating a state-level refundable Earned Income Tax Credit for the approximately 300,000 qualifying low-income Arkansas households.

What is a Health Impact Assessment?

The International Association of Impact Assessment defines Health Impact Assessment (HIA) as "a combination of procedures, methods and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, program or project on the health of a population and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects."

What is the Earned Income Tax Credit?

The Earned Income Tax Credit (EITC) is a federal tax credit that rewards low-income working families for their work effort. The credit equals a fixed percentage of earnings from the first dollar of earnings until the credit reaches its maximum, which is paid until earnings reach a specified level, after which it declines with each additional dollar of income until no credit is available.

What is a state-level Earned Income Tax Credit?

In addition to the federal EITC, 29 states, the District of Columbia, Guam and Puerto Rico have state-level EITCs. Most of these states "piggyback" on the federal EITC by using the same eligibility requirements and set state-level credits at some percentage of the federal EITC. Recipients in these states receive both the federal and state credit.

Current state of the EITC in Arkansas

During 2017, 287,000 eligible workers and families in Arkansas received about $767 million in federal EITC benefits. The average amount of federal EITC received nationwide per household was about $2,445, while the average in Arkansas was about $2,672. The EITC participation rate among eligible worker households in Arkansas in tax year 2014 (latest year of available data) was 80.6%, compared to the national participation rate of 79%.

Previously, researchers estimated* a refundable state-level EITC in Arkansas would cost approximately $39 million if set at 5% of the federal credit, $77 million if set at 10% of the federal credit, and $155 million if set at 20% of the federal credit. However, new research shows that effects of the EITC contain self-financing attributes **through decreases in public assistance received by mothers and increases in payroll and sales taxes paid, which would reduce the sticker price of a refundable state-level EITC in Arkansas to $5 million if set at 5% of the federal credit**, $10 million if set at 10% of the federal credit, and $20 million if set at 20% of the federal credit.

What is the connection between the EITC and health?

The EITC has successfully lifted many poor families out of poverty, reducing participation in public assistance programs, while largely paying for itself. This led researchers to explore connections between the EITC, poverty, and health. Recent evidence supports the hypothesis that receipt of the EITC can improve health, particularly among children and single mothers. Arkansas Advocates for Children and Families and Children's HealthWatch are conducting a HIA to better understand the degree to which creation of a state-level EITC in Arkansas would improve health for children and families.

A growing body of research demonstrates the relationship between expansions of the federal

The cost of a refundable state-level EITC in Arkansas if set at 5% of the federal credit, is estimated to be as low as $5 million. This estimate does not take into account the potential health care cost savings associated with the EITC.

* Estimates for FY2019.

EITC and introductions of state EITCs and improved maternal and child health outcomes. A 2015 study found that expansions of the federal EITC led to a 2–3 % decline in the rate of low birthweight births for every $1,000 in benefits. More recent studies have found that state EITCs improve birth outcomes, including increased birthweights. Expanding the EITC has been linked to improved self-reported health status and reduced self-reported symptoms of depression among mothers. Research also demonstrates associations between EITCs and higher rates of specific health behaviors, including better diet and food security. A 2016 study found that EITCs are associated with increases in private health insurance coverage among children ages 6-14, decreases in public coverage, and improvements in children's reported health status.

How will HIA determine the population health effects of a state-level EITC in Arkansas?

To conduct this HIA, Arkansas Advocates for Children and Families and Children's HealthWatch will use diverse methods and tools and engage health experts, decision-makers, and stakeholders - including those with local knowledge - to identify and characterize health effects that could result from the creation of a state-level EITC in Arkansas. By leveraging the extensive research demonstrating the EITC's health benefits and how expanded credits can magnify them, we will identify the pathways an Arkansas state EITC may impact population health.

Can an Arkansas state-level EITC reduce low birthweight births, improve infant health, and reduce health care costs to the state?

During the course of HIA we will be able to estimate the impact a refundable credit set at 5, 10, and 20 percent of the federal credit could have in reducing the number of low-weight births in Arkansas each year, and in turn, the reductions in health care costs. In 2016, 8.2 percent of children born in the United States (321,839) had low birth weight and 9.9 percent were born preterm (388,218). The health care costs for these low birth weight/pre-

> **"In a rural area where income is low, and when you have to decide where your money is going ... if you had to choose between to going to the doctor, or paying your rent, or taking care of your kids' needs, which would you do? Which do you choose?"**
>
> *— Lee County focus group participant*

term children were approximately $9.8 billion 2016.** In Arkansas, 8.8 percent (3,386) of children born in 2016 had low birth weight, and 10.9 percent (4,172) were born preterm.

Not only do preterm/low birth weight infants require costlier health care in the days and weeks following their birth, they are also at higher risk for expensive long-term mental and physical disabilities, special education services, and lost household and labor market productivity. The estimated annual societal economic burden associated with preterm births (most of which are also low birth weight) in the United States was $35.2 billion, or $69,502 per infant born preterm. Given these findings, the EITC's role in reducing the prevalence of low birth weight is critic al to reducing health care and other societal costs, increasing future opportunities for children, and most importantly, improving child health.

** Note that these costs do not include the cost of delivery and other medical care for the mother, but rather are exclusively the costs associated with the newborn's care, defined as all hospital admissions, including the newborn admission at delivery, hospital transfers, and all readmissions up to 1 year of age, not including mother's admission. All health care and societal costs reflect most recent data available, adjusted for inflation using the U.S. Medical Cost Inflation Calculator from http://www.halfhill.com/inflation_js.html.

Can an Arkansas state-level EITC increase access and affordability of health care costs?

During the course of HIA we will estimate how various refundable EITC amounts could encourage greater health care access and household-level affordability. Studies have shown past expansions to the EITC have resulted in shifts from public to private, predominantly employer-sponsored insurance, which likely leads to greater access to health care services and preventive care. For example, among pregnant women receiving the EITC, prenatal care occurred earlier and more frequently.

CONCLUSION

Arkansas has an opportunity to join the 29 states plus the District of Columbia (D.C.) that have enacted state-level EITCs. While a modest investment in creating a working families tax credit has big payoffs in terms of reducing poverty the forthcoming HIA will enable lawmakers to better understand how an EITC may also improve the health of low-income Arkansans.

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DISCLAIMER The Health Impact Assessment is supported by a grant from the Health Impact Project, a collaboration of the Robert Wood Johnson Foundation and The Pew Charitable Trusts. The views expressed are those of the authors and do not necessarily reflect the views of the Health Impact Project, The Pew Charitable Trusts or the Robert Wood Johnson Foundation.

APPENDIX I

RESEARCH QUESTIONS AND DATA SOURCES

ARKANSAS EITC HIA — ASSESSMENT

Research Questions and Data Sources

Research questions (metrics) and data sources will be used for the HIA assessment's existing conditions profile and health impact analysis.

METRIC	DEFINITION	DATA SOURCE
General		
Number of Arkansans eligible to receive Arkansas EITC	Same as those eligible for federal EITC	Brookings/IRS
Number of Arkansans likely to access Arkansas EITC	Same as those who claim federal EITC	Brookings/IRS
Estimated amount of a refundable Arkansas EITC at 5, 10, 15, 20, 25, 30% of federal EITC	Depends on household composition	Brookings/IRS
Average Arkansas and federal EITC amounts	minimum, maximum, quintiles	Brookings/IRS/ ITEP

Note: The final list of research questions and data sources used in the assessment was selected from this larger list.

METRIC	DEFINITION	DATA SOURCE
Baseline Health Conditions of Arkansans		
Share of adults with fair and/or poor health (self-reported)	Age-adjusted, share of adults reporting fair or poor health	CDC, CHW
Share of children with fair and/or poor health (caregiver-reported)	Age-adjusted, share of caregivers reporting child's fair or poor health	CDC, CHW
Share children with developmental delays	share of caregivers reporting developmental delay concerns for children	CDC, CHW
Share with maternal depressive symptoms	Share of adults who reported maternal depressive symptoms	CHW
Share with frequent mental distress	Share of adults who reported ≥14 days of not good mental health in past 30 days	CDC
Share with diabetes	Share of people with diagnosed diabetes	CDC
Cardiovascular disease deaths	Number of cardiovascular disease death per 100,000 people, all ages, 3 year average	CDC
Share of obese adults	Share of adults age 20+ with a body mass index of 30 kg/m^2 or above	CDC
Share of adults who smoke	Share of adults who currently smoke every or most days, and has smoked at least 100 cigarettes in their lifetime	CDC
Share low-birthweight births	Share of live births with low birthweight (< 2500 grams)	CDC
Breastfeeding rate		CDC
Child asthma rate		CDC
Child lead poisoning rate		CDC
Child vaccination rate		CDC
Infant mortality rate		CDC
Premature birth rate	Number of premature births	CDC, March of Dimes

METRIC	DEFINITION	DATA SOURCE
Downstream Impacts (Health Impact Analysis)		
INCOME		
Median household income	Median household income in the county	US Census
Share living below the federal poverty line	Share of people with incomes below the federal poverty level	US Census
Child poverty rate		US Census
Share living below 200% of the federal poverty line	Share of people with incomes below 200% of the federal poverty level	US Census
Share of workers with incomes below the federal poverty line	Share of employed people in the workforce whose income is below 100% of the federal poverty line	US Census
Income inequality	Gini coefficient	US Census ACS
Upward intergenerational mobility	Expected economic outcomes (income percentile rank) of children born to a family earning an approximate income of $30,000	Stanford Center on Poverty and Inequality
EMPLOYMENT		
Unemployment rate	Share of people in labor force who are not employed	BLS
Employment to population ratio	Employed persons divided by total population	BLS
Part time employment rate	*Share of employed people working less than 35 hours per week last week*	*BLS*
BENEFIT RECEIPT		
Share of households that receive SNAP benefits	Percent of households that receive benefits from the Supplemental Nutrition Assistance Program (SNAP)	USDA FNS
Share that receive the CTC	*Share of tax returns that received the Child Tax Credit (CTC); most recent year available is 2013*	
Share of people with public health insurance	Share of people enrolled in Medicaid or another means-tested public health insurance plan	US Census

METRIC	DEFINITION	DATA SOURCE
Share of people with any health insurance	Share of people enrolled in a health insurance plan, either private or public	US Census
FOOD		
Food prices		
Food insecurity	Share of food-insecure households (by depth)	USDA ERS
HOUSING		
Share housing cost burdened (includes utilities)	Share of households (renters & owners) that spend 30% or more of their incomes on selected housing and utility costs; available by absolute household income level	JCHS, HUD
Share severely housing cost burdened (includes utilities)	Share of households (renters & owners) that spend 50% or more of income on selected housing and utility cost; available by absolute household income level	JCHS, HUD
Hourly wage needed to afford fair market rent	Rate calculated for 1 person working full-time, full-year so that s/he would spend no more than 30% of his/her income on rent based on HUD's prevailing fair market rent for a 2 bedroom apartment	HUD
Eviction rate	Number of evictions per 100 renter homes	Eviction lab
Housing instability	prevalence of behind on rent, multiple, moves, homelessness in the past year	CHW
ENERGY		
Energy insecurity	threatened or actual utility shutoffs, use of cookstove for heat, number of unheated/ uncooled days	CHW
FINANCIAL HEALTH AND SECURITY		
Credit score	Overall indication of credit health	
Median amount of unsecured debt (e.g., credit card debt, student loan debt)	Median amount of unsecured debt among people with a credit record	

METRIC	DEFINITION	DATA SOURCE
Share with debt in collections	Share of people with a credit record that have any debt in collections (i.e. severely delinquent debt)	Urban Institute
Share with student loan debt in collections	Share of people with a credit record that have student loan debt in collections	Urban Institute
Share with medical debt in collections	Share of people with a credit record that have medical debt in collections	Urban Institute
Share with foreclosure	Share of people with a foreclosure on their record in the last 7 years	FHFA
Share with bankruptcy	Share of people with a bankruptcy on their record in the last 7 years	Dept. Justice
Share with unpaid tax lien	Share of people with a credit record that have an unpaid tax lien on their record	
Share of households unbanked or underbanked	Share of people who are unbanked or underbanked	FDIC
TRANSPORTATION		
Median transportation cost	Median annual transportation cost for regional typical households	BLS, BTS
Transportation cost as percent of income	Median transportation cost as percent of income for regional typical households	BLS, BTS
Share of households without access to a vehicle	Share of households without access to a vehicle for commuting to work	US Census ACS
HEALTH CARE		
Hospital admissions		CDC, HCUP
Hospital readmissions		AHRQ
Heath care hardships	Foregone care, health cost sacrifices	CHW
Share of mother's receiving regular prenatal care		Childtrends

REFERENCES

1. http://www.iaia.org/Non_Members/Pubs_Ref_Material/SP5.pdf
2. HIA Publications and Resources. Human Impact Partners. https://humanimpact.org/products-resources/issue-area/?filter=iss1-145.
3. What Is the Earned Tax Credit? Tax Policy Center. https://www.taxpolicycenter.org/briefing-book/what-earned-income-tax-credit. Published 2016.
4. Statistics for Tax Returns with EITC. IRS. https://www.eitc.irs.gov/eitc-central/statistics-for-tax-returns-with-eitc/statistics-for-tax-returns-with-eitc. Published 2019.
5. EITC Participation Rate by States. IRS. https://www.eitc.irs.gov/eitc-central/participation-rate/eitc-participation-rate-by-states. Published 2019.
6. Williams E, Waxman S. How Much Would a State Earned Income Tax Credit Cost in Fiscal Year 2020? CBPP. https://www.cbpp.org/research/state-budget-and-tax/how-much-would-a-state-earned-income-tax-credit-cost-in-fiscal-year?fa=view&id=2992. Published 2019.
7. Bastian J, Jones M. Do EITC Expansions Pay for Themselves? Effects on Tax Revenue and Public Assistance Spending. Paper presented at: NBER Spring Public Economics; 2019.
8. Hoynes H, Patel A. Effective Policy for Reducing Inequality? The Earned Income Tax Credit and the Distribution of Income. *National Bureau of Economic Research Working Paper Series*, 2018; No. 25231:1-13.
9. Neumark D, Asquith B, Bass B. Longer-Run Effects of Anti-Poverty Policies on Disadvantaged Neighborhoods. *National Bureau of Economic Research Working Paper Series*, 2015; No. 21340.
10. Hoynes H, Doug M, David S. Income, the Earned Income Tax Credit, and Infant Health. *American Economic Journal: Economic Policy*, 2015; 7(1):172-211.
11. Markowitz S, Komro K, Livingston M, et al. Effects of state-level Earned Income Tax Credit laws in the U.S. on maternal health behaviors and infant health outcomes. *Social Science & Medicine*, 2017; 194:67-75.
12. Simon D, McInerney M, Goodell S. The Earned Income Tax Credit, Poverty, And Health. Health Affairs Health Policy Brief. https://www.healthaffairs.org/do/10.1377/hpb20180817.769687/full/. Published 2018.
13. Wicks-Lim J, Arno P. Improving population health by reducing poverty: New York's Earned Income Tax Credit. *SSM – Population Health*, 2017; 3:373-381.
14. Evans W, Garthwaite C. Giving Mom a Break: The Impact of Higher EITC Payments on Maternal Health. *American Economic Journal: Economic Policy*, 2014; 6(2):258-90.
15. Boyd-Swan C, Herbst C, Ifcher J, Zarghamee H. The earned income tax credit, mental health, and happiness. *Journal of Economic Behavior & Organization*, 2016; 126(A):18-38.
16. Do Earned-Income Tax Credits Affect the Health of Adults? AcademyHealth. https://www.academyhealth.org/sites/default/files/Updated.EITC%20Rapid%20Evidence%20Review%20FINAL.pdf. Published 2017.
17. Baughman R, Duchovny N. State Earned Income Tax Credits and the Production of Child Health: Insurance Coverage, Utilization, and Health Status. *National Tax Journal*, 2016; 69(1):103-132.
18. Shapiro I, Greenstein R, Trisi D, Dasilva B. It Pays to Work: Work Incentives and the Safety Net. CBPP. https://www.cbpp.org/research/federal-tax/it-pays-to-work-work-incentives-and-the-safety-net. Published 2016.
19. Appropriation Summary: Fiscal Year 2018. State of Arkansas. https://www.dfa.arkansas.gov/images/uploads/budgetOffice/authorizedAppropriation.pdf
20. Sherman A, Dasilva B, Palacios V, et al. Pro-Work Tax Credits Help 2 Million Veteran and Military Households. CBPP. https://www.cbpp.org/research/federal-tax/pro-work-tax-credits-help-2-million-veteran-and-military-households. Published 2015.
21. A State EITC in Arkansas: Reinforcing the Bridge out of Poverty. Arkansas Advocates for Children and Families. http://www.aradvocates.org/wp-content/uploads/AACF-EITC.webfinal.4.6.16.pdf. Published 2016.
22. Gov. Hutchinson's low-income tax plan: A good start, but needs work. Arkansas Advocates for Children and Families. http://www.aradvocates.org/gov-asa-hutchinsons-low-income-tax-plan-a-good-start-but-it-needs-work/. Published 2017.
23. New Poll Finds Arkansans Strongly Support State-Level EITC, Investing in Children's Programs. Arkansas Advocates for Children and Families. http://www.aradvocates.org/april2018poll/. Published 2018.
24. Earned Income Tax Credit (EITC) interactive and resources. The Brookings Institution. https://www.brookings.edu/interactives/earned-income-tax-credit-eitc-interactive-and-resources/. Published 2016.
25. Welton C. From Rhetoric to Reality: What it takes for Public Benefits to Work Better for Workers. CLASP. https://www.clasp.org/sites/default/files/publications/2017/08/From-Rhetoric-to-Reality-What-it-takes-for-Public-Benefits-to-Work-Better-for-Workers.pdf. Published 2017.
26. O'Hara B, Caswell K. P70-133, "Health Status, Health Insurance, and Medical Services Utilization: 2010," *Current Population Reports*, U.S. Census Bureau, Washington, DC, 2012.
27. Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey Questionnaire*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2016.

28. Bowling, A. Just one question: if one works, why ask several? *J Epidemiol Community Health*, 2005; 59(5):342-345.

29. Black N, Johnston DW, Shields MA, et al. Who provides inconsistent reports of their health status? The importance of age, cognitive ability and socioeconomic status. *Social Science and Medicine*, 2017; 191:9-18.

30. Pastor PN, Reuben CA, Duran, CR. Reported Child Health Status, Hispanic Ethnicity, and Language of Interview: United States, 2011-2012. *National Health Statistics Reports*, 2015; No. 82.

31. University of Wisconsin Population Health Institute. County Health Rankings State Report 2019. http://www.countyhealthrankings.org/

32. U.S. Census Bureau, Survey of Income and Program Participation, 2008 Panel, Wave 10 topical module and core survey data. http://www.census.gov/sipp/source.html.

33. Larrimore, J. Does a Higher Income Have Positive Health Effects? Using the Earned Income Tax Credit to Explore the Income-Health Gradient. *The Milbank Quarterly*, 2011; 89(4):694–727.

34. Muennig PA, Mohit B, Wu J, et al. Cost Effectiveness of the Earned Income Tax Credit as a Health Policy Investment. *Am J Prev Med*, 2016; 51(6):874–881.

35. Markowitz S, Komro KA, Livingston MD, et al. Effects of State-Level Earned Income Tax Credit Laws in the U.S. on Maternal Health Behaviors and Infant Health Outcomes. *Soc Sci Med.*, 2017; 194:67–75.

36. Hamad R, Rehkopf DH. Poverty, Pregnancy, and Birth Outcomes: A Study of the Earned Income Tax Credit. *Paediatr Perinat Epidemiol.*, 2015; 29(5):444–452.

37. US Bureau of the Census, Current Population Reports, Series P23-179, *Studies in Household and Family Formation*, US Government Printing Office, Washington, DC, 1992.

38. Vespa J, Kennedy S. *A Room of Their Own: The Rise of Couples Living in Subfamilies Since the Great Recession.* Unpublished working paper accessed April 5, 2019 at https://www.census.gov/content/dam/Census/library/working-papers/2017/demo/SEHSD-WP2017-06.pdf .

39. Mykyta L, Macartney S. *Sharing a Household: Household Composition and Economic Well-Being: 2007–2010.* US Census Bureau, Current Population Report, Consumer Income, P60-242, June 2012.

40. Gurrentz, B. *Millennial Marriage: How Much Does Economic Security Matter to Marriage Rates for Young Adults?* SEHSD Working Paper #2018-09, Fertility and Family Statistics Branch, U.S. Census Bureau, Issued April 26, 2018

41. US Census Bureau, America's Families and Living Arrangements: 2018. Adult (A table series). Accessed 04/05/19 at https://www.census.gov/data/tables/2018/demo/families/cps-2018.html.

42. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (DSM–5). 5th ed. Arlington, VA. 2013.

43. Katon WJ. Clinical and health services relationships between major depression, depressive symptoms, and general medical illness. *Biol Psychiatry*, 2003; 54(3):216–26.

44. Pratt LA, Brody DJ. *Depression in the U.S. Household Population*, 2009–2012. NCHS Data Brief No. 172, December 2014.

45. Goetzel RZ, Long SR, Ozminkowski RJ, et al. Health, Absence, Disability, and Presenteeism Cost Estimates of Certain Physical and Mental Health Conditions Affecting U.S. Employers. *J Occup Environ Med.*, 2004; 46:398–412.

46. Stewart WF, Ricci JA, Chee E, et al. Cost of Lost Productive Work Time Among US Workers with Depression. *JAMA*, 2003; 289:3135-3144.

47. Frank DA, Casey PH, Black MM, et al. Cumulative Hardship and Wellness in Low-Income Young Children: Multisite Surveillance Study. *Pediatrics*, 2010; 125:e1115–e1123.

48. Casey P, Goolsby S, Berkowitz C, et al. Maternal Depression, Changing Public Assistance, Food Security, and Child Health Status. *Pediatrics*, 2004;113(2): 298-304.

49. Cook JT, Black M, Chilton M, et al. Are Food Insecurity's Health Impacts Underestimated in the U.S. Population? Marginal Food Security Also Predicts Adverse Health Outcomes in Young U.S. Children and Mothers. *Adv. Nutr.*, 2013; 4:51–61.

50. Sandel M, Sheward R, Ettinger de Cuba S, et al. Unstable Housing and Caregiver and Child Health in Renter Families. *Pediatrics*, 2018; 141(2):e20172199.

51. Cutts DB, Bovell-Ammon A, Ettinger de Cuba S, et al., Homelessness During Infancy: Associations With Infant and Maternal Health and Hardship Outcomes. *Cityscape: A Journal of Policy Development and Research*, 2018; 20(2).

52. Cardoso JB, Padilla YC, Sampson M. Racial and ethnic variation in the prediction of maternal parenting stress. *Journal of Social Service Research*, 2010; 36(5):429-444.

53. Liu Y, Kaaya S, Chai J, et al. Maternal depressive symptoms and early childhood cognitive development: a meta-analysis. *Psychological Medicine,* 2017; 47:680–689.

54. Cents RAM, Diamantopoulou S, Hudziak JJ, et al. Trajectories of maternal depressive symptoms predict child problem behaviour: The Generation R Study. *Psychological Medicine*, 2013; 43:13–25.

55. Goldberg D. The aetiology of depression (Invited Review). *Psychological Medicine*, 2006, 36; 1341–1347.

56. Sun J, Patel F, Rose-Jacobs R, et al. Mothers' Adverse Childhood Experiences and Their Young Children's Development. *Am J Prev Med*, 2017; 53(6):882–891.

57. Bakermans-Kranenburg MJ, van IJzendoorn MH. Research Review: Genetic vulnerability or differential susceptibility in child development: the case of attachment. *Journal of Child Psychology and Psychiatry*, 2007; 48(12):1160–1173.

58. National Scientific Council on the Developing Child. *Supportive Relationships and Active Skill-Building Strengthen the Foundations of Resilience: Working Paper 13*, 2015. http://www.developingchild.harvard.edu

59. Tach L, Halpern-Meekin S, Edin K, Amorim M. "As Good as Money in the Bank": Building a Personal Safety Net with the Earned Income Tax Credit. *Social Problems*, 2018, 0:1–20. doi: 10.1093/socpro/spy001.

60. Centers for Disease Control and Prevention. Morbidity and Mortality Weekly Report (MMWR), Feb 15, 1991. 40(6); 99, 105-106.

61. HCUPnet, Healthcare Cost and Utilization Project. Agency for Healthcare Research and Quality, Rockville, MD. https://hcupnet.ahrq.gov/.

62. Martin JA, Hamilton BE, Osterman MJK. Births in the United States, 2017. *NCHS Data Brief* No. 318, August 2018.

63. Murphy SL, Xu JQ, Kochanek KD, et al. Mortality in the United States, 2017. *NCHS Data Brief*, no 328. Hyattsville, MD: National Center for Health Statistics. 2018.

64. Mathews TJ, Ely DM, Driscoll AK. State Variations in Infant Mortality by Race and Hispanic Origin of Mother, 2013–2015. NCHS Data Brief No. 295, January 2018.

65. Mathews TJ, Hamilton BE. Total Fertility Rates by State and Race and Hispanic Origin: United States, 2017. *National Vital Statistics Reports*, 2019; 68(1).

66. Julian TA, Kominski RA. "Education and Synthetic Work- Life Earnings Estimates." *American Community Survey Reports*, ACS-14; 2011. U.S. Census Bureau, Washington, DC.

67. Williams, DR. Race, Socioeconomic Status, and Health: The Added Effects of Racism and Discrimination. Annals, *New York Academy of Science*, 1999.

68. Alcalde GM. Zip Codes Don't Kill People – Racism Does. *Health Affairs*, Health Affairs Blog, Nov 29, 2018.

69. Van Dyke M, Greer S, Odom E, et al. Heart Disease Death Rates Among Blacks and Whites Aged ≥35 Years — United States, 1968–2015. *MMWR Surveill Summ*, 2018; 67(5).

70. Acs G, Pendall R, Treskon M, Khare A. *The Cost of Segregation: National Trends and the Case of Chicago, 1990-2010*. Urban Institute Research Report, March 2017.

71. Arno PS, Sohler N, Viola D, Schechter C. Bringing health and social policy together: the case of the earned income tax credit. Journal of Public Health Policy 2009;30(2):198–207.

72. Hoynes HW, Miller DL, Simon D. Income, the earned income tax credit, and infant health. Cambridge (MA): National Bureau of Economic Research; 2012.

73. Wicks-Lim J, Arno PS. Improving population health by reducing poverty: New York's earned income tax credit. Amherst (MA): Political Economy Research Institute, University of Massachusetts–Amherst; 2015.

74. Rehkopf DH, Strully KW, Dow WH. The short-term impacts of Earned Income Tax Credit disbursement on health. *International Journal of Epidemiology*, 2014; 43(6):1884-1894.

75. Komro KA, Markowitz S, Livingston MD, et al. Effects of State-Level Earned Income Tax Credit Laws on Birth Outcomes by Race and Ethnicity. *Health Equity*; Volume 3.1, 2019. Open Access.

76. Wagenaar AC, Livingston MD, Markowitz S, et al. Effects of changes in earned income tax credit: Time-series analyses of Washington, DC. *SSM - Population Health*, Volume 7, April 2019, 100356; open access.

77. Child and Adolescent Health Measurement Initiative. 2017 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by Agreement U59MC27866 from the U.S. Department of Health and Human Services, Health Resources and Services Administration's Maternal and Child Health Bureau (HRSA MCHB). Retrieved [04/04/19] from www.childhealthdata.org.

78. Hamad R, Rehkopf DH. Poverty and Child Development: A Longitudinal Study of the Impact of the Earned Income Tax Credit. *Am J Epidemiol*. 2016; 183(9):775–784.

79. Behavior Risk Factor Surveillance System, United States, 2015.

80. Warren M, Beck S, Rayburn J. *The State of Obesity: Better Policies for a Healthier America*. Trust for America's Health and the Robert Wood Johnson Foundation, Issue Report, September 2018.

81. AACF Presents at Tax Reform and Relief Task Force Meeting. Arkansas Advocates for Children and Families. http://www.aradvocates.org/aacf-presents-at-tax-reform-and-relief-task-force-meeting/. Published 2017.

82. Harker L. State Earned Income Tax Credits — a Proven Tool to Improve Health. https://gbpi.org/2018/state-earned-income-tax-credits-a-proven-tool-to-improve-health/#_edn8. Published 2018.

83. Birthweight and Gestation. CDC. https://www.cdc.gov/nchs/fastats/birthweight.htm.

84. Russell RB, Green NS, Steiner CA, et al. Cost of hospitalization for preterm and low birth weight infants in the United States. *Pediatrics*, 2007; 120(1):e1-9.

85. Martin JA, Hamilton BE, Osterman MJK, et al. Births: Final Data for 2017. *National Vital Statistics Report*, 2016; 67(1).

86. Butler AS, Behrman RE, eds. *Preterm birth: causes, consequences, and prevention*. Washington, DC: National Academies Press; 2007.

87. Lenhart O. The Effects of Income on Health: New Evidence from the Earned Income Tax Credit. SSRN, 2017.

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