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Practice Summary & Implementation
Guidance

Arizona Health Start Program

The Arizona Health Start Program (HSP) mission is “to educate, support and advocate for families at risk by promoting optimal use of community-based family health care services and education services through the use of community health workers (CHWs) who live in and reflect the ethnic, cultural and socioeconomic characteristics of the community they serve.”



Location

Arizona



Topic Area

Preconception/Reproductive Health, Service Coordination/Integration



Setting

Home-based, Community, Clinical



Population Focus

Woman/Maternal Health, Perinatal/Infant Health



NPM

NPM 1: Well-Woman Visit;
NPM 3: Risk-Appropriate Perinatal Care



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Section 1: Practice Summary

PRACTICE DESCRIPTION

The Arizona Health Start Program (HSP) mission is “to educate, support and advocate for families at risk by promoting optimal use of community-based family health care services and education services through the use of community health workers (CHWs) who live in and reflect the ethnic, cultural and socioeconomic characteristics of the community they serve.”

HSP is unique in that it is the longest-running program in Arizona that employs CHWs to engage at-risk, low-income mothers in order to improve birth outcomes. The initial framework for HSP was developed in 1984, to address the low rates of prenatal care among migrant farmworker women in southern Arizona. At the time, Arizona ranked the 5th worst state for prenatal care outcomes. In 1992, Arizona Department of Health Services (ADHS) assumed leadership of the program, and in 1994 the Arizona State Legislature passed the Arizona Children and Families Stability Act, A.R.S. § 36-697, which formalized and expanded HSP’s purpose, requirements, and administration. HSP is a beneficiary of the Arizona State Lottery and now operates in 14 communities across Arizona.

HSP serves women who are pregnant or have a child under age two who live in a current service area and have one or more risk factors (including medical (e.g. previous preterm birth, chronic diseases, maternal BMI) and social (e.g. marital status, education level, income, insurance type) risk factors).

CHWs serve as the primary interventionists and home visitors for HSP. CHWs are recognized as integral contributors in collaborative health and community-based teams and in providing comprehensive care, including attention to the social determinants of health, which contribute to health improvements and cost savings (Kangovi, 2015; Rogers, 2018; Williams, 2017; Hussaini, 2011). Before they can initiate unsupervised outreach and/or home visits, CHWs must complete 40 hours of training and 8 hours of home visit shadowing in both the 10 CHW Core Competencies set forth by the CHW Core Consensus Project and recognized by the Arizona state legislature HB 2324 Voluntary CHW Certification and in the Health Start Program Core Training. CHW core competencies include: cultural and systems mediation, social support, advocacy, capacity building, care coordination, systems navigation, community outreach and assessment that they are so effective across disease areas and systems (Rosenthal, 2016). Health Start Core Training includes (1) Essential Health Start information (Health Start Basics, Health Start Visits, Community Outreach); (2) Communication and Emotional Support (communication with clients, emotional support); (3) Nutrition and Physical Activity (family nutrition and physical activity, infant nutrition and physical activity, healthy pregnancy, prenatal care, discomforts during pregnancy, labor and delivery, postpartum care and family planning, early childhood development and parenting skills, infant health and child health); (4) Safety (home safety for infants and children, child abuse and domestic violence). CHWs are required to complete 12 hours of continuing education per year.

HSP is guided by two behavioral change theories, the Trans Theoretical Model of Behavior Change (TTM) and Social Cognitive Theory (SCT). These behavioral change theories assume, respectively, that behavior modification in individuals is a multistage process in which people move through stages of readiness for change (Prochaska, 1997), and that they do so in the context of reciprocal relationships with their environment, behavior, and cognition (Bandura, 2001). SCT and TTM guide each CHW home visiting session which involve assessment, education, goal planning, referral, advocacy, and follow up activities. Behavioral theories are further coupled with meaningful adult learning modules, which acknowledge the agency of adult clients to create a cognitive structure that makes sense of their own surroundings and situations (Vallori, 2014). HSP encourages critical thinking about self-sufficiency, empowerment, and personal agency related to the five HSP



goals. As trusted members of the community served, sharing both lived experience and cultural knowledge of the population, CHWs are well-positioned as knowledgeable, trusted, and supportive role models for HSP clients. CHWs connect clients to prenatal care and increase client’s continuity of care during and after pregnancy. CHW home visiting sessions include assessment, education, and goal setting, which, over time, promote personal agency and self-efficacy to engage in the activities that promote positive health change and improved health outcomes for clients and their families. CHWs encourage self-sufficiency and empowerment by acting as an advocate and connecting clients to resources and opportunities that help overcome the barriers to personal agency.

CORE COMPONENTS & PRACTICE ACTIVITIES

HSP overarching goals include: (1) Increase prenatal services to pregnant women; (2) Reduce the incidence of very low birthweight babies; (3) Reduce the incidence of children affected by childhood diseases; (4) Increase the number of children receiving age-appropriate immunizations by two years of age; and (5) Increase awareness by educating families on the importance of good nutritional habits, developmental assessments, and preventative health care.

HSP achieves this by employing and training CHWs who 1) assist clients with obtaining early and consistent prenatal care, 2) provide prenatal and postpartum education, information, referral services, and advocacy, and 3) emphasize timely immunizations and developmental assessments for their children.

Core Components & Practice Activities		
Core Component	Activities	Operational Details
Case management	Identify pregnant/postpartum women in the CHW’s service area, and enroll them into HSP	Conduct monthly prenatal/postpartum home visits and case management through enrolled child’s 2nd birthday.
Screen & assess	CHWs complete screening and assessment tools to identify perinatal health and service needs of families and children (e.g. postpartum depression, inter-conception health, child development)	Assess various medical and social risks; offer education, goal planning, referral, and advocacy services
Educate & advocate	CHWs educate clients about perinatal and child health, child development, immunizations, home safety, vehicle safety, mood/anxiety disorders, alcohol/tobacco/drug cessation, & domestic violence, etc.	Education topics are client-specific; providing tailored and relevant information increases client knowledge of health topics, services, and empowerment. Advocacy helps clients adhere to appointments, timely completion of immunizations for children



Refer & assist

CHWs refer and assist clients with access to early and continuous prenatal care, completion of child age-appropriate vaccines, social services, and programs to address health and social determinants of health needs.

Referrals and assistance with care and service access increase initiation and frequency of prenatal care appointments, improve health behaviors that may impact birth outcomes, and promote opportunities including a medical home, early childhood education programs, financial assistance, transportation, employment services, etc

HEALTH EQUITY

The HSP intervention was designed to reach communities in Arizona disproportionately affected by structural racism, initially in southern Arizona to help migrant farmworker women with prenatal care attendance, then expanding to 14 communities, including tribal nations, to address maternal and child health needs. Majority of HSP mothers identify as Latina (59%), 24% white, 12% American Indian, and 5% other. Over 80% of participants have Medicaid insurance. Almost 42% are first-time mothers and about 11% have a pre-pregnancy health risk such as diabetes or hypertension. Most mothers who participate in HSP are under age 25 and 33% have less than a high school education. The study assessed program impact among groups of women that are historically underserved and/or disadvantaged (e.g. Latina, American Indian, and teen mothers).

Compared to Latina mothers who were not in HSP, Latina mothers in HSP were:

- 17% more likely to attend any prenatal care
- 7% more likely to have adequate prenatal care
- 12% more likely to have adequate plus prenatal care
- 36% less likely to have very low birthweight babies
- 62% less likely to have extremely low birthweight babies
- 28% more likely to complete their child's 7-vaccine series

Compared to American Indian mothers who were not in HSP, American Indian mothers in HSP were:

- 122% more likely to attend any prenatal care
- 39% less likely to have low birthweight babies
- 25% more likely to complete their child's 7-vaccine series

Compared to teen mothers who were not in HSP, teen mothers in HSP were:

- 58% more likely to attend any prenatal care
- 31% more likely to have adequate prenatal care
- 32% less likely to have preterm births
- 27% more likely to complete their child's 7-vaccine series.

EVIDENCE OF EFFECTIVENESS

Arizona Department of Health Services (ADHS) contracted with Northern Arizona University and University of Arizona to evaluate HSP. The evaluation team conducted a retrospective, non-experimental observational study of mothers who participated in HSP between 2006 and 2016. The purpose of the evaluation study was to assess the impact of HSP on maternal and child health outcomes and to contribute to the evidence of its effectiveness



as a home visiting program. This evaluation was based on a propensity score-matched research design to ensure analytic rigor in addressing the evaluation questions and program effectiveness in general (Sabo, 2019; Sabo 2021; McCue, 2022; Wightman, 2022).

The evaluation approach was designed to take full advantage of the depth of HSP enrollment information and the breadth of the informational resources made available through ADHS. Three datasets were accessed: the Health Start Program Data, Vital Records Birth Data, and the Arizona State Immunization Information System. Because this was a retrospective study, pertinent data were accessed at the beginning of the proposed evaluation study timeline in 2017. This study was approved by the University of Arizona's Institutional Review Board and the Arizona Department of Health Services Human Subjects Review Board.

During this 11-year period, 17,327 mothers were enrolled in HSP. Enrollment data were queried against the Vital Records Birth Database to identify HSP enrollees' birth certificates. The study population was limited to mothers who first enrolled in HSP during their pregnancy ('intervention', n=7,212). A synthetic comparison group with similar baseline characteristics was created based on propensity scores of several socioeconomic, demographic, geographic, and health variables ('comparison', n=54,000). These analytic sample sizes were sufficient to detect meaningful program effects from low-frequency events, including preterm births and low, very low, and extremely low birthweights over a relatively long period of time (11 years).

HSP serves communities with high concentrations of low-income pregnant and postpartum women and families. The evaluation included sub-analyses to specifically assess HSP impact among the following populations: Hispanic/Latina, American Indian, rural border communities, and low education (less than a high school degree).

This quasi-experimental retrospective design is based on 11 years of observational data (2006-2016) and compares HSP participant outcomes to probabilistically-matched comparison groups. Outcome data were accessed from three ADHS administrative sources. Propensity score matching (PSM) was used to create comparison groups with the same observable baseline characteristics as the HSP intervention groups. PSM identifies counterfactual outcomes for participants (i.e. what would have happened in the absence of participation), as measured by the matched comparison group ("matches"). This estimated effect is often referred to as the average treatment-on-the-treated (ATT) effect, or the impact of the program among those who participated.

Aim 1: Impact of HSP on Birth Outcomes

Outcomes

- Low birthweight (LBW): birthweight less than 2500g despite gestational age
- Very low birthweight (VLBW): birthweight less than 1500g
- Extremely low birthweight (ELBW): birthweight less than 1000g
- Preterm birth (PTB): short gestational age of <37 completed weeks of pregnancy

Results

Participation in HSP during 2006 to 2016 is associated with statistically significant decreases in adverse birth outcomes for most subgroups, compared to their matches (n=7,212 (HSP group); n=53,948 (unweighted matched comparison group)). Among American Indian mothers, the LBW rate was 38% lower for HSP mothers compared to their matches (3.8% vs 6.1%) (p-value <0.05). The LBW rate for HSP mothers with pre-pregnancy health risks (diabetes and/or hypertension) is approximately 25% lower than their matches (9.4% vs 12.5%) (p-value <0.05). Among Latina mothers, the VLBW rate was 36% lower and the ELBW rate was 62% lower for HSP mothers compared to their matches (p-value <0.05). Compared to their matches, the PTB rate for teen mothers in HSP is 30% lower (9.5% vs 6.7%) (p-value <0.05). All other outcomes were not significant at the $\alpha=0.05$ level.



Aim 2: Impact of HSP on Prenatal Care Utilization

Outcomes

- Any prenatal care
- (At least) Adequate prenatal care, defined by the Adequacy of Prenatal Care Utilization Index

Results

Participation in HSP during 2006 to 2016 is associated with statistically significant increases in both any and adequate prenatal care attendance for most subgroups, compared to their matches (n= 7,117 (HSP group); n= 53,213 (unweighted matched comparison group)). American Indian, teen, and primipara mothers who participated in HSP had higher rates of any prenatal care higher compared to their matches (1.59%, 1.7%, and 0.97%, respectively) (p-value <0.05). American Indian mothers, mothers with less than high school degree, teen, and primipara mothers who participated in HSP had higher rates of adequate prenatal care compared to their matches (6.1%, 5.1%, 9.8%, and 5.1%, respectively) (p-value <0.05).

Aim 3: HSP Impact on Early Childhood Immunization Completion

Outcomes

The CDC vaccination schedule for children up to age two was used to measure Aim 3 outcomes, specifically: diphtheria and tetanus toxoids and acellular or whole-cell pertussis (DTaP/DTP, 4 doses), Haemophilus influenzae type b (Hib, 3 or 4 doses depending on the regimen), hepatitis B (Hep. B, 3 doses), measles-mumps-rubella (MMR, 1 dose), pneumococcal conjugate vaccine (PCV13, 4 doses), poliovirus (3 doses), and varicella (1 dose). In each case, completion is measured by the age of the child on receipt of the last recommended dose in the series, allowing for vaccinations completed during the 'catch-up' window.

Results

Participation in HSP during 2006 to 2016 is associated with statistically significantly higher early childhood immunization rates across all subgroups, compared to their matches (n= 7,212 (HSP group); n= 53,948 (unweighted matched comparison group)). Completion rates for all seven early childhood vaccines (by age five) were 8.1% higher for all HSP children as a group, compared to their matches (p-value ≤0.05). Rates of vaccine completion were also higher among children of mothers from rural border counties (8.6%), Hispanic/Latinx women (8.1%), American Indian women (7.4%), women with less than high school education (8.3%), and teen mothers (8.7%), compared to their matches (p-value ≤0.05). Time-to-event analyses show HSP children complete vaccination sooner, with a hazard rate for full vaccination 13% higher than their matches.



Section 2: Implementation Guidance

COLLABORATORS AND PARTNERS

Practice Collaborators and Partners			
Partner/ Collaborator	How are they involved in decision-making throughout practice processes?	How are you partnering with this group?	Does this stakeholder have lived experience/come from a community impacted by the practice?
Community Health Workers (CHWs)	CHWs are the primary interventionist of HSP; they assist each client based on individual needs and inform program managers of programmatic needs.	CHWs meet regularly with program managers.	Yes, CHWs live and work in an HSP service area and reflect the ethnic, cultural, and socioeconomic characteristics of the communities they serve.
Mothers (pregnant or have a child <2y)	Mothers are the primary recipient of HSP services; they are asked at each home visit about their specific perinatal/parenting needs, which informs CHW service delivery.	Mothers may schedule up to 4 home visits per month with a CHW	Yes, mothers are the key population receiving services.

REPLICATION

HSP started in southern Arizona, to specifically address low prenatal care rates among migrant farmworker women. The program has demonstrated replicability, as it is now offered in 14 communities across the state to reach women from the Arizona-Mexico border to rural and urban areas, including American Indian communities. HSP has been in operation for 30 years, and the recent analysis of data (2006-2016) showcases the impact of the program generally as well as by social, ethno-racial, and geographic sub-populations. We developed issue briefs to highlight the impact of HSP on prenatal care, birth outcomes, and child immunizations among different populations (see Health Equity section and issue briefs). HSP is a CHW-centered model; the CHWs live in and reflect the ethnic, cultural, and socioeconomic characteristics of the community they serve. CHWs are community-based professionals trained in CHW competencies including cultural mediation to provide appropriate support for their clients. Therefore, the delivery of HSP is adaptable to best serve the culturally distinct communities and families in the program.



INTERNAL CAPACITY

A fully staffed HSP, providing direct community services, at a minimum would include the following personnel:

Full time equivalent program manager/ coordinator. This position would act as a point of contact with funding agencies, as well as community partners. This position would benefit from skills in supervision, community engagement, budget management and knowledge of home visiting. Position may or may not carry a home visiting caseload themselves. This position would supervise between 3-7 CHWs, dependent on if they are carrying a CHW caseload.

A team of CHW Home Visitors to provide direct services. CHW's carry a caseload of maximum 25 families at a time, and therefore team size will depend on need in the population being served. The CHWs should be appropriate providers in the community, representative of the communities being served.

Additional personnel who may add to program success include administrative positions, finance support positions and addition supervisors (dependent on size of CHW team).

Program support to HSP would include a support from funding agency, with data management support, as well as contract management support.

PRACTICE TIMELINE

For more information on this practice's timeline and specific practice activities, please contact Kristin Spevak directly at Kristin.Spevak@azdhs.gov.

PRACTICE COST

HSP Budget will vary, dependent on staffing needs and associated costs. For more information, please contact Kristin Spevak directly at Kristin.Spevak@azdhs.gov.

Budget			
Activity/Item	Brief Description	Quantity	Total
Personnel + Employee Related Expenses (ERE)	Program specific personnel to support implementation and direct service delivery, and the cost of their benefits.	Program Director, Program Manager, and 4 CHW's, 2 additional administrative/data support individuals	Varies



Other Operating Costs	Costs associated with purchase of capital equipment, program supplies and program incentives to clients, occupancy		Varies
Data Management	Appropriate data management software for collection of HSP data and appropriate analysis.		Varies
Total Amount:			Varies

LESSONS LEARNED

A strength and challenge of HSP is the flexibility of the model. The CHWs are encouraged to support their clients' individual needs, including the social determinants of health. Many HSP families experience acute, high-need situations including flooding, COVID-19, and domestic violence. The CHWs spend time and resources to assist their clients to address these immediate needs because it is important and necessary. As a result, progress with the HSP curriculum is significantly delayed.

Another strength of the model is the regularly scheduled communication between CHWs, site managers, and the program director. These meetings ensure continuous feedback and ability to address and adapt to challenges quickly and effectively.

The recent evaluation of HSP relied on administrative enrollment data, which was linked to birth certificate data to assess the associative effect of the program on maternal and child health outcomes. The scale of the administrative and program data enabled us to show where and for whom HSP has been most effective, with respect to observable health outcomes. This is especially true for those events that occur infrequently (e.g. very low birth weight), but which are also associated with high cost and spending.

There is still much left to understand with respect to the mechanisms behind the program's success. Future program evaluation of HSP components would provide a deeper understanding of the connection between the CHW-provided activities, participant actions, and short- and long-term indicators of healthy perinatal outcomes. There is opportunity for future research to use program participation data to assess specific CHW activities and other program features and their associations with the positive impacts presented in this application.

By design, HSP serves a geographically and demographically diverse population of mothers characterized by high rates of socioeconomic and health risk factors. These factors were controlled for explicitly in the evaluation via logistic regression to estimate the propensity score, and implicitly via the propensity score match study design. The subgroup analyses represent an extra step in accounting for potential variance in program effects. Challenges of the evaluation derived from:

- 1) The change in birth certificate format in 2014, which limited information available across the entire study period. However, meaningful and consistent measures were identified or created to enable evaluation of a longer time period and the statistical power to investigate program effects on low-frequency events.
- 2) Data



preparation and transfer arrangements between the different agencies (state health department and university partners), which required patience, persistence, and flexibility of all parties involved. 3) The matching process itself. Baseline equivalence and balance had to be achieved for each subgroup analyzed, which means that the original model had to be re-calibrated and customized numerous times. 4) The global pandemic presented a significant challenge to both implementation and evaluation efforts.

HSP is designed to serve ‘high risk’ mothers and their children. The CHWs are expected to recruit, enroll, and manage a caseload of 40 clients that meet the eligibility criteria. Many CHWs feel pressured to reach the caseload of 40 clients, at the risk of missing opportunities to enroll clients who would particularly benefit from the program’s services. This is an area of improvement for the program.

NEXT STEPS

HSP will continue in the 14 existing sites and intends to expand to additional sites in the near future. Results from this evaluation support the growing body of evidence that CHW-led programs can have a positive impact on maternal and child health outcomes, particularly for mothers and families affected by health disparities. The evaluation provides much needed evidence to guide policymakers and practitioners on integration of CHW perinatal home visitation. The evaluation team is currently examining HSP impact on maternal mental health and chronic disease outcomes. Future plans include an implementation study to assess the CHWs activities more closely.

HSP aims to improve and expand the model in the following ways:

- Increase the number of allowed monthly home visits to four times per month, for all HSP participants. This will enable the CHWs to provide additional prenatal care accountability to every client throughout their pregnancy, which may contribute to increased positive maternal and child health outcomes.
- Provide CHWs with additional resources and training to support their capacity to connect with each client at least four times during their pregnancy.
- Encourage and support CHWs to check in with clients prior to and after each scheduled prenatal care appointment to promote and improve attendance, prepare for the appointment (e.g. questions), and provide follow-up information as needed.
- Develop and expand transportation assistance (e.g. service, coordination, passes) to all HSP sites statewide to address a potential barrier to utilizing perinatal care services (e.g. prenatal care visits, child immunization appointments).
- Strengthen education topics covered by CHWs during the prenatal period, including healthy weight and pre-existing health conditions management, because all HSP mothers have at least one social and medical risk factor that puts them at increased risk for a health issue, such as diabetes or hypertension, and subsequently at higher risk for preterm birth and low birthweight outcomes

The Arizona Health Start Program and its 30-year commitment to strengthening CHW maternal and child health home visiting is a healthcare innovation that can improve birthweight, prenatal care attendance, and child immunization completion among ethno-racially, socioeconomically, and geographically diverse mothers and infants in Arizona.



RESOURCES PROVIDED

Manuscripts

- Sabo, S., Butler, M., McCue, K., Wightman, P., Pilling, V., Celaya, M., & Rumann, S. (2019). Evaluation protocol to assess maternal and child health outcomes using administrative data: A community health worker home visiting programme. *BMJ Open*, 9(12), e031780. doi:10.1136/bmjopen-2019-031780
- Sabo, S., Wightman, P., McCue, K., Butler, M., Pilling, V., Jimenez, D. J., Celaya, M., & Rumann, S. (2021). Addressing maternal and child health equity through a community health worker home visiting intervention to reduce low birthweight: Retrospective quasi-experimental study of the Arizona Health Start Programme. *BMJ Open*, 11(6), e045014. doi:10.1136/bmjopen-2020-045014
- McCue, K., Sabo, S., Wightman, P., Butler, M., Pilling, V., Jiménez, D., Annorbah, R., & Rumann, S. (2022). Impact of a Community Health Worker (CHW) Home Visiting Intervention on Any and Adequate Prenatal Care among Ethno-Racially Diverse Pregnant Women of the US Southwest. *Maternal and Child Health Journal*, 26(12), 2485–2495. <https://doi.org/10.1007/s10995-022-03506-2>
- Wightman, P., McCue, K., Sabo, S., Annorbah, R., Jimenez, D. J., Pilling, V., Butler, M., Celaya, M., & Rumann, S. (2022). Community health worker intervention improves early childhood vaccination rates: Results from a propensity-score matching evaluation. *BMC Public Health*, 22(1), 1854. doi:10.1186/s12889-022-14239-w

Issue Briefs

- Annorbah R, McCue K, Sabo S, Wightman P, Rumann S. (2022). Issue brief: Arizona’s Health Start Program improves health outcomes for teen mothers and their children. *Center for Health Equity Research*. Available at https://nau.edu/wp-content/uploads/sites/160/Teen-MCH-Brief_-9.22.22.pdf
- Annorbah R, McCue K, Sabo S, Wightman P, Rumann S. (2022). Issue brief: Arizona’s Health Start Program improves health outcomes for American Indian mothers and their children. *Center for Health Equity Research*. Available at https://nau.edu/wp-content/uploads/sites/160/American-Indian-MCH-Brief_-9.22.22.pdf
- Annorbah R, McCue K, Sabo S, Wightman P, Rumann S. (2022). Issue brief: Arizona’s Health Start Program improves health outcomes for Latina mothers and their children. *Center for Health Equity Research*. Available at https://nau.edu/wp-content/uploads/sites/160/Latina-MCH-Brief_-9.22.22.pdf

Evaluation Impact Report

- McCue K, Sabo S, Wightman P, Jimenez D, Rumann S. Health Start Program Evaluation, 2006-206: Final Impact Report. Phoenix, AZ: Arizona Department of Health Services; 2021. Available at <https://www.azdhs.gov/documents/prevention/womens-childrens-health/reports-fact-sheets/health-start/health-start-final-impact-report-2021-12-02.pdf>

Websites

Arizona Department of Health Services, Health Start Program: <https://www.azdhs.gov/prevention/womens-childrens-health/childrens-health/index.php#health-start-home>

- Arizona Health Start Program Curriculum approved by Arizona Community Health Workers Association (AzCHOW), certifying that it provides high quality training, skill development and community experience to prepare CHWs to work to their fullest competencies. Curriculum available upon request.

Northern Arizona University, Center for Health Equity Research: <https://nau.edu/cher/evaluating-arizonas-health-start-program/>



APPENDIX

Arizona HB 2324, HB 2324, Fifty-third Legislature (2018).

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52(1), 1-26.

Hussaini, S. K., Holley, P., & Ritenour, D. (2011). Reducing low birth weight infancy: Assessing the effectiveness of the Health Start program in Arizona. *Maternal and Child Health Journal*. doi:10.1007/s10995-009-0556-0

Kangovi, S., Grande, D., & Trinh-Shevrin, C. (2015). From rhetoric to reality--community health workers in post-reform U.S. health care. *The New England journal of medicine*, 372(24), 2277-2279. doi:10.1056/NEJMp1502569

Prochaska, J. O. & Velicer, W. F. (1997). The transtheoretical model of health behavior change. *American journal of health promotion*, 12(1), 38-48.

Rogers, E. A., Manser, S. T., Cleary, J., Joseph, A. M., Harwood, E. M., & Call, K. T. (2018). Integrating Community Health Workers Into Medical Homes. *Ann Fam Med*, 16(1), 14-20.

Rosenthal, E. L., Rush, C., & Allen, C. (2016). Understanding scope and competencies: A contemporary look at the United States community health worker field: Progress report of the Community Health Worker (CHW) Core Consensus (C3) Project: Building national consensus on CHW core roles, skills, and qualities.

Vallori, A. B. (2014). Meaningful Learning in Practice. 3(4), 2334-2978. doi:10.15640/jehd.v3n4a18

Williams, C. M., Cprek, S., Asaolu, I., English, B., Jewell, T., Smith, K., & Robl, J. (2017). Kentucky Health Access Nurturing Development Services Home Visiting Program Improves Maternal and Child Health. *Maternal and Child Health Journal*, 21(5), 1166-1174. doi:10.1007/s10995-016-2215-6

