Baltimore Teen Pregnancy Prevention Initiative for Out-of-Home Youth

FINAL TECHNICAL REPORT 2021

Prevention of Adolescent Risk Initiative

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SCHOOL OF SOCIAL WORK

PARI: PREVENTION OF ADOLESCENT RISKS INITIATIVE

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This report was prepared by the faculty and staff at the University of Maryland, School of Social Work's Prevention of Adolescent Risks Initiative (PARI). Patricia Jones (MDH), Nadine Finigan-Carr and Catherine Watson (BCHD) co-managed the interagency agreement that supported the development of this report. Nadine Finigan-Carr led the quantitative analysis from the youth survey data. Nadine Finigan-Carr and Rochon Steward oversaw the *Power through Choices (PTC) & Making Proud Choices (MPC)* evaluation components and the final development of the written report.

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FINAL REPORT: EXECUTIVE SUMMARY

PROGRAM SUMMARY

The programmatic final report submitted by the University of Maryland School of Social Work encompasses the ten-years of implementation and evaluation of the *Baltimore Teen Pregnancy Prevention Initiative for Out-of-Home Youth*. This was one of eleven programs under Maryland DHMH PREP funding designed to align with the expectations outlined by Congress in the 2010 Patient Protection and Affordable Care Act (ACA). Grantees were encouraged to target their programs to high-risk populations. Youth targeted for this program were those residing in geographic areas with higher teen birth rates, as well as adjudicated youth, and youth in foster care. This initiative was funded by the Administration on Children, Youth and Families (ACYF) via Maryland Department of Health's (MDH) Personal Responsibility and Education Program (PREP) designed to align with the expectations outlined by Congress in the 2010 Patient Protection and Affordable Care Act (ACA).

EVALUATION SUMMARY

This programmatic report reflects data from both the youth and adult components of the initiative. The adult component is comprised of data from Department of Juvenile Services' (DJS) and Department of Social Services' (DSS) staff and foster parents. The data collection for the adult component ended at the end of 2018. The adult providers' data results are reflective of the data collected between 2012 and 2018. The results from the youth component includes both baseline and follow-up data through 2020.

PROJECT OVERVIEW

Timeline/Milestone History	Date	Notes
Focus groups	03/2012	Responses helped shape adult curriculum.
Implement adult curriculum	--	Slow recruitment of youth providers (adults).
Implement youth curriculum	--	Slow recruitment of eligible youth.
Youth intervention change	10/2016	Revised intervention- Making Proud Choices
Adult intervention ended	06/2019	Slow recruitment.
Youth intervention change	10/2019	Revised intervention- Power through Choices

CONCLUSIONS/ RECOMMENDATIONS

The findings from each component of the BCHD's Teen Pregnancy Prevention Initiative for Out-of-Home Youth can be used to develop the evidence base for teen pregnancy prevention, and strategic decision-making to address barriers to successful replication and adaptation of evidence-based programs.

INTRODUCTION

Program Background

The need to address concerns of risky behavior and development in youth ages 14-21 have been a concern for decades, with a focus on adolescent pregnancy, sexually transmitted infection (STI) rates, and domestic violence incidents. Significant strides have been achieved in addressing Maryland's teen birth rates with a 74% decrease between 1991 and 2019[1] and a 5.4% decrease since 2013[2]. However, eleven counties in Maryland still have teen birth rates higher than the national average[3]. Baltimore City's rate has continued to be higher than the state average (43.4 per 1000 births compared to 19.3 per 1000 births to females ages 15-19 in 2013; and 27.8 per 1000 births to females ages 15-19 compared to 13.9 per 1000 in 2019[4]). Nationally, youth living in group home settings have higher rates of sexual risk behaviors than their peers in the general population. Adverse childhood experiences (ACEs) have been linked to negative sexual health outcomes in adulthood[5]. Many behaviors place out-of-home (OOH) youth (14-21 years) at a greater risk for these negative outcomes in comparison to their peers in the general population.

Youth ages 15-19 still have a greater risk for negative consequences related with risk behaviors, such as making poor choices with relationships, early sexual activity, as well as a higher risk for STIs. In an effort to reduce these risk behaviors, Congress authorized the Personal Responsibility Education Program (PREP) as part of the 2010 Patient Protection and Affordable Care Act (ACA), amending Title V of the Social Security Act. As a result, Congress initially appropriated $55 million in funding for PREP for both competitive and state grants administering evidence-based and promising new teen pregnancy prevention programs. Funds were required to be used to support a program designed to educate adolescents on both abstinence and contraception to prevent pregnancy and STIs, including HIV/AIDS, and at least three adult preparation subjects (Healthy relationships, adolescent development, financial literacy, parent-child communication, educational and career success,

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[1] Power to Decide https://powertodecide.org/what-we-do/information/national-state-data/Maryland

[2] Kids Count Data https://datacenter.kidscount.org/data/tables/4471-teen-birth-rate#detailed/2/any/false/1729,37,871,870,573,869,36,868,867,133/any/15346

[3] https://maryland.prochoiceamericaaffiliates.org/wp-content/uploads/sites/11/2021/01/PEPS-Fact-Sheet-Updated-January-22-2021.pdf

[4] https://datacenter.kidscount.org/data/tables/4471-teen-birth-rate#detailed/2/any/false/1729,37,871,870,573,869,36,868,867,133/any/15346

[5] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6035089/

and healthy life skills). States were encouraged to target youth populations that are the most high risk or vulnerable for pregnancy, including youth in foster care, homeless youth, youth with HIV/AIDS, parenting youth under the age of 21, and those residing in areas with high birth rates for youth.

Administration for Children Youth and Families (ACYF), Family and Youth Services Bureau (FYSB) outlined four primary expectations for all state PREP grantees: 1) emphasize evidence-based programming; 2) focus on high-risk populations; 3) coverage of abstinence and contraception; and 4) incorporation of adulthood preparation subjects. The State of Maryland received PREP funding in 2010, along with forty-one other states (42 in total); three additional states received funding in 2011. The Maryland Department of Health solicited competitive applications to implement these models in existing community-based programs to prevent pregnancies and STIs among Maryland teens aged 10-19. Maryland's PREP program funded 55 sites throughout the state. Maryland PREP planned to serve 2,510 youth per year. The Maryland PREP project implemented the evidence-based curricula, *Promoting Health Among Teens-Comprehensive, Power through Choices, and Making Proud Choices*. The target populations included youth in foster care, youth in substance treatment centers, youth in group homes, youth in the juvenile justice system, youth in faith-based and community-based settings, gender and sexual minority youth, Hispanic and Latino youth and jurisdictions with high rates of teen pregnancy and sexually transmitted infections. The adulthood preparation subjects incorporated in Maryland's PREP project incorporates all of the identified adulthood preparation subjects (adolescent development, educational and career success, parent-child communication, healthy life skills, financial literacy, and healthy relationships). Maryland was awarded $962,931.

Prior to the award, Maryland developed and finalized a State Teen Pregnancy Prevention Plan with input from stakeholders across the state. In 2010, the Baltimore City Health Department (BCHD), in partnership with Healthy Teen Network and the Johns Hopkins Center for Adolescent Health, completed the *Strategic Plan to Reduce Teen Births in Baltimore City*, a comprehensive approach to reducing teen pregnancy. Major recommendations included increasing access to evidence-based sexuality education and contraceptive services, increasing youth outreach and connection especially among youth who may not be reached by school-based approaches or social marketing campaigns, and creating a City-wide coalition to oversee plan implementation. BCHD submitted an application

for PREP funding proposing to replicate an evidence-informed model within child welfare and juvenile services agencies addressing the sexual reproductive health needs of these vulnerable youth. Based upon recommendations from the *Strategic Plan to Reduce Teen Births in Baltimore City*, the project aimed to increase access to sexuality education and confidential contraceptive services in order to promote positive sexual and reproductive health. As a part of this application, BCHD collaborated with the University of Maryland, School of Social Work (UMSSW) to conduct the project evaluation. The evaluation aimed to document how the intervention was operationalized and assess its effectiveness in reducing teenage pregnancies, STI's and sexual risk behaviors. The goal of the evaluation is to expand the evidence on teen pregnancy prevention programs as well as identify the successes and challenges of replicating or adapting evidenced-based programs for youth in out-of-home care.

Program Description

BCHD's Teen Pregnancy Prevention Initiative for Out-of-Home Youth had two intervention components:

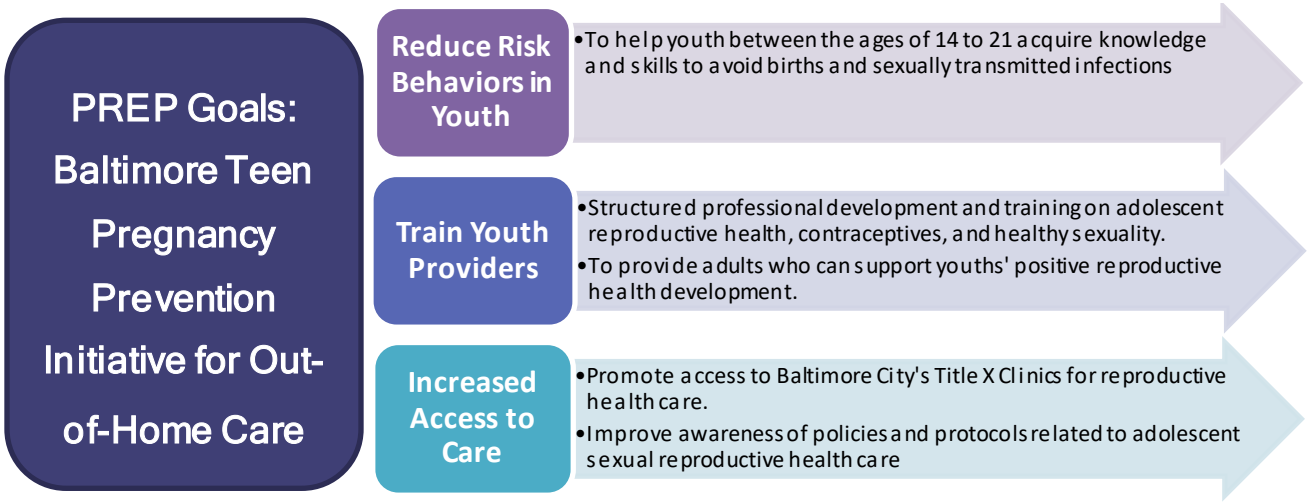
1) An evidence-based intervention with at-risk youth, specifically those in out-of-home settings in DSS and DJS; and
2) An adolescent reproductive health intervention for adolescent providers, which included DSS and DJS staff, as well as foster parents.

The core of the intervention included the implementation and evaluation of evidence-based pregnancy prevention curricula, *Power through Choices/Making Proud Choices* administered to identified youth; and the *Adolescent Reproductive Health Training*, an educational pregnancy prevention intervention for child welfare and juvenile services professionals and foster care providers. Healthy Teen Network and Planned Parenthood of Maryland collaborated to develop and implement the pregnancy prevention intervention for adult providers. Other collaborators included Baltimore City and Baltimore County Departments of Social Services and Maryland's Departments of Human Services (DHS) and Juvenile Services (DJS), who have been instrumental in the coordination of participants and community engagement activities.

Overarching Program Goals

Both components reflect a systematic holistic approach to addressing teen pregnancy within this vulnerable population. The expected outcomes and goals are consistent for both interventions. Figure 1 outlines the overarching PREP goals for both interventions.

Figure 1 - Overarching PREP Goals for the BCHD's Teen Pregnancy Prevention Initiative for Out-of-Home Youth



BCHD's Teen Pregnancy Prevention Initiative for Out-of-Home Youth collaborates with stakeholders to provide reproductive health information, education, and outreach; peer and significant adult education; and organizational support to achieve a change in teen pregnancy prevention knowledge, attitudes, and behavior among Baltimore youth in out of home placements ages 14-21. Specific program objectives were as follows:

- Objective 1. Pilot and implement an evidence-based pregnancy prevention curriculum (*Power through Choices/Making Proud Choices)* to be culturally, spiritually, and linguistically appropriate for out-of-home youth.
- Objective 2. Conduct focus groups with child welfare professionals and significant adults to identify concerns and culturally specific barriers to cross-generational pregnancy prevention communication.
- Objective 3. Develop and implement an educational pregnancy prevention intervention for adult providers.
- Objective 4. Evaluate the youth intervention using a quasi-experimental design to compare changes in teen pregnancy knowledge, attitudes, and behaviors between the target population and the general population of youth in Baltimore City.

Adult Intervention: Adolescent Reproductive Health Training (ARH)

For the adult component of the initiative, *Adolescent Reproductive Health Training* (ARH), providers received direct educational training. The ARH offered healthy sexuality and teen

pregnancy prevention supports to adult professionals and foster parents working with youth ages 14-19 in out-of-home care. The objectives of the adult training were:

- Separate individual (self) values around sexuality from their professional role as a resource for youth.
- Understand the basic effects of trauma on sexual development and utilize strategies to discuss sexuality with youth who have experienced trauma.
- Explain the current Maryland laws on adolescent access to sexual health care.
- Answer youth questions about sexuality competently and comfortably.
- Provide a wide array of sexuality referrals and resources to youth.

The Baltimore City Health Department began implementing the ARH Training in 2012. As the initiative progressed, Maryland also considered the need to expand conversations to include the growing population of LGBTQ+ youth and issues related to youth in out-of-home care's vulnerability to sex-trafficking. The training is a foundational course intended to be administered in one day (6 hours). The course is critical for youth providers and foster parents in understanding the effectiveness of current strategies and possible means to overcome any barriers to meeting the needs of youth in OOH care related to STIs and pregnancy prevention.

All youth providers (foster parents, child welfare staff, and juvenile justice professionals) were notified of the training through the training units of their respective agencies and/or the Child Welfare Academy (CWA) at the UMSSW. Child welfare staff (DSS) and juvenile justice professionals (DJS) were compensated via Continuing Education Units (CEUs) or training hours for participation in the intervention. Foster parents received training hours and $20 to compensate their time. The six-hour training included a pre-post assessment.

Youth Intervention: *Power Through Choices & Making Proud Choices*

For the youth component of the initiative, youth in out-of-home care in Baltimore City or Baltimore County received direct services through tailored educational programs. The *Power Through Choices* curriculum was selected as the evidence-informed intervention used for this study. *Power Through Choices* was developed exclusively for youth and young adults between ages 14-21 residing in out-of-home settings. It was comprised of ten (10), two-hour group sessions (90-minute sessions, 30-minute rapport building and meal), with a minimum of ten (10) youth registered per session. Sessions typically were provided twice a week over a

five-week period. There were two main themes for the curriculum: 1) self-empowerment and 2) the impact of choices on an individual's future. An eleventh session focused on awareness of human trafficking was developed and implemented by BCHD and content experts as a special adulthood preparation subject in the fourth year in response to the vulnerability of this population to commercial sexual exploitation.

Making Proud Choices for Out-of-Home Youth is an adaptation of the evidence-based sexual reproductive health curriculum, *Making Proud Choices,* with a particular emphasis on trauma-informed language (Jemmott, Jemmott & Fong, 1998). This curriculum was introduced in September 2016 and adopted as the intervention for this initiative due to issues with staff turnover and training. Similar to *Power Through Choices,* the curriculum was comprised of the community and family approach, the role of sexual responsibility and accountability as well as personal responsibility and pride. The curriculum helps youth build life skills and make positive choices related to sexual behavior. The goal of the intervention is to reduce the incidence of pregnancy, HIV prevention, ad other sexually transmitted infections. The culturally appropriate sessions offered experiential activities to facilitate communication with partners about the importance of using condoms and/or skills to delay initiating sex.

In 2018, our project partner Healthy Teen Network acquired the *Power Through Choices* curriculum and became its developer and distributor. BCHD was able to re-introduce the *Power Through Choices* curriculum which had undergone some slight modifications and was now listed as an evidence-based curriculum by ACYF. BCHD fully adapted the Power Through Choices curriculum by October 2019.

Youth who agreed to participate in the intervention were consented prior to the first day of the sessions and completed a pre-assessment (baseline survey). Youth were asked to complete surveys at three additional time points: 1) after the completion of all sessions, 2) 3 months after intervention completion, and 3) 9 months post-intervention. Participants were compensated for their time to complete the surveys in the form of $20 gift cards per survey completed for a possible total of $80 in gift cards. Once consented, youth were incentivized to continue participating in sessions. However, they were free to leave the intervention at any time. Raffles and hygiene gift packs were provided by BCHD at each session to reward attendance. Another retention strategy employed included providing any participant who completed at least 10 sessions a $50 gift card. All person(s) attending the next highest

number of sessions received a $40 gift card; and those who attended the third highest number of sessions received a $30 gift card.

PROGRAM EVALUATION MANAGEMENT AND ADMINISTRATION

Role of Maryland Department of Health

The mission of the Maryland Department of Health (MDH) is to work collaboratively to promote and improve the health and safety of all Marylanders through disease prevention, access to care, quality management and community engagement. This is accomplished through the provision of Maryland's health care delivery system, consisting of public, and private hospitals, nursing homes, outpatient clinics, home health care services, community-based services and the facilitation of systems development. The functional structure of MDH includes the following divisions: Public Health Services, Behavioral Health, Developmental Disabilities, and Health Care Financing. The department also has 20 boards that license and regulate health professionals and various commissions that issue grants, research, and recommendations on issues that affect Maryland's health care delivery system. MDH manages and distributes Personal Responsibility Education Program funding for teen pregnancy prevention, and adolescent sexual health programs administering evidence-based and promising interventions.

MDH oversees the adolescent sexual health programs which include the PREP-Baltimore Teen Pregnancy Prevention Initiative for Out-of-Home Youth in Maryland. These programs are working together toward the common goal of reducing teen pregnancy, teen births, and sexually transmitted diseases/infections (STDs/STIs) among adolescents. MDH also monitors one of the IRB protocols for the PREP- Baltimore Teen Prevention Initiative for Out-of-Home Youth. MDH provides technical assistance to contractors, monitors contract compliance, coordinates, and provides professional development opportunities and authorizes payment of contracted deliverable services.

Role of Baltimore City Health Department

The mission of the Baltimore City Health Department (BCHD) is to eliminate disparities through education, coordination, advocacy, and direct service delivery. In collaboration with other community and health providers, BCHD aims to empower Baltimoreans with the knowledge, access, and environment to promote healthy living.

BCHD is organized into four divisions: Finance & Administration, Youth Wellness & Community Health, Population Health & Disease Prevention, and Aging. BCHD is the official grantee of the PREP award. BCHD is responsible for day-to-day technical assistance to contracted programs, coordinates and provides professional development for program and contracted staff. BCHD is also responsible for the implementation of the youth component of the PREP-Baltimore Teen Pregnancy Prevention for Out-of-Home Youth intervention. BCHD is responsible for ensuring compliance with implementation fidelity. This includes recruitment, retention, monitoring incentives, and adhering to fidelity of the program intervention.

Role of University of Maryland Baltimore

The University of Maryland School of Social Work's (UMSSW) mission is to develop practitioners, leaders, and scholars to advance the well-being of populations and communities, as well as promote social justice. As national leaders, we create and use knowledge for education, service innovation and policy development. The Prevention of Adolescent Risks Initiative (PARI) focuses on adolescent risks by promoting positive health behaviors that are critical for the prevention of health problems in adulthood; and taking steps to better protect young people from health risks, especially at-risk youth. PARI serves to focus on the social determinants of health to:

1) Increase the visibility and knowledge base for adolescent health issues through better data collection and information sharing at the national, state and local levels,
2) Increase the capacity of professional disciplines across Maryland through advocacy and training of child welfare and juvenile justice professionals, health care providers, researchers, mental health providers, law enforcement, policy makers, and others to prevent, identify and respond to adolescent health needs appropriately and effectively.

As a sub-grantee for this award, UMSSW is responsible for the program evaluation of the PREP-Baltimore Teen Pregnancy Prevention Initiative. With this program evaluation, UMSSW periodically monitored program fidelity, assured client confidentiality and provided safeguards for privacy. This also included data collection including consent and assent forms, attendance records, evaluation surveys/ forms. UMSSW was also responsible for dissemination of evaluation findings. A full list of dissemination efforts are outlined in the "Discussion and Conclusion" portion of this report.

Institutional Review Board Protocols

There were two entities monitoring the IRB protocols for this initiative's program evaluation. In addition, there was oversight from BCHD's Public Health Review unit. The University of Maryland Baltimore's Human Research Protections Office (HRPO) program is the coordinating entity of the Human Research Protections Program and provides support via the UMB Institutional Review Board (IRB). Under this award, the HRPO reviewed the following:

Table 1: UMSSW IRB Monitoring Chart

BCHD Pregnancy Prevention in Foster Care: Youth (Protocol)			BCHD Reproductive Health of Foster Youth (Adult-UMSSW)		
CRs	Modifications	RNIs	CRs	Modifications	RNIs
9	13	2	9	10	2

The UMSSW IRB protocol was separated into two components (youth and adult). The table above outlines the number of continuing reviews (CRs), modifications, and reportable new information (RNIs). The two RNIs, for both protocols, included the following:

- 2013: Non-compliance with federal regulations. Expiration of protocol. Continuing review not submitted prior to expiration date. Former Dean of UMSSW, Richard Barth, was the PI of record from 2012-2013. This did not occur again after Dr. Finigan-Carr became PI in 2014.
- 2020: Research Resumption Plan during COVID-19 pandemic. Mandatory RNI due to pandemic. Submission included resumption plan, clinical research checklist, COVID training completions for research and program staff, as well as COVID-19 Campus Operations Assessment questions.

The MDH via the Division of Support and Coordination monitored the IRB protocol for the evaluation of this project. Under this award, MDH reviewed the following:

Table 2: MDH IRB Monitoring Chart

BCHD- Teen Pregnancy Prevention Initiative: Out-of-Home Youth (Protocol # 12-15)	
Continuing Reviews	Modifications
9	11

UMSSW evaluators also monitored the training compliance of research and program staff who participated with this initiative's evaluation efforts. The trainings required under the IRB protocols are housed under the University of Miami's Collaborative IRB Training Initiative

(CITI). The trainings include the following: HIPAA training, 17 basic modules of Social/ Behavioral Research Investigators and Key Personnel, Responsible Conduct of Research training, and Conflicts of Interest training.

Research and Evaluation Systems (CTRIC)

The PARI team partnered with the Clinical and Translational Research Informatics Center (CTRIC), located at the University of Maryland School of Medicine within the Department of Epidemiology and Public Health (EPH). The center supports clinical and translational researchers at all stages of project development, by offering a centralized body to cater to the needs of the project. For this Maryland PREP project, the CTRIC team supported telesurvey forms for the youth component, inclusive of data management, and quality assurance/control. CTRIC was also instrumental in the conversion of the survey to a virtual format during the COVID-19 pandemic.

Program Outreach

The use of incentives is an evidence-based strategy for promoting engagement and buy-in with participants. Initially, UMSSW administered the incentives for evaluation participation. Researchers administered incentives at baseline, completion of intervention (initial follow-up), and 3-month follow-up. Researchers also administered incentives for retention, as outlined in the protocol. In 2018, BCHD assumed administration of participant incentives.

PROGRAM EVALUATION & MONITORING

Evaluation Goals

Maryland's PREP goal was to reduce rates of teen births (proxy for teen pregnancy) and sexually transmitted infections, including HIV/AIDS among youth, both males and females, between the ages of 14-21. The core of the intervention aimed to achieve a change in teen pregnancy prevention knowledge, attitudes and behavior among Baltimore area youth in out-of-home placements aged 14-21. The project intended to provide comprehensive sexuality education and confidential contraceptive services in order to promote positive sexual reproductive health. The evaluation includes a quasi-experimental design to assess teen pregnancy prevention (TPP) related participant outcomes, including changes in knowledge, attitudes, and intentions/behaviors

Evaluation Methods

Youth Intervention

The purpose of the evaluation was to assess the feasibility and effectiveness of sexual reproductive curricula provided to youth in out-of-home care. The pre-post evaluation assessed effectiveness of the intervention, as well as primary outcome variables (e.g., sexual initiation and pregnancy risk), secondary outcomes (e.g., contraceptive use, negotiation skills, and behaviors), and predictor variables (e.g., gender, out-of-home factors, and risk behaviors such as aggression, violence, or substance abuse).

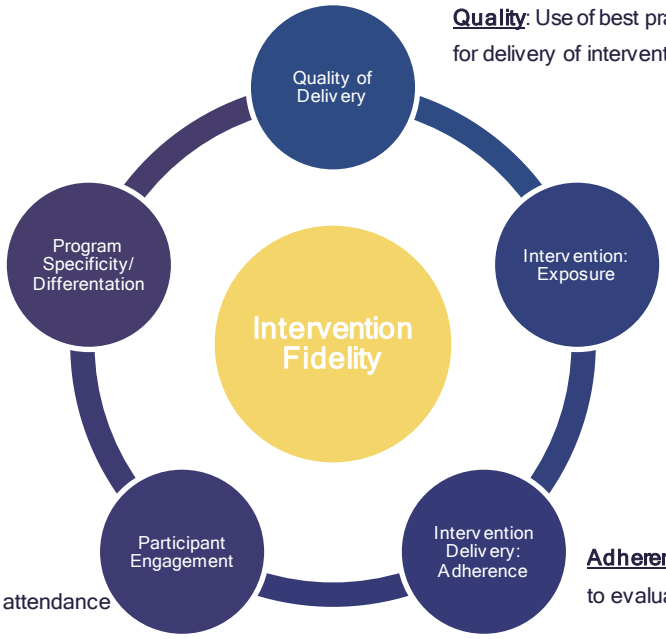
Adult Intervention

For the adult intervention, there were two purposes for the evaluation: 1) to use qualitative methods (focus groups) to inform the development and refinement of the adult curriculum that addressed adolescent reproductive health; and 2) to assess change in knowledge, attitudes and behaviors from the implementation of the adult curriculum.

Monitoring Program Implementation & Intervention Fidelity

Although UMSSW was not formally evaluating the fidelity to implementation of the model, considerations of program implementation and intervention fidelity are important to understanding the effectiveness of the intervention. The figure below highlights the fidelity elements considerations. These elements will be discussed only in the results to report facilitators, barriers and/or limitations to implementation of this initiative.

Figure 2. Fidelity Elements



Quality: Use of best practices for delivery of intervention.

Program Specificity: Intervention Evidence-based and aligned to goals

Exposure: Frequency of youth/ youth provider receiving intervention

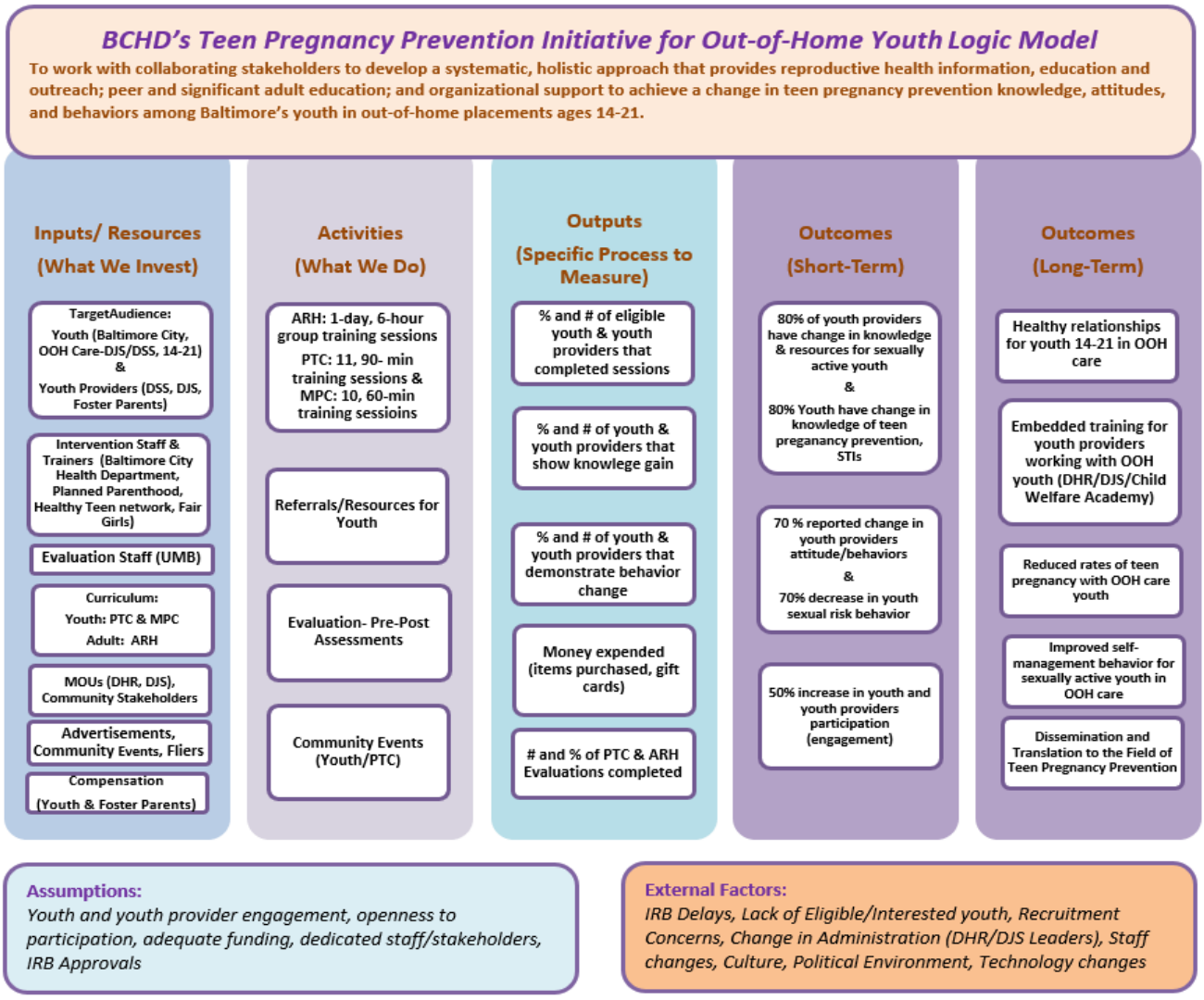
Participant engagement: Commitment, agreement, attendance of youth/ youth providers.

Adherence: How well intervention sticks to evaluation plan, or assessment?

Logic Model

The logic model describes the two training components of the program more specifically (Figure 3). It serves as a visual to describe the sequence of related program components, constructs, and events and how these relate to the overall initiative's intended results.

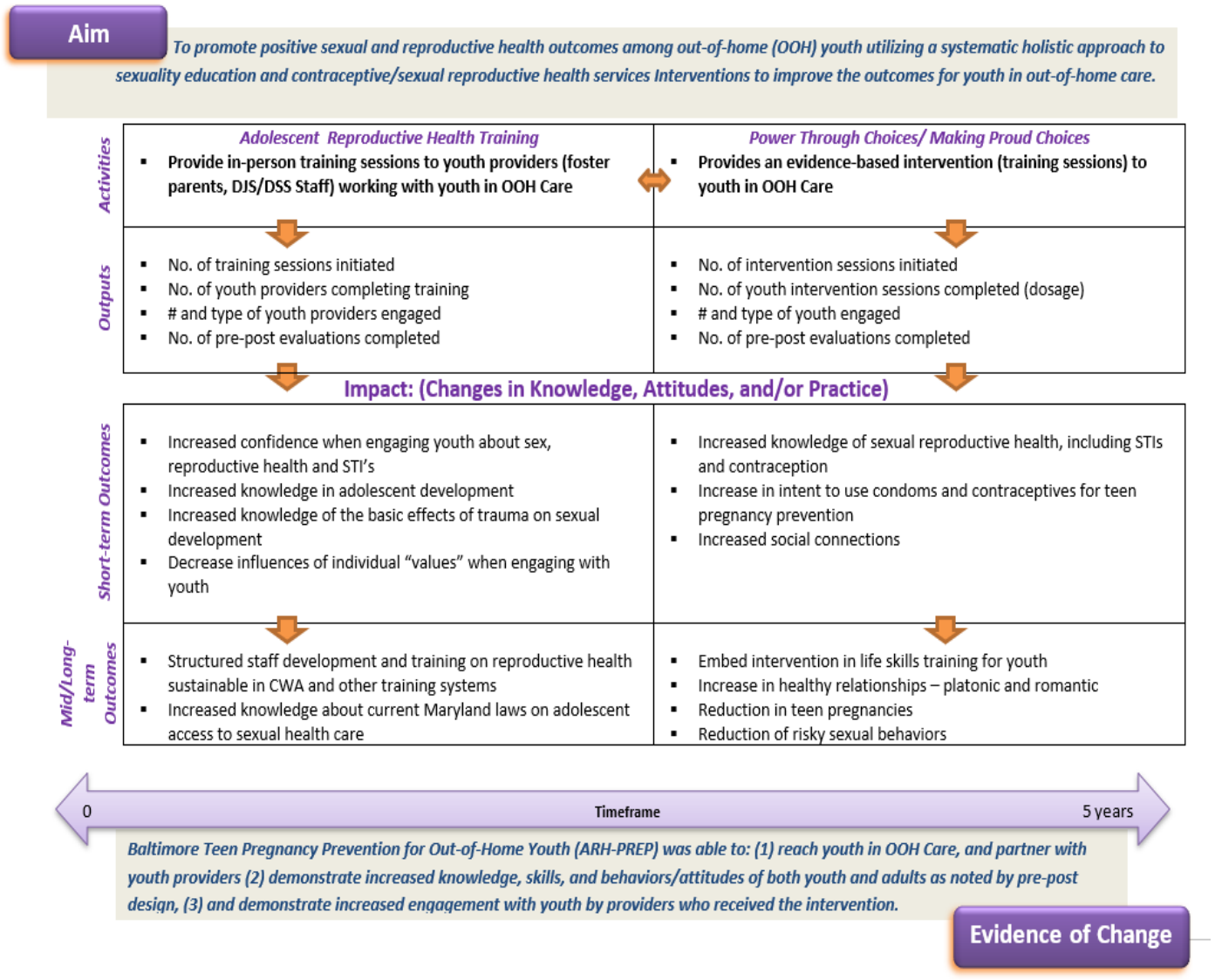
Figure 3- Logic Model



Theory of Change

The theory of change (Figure 4) outlines the program in an outcomes-based framework. The theory of change model can be helpful in defining the programs activities, outputs that are relative to the potential impact (short to long-term outcomes) towards change. The theory of change offers an overview of program services related to the intended changes for the goal of the initiative.

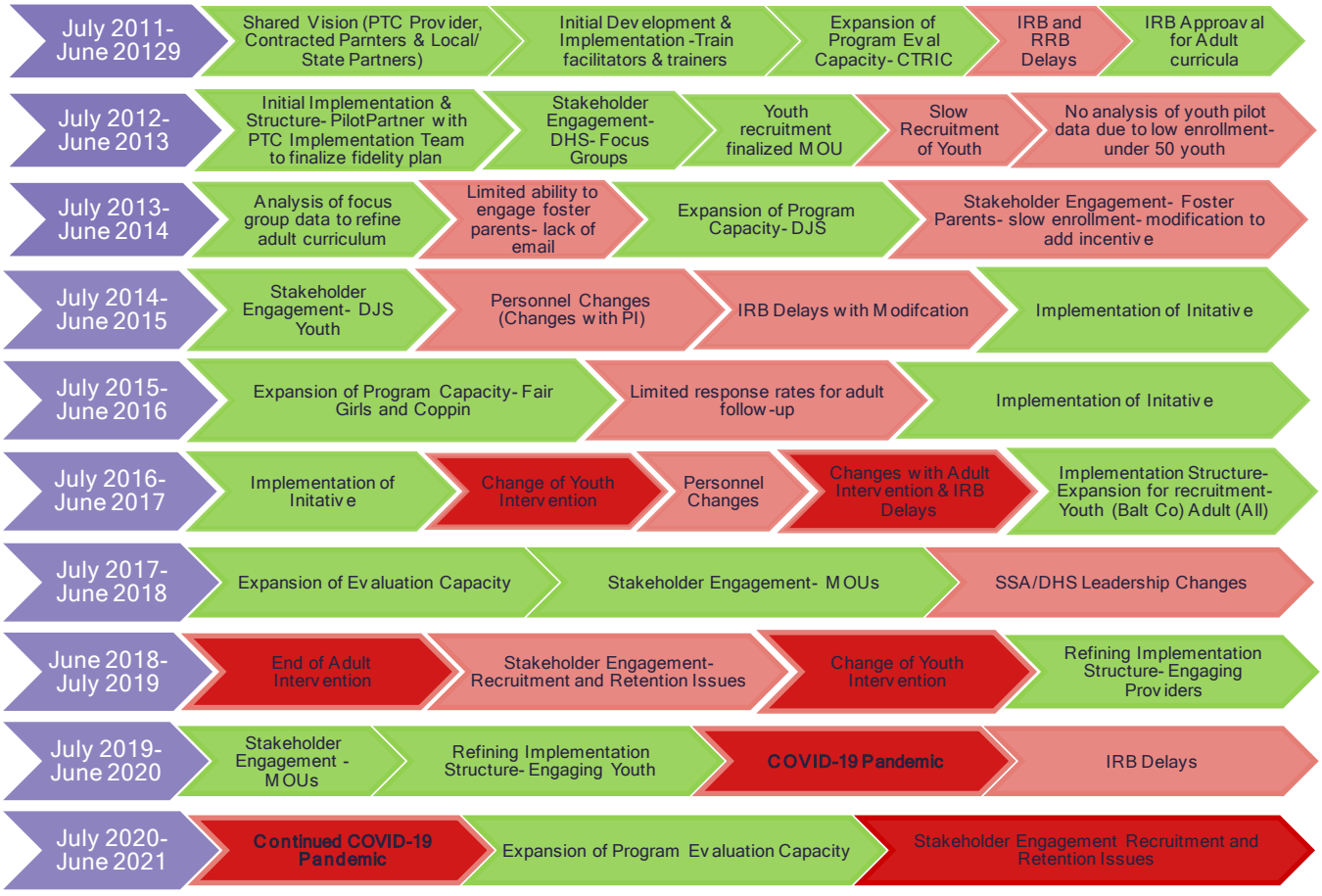
Figure 4- Baltimore Teen Pregnancy Prevention for Out-of-Home Youth (ARC-PREP) Theory of Change



Timeline and Implementation Status of PREP-Baltimore Teen Pregnancy Prevention Initiative for Out-of-Home Youth

The Baltimore City Health Department began implementing the pilot of the *Power through Choices* intervention in 2012, with training and strategic planning efforts focused on reaching youth in areas of greatest need, those youth in out-of-home care. As the initiative progressed, Maryland also considered the needs of LGBTQ+ youth, as well as the vulnerability of youth in out-of-home care to traffickers. The figure below highlights the timeline and major milestones/modifications for this initiative.

Figure 5. Benchmarking Timeline and Implementation Status



Evaluation Results

Adult Model: Focus Groups

To demonstrate the need for an educational pregnancy prevention curriculum for adult providers, a series of focus groups were conducted during the pilot phase of intervention development. Four focus groups were led by two staff members who are experienced social workers and researchers. Sessions were audio-taped and later transcribed for analysis. Several themes emerged. Four main themes presented here helped to further the intervention's development.[6]

Theme 1 - Conversations with youth about their sexual reproductive health

Child welfare workers and foster parents, specifically, were concerned with having positive conversations with youth about their reproductive health concerns. They noted that they were expected to have these conversations with youth as a part of comprehensive case management; however, they did not always feel comfortable about their ability to have these conversations. The following quotes illustrate this:

> *"I believe that if we had more positive conversation with our youths surrounding sex, then I mean, you wouldn't see I guess the amount of teenage pregnancy that you do see."* - Child Welfare Worker
>
> It is important to have *"..trainings where you're able to learn correct and factual information and having snapshots and things..helps us be able to better engage [youth]"* - Child Welfare Worker
>
> We need *"Information in general about STDs so they know where to get help, so they can be treated and put back on the right path."* - Foster Mother

In response to this theme, the ARH training included modules on medically accurate information about adolescent sexual reproductive health and development. These modules were presented in an interactive manner using gamification techniques to improve retention.

Theme 2 - Reducing the stigma about the "sex talk"

Adult professionals understood that for many youth who had experienced trauma, talking about sex had an additional layer of stigma. They also realized that their own beliefs and

[6] A peer reviewed manuscript discussing the focus groups has been published.

values about sexuality sometimes made them uncomfortable with having these conversations with youth in their care. This is illustrated as follows:

> *"..some of them don't feel comfortable, uncomfortable with the body, they don't want to get put out, they don't want to get punished, they want to feel comfortable so they can continue to have trust."* - Foster Mother
>
> *"if you're not really comfortable with dealing with a teen who might have values that you don't have, then you're less likely to talk, or less likely to have that discussion with them because you are not feeling comfortable with going there."* - Child Welfare Worker
>
> *"We need to be more comfortable explaining to them and talking to them, instead of over exaggerating or getting upset. Instead talking to them calmly since you don't know what they're going through. It's hard for them to ask those questions."* - Foster Mother

It is apparent from these quotes that the stigma associated with having these conversations were a barrier for adults to discuss sexual reproductive health with youth in their care. Modules of the ARH training included how to have difficult conversations with youth and an integration of trauma informed responses throughout in response to this theme.

Theme 3 - Inclusion of the adolescent's viewpoint

Adult participants also recognized that they needed to hear from teens about how they felt their sexual reproductive health needs were being met and how to respond to them. The following illustrative quotes support this:

> *"..having some of the teens sitting with us to get their point of view, to get their viewpoint as well, getting feedback from them."* - Child Welfare Worker
>
> *"They [foster youth] can have their own separate workshop, and then we take that information, and we learn how to respond back to it. So like real life case scenarios, where they say you know, 'I was put in this situation, and I wanted to ask blah blah blah...' so that we would know how to better respond to them"* - Child Welfare Worker

The final version of the ARH training included videos of youth discussing healthy relationships, sexual reproductive health, and LGBTQ+ concerns so that the adolescent's voice could be heard.

Theme 4 - Training Needs

Adult providers were clear as to what specific information they felt was needed from a training. In addition to what was reported in the prior themes, one DJS case manager said, *"I think it's good if workers who have to deal with the teenagers and families, that if we first know the resources and the laws and the rules, and make us better informed, then we can inform our clients. But we have to know the information."*

The final ARH training was comprised of ten modules that covered values, federal and state laws about access to reproductive health care for minors, healthy and unhealthy relationships, sexually transmitted infections, contraception, LGBTQ+ youth, and communicating with youth about their sexual health and sexuality.

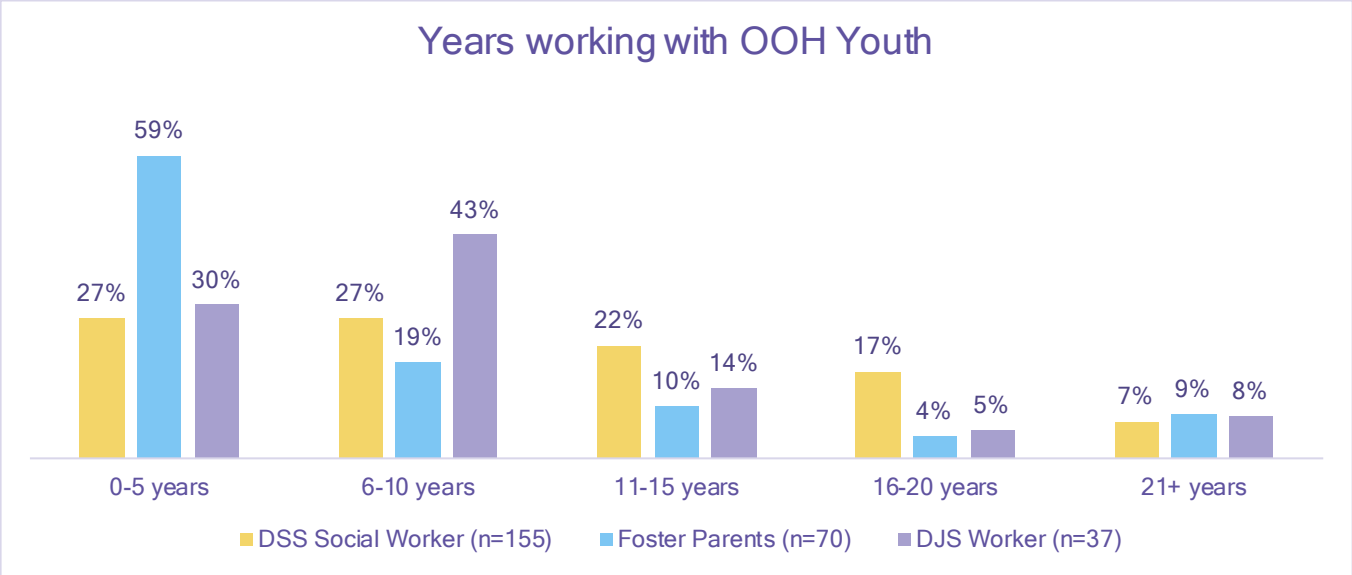
Adult Model: Adolescent Reproductive Health Training Evaluations (Pre-Post)

Over the life of the award, there were 31 trainings held for youth providers. The majority were conducted with DSS workers (14 trainings), followed by foster parents (10 trainings), and lastly DJS workers (7 trainings). A total of 325 providers initially agreed to participate in the study; however, only 316 were eligible to participate. Of the eligible providers, 290 completed baseline pre-test data and 275 completed post-test data. Only 44 of the adult providers participated with long-term follow-up data.

Demographic Information:

A majority of the youth providers, and foster parents in this study were non-Hispanic (98%), Black/African American (88.6%) who identified as female (84.1%). The median age of the providers and foster parents was 48 years old, ranging from 23-78 years old. Participants with a four-year degree were the majority across all of the affinity groups who participated in the ARH Adult Training. Youth providers and foster parents had varying degrees of experience working with OOH youth, DSS providers and DJS providers had approximately 6-10 years of experience (27% and 43% respectively). The majority of the foster parents reported having fewer years' experience, 0-5 years' experience (59%) working with OOH youth. Figure 6 outlines youth providers experience working with OOH youth. Child welfare workers tended to have more education. Foster parents tended to be older. Statistical comparisons between the groups were not conducted due to the size differences between them. Additional demographic information about the providers are in the Appendices.

Figure 6 - Years working with OOH youth by affinity group



Baseline Survey

Prior to training, a baseline pre-assessment (10 minutes) was administered to providers and foster parents who agree to participate in the evaluation. The pre-assessment collects demographic information, perceptions of sexual reproductive health needs for OOH youth (beliefs), self-report of behaviors related to working with youth regarding sexuality and pregnancy prevention (practice), as well as knowledge and attitudes.

Problematic Behaviors in OOH Youth

In order to assess their beliefs about adolescent sexual health issues, professionals were asked to identify problematic behavioral health issues for OOH youth. Overall, unwanted pregnancy (64%), STIs (60%), and sexual assault (54%) were identified as the top three major behavioral health issues for OOH youth across all affinity groups. "Other" problematic behaviors noted by youth providers and foster parents include:

- abortion access,
- anger/aggression,
- female lacks empowerment,
- human trafficking, sex trafficking
- keep up with medical and other appointments,
- lack of sex education,
- mental health/suicide
- peer pressure,
- sex gender confusion,

- unhealthy relationships.

Figure 7 and Table 3 outlines participants' perspectives of problematic behavioral health issues across affinity groups and by provider type using the 5-pt Likert scale. DSS, DJS, and foster parents note STIs (64%; 65% & 47% respectively), unwanted pregnancies (69%; 75% & 46% respectively), and sexual assaults (55%; 66% & 45% respectively) as problematic behavioral health issue.

Figure 7 - Participants perspectives of problematic behavioral health issues

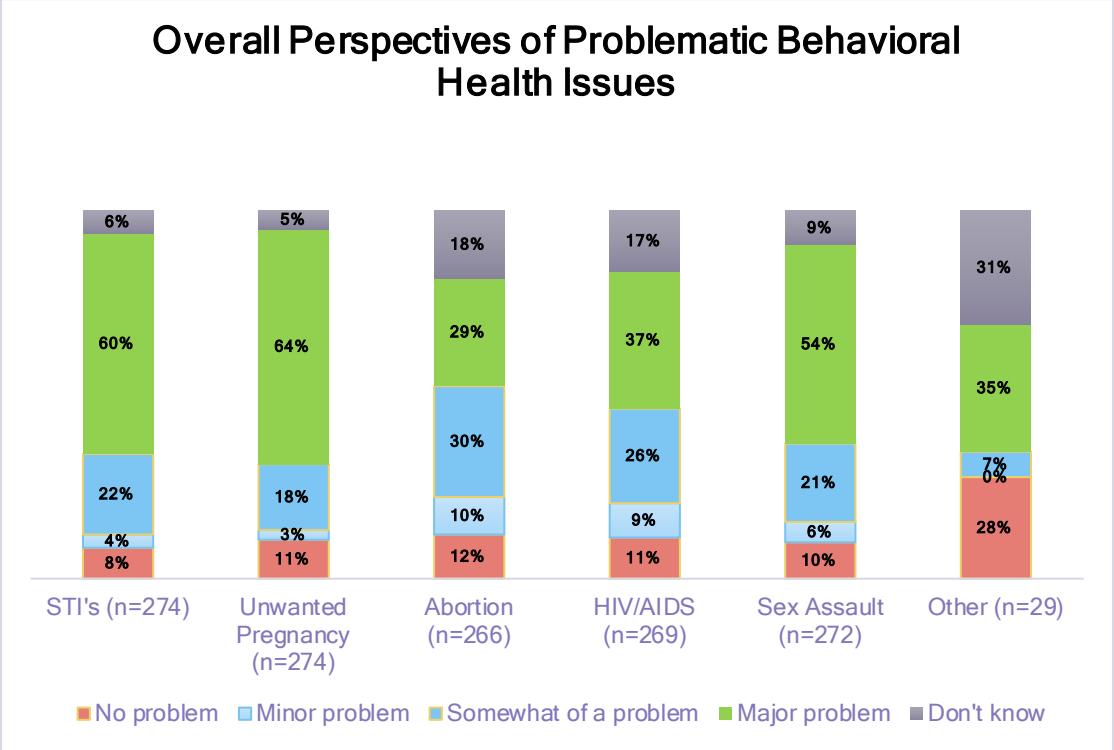


Table 3 - Providers' perspectives of problematic behavioral health issues by affinity groups

		STI's (n=274)	Unwanted Pregnancy (n=274)	Abortion (n=266)	HIV/AIDS (n=269)	Sex Assault (n=272)
DSS	No problem	2%	4%	6%	5%	4%
	Minor problem	4%	4%	12%	12%	6%
	Somewhat of a problem	23%	20%	34%	29%	24%
	Major problem	64%	69%	28%	37%	55%
	Don't know	7%	4%	21%	18%	11%
Foster Parents	No problem	28%	31%	31%	33%	29%
	Minor problem	6%	0%	9%	3%	4%
	Somewhat of a problem	13%	14%	19%	15%	13%
	Major problem	47%	46%	31%	36%	45%
	Don't know	7%	9%	9%	13%	9%
DJS	No problem	0%	0%	5%	0%	0%
	Minor problem	0%	3%	5%	10%	7%
	Somewhat of a problem	33%	18%	31%	31%	24%
	Major problem	65%	75%	33%	41%	66%
	Don't know	3%	5%	26%	18%	2%

Problematic Health/Social Services for OOH Youth

Professionals were asked to identify problematic health/social services issues for OOH youth. Overall, across affinity groups, availability of health education services (38%), availability of adequate and timely health care (37%) and availability of reproductive health services (34%) were identified as somewhat problematic health/social services with limited access/availability for OOH youth. Figure 8 outlines participants' perspectives of problem with access of availability of health/social services using a four-point Likert scale. Upon further examination by affinity group (Table 4), nearly one-third of DSS professionals identified availability of health education programs as the most challenging problem for OOH youth (28%), and over one-third noted all health/social issues as somewhat problematic. Nearly one-fifth of the foster parents identified lack of counseling and mental health services (17%) as the most challenging problem for OOH youth, and noted availability of health care services (30%) as somewhat problematic. Over one-third of DJS professionals identified availability of counseling and mental health services (35%) as the most challenging problem for OOH youth, and over half of DJS professionals noted availability of health education programs as somewhat problematic at (54%).

Figure 8 - Providers' overall perspectives of problematic health/social service issues

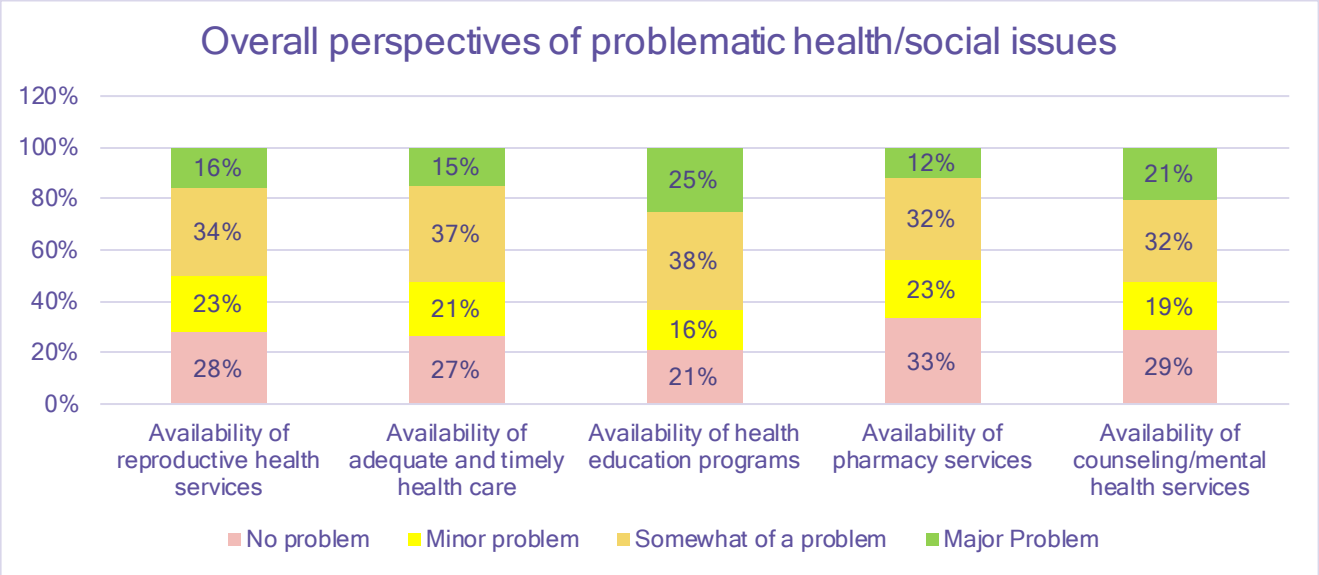


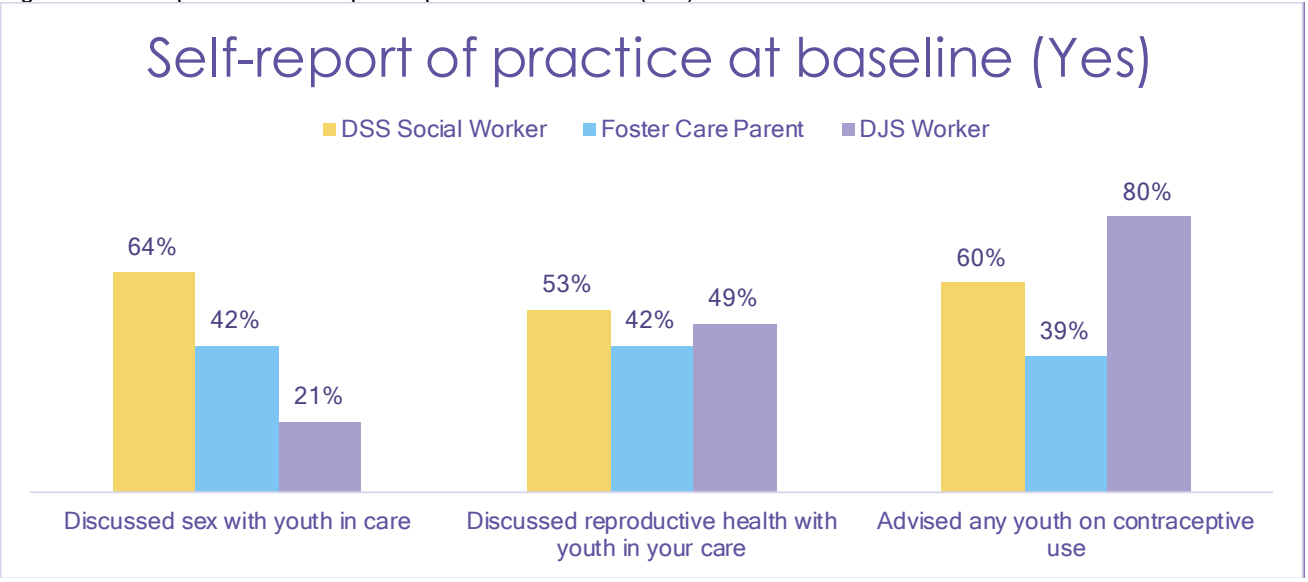
Table 4. Providers' perspective of problematic health/social issues

		Availability of reproductive health services	Availability of adequate and timely health care	Availability of health education programs	Availability of pharmacy services	Availability of counseling/mental health services
DSS	No problem	25%	20%	18%	28%	26%
	Minor Problem	25%	25%	16%	25%	23%
	Somewhat of a problem	34%	39%	37%	36%	33%
	Major Problem	16%	16%	28%	11%	18%
Foster Parents	No problem	43%	48%	37%	57%	47%
	Minor Problem	15%	17%	18%	20%	13%
	Somewhat of a problem	28%	25%	30%	13%	23%
	Major Problem	13%	10%	15%	10%	17%
DJS	No problem	14%	16%	8%	16%	14%
	Minor Problem	24%	14%	8%	19%	8%
	Somewhat of a problem	43%	49%	54%	49%	43%
	Major Problem	19%	22%	30%	16%	35%

Youth Providers Practice at Baseline

The baseline survey examined self-reported behaviors related to working with youth regarding sexuality and pregnancy prevention. Figure 9 highlights youth providers confirmation of engagement with OOH youth regarding sexuality and pregnancy prevention outlining three questions: *In the past three months, have you…discussed sex with any youth in your care; discussed reproductive health with any youth in your care; and advised any youth in your care on contraceptive use.* Findings suggest that over half of DSS professionals are consistently engaging youth regarding sexuality, reproductive health and pregnancy prevention (64%, 53% and 60% respectively). The data also notes that less than half of foster parents are actively engaging youth to discuss sex, reproductive health and contraceptive use (42%, 42%, and 39% respectively). Additionally, findings also suggest that approximately 80% of DJS professionals are consistently engaging youth by advising youth on contraceptive use. The goal of the evaluation was to access the comfortability of youth providers to answer youth questions about sexuality, reproductive health and contraceptive use, in their role as a resource to youth.

Figure 9 - Youth providers self-report of practice at baseline (Yes)



Youth Providers Knowledge (Baseline)

In addition, adult participants' (youth providers and foster parents) knowledge and attitudes were assessed on training related content and attitudes. Overall, youth providers had 67% of items correct across all items. Table 5 highlights knowledge and attitude items across each of the youth providers who participated in the research. DSS professionals' knowledge and

attitudes scores fared higher (71%) than the other youth providers. The knowledge assessment items align with goals of adult evaluation:

- Separate individual self/ values around sexuality from professional role as resource to youth
- Understand the basic effects of trauma on sexual development and utilize strategies to discuss sexuality with youth who experience trauma.
- Explain the current Maryland laws on adolescent access to sexual health care
- Answer youth questions about sexuality competently and comfortably.
- Wide array of sexuality referrals and resources to youth.

Table 5 - Percentage of correct responses to pre-test knowledge and attitudes items

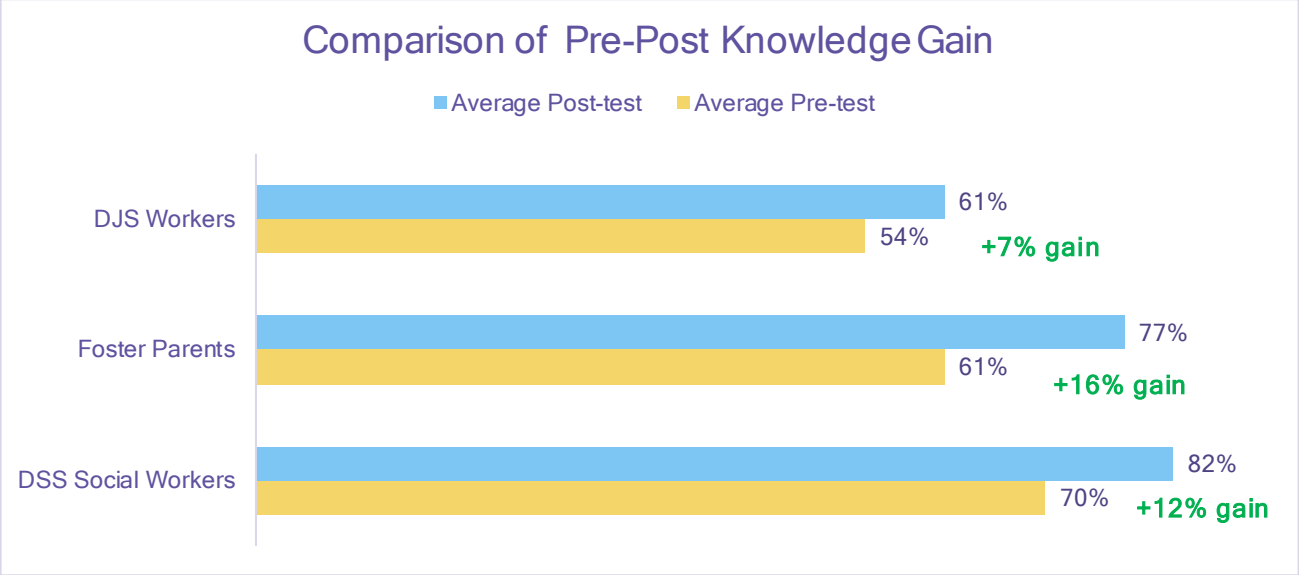
	% Overall Correct	% DSS Staff Correct	% Foster Parents Correct	% DJS Staff Correct
In Maryland, teens can get birth control confidentially and without parental involvement	**92%**	92%	98%	83%
When a youth you work with asks you personal questions, it is best to answer them directly.	**47%**	58%	28%	35%
You should avoid talking about sexual topics with youth who have experienced trauma.	**63%**	65%	78%	33%
Using hormonal birth control can make it difficult for a woman to get pregnant in the future	**62%**	70%	40%	34%
Many people do not have, or notice, symptoms when they have a STD.	**86%**	86%	83%	90%
How many teens report verbal, physical, emotional, or sexual abuse from a dating partner each year?	**48%**	50%	40%	50%
Average Score for Knowledge items:	**67%**	**71%**	**62%**	**54%**

Providers' knowledge of information related to Maryland law regarding access to birth control and symptoms of STDs were high at baseline across affinity groups (DSS- 92%, Foster Parent- 98%, and DJS- 83%). However, there were definite knowledge gaps related attitudes towards discussing sexual topics with youth and access to comfortability with answering youth directly, separating individual/self/ values around sexuality from their professional role as resource to youth. There was also a knowledge gap across affinity groups as it pertains to abuse (verbal, physical, emotional or sexual abuse).

Adult Providers Knowledge (Same Day Post-test)

After training, a post-assessment is administered to assess changes in knowledge and attitudes due to the training. Figure 10 highlights the average score gains for each affinity group. Findings suggest DJS professionals had the least change in knowledge and behaviors due to the training (+7% gain); while DSS professionals showed the greatest change in knowledge and behaviors due to the training (12% gain).

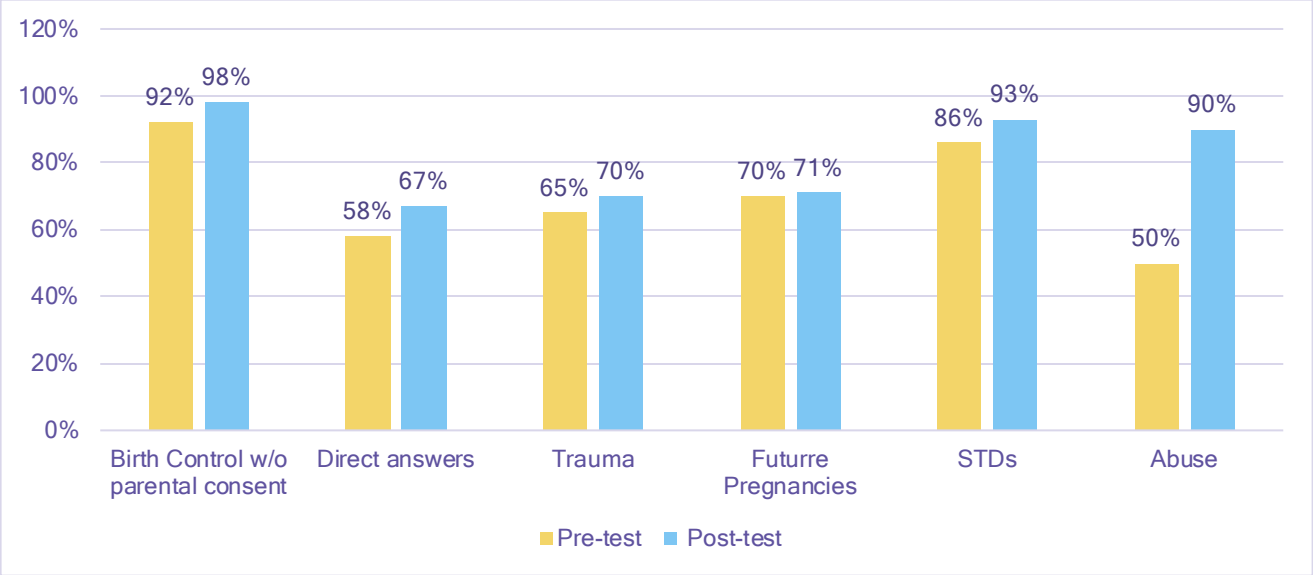
Figure 10 - Comparison of Average Pre-Post Knowledge Scores across adult provider groups



DSS Providers

DSS providers exhibited the greatest knowledge/attitude change across all items. Despite initial low pre-test scores, knowledge of abuse saw the greatest gains with the post-test administration (Figure 11).

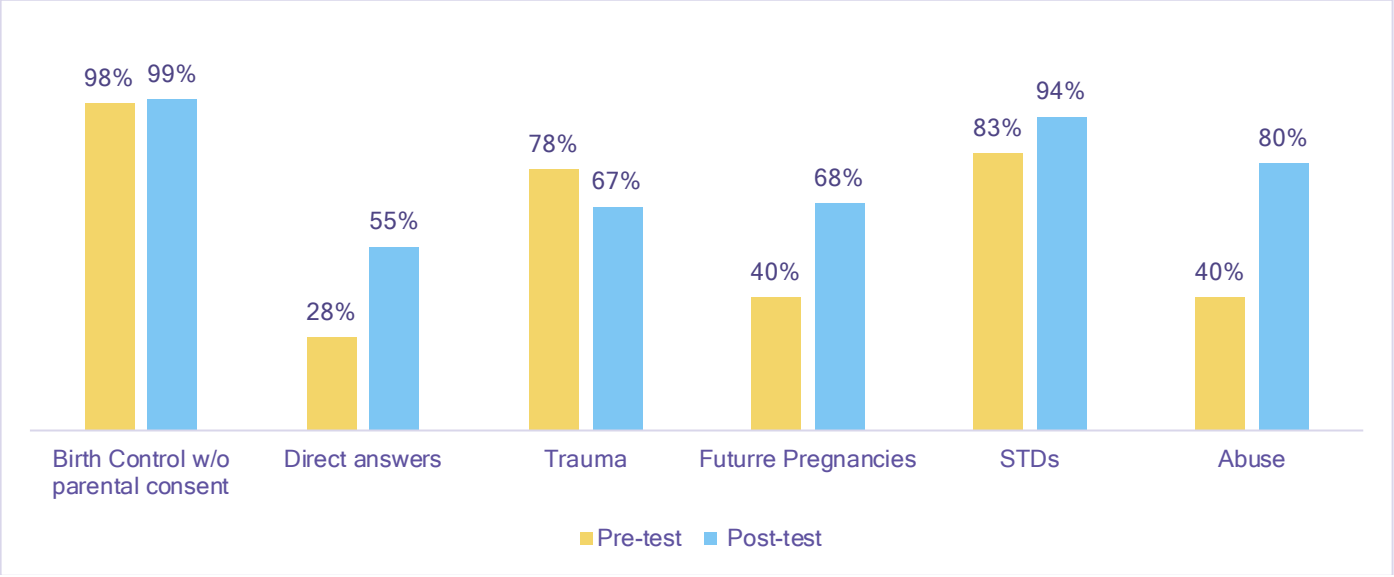
Figure 11 - DSS Providers Pre-Post Comparison



Foster Parents

Foster parents exhibited the greatest positive change in their attitudes about discussing personal questions with youth. However, there was a slight decrease in their knowledge about avoiding sexual topics with youth who have experienced trauma (Figure 12).

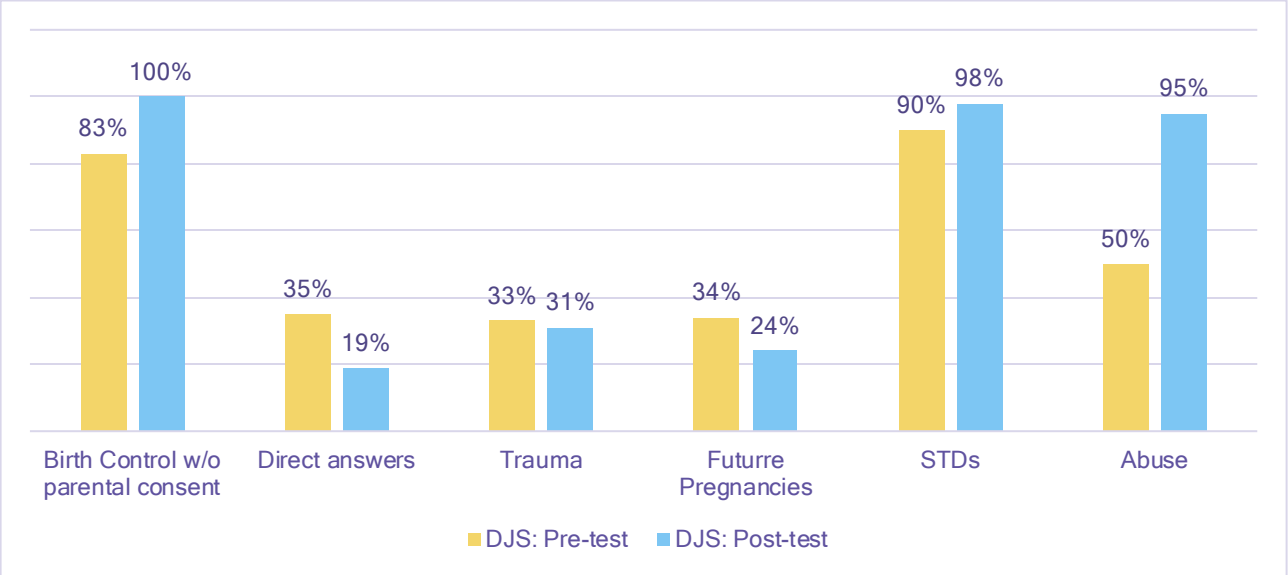
Figure 12 - Foster Parents Pre-Post Comparison



DJS Providers

DJS professionals exhibited gains regarding knowledge about birth control confidentiality, as well as knowledge with abuse. Findings indicate slight decreases from pre- post, for direct answers, trauma, and future pregnancies. (Figure 13).

Figure 13 - DJS Providers Pre-Post Comparison

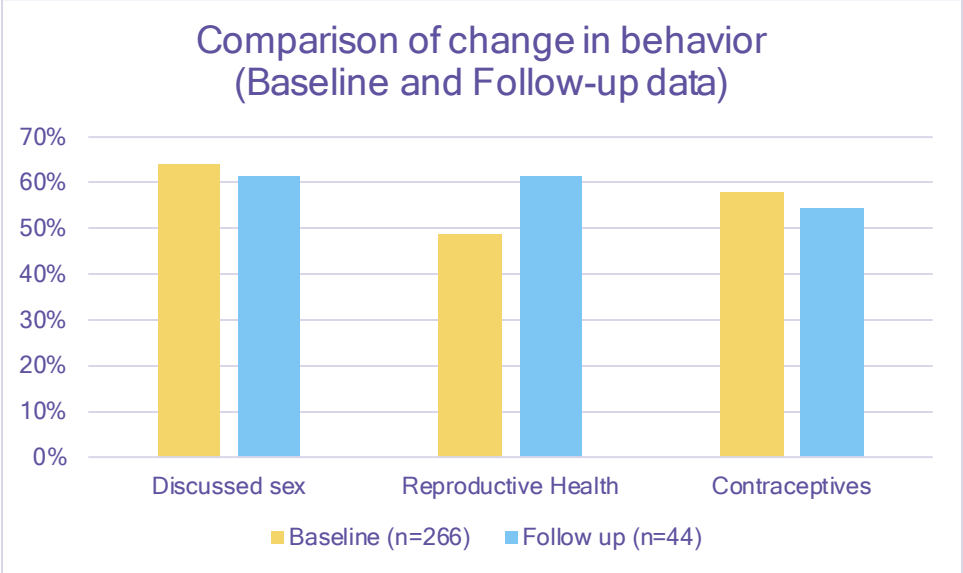


Long-Term Follow-up Survey

The original evaluation plan was to administer long-term follow-up surveys to all providers 6-months and 12-months post-training via email. The long-term survey instrument was tested with groups of providers trained in the first year of implementation (n=44). These tests show that the instrument is able to be administered using an online format.

In the follow-up survey, workers were more likely to have had conversations about reproductive health, but less likely to have had conversations about contraception or discussions about sex than in the three months prior to the baseline survey (Figure 14).

Figure 14 - Baseline and Follow-up data

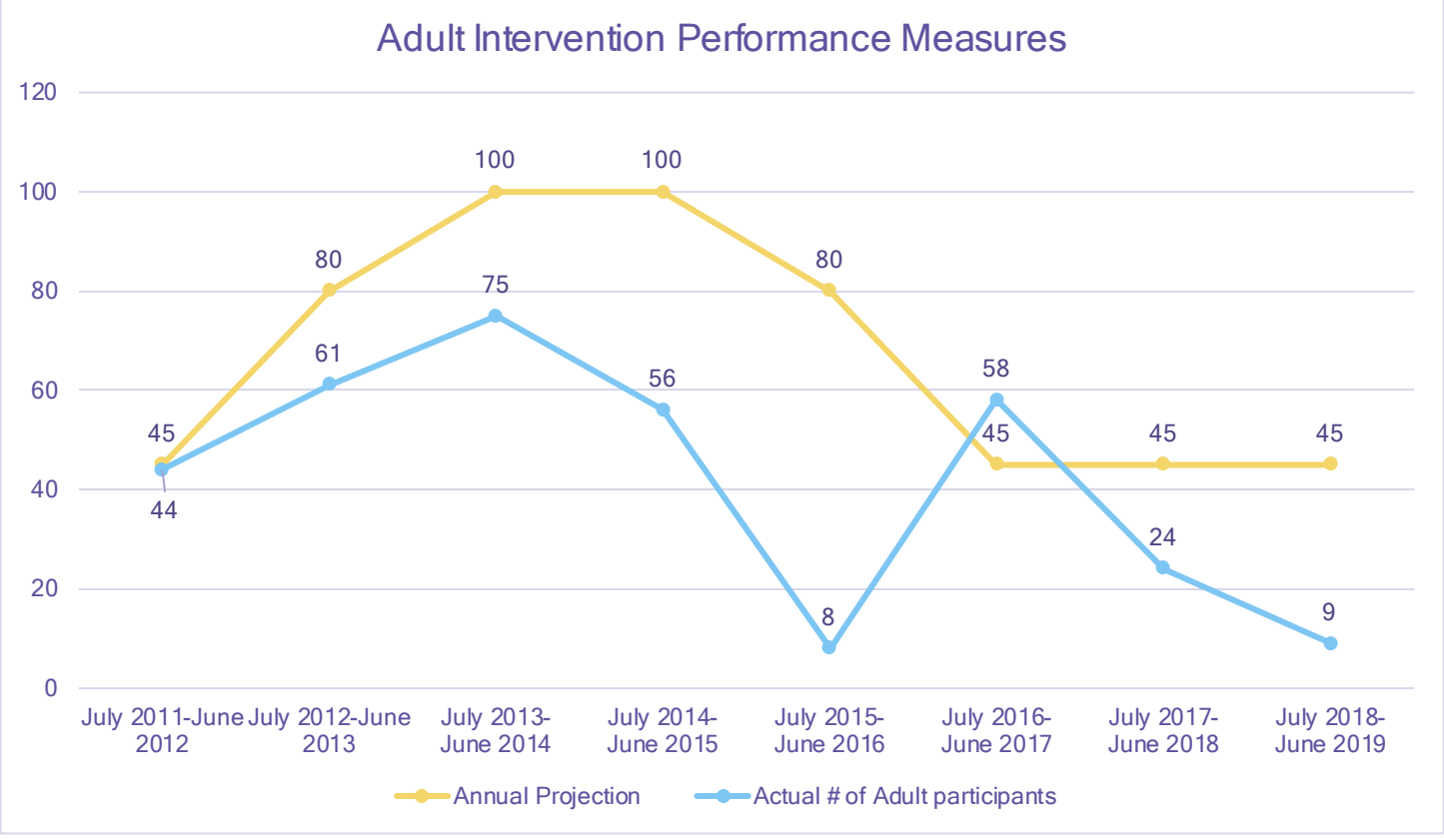


Although the online platform is feasible for long-term follow-up surveys of the adult participants, there were some challenges. Most of them were due to issues with email contact information for the providers. Specifically, DSS workers emails were migrated to a new system making contact difficult for those trained in the prior year(s); foster parents in both agencies rarely had emails and/or rarely checked their email. Due to these and issues with staff turnover, there was high attrition for long-term follow-up surveys. Future research to assess if knowledge is sustainable over time would provide greater insight into how this intervention impacts the practice of those working with out-of-home youth.

Performance Measures

Although overall performance of the initiative was considered, continued funding was also approved based on the number of youth providers recruited to participate in the initiative during each funded year. The annual projects ranged from 45- 100 adults participants annually. Figure 15 highlights the annual projections against the actual total of providers for each year of the adult intervention component. Over the life of the project, 65% of the targeted youth providers participated in this initiative.

*Figure 15. Adult intervention performance measures (2012- 2021)**



*Based on Quarterly reports

Youth Model: PREP- Power Through Choices & Making Proud Choices Evaluation

The Baltimore City Health Department began implementing the Power through Choices intervention in 2012, with training and strategic planning efforts focused on reaching youth in out-of-home care. Despite all of the efforts in place to recruit youth, securing targeted OOH youth to participate in evaluation posed a real challenge. Although 619 youth were recruited, only 64% participated in evaluation (completed baseline survey). There were 44 cycles of the intervention offered for consented youth ages 14-21 between 2012 and 2020 (n=422). Figure 16 is the participant flow chart showing the progression from consenting to survey completion. About sixty-three percent (62.56%) were from DSS and 37.44% were DJS youth. Baseline demographics of the youth are provided in Table 6. Figure 17 provides the gender breakdown of these youth by agency placement.

Figure 16 - Participant Flow Chart

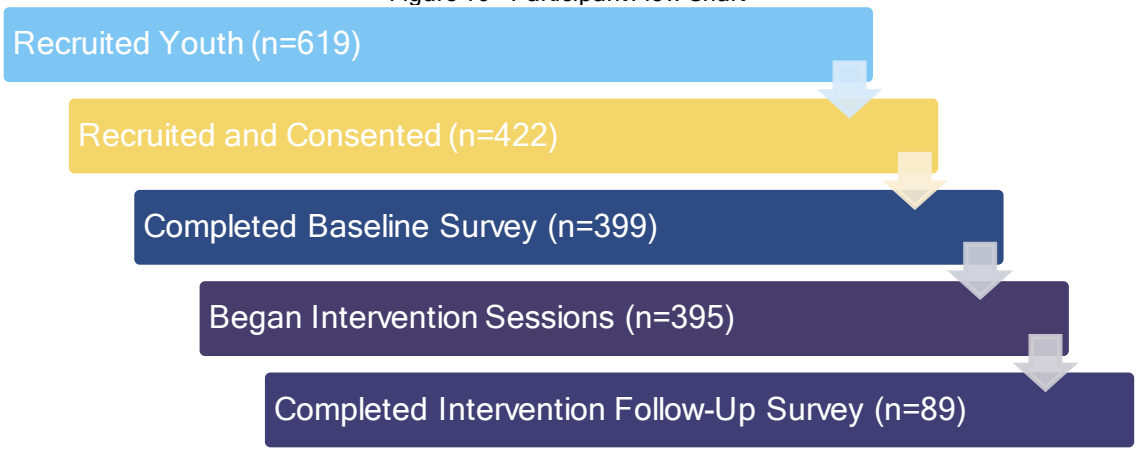
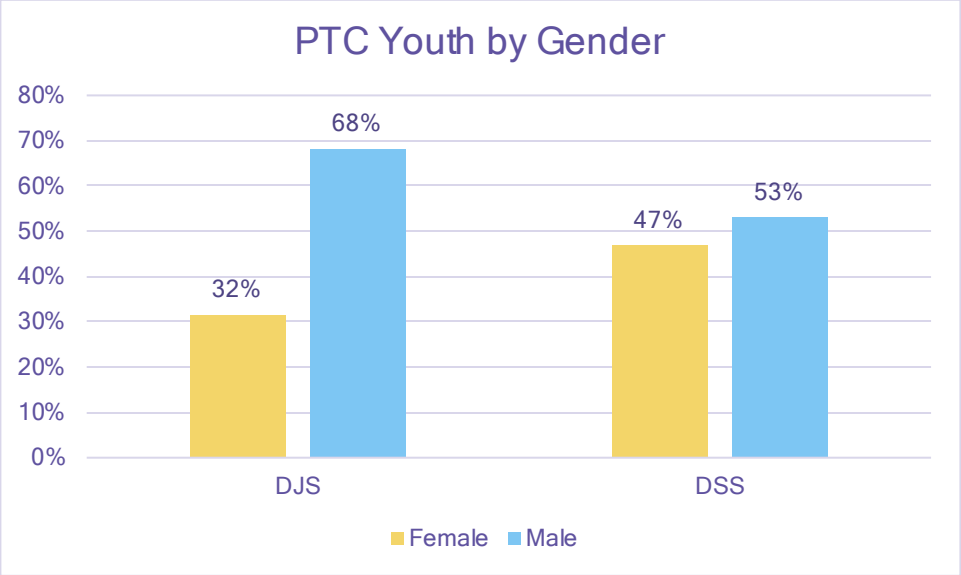


Table 6 - Youth Participant Demographics at Baseline

Baseline Characteristics	%
Gender	
Male	63.1
Female	36.9
Age: X (range)	17.37 years (13-24 years)
Race/Ethnicity[7]	
African American	77.7
Latinx	6.7
Other	22.2
System Involvement	
Child Welfare	62.6
Juvenile Justice	37.4

Figure 17 - Gender by Agency Placement



Baseline Factors

Prior to the intervention's implementation, a baseline survey (~30 minutes) was administered to youth who agree to participate in the evaluation. The pre-assessment collected demographic information, views/perceptions of healthy sexual relationships and development, as well as self-report of behaviors related to sexuality, sexual activity, STIs, drug and/or alcohol use, and attitudes about aggression/ violence as well as social supports (friends and relationships). The surveys were provided in two parts. Part A included questions asked of all youth about their knowledge, beliefs, and behaviors related to sexual reproductive health. The last question of Part A asked if they had ever had sex. Based on their responses to that question, they completed the second part B which had questions about sexual activity for those who had ever had sex; and, questions about intention to have sex for those who had not. Of the youth recruited and consented to participate, 399 completed part A surveys at baseline. There were 30 youth who did not complete key questions in part B (e.g. puberty, substance use, and/or aggressive behaviors). There were no significant differences between those who completed part B and those who did not. Demographics are provided for 399. The working analysis is restricted to those who completed parts A and B (n=369).

[7] Race/Ethnicity are not mutually exclusive. One could have selected a race and Latinx.

Table 7 - Ever Had Sex (Vaginal, Oral or Anal) By Gender

Gender - N (%)	No	Yes
Male - 188 (62.5)	44 (23.4)	144 (76.6)
Female - 113 (37.5)	27 (23.9)	86 (76.1)
Total	71 (23.6)	230 (76.4)

The majority of the youth who participated in the intervention (76.4%) were sexually active at baseline (Table 7). Early sexual debut was an issue with 84% of participants reporting that they had sex before the age of 16. The mean age at first sex was 13.4 (S.D. 2.5) years old (18% were under 11 years old). 13.2% reported that their sexual debut was not voluntary. 57.1% used some form of birth control the first time they had sexual intercourse. Of those who had used birth control at first sex, the majority used condoms (77.8%). More than 50% of the sample had a partner at least one year older than them at their sexual debut (32.2% one-two years older; 21.6% three or more years older). The mean number of sexual partners was 9.3 (SD 9.3).

Contraceptive use, specifically condom use, is promoted as effective for decreasing teen pregnancy and STDs. Of those who had sex, 98% of participants had had sex without a condom in the 3 months prior to baseline; 59% had had sex without any birth control. This puts these teens at high risk for not only teen pregnancy but also sexually transmitted infections. Looking at the teen pregnancy and parenting data more closely, 38.9% of the teens had either been pregnant or gotten someone pregnant at baseline.11% had received no sexual health education whatsoever; 26.5% had received comprehensive sexual health education[8]. More than 50% of the sexually active youth in this sample had spoken to a medical professional about sex, birth control and/or sexually transmitted infections (STIs). 58.5% had been tested for an STI and only 10% had been told they had one.

Protective and Risk Factors

Further examination of the characteristics of youth in this sample show that there are protective factors. A little over 79% of youth report that religion and spirituality are somewhat or very important in their lives. Roughly half of them also report that they have an adult in their life who they feel genuinely cares about them. Both of these factors have been shown to be beneficial as youth transition from out-of-home care into adulthood. Substance use and abuse

[8] Details about the type of sexual health education received and its impact on sexual reproductive health have been published in two journal articles.

behaviors were reported in this sample. More than a third (37.4%) reported no drug use. Whereas 55.2% reported using at least marijuana with 22.2% reporting the use of marijuana and two other illegal substances. Specifically, 44.4% reported having had alcohol; and, 51.9% reported having smoked cigarettes in their lifetime.

Gender Comparisons

Further analyses were conducted to identify if there were differences among the sexual health behaviors by gender for those who were found to be sexually active. Differences were found for age at first sex (i.e. sexual debut), partner age at first sex, contraception use at first sex, and number of lifetime partners (Table 8).

Table 8 - Sexual Reproductive Health Behaviors by Gender of those who have Ever Had Sex

	Males	Females	Total	Significance
Age at First Sex				
<11 years old	30 (25.6)	5 (7.3)	35 (18.8)	$X^2 = 11.17$ p = 0.004*
Early Adolescence (12-14 years old)	60 (51.3)	38 (55.1)	98 (52.7)	
Late Adolescence (15-21 years old)	27 (23.1)	26 (37.7)	53 (28.5)	
Partner Age at First Sex				
3+ years younger	2 (1.6)	4 (5.5)	6 (3.0)	$X^2 = 13.63$ p = 0.009*
1-2 years younger	14 (11.1)	6 (8.2)	20 (10.1)	
The same age as you	51 (40.5)	15 (20.6)	66 (33.2)	
1-2 years older	39 (30.9)	25 (34.3)	64 (32.2)	
3+ years older	20 (15.9)	23 (31.5)	43 (21.6)	
Any Contraception Use at First Sex				
No	61 (50.4)	20 (29.4)	81 (42.9)	$X^2 = 7.84$ p = 0.005*
Yes	60 (49.6)	48 (70.6)	108 (57.1)	
Condom Use at First Sex				
No	24 (27.9)	8 (13.79)	32 (22.22)	$X^2 = 3.99$ p = 0.05*
Yes	62 (72.1)	50 (86.2)	112 (77.8)	
Sex without Condom Use in the Past 3 Months				
No	5 (2.8)	2 (1.8)	7 (2.4)	$X^2 = 0.25$ p = 0.62
Yes	177 (97.3)	108 (98.2)	285 (97.6)	
Ever Pregnant/Got Someone Pregnant				
No	65 (63.1)	28 (51.9)	93 (59.2)	$X^2 = 1.86$ p = 0.17
Yes	38 (36.9)	26 (48.2)	64 (40.8)	
Lifetime Partners (Mean, S.D.)	8.98 (10.73)	3.97 (9.49)	9.3 (9.3)	p = 0.00*

For age at first sex, a quarter of the males' first experience was during childhood, i.e. under the age of 11. Roughly half of both males and females had their sexual debut during early

adolescence (51.3% of males; 55.1% of females). Female partners at first sex tended to be older than those of males. Specifically, 31.5% of females had a partner three or more years older than them compared to only 15.9% of the males. Females were also more likely to have used contraception at first sex at a statistically significant level (p=0.005). In looking at mean number of lifetime partners, males had significantly more partners than females in this sample (p=0.00).

Follow-Up Factors

Retention of youth over the course of the intervention was found to be challenging with this highly transient population. It was not unusual to consent a group of youth who were in different out-of-home placements by the end of the five weeks thereby being unable to attend all 10 sessions. The original plan was for youth to complete the follow-up survey, including satisfaction questions, at the end of the five weeks. Afterwards, youth were contacted at three months and nine months post-intervention in an attempt to conduct long-term follow-up surveys and follow them over a total of one year. 131 (35%) follow-up surveys were completed over the course of the pilot and implementation period. Some of these were surveys completed up to three times over one year by the same youth (n=42). 7 follow-up surveys were completed by youth with no baseline data to be matched. This left 82 youth with follow-up surveys completed at the final intervention session and matched to youth's baseline surveys. There is not enough power with this small sample size for longitudinal analyses. Future research should account for the transiency of this population and increase efforts at tracking youth who may move in and out of the jurisdiction.

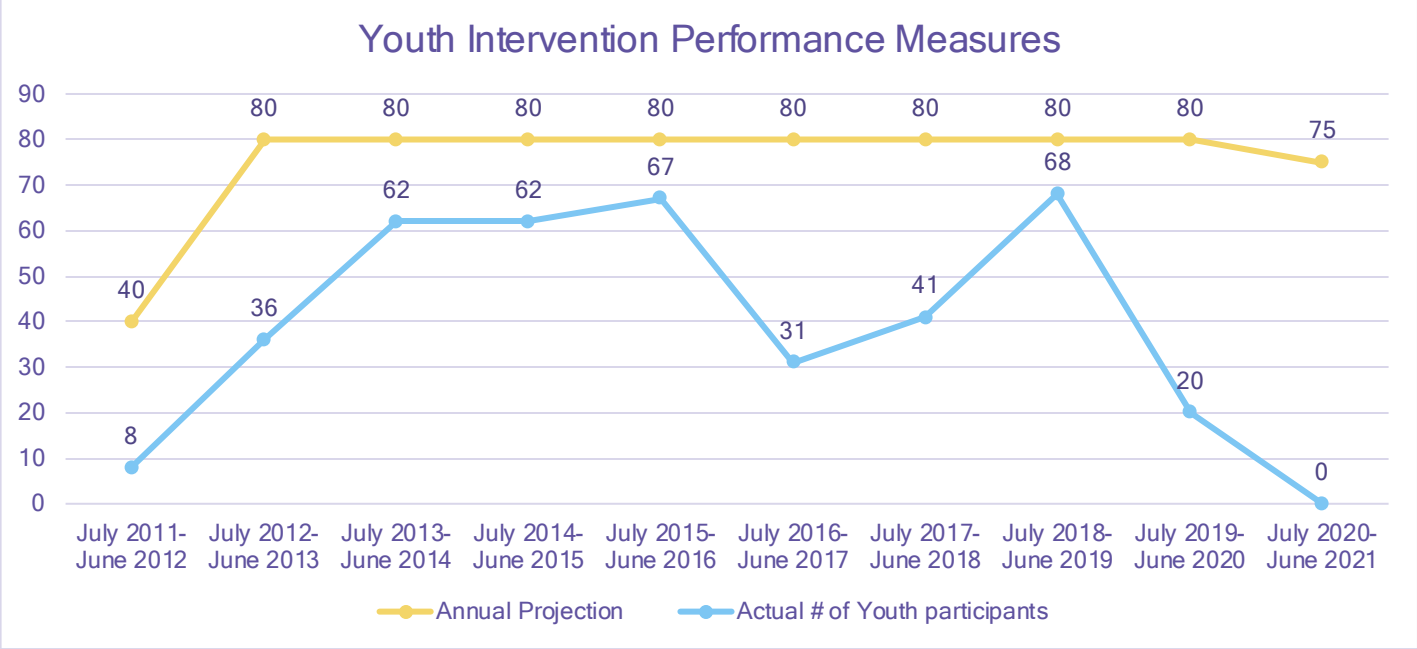
Comparison of group means was conducted for a few key variables to determine if there was a change in attitudes, beliefs, and behaviors from baseline to the follow-up post-intervention. These key variables were: attitudes about condoms, condom beliefs, talking with a doctor/nurse about sexual reproductive health and being tested for an STI. Beliefs about condoms changed significantly (p=0.0062) with more people believing in their effectiveness in preventing pregnancy and STIs. There was also a significant increase in the number of youth who went to a doctor/nurse to be tested for an STI (p=0.0016). In this short time span, no other changes were able to be compared.

Performance Measures

Although overall performance of the initiative was considered, continued funding was also approved based on the number of youth recruited to participate in the initiative during each funded year. The annual projections ranged from 40- 80 youth participants annually. The

figure below highlights the annual projects against the actual total of youth recruited for each year of the youth intervention component. Over the life of the project, 50% of the targeted youth participated in this initiative.

Figure 18. Youth Intervention Performance Measures (2012-2021)*



Based on quarterly reports data

Discussion & Conclusion

Quality of Delivery

Changes in intervention model

In the beginning of the project, *Power Through Choices* was an evidence-informed intervention that showed promise in having an impact on pregnancy prevention and reduction of STIs for youth in out-of-home care. There were issues with ongoing training and implementation, which made it difficult to expand. As such, *Making Proud Choices for Youth in Out-of-Home Care* was implemented in late 2016. *Making Proud Choices* had the evidence-based strengths of the original curriculum; and was adapted to address the unique and specific concerns of youth placed in out-of-home care. This included a focus on healthy relationships, a strengths-based approach, trauma-informed facilitation, and respect for diversity, including LGBTQ+ youth. In 2019, the Healthy Teen Network secured the rights to Power Through Choices, and our partners at the Baltimore City Health Department returned to the now an evidence-based intervention. Despite the change of intervention model, the final analyses did not involve comparisons of youth outcomes based on the curriculum employed due to limited power for such analyses.

Intervention exposure & Participant Engagement

Youth recruitment and retention issues

Throughout the project, youth recruitment and retention continued to be an issue. Collaborators and project partners pooled resources to increase participation by those recruited and increase awareness of the intervention. With the addition of DJS, recruitment improved. However, the addition of those adjudicated youth skewed the gender composition to be predominantly male. Recruitment was also expanded to include youth from another jurisdiction, Baltimore County. However due to the transient nature of youth in foster care, retention remained an issue making longitudinal analyses virtually impossible.

Dissemination Efforts

The University of Maryland, School of Social Work collaborated with the Baltimore City Health Department to develop various dissemination presentations throughout the 10-year project. A comprehensive list of the dissemination activities is provided below. At least one additional peer-reviewed publication is expected to be in press by late 2021 or early 2022.There was also a blog entry for Public Health Post published in 2019 that can be found at https://www.publichealthpost.org/research/why-foster-youth-need-sex-ed/.

Peer-reviewed articles:

1) Finigan-Carr, N., Craddock, J.B., Johnson, T. (2021). Predictions of condom use among system-involved youth: The importance of Sex Ed, Children and Youth Services Review, Vol. 127, ISSN 0190-7409, *https://doi.org/10.1016/j.childyouth.2021.106130*.
2) Harmon-Darrow, C., Burruss, K., Finigan-Carr, N. (2020). "We are kind of their parents" Child welfare workers' perspective on sexuality education for foster youth", Children and Youth Services Review, Vol 108, ISSN 0190-7409, https://doi.org/10.1016/j.childyouth.2019.104565.
3) Finigan-Carr, N., Steward, R., & Watson, C. (2018). Foster Youth Need Sex-Ed, Too!: Addressing the Sexual Risk Behaviors of System-Involved Youth, American Journal of Sexuality Education, 13:3, 310-323, DOI: 10.1080/15546128.2018.1456385
4) Herrman, JW., Finigan-Carr, NM., and Haigh, K. (2017). Intimate partner violence and pregnant and parenting teens in out-of-home care: Reflections on a data set and implications for intervention. Journal of Clinical Nursing, 26(15-16): 962-1067. doi: 10.1111/jocn.13420.

Conferences & Presentations

5) Finigan-Carr, NM., Rubenstein, A., Burruss, K. & Steward, R. Preparing Child Welfare Workers to Address the Needs of Sex Trafficked Youth. Virtual Presentation for the Society for Prevention Research Annual Conference. July 2020.

6) Finigan-Carr, Nadine, "We Need Sex Ed, Too!: Addressing the Sexual Risk Behaviors of System Involved Youth" (2020). National Youth At Risk Conference. Savannah, GA. https://digitalcommons.georgiasouthern.edu/nyar_savannah/2020/2020/101

7) Steward, R. & Johnson, T (2019). Operationalizing Recruitment Efforts for System Involved Youth and their Providers for Successful Outcomes: U Choose: PREP Program for Out-of-Home Youth. Poster Presentation at Health Teen Network Conference. New Orleans, LA.

8) Finigan-Carr, NM., Watson, C., & Steward, R. Pubertal Timing and the Sexual Reproductive Health Risk Behaviors of Youth in Out-Of-Home Care. Society for Social Work Research 23rd Annual Conference, San Francisco, CA. January 2019[9].

9) Finigan-Carr, NM., & Chilcoat, D. Sexuality Education Programs in Systems of Care, The Healthy Teen Network Annual Conference, San Diego, CA. October 2018.

10) Finigan-Carr, NM., Steward, R., & Watson, C. "Nobody cares if I use a Condom": Sexual Risk Behaviors of System Involved Youth, Society for Research on Adolescence Biennial Conference, Minneapolis, MN, April 2018. (Poster)

11) Finigan-Carr, NM. Prevention Research with Out of Home Youth - Foster Care and Juvenile Justice System Involved Youth, Special Interest Group Convener. Society for Prevention Research, Washington, DC, May 2017.

12) Finigan-Carr, NM. Baltimore City PREP: Comparison with FYSB PTC Implementation. Maryland Department of Health and Mental Hygiene Maternal and Child Health Department Briefing. Baltimore, MD. May 2017.

13) Finigan-Carr, NM. Baltimore City PREP: UCHOOSE data update. Baltimore City Health Department Adolescent Health Department Briefing. Baltimore, MD. March 2017.

14) Finigan-Carr, NM. (Invited Talk). Foster Youth Need Sex Ed, Too!: Sexual Risk Behaviors of System-Involved Youth. Johns Hopkins School of Public Health Urban Health Institute Researchers' Dinner. Baltimore, MD. January 2017.

[9] A manuscript on pubertal development will be submitted for publication in a peer-review journal in Fall 2021.

15) Finigan-Carr, NM. (Webinar). Foster Youth Need Sex Ed, Too!: Sexual Risk Behaviors of System-Involved Youth. Healthy Teen Network Members Only Webinar. Baltimore, MD. January 2017.

16) Finigan-Carr, NM (Invited Symposium Moderator). Adolescent Sexual Health and the Role for Intervention and Sexual Education. Society for Social Work Research Annual Meeting. New Orleans, LA. January 2017.

17) Finigan-Carr, NM. Prevention Research with Out of Home Youth – Foster Care and Juvenile Justice System Involved Youth. Special Interest Group Convener. Society for Prevention Research, San Francisco, CA, May 2016.

18) Finigan-Carr, NM. Issues of Pubertal Development and Sexual Reproductive Health among System Involved Youth. The Society for Research on Adolescence Annual Meeting. Baltimore, MD. April 2016.

19) Finigan-Carr, NM, Puberty and Sexual Reproductive Health Among Youth in Out-of-Home Care. The Healthy Teen Network Annual Conference, Baltimore, MD. October 2015.

20) Finigan-Carr, NM, Watson, C., Jones, P., Barth, R.P. Pubertal Development and Sexual Reproductive Health Among Youth in Out-of-Home Care: Implications for Policy and Practice. Society for Prevention Research, Washington, DC, May 2015.

21) Finigan-Carr, NM, Watson, C., Jones, P., & Barth, R.P. 'Nobody cares if I use a condom': Sexual Risk Behaviors of Foster Care Youth. The American Public Health Association Annual Meeting, New Orleans, LA, November 2014. (Poster)

22) Finigan-Carr, NM, Jones, P., & Watson, C. Addressing the Sexual Risk Behaviors of System Involved Youth. The Healthy Teen Network Annual Conference, Austin, TX. October 2014.

23) Finigan-Carr, NM & Eisenmann, A. Foster Youth Need Sex Ed, Too!: Addressing the Sexual Reproductive Health Needs of Youth in the Child Welfare System. Office of Adolescent Health's Teen Pregnancy Prevention Conference, Washington, DC, June 2014. (Poster)

24) Finigan-Carr, NM & Chilcoat, D. Why Foster Youth Need "Sex Ed": Social Work Practices Regarding Sexual Reproductive Health. Office of Adolescent Health's Teen Pregnancy Prevention Conference, Washington, DC, June 2014. (Poster)

25) Finigan-Carr, NM & Rose, T. Prevention Research with Out of Home Youth – Foster Care and Juvenile Justice System Involved Youth. Special Interest Group Presentation. Society for Prevention Research, Washington, DC, May 2014.

26) Finigan-Carr, NM. Why Foster Youth Need "Sex Ed": Social Work Practices Regarding Sexual Reproductive Health. The American Public Health Association Annual Meeting, Boston, MA, November 2013. (Poster)

27) Finigan-Carr, NM. Foster Youth Need Sex Ed, Too!: Prevention is Key. Adolescent Medicine Grand Rounds. Johns Hopkins University: School of Medicine – Department of General Pediatrics and Adolescent Medicine, Baltimore, MD, August 2013. (Invited Talk)

28) Finigan, NM. Foster Youth Need Sex Ed, Too!: Addressing the Sexual Reproductive Health Needs of Youth in the Child Welfare System. The Society for Prevention Research Annual Conference, San Francisco, CA, June 2013. (Poster)

29) Finigan, NM & Murray, KW. Foster Kids Need Sex Ed Too! The Healthy Teen Network Annual Conference, Minneapolis, MN, October 2012.

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APPENDIX

Glossary

ACA- Affordable Care Act

ACE- Adverse Childhood Experiences

ACYF- Administration for Children, Youth and Families under the Children's Bureau.

ARH- Adolescent Reproductive Health training. Training provided to youth providers (foster parents, DJS workers and DSS workers) to

BCHD- Baltimore City Health Department

CWA- Child Welfare Academy housed at the University of Maryland, School of Social Work

CEU- Continuing Education Units

CR- Continuing Review

CTRIC- Clinical and Translational Research Informatics Center at the University of Maryland School of Medicine

DSS- Department of Social Services. Collaborative Maryland state partner for the Baltimore Teen Pregnancy Prevention Initiative for OOH Youth. Workers received ARH trainings, and also provided referrals for youth participants.

DJS- Department of Juvenile Services. Collaborative Maryland state partner for the Baltimore Teen Pregnancy Prevention Initiative for OOH Youth. Workers received ARH trainings, and also provided referrals for youth participants.

EPH- Epidemiology and Public Health at the University of Maryland Baltimore

FYSB- Family and Youth Services Bureau

HRPO- Human Research Protections Office

IRB- Institutional Review Board

MDH- Maryland Department of Health

MOU- Memorandum of Understanding

MPC- Making Proud Choices- 2nd curriculum introduced under the Youth Intervention

OOH- Out-of Home care

PARI- Prevention of Adolescent Risks Initiative, an independent research team at the University of Maryland, School of Social Work

PREP- Personal Responsibility and Education Program

PTC- Power through Choices- Original curriculum utilized for youth intervention. Later re-introduced in 2019.

RNI– Reportable New Information

SSA- The State of Maryland's Department of Social Services Administration, also known as DHR/DHS.

STD- Sexually transmitted diseases

STI- Sexually transmitted infections

TOC- Theory of Change

TPP-Teen Pregnancy Program

UMB-University of Maryland, Baltimore

UMSSW- University of Maryland, School of Social Work