



Bureau for Children and Families

Safe at Home West Virginia Title IV-E Waiver Evaluation Plan

**Produced by:
Hornby Zeller Associates, Inc.**

Contacts:

**Dennis Zeller, Ph.D.
dzeller@hornbyzeller.com
518 273-1614**

**Helaine Hornby, M.A.
hhornby@hornbyzeller.com
207 773-9529**

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I. INTRODUCTION

A. Overall Purpose

Two problems facing the child welfare agency in West Virginia, the Bureau for Children and Families (BCF), are being addressed by the Title IV-E Waiver Demonstration. One is the overall number of children entering foster care and the second is the rate at which these children and youth are being placed in congregate care settings such as group homes and residential treatment centers. The foster care entry rate in West Virginia is 8.6 per 1,000 children, nearly three times the national entry rate of 3.3.¹ When it comes to congregate care placement, the hardest hit are the older youth, ages 12 to 17. West Virginia found, for example, that of the 1,488 children in care in fiscal year 2013, 71 percent were in congregate care.² Among the youth in the counties targeted initially by the Waiver Demonstration, the rate is as high as 76.5 percent in October, 2014.³

The overall strategy being used by BCF is to implement a behavioral health approach reflected in the Wraparound service model, both to prevent placement of the older youth and to shorten the length of stay for those already in care. In addition, BCF plans to bring youth who are placed out of state back to West Virginia. The Wraparound service model was selected because it has been demonstrated in the literature to be effective; it builds on the strengths of both the youth and the family members (the latter are often neglected when a youth is placed in congregate care) and it uses a flexible approach of formal and informal supports to target the particular needs of the youth and family members. In addition, West Virginia has a history with this model, having piloted it in its system of care program, Next Step Community Based Treatment in one region of the state with positive results.

To provide more thorough and consistent assessment BCF also plans to implement the Child and Adolescent Needs and Strengths Assessment (CANS) universally across child-serving systems in West Virginia at early points of the youth's involvement; develop thresholds to guide decision-making about levels of care; and educate system partners about decision-making based on assessed needs and strengths of children and families using common assessment language.

Safe at Home West Virginia, the Title IV-E Waiver Demonstration being conducted by the Bureau for Children and Families of the West Virginia Department of Health and Human Resources (DHHR), is designed to accomplish the following goals:

- increase the number of children staying in their home communities,
- reduce initial foster care entry rates,
- increase youth safety as demonstrated by decreased rates of maltreatment/repeat maltreatment,

¹ West Virginia Department of Health and Human Resources, Initial Design and Implementation Report, May, 2015, p.4.

² Ibid., p. 3.

³ Ibid., p. 5.

- improve well-being of children 12 to 17 years of age as demonstrated through educational achievement and increased numbers graduating high school,
- improve academic progress of children 12 to 17 years of age by keeping them in the same school,
- reduce the reliance on congregate care,
- decrease the length of stay in congregate care for children 12 to 17 years of age,
- improve family functioning to support reunification and
- reduce the number of children re-entering any form of foster care.

The evaluation of West Virginia's efforts will be carried out by Hornby Zeller Associates, Inc. (HZA), a national firm which is conducting Title IV-E Waiver evaluations in two other states and has prior experience evaluating BCF programs.

B. Research Questions

The research questions HZA will address can be summarized as follows, categorized by whether they relate to the process evaluation, outcome evaluation or cost analysis.

Process Evaluation

- How was the planning process conducted?
- How was the Waiver Demonstration organized including staff structure, funding, administrative oversight, and problem resolution?
- What number and types of staff were involved in implementation and how long were the implementation periods?
- How was the service delivery system, focusing on Wraparound, defined?
- What role did the courts play in the Waiver Demonstration? What is the relationship between BCF and the court system?
- What contextual factors may impact the Waiver results?
- To what degree are the Wraparound Demonstration programs and services implemented with fidelity to the national model?
- What barriers were encountered during implementation, the steps taken to address them and lessons learned?

Outcome Evaluation

- To what extent has the project reduced the number of youth placed in congregate care?
- To what extent has the project reduced the length of stay in congregate care and what impact did that have on the overall length of time in care for the foster care population?
- To what extent has the project increased the number of youth remaining in own communities?

- To what extent has the project reduced the rates of initial foster care entry?
- To what extent has the project reduced the number of youth re-entering any form of care?
- To what extent has the project improved youth safety/ maltreatment recidivism?
- To what extent has the project improved the well-being of youth?
- To what extent has the project improved the educational achievement of youth?
- To what extent has the project improved family functioning?

Cost Analysis

- Are the costs of providing the Waiver services to a youth and family less than those provided before the Waiver Demonstration?
- How does the Waiver Demonstration alter the use of state and federal funding sources including Titles IV-A, IV-B, IV-E, and XIX of the Social Security Act as well as state and local funds?
- What is the cost effectiveness of the Waiver Demonstration (cost of each successful outcome)?

By answering these questions the evaluation will determine the extent to which the intended outcomes are achieved, identify the population(s) for which the interventions have been most effective, determine the cost effectiveness of the approach and identify any barriers which may have limited the success of the project in achieving the desired outcomes.

II. EVALUATION DESIGN

The evaluation has three components: a process evaluation, an outcome evaluation and a cost study. The subsequent three sections detail the goals and methods within each of these components.

The fundamental thesis to be examined is how the availability of flexible Title IV-E funds enables BCF to implement high fidelity Wraparound services in order to reduce the number of youth ages 12 to 17 who reside in congregate care either because they are diverted from care in the first place or their time in care is reduced. BCF expects the reduced use of congregate care to result in improved outcomes such as fewer mental or behavioral health issues and increased educational achievement.

A. Logic Model

To illustrate the conceptual linkages between the Waiver Demonstration activities and the measurable short-term, intermediate and long-term outcomes, HZA has developed a logic model illustrating the theory of change. That model appears below.

Inputs	Interventions	Outputs	Outcome Linkages	Short-term Outcomes	Intermediate/ System Outcomes
<ul style="list-style-type: none"> Youth 12-17 in open cases Flexible funding under Title IV-E waiver CANS Assessment tool Caseworkers trained in Wraparound principles Multi-disciplinary team Courts Behavioral health coordinating agencies receiving service referrals 	<ul style="list-style-type: none"> CANS assessments for all youth Intensive Care Coordination model of Wraparound services Next Steps model of Wraparound services 	<ul style="list-style-type: none"> Number of youth⁴ assessed with CANS Number of youth and families engaged in Wraparound services while youth remains at home Number of youth and families engaged in Wraparound services while in non-congregate care out-of-home placement Number of youth and families engaged in Wraparound services while in congregate care 	<ul style="list-style-type: none"> Comprehensive assessments lead to service plans better aligned to the needs of the youth and their families Delivery of services tailored to the individual needs of the youth and families; results in stronger families and youth with fewer intensive needs 	<ul style="list-style-type: none"> More youth leaving congregate care Fewer youth in congregate care placements on any given day More youth return from out-of-state placements Fewer youth in out-of-state placements on any given day 	<ul style="list-style-type: none"> Fewer youth enter congregate care Average time spent in congregate care decreases More youth remain in their home communities Fewer youth enter foster care for the first time Fewer youth re-enter foster care after discharge Fewer youth experience a recurrence of maltreatment Fewer youth experience physical or mental/ behavioral issues More youth

⁴ All references to youth in the logic model refer to youth in open cases who are between 12 and 17.

Inputs	Interventions	Outputs	Outcome Linkages	Short-term Outcomes	Intermediate/ System Outcomes
					maintain or increase their academic performance <ul style="list-style-type: none"> • Improved family functioning

B. Research Methodology

HZA will employ a mixed method approach to answering the process, outcome and cost evaluation questions. It will include annual data collection and analysis using qualitative methods such as interviews and surveys and quantitative methods using extracts from West Virginia’s SACWIS, FACTS and the manual review of case records.

As detailed in the Outcome section below, HZA will employ a historical matched case design for the outcome analysis. Because BCF has multiple goals and objectives to assess, the matched groups will vary depending upon the question. For example, not all youth served by BCF have had a substantiated maltreatment report to start with; therefore the question about *repeat* maltreatment will use only those members of the sample and comparison group who had at least one confirmed maltreatment. That constraint would not apply to a question about length of time in care, which would apply only to youth who have ever been in care.

HZA will draw the historical comparison groups from federal fiscal years (FFY) 2011 through 2015. Matching will occur in semi-annual cohorts: HZA will select cases from FACTS which became eligible for inclusion in a specific goal/objective’s treatment group during a given half year, as well as the cases matched to that treatment group. The propensity score matching variables will include, at a minimum, along with demographic factors, reasons for removal, length of time since removal, number of removals and number of prior placements during this removal episode. As with all of the FACTS based analyses, all cases in the target population meeting the criterion for this measurement will be included.

The following table summarizes the research methodology by showing the data collection method, source, frequency and sample for all three aspects of the evaluation, process, outcome and cost.

Data Collection Method, Frequency and Source Overview			
Method	Source	Frequency	Sample
Document Review	BCF	Annually	All relevant e.g., policies, federal waiver documentation like IDIRs, organization charts, training manuals
Interviews with central and regional administrative staff	Central and regional office staff	Annually	15 central offices and regional administrative staff
Interviews with direct service staff	Regional office staff	Annually	25 ongoing and SSW III workers in implementation counties
Interviews with community members and providers	Community members and providers	Annually	22 community members and providers in implementation counties
Supervisor and worker survey	Regional office staff	Annually	All workers and supervisors in implementation counties
Interviews with judges	Judiciary (Circuit Courts)	Years one, three and five	At least 10 per cycle
Fidelity Assessment	BCF and Wraparound providers	Annually	40 per year
FACTS Analysis	DHHR	Annually	Treatment and comparison groups
Case Record Reviews	DHHR	Annually	Treatment and comparison groups 100 per year
Claims Analysis	DHHR	Annually	Treatment and comparison groups
Standardized Assessments Review	BCF (CANS)	Annually	Implementation counties
Analysis of Secondary Data	US Children's Bureau Report Data KidsCount American Community Survey	Annually	NA
Data Dashboard ⁵	FACTS data	Quarterly	Waiver participants

C. Target Population/Sampling Plan

The project will serve youth with a mental health diagnosis and involvement in two or more systems. The target population includes youth meeting the following criteria, making them eligible for Safe at Home West Virginia, who in fact are referred to Local Coordinating Agencies which are licensed behavioral health centers: youth ages 12 to 17 with a severe emotional or behavioral disturbance that impedes his or her daily functioning (DSM-V Axis I) and:

- currently resides in an out-of-state residential placement and cannot return successfully without extra support, linkage and services provided by Wraparound; or
- currently resides in an in-state residential placement and cannot be reunified successfully without extra support, linkage and services provided by Wraparound; or
- is at risk of out-of-state residential placement and utilization of Wraparound can safely prevent the placement. The operational definition of at risk for Safe at Home West Virginia being any youth ages 12 to 17 involved with the child welfare system and that BCF has an open case on; or

⁵ This is an HZA product rather than a data collection method.

- is at risk of in-state level one, two, or three or PRTF residential placement, and can be safely served at home by utilizing Wraparound.

In addition, the youth will come from the targeted West Virginia counties, depending on the project phase. In Phase 1 these include eight counties in Region II (Mason, Putnam, Kanawha, Cabell, Lincoln, Boone, Wayne and Logan) and three counties in the Eastern Panhandle (Berkeley, Jefferson, Morgan). West Virginia estimates that there are 283 youth residing in congregate care and 140 at risk of care who would meet the eligibility criteria in Phase I. In Phase II, starting July 1, 2016, West Virginia will serve five counties in Region I (Brooke, Hancock, Monongalia, Marion and Ohio); 13 counties in Region III (Barbour, Grant, Hardy, Hampshire, Harrison, Lewis, Mineral, Pendleton, Preston, Randolph, Taylor, Tucker and Upshur) and six counties in Region IV (Greenbrier, Mercer, Monroe, Nicholas, Pocahontas and Summers). During that phase West Virginia expect to have about 290 eligible youth in congregate care and 145 eligible youth at risk of placement. In the final phase, starting April 1, 2017, West Virginia will serve 14 counties in Region 1 (Braxton, Calhoun, Clay, Doddridge, Gilmer, Jackson, Marshall, Pleasants, Ritchie, Roane, Tyler, Wetzel, Wirt and Wood) and six counties in Region IV (Fayette, McDowell, Mingo, Raleigh, Webster, and Wyoming). There are 147 in youth in congregate care in those counties and about 70 eligible youth at risk of placement. Assuming that 75 percent of the eligible youth in both in-home and out-of-home care were served over the course of the Waiver Demonstration, then about 700 will be served.

HZA will employ a 100 percent sample of youth meeting the eligibility criteria for all outcome analyses which are conducted using FACTS data. For outcome analyses that are based on case reviews, 50 cases involving youth in the treatment group will be randomly selected, and 50 historical cases for the comparison group will be selected using propensity score matching.

III. PROCESS EVALUATION

A. Inputs, Interventions, Outputs

General Considerations

The following pages describe the approach HZA will take in conducting the process evaluation of West Virginia's Title IV-E Waiver. For several of the goals/objectives of the process evaluation HZA will perform a common set of activities. These are: interviews with central and regional DHHR administrative staff; interviews with direct services staff; interviews with community members and providers; and reviews of various types of documents and documentation. The discussion of each of the goals/objectives below will describe the content of each of these processes as it relates to that specific goal/objective. These basic activities will be repeated annually throughout the Waiver Demonstration period, with questions updated to be consistent with the stage of the Waiver.

Other goal/objectives require activities that are particular to that goal. These are: staff survey; Data Dashboard creation; fidelity assessment for Wraparound services; interviews with judges; and analysis of Children's Bureau Report Data, KidsCount and American Community Survey.

The way each of these activities will be applied for each of the goals/objectives of the demonstration is discussed below. The goal/objectives are drawn from the request for proposals issued by West Virginia to obtain an evaluation contractor.

Goal Specific Plans

Goal/Objective I: To assess the planning process for the Waiver Demonstration including whether any formal needs assessment, asset mapping, or assessment of community readiness was conducted.

The success of an initiative such as Safe at Home West Virginia depends in part on how well it was conceived, planned and disseminated to the people who need to implement it. The first goal/objective examines the planning process for the Title IV-E Waiver. Issues to be addressed include how the need for the proposed intervention was assessed and whether the assessment encompassed a formal process; whether the planning group took into account West Virginia's assets for conducting the initiative; and whether the readiness of community members was taken into account and how. Critical issues in planning a Waiver which will be included in the goal/objective include:⁶

1. estimating the size and characteristics of the Waiver population,

⁶ James Bell Associates, Evaluation Brief, Critical Issues in Evaluating Child Welfare Programs, September 2009.

2. determining what existing services address or complement the planned service and
3. determining if staff and providers are receptive and willing to implement the change.

HZA will conduct face-to-face interviews with central and regional office DHHR staff following an interview protocol developed to assess the planning process. HZA recognizes that the Waiver Demonstration heavily involves the community in general and the behavioral health system in particular in its implementation. The interviews will explore how the planning was conducted and who was involved at both the agency and community levels. A minimum of twelve interviews will be conducted among administrative staff. Because issues related to the full range of process goals/objectives will be addressed, the interviews will be expected to last from 45 to 60 minutes each. Some of the areas HZA will explore are: What was the impetus for pursuing a Title IV-E Waiver? How did the state arrive at the specific strategy of reducing congregate care? What types of data were used to make this determination? Was a formal needs assessment performed? What did it consist of? Did West Virginia engage in an asset mapping exercise? What did it consist of and what did it show? How was community readiness including provider readiness assessed? Who was involved, what processes were used and what did the agency conclude?

While visiting each region HZA will interview a small number of direct service staff, five or six per region, to determine whether and how front line staff were involved in the planning as well as whether and how the results of the planning and the implementation of the Waiver have been conveyed to the field.

In addition, the regional administrators will be asked to identify three to five providers in each region. HZA will interview representatives of each of these regions to obtain their perspectives on the degree to which service providers were involved in the planning and on the level of community readiness for the changes the demonstration project is intended to bring.

During the first set of interviews with central office staff they will be asked to produce documents that are relevant to the needs assessment, asset mapping and planning processes. Any other information about the Waiver such as assessment tools, policies and procedures will be requested as well.

Goal/Objective 2: To assess the organizational aspects of the Waiver Demonstration, such as staff structure, funding committed, administrative oversight, and problem resolution at various organization levels.

All of the processes discussed in relation to the first goal/objective will also be used to address how well and in what ways the organization was prepared to initiate the Waiver Demonstration. Examples of areas HZA will explore are:

1. whether Waiver activities are integrated or appended to existing services,
2. whether new staff were added to monitor the Waiver or whether responsibility was added to existing positions,
3. whether Waiver processes have been written or mapped for people to look at,
4. whether the chain of command for answering Waiver questions and resolving issues as they arise has been defined and
5. whether and how community partners have been engaged and apprised of the changes.

In the interview protocol developed for the face-to-face interviews with central and regional office staff, which are expected to last for 45 minutes encompassing Goal/objective 1 above and 2 to mitigate burden, questions will be included about the organizational and administrative aspects of Safe at Home West Virginia. These will include information on how the Waiver Demonstration is being managed at the state level, what staff are in charge, how their job duties have changed in light of the Waiver, how the central office is relating to the field in the management of the Waiver, what types of tools have been implemented to manage information about Waiver participants. These same types of questions will be modified for the regional administrative staff to see if their perceptions about roles and responsibilities for implementing Safe at Home West Virginia are consistent with those at the state office. They will be asked about questions and problems that may be arising during implementation and how they are resolved both at the regional and central office level.

Another area of administrative level inquiry involves the funding levels negotiated with ACF for the Waiver for the entire five years and how those levels compare to past Title IV-E spending in West Virginia. In preparation for the cost analysis HZA will interview fiscal staff to obtain budgets and determine how the accounting process is taking the Waiver Demonstration into consideration.

From the three to five service providers in each region, HZA will learn about how they perceive the structure, funding and administrative oversight of the project. If they are serving clients in the Waiver, do they have any special administrative or reporting requirements? Do they have an easy way to get issues resolved or problems addressed? Special attention will be paid to the Local Coordinating Agencies responsible for implementing the Wraparound model.

Among the documents requested during the interviews will be a Waiver organization chart, if it exists, or modifications that may have been made to existing charts. If there are new job descriptions, policies or procedures as well as contracts and funding documentation, they will be requested, as well.

Goal/Objective 3: To describe the number and type of staff involved in implementation, including the training they received, as well as their experience, education, and characteristics.

Two activities will occur in response to this objective. One will involve adding questions to the interviews with central and regional administrative staff. The second will be a supervisor and worker survey which will be administered on-line annually.

HZA recognizes that the direct implementation involves increased and consistent use of the CANS tool and referrals to the Local Coordinating Agencies to implement Wraparound services. The interview protocols discussed above with central and regional staff will include questions about the preparation of field staff to implement these aspects of Safe at Home West Virginia. For example, what information was provided to staff about the purpose and processes of the Waiver? What information was given about the intended target population, the functions of the Local Coordinating Agencies in delivering Wraparound services and the ongoing role of BCF staff for cases that are referred under the Waiver? What kinds of training, orientation or materials did they receive? What training and messages were provided about implementing CANS? Among those not directly implementing the Waiver, how will their jobs change, if at all? What types of interactions will BCF staff have with other formal and informal providers? How will their relationship with judges change, if at all? Also, how have the principles of Wraparound and particularly the role of family engagement been conveyed?

HZA will also conduct an on-line survey of supervisors and workers who are tasked with implementing Safe at Home West Virginia. In addition to providing information on each worker's involvement in the Waiver Demonstration and his or her experience, education and other characteristics and qualifications, the survey will address the same issues for this goal/objective as are addressed in the interviews, but every worker in a county implementing the Waiver services at the time of the survey (which will be repeated annually) will have an opportunity to express his or her opinions. In subsequent years information will be collected about the implementation of the CANS and how that has affected casework practice, relationships with the Local Coordinating Agencies and the overall perceived effectiveness of the initiative. Moreover, the survey will provide a quantitative version of the qualitative information obtained in the interviews.

Each staff person will be sent an email message requesting his or her participation in the survey, along with a link to the secure website hosting the survey instrument. HZA will send repeat emails to bolster the response rate if needed. The survey will consist largely of Likert scale questions, but it will also contain space for narrative comments and reactions staff might have to the demonstration project. Aside from providing information about the implementation of the project, therefore, the survey will give HZA a broader view of staff readiness to make the changes the Waiver requires if it is to be successful.

Goal/Objective 4: To describe the service delivery system, including procedures for determining eligibility, referring clients for services, the array of services available, the number of children/families served and the type and duration of services provided.

The fourth area to explore is the service delivery system including procedures for determining eligibility, referring clients for services, and the array of services available. Some of the standards articulated for this type of start-up are the following.⁷

1. Develop well-defined eligibility criteria for program participation. Make the criteria as discrete and specific as possible to minimize ambiguity.
2. Formulate clear intake, screening and assessment procedures.
3. Institute data collection procedures which make it easy to determine if the eligibility criteria are being followed.
4. For qualified children develop clear referral processes. This may include internal referrals as well as those to contracted providers.
5. Assess the service array to be sure it is sufficient to meet Safe at Home West Virginia objectives. BCF intends to provide a “full continuum of supports” to strengthen children and families. Presumably these include both concrete and therapeutic services.

Once the program is launched, HZA will collect information on the number of children/families served and the type and duration of services provided. Providing this information requires a different type of data collection and analysis than the first set of questions in this objective. The questions here are:

1. the number of children/families referred this period (e.g., year),
2. the number of children/families deemed eligible and accepted as Waiver families this period,
3. the types of services provided and
4. the number of children/families exiting services this period.

The first set of questions, all of which relate to the start-up, will be addressed through the central and regional administrative staff interviews discussed above, as well as the provider interviews, and through document reviews. From the work done to date we know that specific criteria have in fact been established but the process evaluation will help BCF to understand how well they are understood in the field and are being followed. People will be asked not only about the established criteria but, as regional staff and provider representatives, whether they are clear and easy to follow. In addition, HZA will use document reviews to determine how well the criteria are laid out and whether the intake and referral procedures are clear and precise. The evaluators will look at assessment tools, e.g., CANS, to determine whether any address either trauma history or trauma symptoms. HZA will also review the Local Coordinating Agency contracts to see if they are consistent with the West Virginia Safe at Home Plan. Also, is the service array comprehensive, recognizing that not all community services need to be available through purchase.

The second set of questions will be answered by FACTS analysis and displayed through a Data Dashboard that HZA will create so that others will have ready access to the information.

⁷ Op cit., page 3.

HZA proposes to publish and update the dashboard data at least semi-annually and perhaps quarterly, depending on how difficult it is to identify who is receiving the Waiver Demonstration services. Ideally, there will be some type of indicator in FACTS which designates children/families who are formally considered participants in Safe at Home West Virginia. Absent that, HZA will develop a process for collecting the identities of the families and children and will connect that information to the FACTS extracts, as described below in the discussion of the outcome evaluation.

The Data Dashboard will be an on-line tool which will provide administrators and those to whom they wish to grant access up-to-date information on the progress of the Waiver services. As with the Title IV-E Waiver evaluation HZA is conducting in Maine, the dashboard will show both descriptive statistics and, as the evaluation progresses, outputs and outcomes. Examples of the former are: number admitted to the Waiver, number referred for evidence based services by type of service; number who initiated services; number who completed services. Examples of the latter are: of the youth served in the home, how many remained in the home for the next six months; of those served where the child was removed, how many remained within their own communities. This information will be made available both on a statewide basis and for the BCF Regions where the Waiver is being implemented at that time.

Goal/Objective 5: To assess the role of the courts in the demonstration and the relationship between the child welfare agency and court system, including any efforts to jointly plan and implement the demonstration.

Judges are critical players in child welfare systems. HZA has observed in some states that judges can be, in essence, more cautious than staff, resisting efforts to keep youth in their own homes when their well-being may be in doubt, even when plans and provisions are made to ensure the child's safety. HZA has broad experience in many states interviewing judges and employs its senior staff to do so. Some of the issues that may be addressed with judges are the following.

1. What do you see as the greatest issues facing 12-17 year olds in the child welfare system?
2. BCF wishes to demonstrate through its Title IV-E Waiver its ability to serve more youth in their homes, to reduce the use of congregate care and to keep children in their own communities.
 - a. Are you aware of this initiative?
 - b. How, if at all, have you been asked to plan for or support it?
 - c. What do you see as BCF's advantages in trying to implement it?
 - d. What concerns would you have?
 - e. What can BCF do to help assure your support in its efforts?

In the first round of central office and regional office staff interviews discussed above, HZA will include a section on judges and their roles in planning and implementing Safe at Home West Virginia. During the annual follow-up interviews the staff will be asked

about the efforts made in the past year to involve the judges, the successes experienced and the additional work needed.

Goal/Objective 6: To describe contextual factors, such as the social, economic, and political forces that may have a bearing on the replicability of the intervention or influence the implementation or effectiveness of the demonstration.

No child welfare system acts in a vacuum. One of the largest social forces affecting child welfare is the rise of the drug epidemic, as an example. It was reported in 2013 that West Virginia has the highest drug overdose mortality rate in the United States, with 28.9 per 100,000 people suffering drug overdose fatalities.⁸ The number of drug overdose deaths in West Virginia, a majority of which are from prescription drugs, increased by 605 percent since 1999. Many attribute the rise in drug abuse to a critical economic factor, the decline in coal mining. McDowell County, while not included in the initial roll out of Safe at Home West Virginia, was once the top producer of coal in the nation and now leads the state in overdose deaths.⁹ Another example of the impact of the decline in the coal industry is the bankruptcy of Patriot Coal, the current owner of Camp Thomas E. Lightfoot in Summers County. While Summers is also not in one of the first counties to implement the Waiver, the Chapter 11 filing has caused Patriot Coal to close the camp, denying local children a place to go in the summer.¹⁰

Looking at the drug issue from the political perspective, West Virginia scored eight out of ten on the New Policy Report Card of Promising Strategies to Help Curb Prescription Drug Abuse. For example, it has instituted a prescription drug monitoring program, a doctor shopping law making it more difficult to get drugs from multiple sources, and Medicaid expansion which helps people access substance abuse treatment. Thus HZA will be able to document political efforts being taken to curb the drug epidemic.

While drugs are but one factor in society that may affect child abuse, there was an initial decline in confirmed abuse reports in West Virginia between 2009 and 2010 and a steady rise since then through 2013.¹¹ In addition, West Virginia's victim rate per thousand children exceeds national averages by 25 to 33 percent. The table below shows a one-year delay between the number of child victims per year and the number of children in foster care on October 1 in each of the years, also showing a consistent rise since 2011.¹²

West Virginia					
	2009	2010	2011	2012	2013
Child Victims by Year	4,978	3,961	4,000	4,591	4,695
Foster Care Point in Time		4,136	3,999	4,178	4,448

⁸ *Prescription Drug Abuse: Strategies to Stop the Epidemic.*

⁹ Johnson, Kimberly, March 26, 2014, accessed on-line

¹⁰ Hillary Hall, WOWK-TV report, May 18, 2015.

¹¹ Administration for Children and Families, Children's Bureau, Overview, Child Maltreatment Information

¹² Administration for Children and Families, Children's Bureau, Child Welfare Outcomes Report Data, Foster Care.

Another factor potentially impacting Safe at Home is other demonstrations or reforms affecting a comparable target audience. HZA has been the evaluator of Home Visitation in West Virginia during its infrastructure development phase with new federal monies granted under the Affordable Care Act. Home Visitation selected eight high risk counties in which to expand and strengthen home visiting services. Although Safe at Home selects a different demographic, namely, older children, while home visiting selects younger ones, there may be an impact from the expansion of community resources such as trauma-informed and Wraparound services that could meet the needs of families in both groups. Five of the eight counties initially targeted by Safe at Home West Virginia are being served in the home visiting expansion: Boone, Cabell, Lincoln, Mason and Wayne.

Several other projects will either support the demonstration or partner with it. One is the Building Bridges Initiative (BBI) which provides a framework for achieving positive outcomes for youth and families served in residential and community programs. For example, Readily at Hand, a Building Bridges Initiative, created an interactive checklist in 2011 for youth in transition. Stepping Stones, a West Virginia residential facility, led the design and implementation of this web-based checklist.

The State Court Improvement Program (CIP) is another example. Authorized in 1993 under the Omnibus Budget Reconciliation Act, federal funding has been disseminated since 1995 when the West Virginia Supreme Court initiated the Court Improvement Program and formed the CIP Oversight Board. The mission of the West Virginia Supreme Court's CIP is to create, identify, and promote initiatives that make the Court system more responsible and efficient in achieving safety, permanence, well-being, due process, and timely outcomes for children and families in child welfare system. BCF is an active member of the CIP workgroups, some of which focus on activities parallel to those of Safe at Home West Virginia: Multi-Disciplinary Treatment Teams, Youth Service Interventions, Cross Training, and Data Collection and Management.

A confounding effect of the change that Safe at Home may bring about is a reduction in the resources available to serve children. If West Virginia is successful in its reduction of congregate care, then congregate care providers will lose an important funding stream which may cause them to go out of business. Some national congregate care providers such as KVC, KidsPeace and Boystown have adapted to the new reality by developing in-home and family support programs. HZA will be monitoring the impact on providers in West Virginia with its change in focus.

Each year HZA will assess the social, economic and political forces that may be having an impact on the implementation of Safe at Home West Virginia. This will be accomplished through questions included in the interviews with center and regional administrative staff and in the interviews with providers, reviews of changes in state laws governing child welfare and juvenile services, analysis of Children's Bureau Report Data, analysis of KidsCount and American Community Survey data. The information

gleaned from these interviews will be included in the semi-annual reports as it becomes available.

As illustrated briefly here, HZA will access and analyze data from the Children's Bureau Report Data, KidsCount and the American Community Survey to determine the trends in child abuse reporting, the numbers of child victims and the impact on the foster care population. Of course detailed information on foster care entries and exits will also be reflected in the outcome goals/objectives below. In relation to this objective, however, HZA will be looking at broader trends and tying them to the overall discussion of community factors that may be influencing the results of Safe at Home West Virginia.

Goal/Objective 7: To assess the degree to which demonstration programs and services are implemented with fidelity to their intended service models.

For Safe at Home West Virginia the model to be assessed for fidelity is Wraparound services including Intensive Care Coordination and Next Steps. The former is less intensive for youth and their families to prevent out-of-home care.

Eligibility for Intensive Care Coordination are youth ages 12 to 17 who:

- Have a diagnosis of a severe emotional or behavioral disturbance that impedes his or her daily functioning (DSM-V Axis I);
- Are at-risk of a congregate care placement who are currently involved with two or more child-serving agencies (e.g. courts, child welfare, juvenile justice, etc.); or
- Can benefit from an intensive Wraparound approach as determined by a CANS assessment.

Next Steps is a Wraparound process that will be specifically designed to provide higher levels of intervention for youth who meet the following criteria:

- Has a diagnosis of a severe emotional or behavioral disturbance that impedes his or her daily functioning (DSM V Axis I);
- Can benefit from an intensive Wraparound approach as determined by a CANS assessment.
- Is currently placed in highly structured, congregate care outside of West Virginia and may need specific placement resources developed in-state for step-down, as part of initiating Wraparound; or
- Is currently placed in congregate care in-state and is at risk of being placed out-of-state. This could occur when there is a lack of appropriate or adequate in-state placement resources to meet the identified needs of the youth.

HZA will collaborate with the Division of Planning and Quality Improvement (DPQI) within BCF to conduct the fidelity assessment, following guidance from the Service/model Implementation Work Group.

The evaluators plan to consult the tools established by the Wraparound Evaluation and Research Team at the University of Washington which has created a fidelity index for this purpose. These tools include self-administered questionnaires such as the Wraparound Fidelity Index -- EZ (WFI-EZ) and interview protocols such as The Wraparound Fidelity Index 4.0 (WFI-4), a set of four interviews completed through brief, confidential telephone or face-to-face interviews with four types of respondents: caregivers, youth (11 years of age or older), Wraparound facilitators, and team members. In addition to questions on the Wraparound process, the WFI-EZ also contains questions about satisfaction and youth outcomes and includes a demographic form so that the evaluators can assess effectiveness of the model with different groups. The tools are organized by the four phases of the Wraparound process (Engagement and Team Preparation, Initial Planning, Implementation, and Transition). The WFI-4 is keyed to the ten principles of the Wraparound process (family voice and choice, team based, use of natural supports, collaboration, community-based, culturally competent, individualized, strengths-based, unconditional (and/or “persistent”) support, outcome-based), with 4 items dedicated to each principle.

HZA and DPQI will conduct fidelity assessments of 40 Wraparound cases per year with the assessment including the aforementioned surveys/interviews as well as a review of case records to gather more detailed information about the formal and informal services that were planned and delivered. HZA will select the cases for inclusion at random in proportion to the population served in each county by Safe at Home West Virginia. In developing the case record review instrument HZA will consult the 30-item Document Review Measure (DRM) that the Wraparound Evaluation and Research Team at the University of Washington has developed to assess Wraparound fidelity through review of documentation. The tool is used to rate conformance to the principles of Wraparound in materials such as the child and family’s Wraparound plan, crisis and safety plans, transition plan, and meeting notes and link to the ten principles. HZA will be responsible for analyzing the data both the questionnaires and the case review data and reporting on the results.

Goal/Objective 8: To describe the barriers encountered during implementation, the steps taken to address these barriers, and any lessons learned during implementation.

One purpose of this goal is to help the evaluators explain the results of the qualitative and quantitative data collection. Another is for the evaluators to gather multiple perspectives on barriers so that any missing connections among the various players in the Safe at Home West Virginia initiative can be bridged. HZA will explore both internal and external barriers, including those that are endemic and those that relate specifically to this initiative. The researchers will do so through the planned interviews and by participating in meetings of the team responsible for the Waiver at the state level.

HZA will include in its annual interview protocols for both administrators and service providers questions about any barriers encountered during implementation, the steps taken to address these barriers, and lessons the individual believes the organization may have learned during implementation. In addition, HZA staff will participate in team meetings held by BCF management to organize, implement and monitor Safe at Home West Virginia. At these meetings issues will almost certainly be raised about barriers to implementation and how they will be addressed. HZA will record this information and review meeting minutes to capture information for the semi-annual reports.

The following table summarizes the Process Evaluation information just presented, showing the research question associated with each goal/objective, the topics or measures that will be assessed the level of analysis and data collection method.

Process Evaluation			
Research Question	Topics, Measures	Analysis Level	Collection Method
How was the planning process conducted?	Steps taken such as: <ul style="list-style-type: none"> ▪ needs assessments ▪ asset mapping ▪ community readiness assessment ▪ breadth of community involvement 	State and Regional	Document Review Interviews with central and regional administrative staff Interviews with direct services staff Interviews with community members and providers
How was the demonstration organized including staff structure, funding, administrative oversight and problem resolution?	<ul style="list-style-type: none"> ▪ Organizational changes ▪ Staffing structures ▪ Policy changes ▪ Administrative oversight ▪ Structures to solve problems ▪ Chain of command ▪ Involvement of community partners 	State and Regional	Interviews with central and regional administrative staff Interviews with community members and providers Document Review
What number and type of staff were involved in implementation and how long were the implementation periods?	<ul style="list-style-type: none"> ▪ Staffing structure ▪ Education requirements ▪ Experience and training ▪ Internal vs external staff ▪ Implementation periods 	State and Regional	Interviews with central and regional administrative staff Supervisor and worker survey
How was the service delivery system for the Waiver defined?	<ul style="list-style-type: none"> ▪ Procedures for determining eligibility ▪ Intake, screening and assessment procedures ▪ Referral procedures ▪ Array of services available ▪ Number of children/families referred, accepted and served ▪ Type and duration of services provided 	State and Regional	Interviews with central and regional administrative staff Interviews with community members and providers Document Review FACTS analysis Data Dashboard
What role did the courts play in the demonstration; what is	<ul style="list-style-type: none"> ▪ Awareness of Waiver ▪ Involvement in planning 	State and Regional	Interviews with central and regional administrative staff

Process Evaluation			
Research Question	Topics, Measures	Analysis Level	Collection Method
the relationship between BCF and the court system?	<ul style="list-style-type: none"> ▪ Agreement with Waiver concepts ▪ Joint implementation efforts 		Interviews with judges
What contextual factors may impact the Waiver results?	<ul style="list-style-type: none"> ▪ Social factors ▪ Economic factors ▪ Political factors ▪ Other demonstration projects ▪ Other reforms 	State and Regional	Interviews with central and regional administrative staff Interviews with community members and providers Analysis of Children's Bureau Report Data, KidsCount, and American Community Survey
To what degree are the demonstration programs and services implemented with fidelity to their intended models?	Assessment of four Wraparound phases: <ul style="list-style-type: none"> ▪ Engagement and team preparation ▪ Initial planning ▪ Implementation ▪ Transition 	Regional	Wraparound Fidelity Assessment (4 sets of interviews) Case reading
What barriers were encountered during implementation, the steps taken to address them and any lessons learned?	Barriers to implementation e.g., <ul style="list-style-type: none"> ▪ Knowledge of initiative ▪ Specificity of eligibility and referral processes ▪ Willingness of families and youth to participate ▪ Availability and capacity of providers ▪ Availability of service array 	State and Regional	Interviews with central and regional administrative staff Interviews with community members and providers Participation in team meetings

B. Fidelity Assessment

Please see Goal/Objective 7 above: To assess the degree to which demonstration programs and services are implemented with fidelity to their intended service models for an explanation of how the fidelity assessment will be conducted.

C. Implementation Science/Developmental Evaluation

Implementation Science

The conceptual framework for Implementation Science¹³ encompasses three aspects of implementation: 1) changes in adult professional behavior (knowledge and skills of practitioners and other staff); 2) changes in organizational structures and cultures, both formal and informal; and 3) changes in relationship to consumers, stakeholders and system partners. The Implementation Science literature reflects five stages of implementation: 1) Exploration and Adoption; 2) Program Installation; 3) Full Operation;

¹³ Fixsen, D. L., Naoom, S.F., Blasé, K.A., Friedman R.M. and Wallace, F. (2005) Implementation Research: A Synthesis of the Literature, University of South Florida, Tampa, Florida.

4) Innovation and 5) Sustainability. The research questions above and the methodologies laid out to answer them in essence address these aspects of Implementation Science with the possible exception of innovation and sustainability which can be added to the interview protocols in the last two years of the evaluation. In writing up the annual reports which address the process evaluation questions, HZA can reference the aspects and stages of Implementation Science, using it as a framework for interpreting the results.

Developmental Evaluation

HZA uses an “action research model”¹⁴ to promote program improvement even as the experiment is in progress. That means HZA feeds the information back to key decision makers in the State at critical junctures and explores with them the implications for program redesign and implementation. The various cohorts used for sample selection then provide a basis for comparing results at different points in time, with the results indicating whether improvements did in fact occur during the course of the project.

As data about the process are collected and the research questions answered, HZA will compare those results to the results collected from the outcome evaluation at the same time. The comparison will be used to inform BCF of the degree to which the outcomes are being achieved and the processes are being implemented as planned. HZA will make interim recommendations, as needed.

D. Data Sources and Collection Procedures

The following table summarizes data sources and collection procedures as well as frequency of data collection and the source or sample for each type of data. Each of the data sources and collection Procedures is described below.

Data Collection Method, Frequency and Source Overview			
Method	Source	Frequency	Sample
Document Review	BCF	Annually	All relevant e.g., policies, federal waiver documentation like IDIRs, organization charts, training manuals
Interviews with central and regional administrative staff	Central and regional office staff	Annually	Implementation counties
Interviews with direct service staff	Regional office staff	Annually	Implementation counties
Interviews with community members and providers	Community members and providers	Annually	Implementation counties
Supervisor and worker survey	Regional office staff	Annually	Implementation counties
Interviews with judges	Judiciary (Circuit Courts)	Years one, three and five	At least 8 per cycle
Fidelity Assessment	BCF and Wraparound providers	Annually	40 cases per year (in addition to the 100 case record reviews referenced above); both record reviews and

¹⁴ Miles, M.B. and Huberman, A.M. (1994). *Qualitative data analysis: an expanded sourcebook*. Thousand Oaks, CA: Sage.

Data Collection Method, Frequency and Source Overview			
Method	Source	Frequency	Sample
			interviews
FACTS Analysis	DHHR	Annually	Treatment and comparison groups
Case Record Reviews	DHHR	Annually	Treatment and comparison groups 100 per year
Claims Analysis	DHHR	Annually	Treatment and comparison groups
Standardized Assessments Review	BCF (CANS)	Annually	Implementation counties
Analysis of Secondary Data	US Children's Bureau Report Data KidsCount American Community Survey	Annually	NA
Data Dashboard ¹⁵	FACTS data	Quarterly	Waiver participants

Document Review

HZA staff will gather, read and analyze all relevant documents relating to the design and implementation of Safe at Home West Virginia. This includes, but is not limited to, laws, regulations and policies pertaining to BCF; federal waiver documentation such as applications, federal questions and responses and IDIRs; meeting minutes, needs assessments and planning documents; information relating to staffing such as organizational charts, job descriptions, head counts, case counts and training curricula; documents relating to the casework process under the waiver; and provider contracts relating to Wraparound services. The information will be used to create responses to the process questions that cite the need for document reviews.

Interviews with central and regional administrative staff

These will include members of the DHHR Safe at Home West Virginia Oversight Team (multi-disciplinary, multi-agency); members of the BCF Home Team; members of the Practice Development Work Group; members of the Communication and Training Work Group; members of the Fiscal Accounting and Reporting Work Group, members of the IV-E Revitalization Work Group, and the Regional Directors and Community Services Manager if not already covered. Face-to-face interviews will be conducted initially while face-to-face and telephone interviews will be administered after the first year. They are expected to last 30 to 60 minutes using an interview protocol with open-ended questions.

Interviews with direct service staff

These will include caseworkers in the regional offices. All regions will be sampled to determine the spillover effect, if any, of the project demonstration in regions not slated initially for implementation. Face-to-face interviews will be conducted initially while face-to-face and telephone interviews will be administered after the first year. They are expected to last 30 to 60 minutes using an interview protocol with open-ended questions.

¹⁵ This is an HZA product rather than a data collection method.

Interviews with community members and providers

These will include members of the Sub Group-Service Implementation. Represented are licensed behavioral health, residential and specialized foster care partners. It will include Sub Group Wraparound Design, Supports and Services which includes both BCF and community staff such as representatives of Stepping Stones, Crittenton Services, Necco and Burlington United Methodist Family Services; and other partners such as Marshall University. Face-to-face interviews will be conducted initially while face-to-face and telephone interviews will be administered after the first year. They are expected to last 30 to 60 minutes using an interview protocol with open-ended questions.

Interviews with judges

In West Virginia seventy circuit courts throughout the state hear child abuse and neglect, guardianship, delinquency, status offense (except truancy) and adoption cases. HZA will attempt to interview eight judges serving the eleven counties in which the Waiver has been initiated at the time of each interview cycle, with three cycles of interviews, one in the first year, one in the third year and one in the fifth year. HZA hopes to work with BCF and staff from the Administrative Office of the Courts at the state level to obtain clearance for the interviews and then to work with local court staff to set them up at the judge's convenience. Generally face-to-face interviews will be conducted although circumstances may necessitate some telephone interviews. They are expected to last 30 minutes using an interview protocol with open-ended questions.

Supervisor and worker survey

This is an on-line staff survey that will be administered through an email link. It will address questions about the staff's involvement in the implementation of Safe at Home West Virginia; the adequacy of training they received; their engagement with Wraparound service providers; their engagement with judges; their perceptions of the quality and effectiveness of services and what can be done to enhance them.

FACTS analysis

From the data extracts derived from FACTS for the Outcome Evaluation, HZA will generate descriptive statistics for the Process Evaluation. For example, the reports will include the numbers of families and youth served by region and the demographic characteristics of participants.

Secondary data collection and analysis

In order to respond to one of the process questions, what contextual factors may influence the Waiver's results, HZA will consult secondary data sources. These will

include Children's Bureau Report Data, KidsCount, and American Community Survey data. All of these can be accessed on-line.

Fidelity assessment

This will include interviews with the four types of respondents: caregivers, youth, Wraparound facilitators and team members for a total of 160 interviews representing 40 cases. Data will be summarized and scores derived using guidance from the University of Washington. In addition, 40 case records will be reviewed each year to collect more detail on services that were delivered. This will be in addition to the 100 records per year reviewed for the outcome measurement.

Data Dashboard

This is something that HZA will create to summarize the demographic information about families and youth served, displayed both by region and state, and eventually outcomes. It is a web-based tool that staff and community members can access to track the progress of Safe at Home West Virginia.

E. Data Analysis

For the process evaluation, three types of analysis will be used. A description of each is provided below.

Content analysis

There are at least three approaches to content analysis: conventional, directed or summative, all designed to interpret meaning from the content of text data.¹⁶ The major differences among the approaches are coding schemes, origins of codes, and threats to trustworthiness. This project will employ conventional content analysis whereby coding categories are derived directly from the text data. Content analysis will be used to analyze the fixed, open-ended questions in interviews and the open-ended questions on the staff surveys. HZA will report not just on the themes that emerge but also on the prevalence and frequency among interview subjects. Content analysis also will be used to assess the documents that are developed such as policy changes, training curricula and performance based contracts.

Descriptive statistics

Most of the statistical information required for the process evaluation will relate to the outputs and will consist of simple frequencies. For those items which are available from coded fields in FACTS, these generally will be counts of clients and percentages of the larger population when the latter are relevant.

¹⁶ Hsieh, H.F. and Shannon, S.E. (2005). Three Approaches to Qualitative Content Analysis. *Qualitative Health Research*, 15(9), 1277-1288.

Pre-post comparisons

The pre-post comparisons will use the information from the other sources to measure the extent to which changes in the inputs, the interventions and the outputs occur over time. The information derived from the FACTS extracts will be analyzed semi-annually, while information from the other sources will compare entire years one to another.

IV. OUTCOME EVALUATION

A. Outcomes/Outcome Measures

HZA's approach to the outcome evaluation is organized around the project goals/objectives related to outcomes. While the overall target population consists of youth 12 to 17 in open child welfare cases, the goals/objectives of the project are defined so differently that each one requires its own treatment group and, therefore, also its own comparison group. In some instances, this also requires different statistical tests than those to be employed for the majority of the goals/objectives.

Goal/Objective 10: Reduce number of youth placed in congregate care.

For goal/objective 10 dealing with the number of youth placed in congregate care, three counts will be produced for both the common sense comparison and the matched comparison. HZA will examine the number of unduplicated youth entering congregate care during the year, the number of entries into congregate care (duplicated youth counts) during the year and the average number in congregate care on a given day. For the matched comparison, the waiver treatment group will consist of all youth 12 to 17 with any involvement with the child welfare system on any day during the year (or longer period when the 10th quarter and final reports are submitted) who have been assessed for Wraparound services and these will be matched to youth from the historical period on the basis of demographics, living arrangement (in care or out of care), time since removal, reason for removal and number of placements since removal.

The first two of the measures, the entries into congregate care, will be adjusted for the number of service days during which the youth might have entered congregate care, similar to the calculations for some of the new statewide indicators in the federal Child and Family Services Review (CFSR). This will produce two rates: 1) the number of unduplicated youth (in each group) entering congregate care divided by the number of days during the year in which the youth could have done so for the first time (the number of days the youth are in contact with the child welfare system prior to any entry into congregate care); and 2) the number of entries into congregate care divided by the number of days during the year in which the youth could have done so (the number of days youth were in contact with the child welfare system without being in congregate care). From a statistical point of view the results of each of these calculations is the mean for the group, and therefore the significance of the relationship will be examined through a t-test. The basic outcome measurement for the first of these indicators will include all youth who enter congregate care for the first time during the year, but separate analyses will be conducted to distinguish between those who are entering for the first time ever and those for whom the first congregate care entry during the year is a subsequent entry.

Once the basic numbers are generated and the statistical significance calculated, HZA will analyze the data further to show which youth are more likely to enter or be in congregate care and what types of congregate care they are in. Even though the

waiver and comparison groups will be matched, the youth who enter congregate care during each period may differ, and that will shed light on which populations are doing better under the waiver and which are not. The same factors used in the matching will also be used in the breakdowns. In addition, HZA will examine the type of care, focusing particularly on the youth placed out-of-state, who are of particular concern to the agency, and the extent to which emergency shelters impact the number of youth in congregate care. Reducing congregate shelter care entries may require different strategies than reducing longer term congregate placements.

Goal/Objective 11: Reduce length of stay in congregate care.

There are multiple ways to generate measures of length of stay, including the traditional methods of calculating the lengths of stay of those who *enter* congregate care, of those who are in those settings *on a single day* and of those who *exit* congregate settings. Only the first of these, however, is useful for analyzing the factors which contribute to longer lengths of stay and therefore for identifying strategies for reducing them. Thus, while HZA will report on the other measures, the waiver treatment group will be defined as the target group youth who enter congregate settings during the waiver period and they will be matched to youth who entered during the chosen historical period, i.e., FFY 2011-2015. The matching will be done using the same factors listed in relation to goal/objective 10 above, except that living arrangement will be dropped (there will be no youth who have not been in care) and instead of examining simply the number of placements since removal, HZA will include as match factors 1) the number of placements between removal and the youth's first congregate placement and 2) the number of congregate placements the youth has experienced between removal and the congregate setting just entered. FACTS will be the source for the data required for matching.

Once the groups have been selected, length of stay in the setting which qualified the youth for inclusion in either the waiver or comparison group will be examined in terms of medians and percentages of youth exiting within defined periods. Because some youth are likely to remain in their congregate settings for substantial periods of time, normal averages are not really meaningful. It is possible, however, to determine when one-quarter or one-half of the youth have exited and to measure what percent of the youth exit within specified time periods, e.g., three months, six months or one year. In addition, youth will be tracked forward and the uninterrupted length of stay in congregate care, including consecutive stays in different settings, will be calculated, as well as the total time in congregate settings after entry into foster care.

The statistical tests to be used for determining whether BCF is achieving this goal/objective will be different for the median calculation and the calculation of the proportions of each group exiting congregate care within specified time periods. Because it is unlikely that length of stay will be normally distributed, non-parametric tests will be used. The Mann-Whitney U test will be utilized to compare medians and also distributions of length of stay, while the Kolmogorov-Smirnov two-sample test will

be used to compare the proportion of youth leaving congregate care within specified time frames.

As with the analysis of entries into congregate care, HZA will analyze the results further to identify the factors contributing to longer lengths of stay. This will include calculating the lengths of stay for different demographic groups, e.g., racial, age and gender groups, and for youth with different lengths of time in care, reasons for removal, number of previous placements and number of previous congregate care placements. Emergency shelters will again be considered somewhat separately, excluded for some of the calculations of length of stay and for some of the further analyses and included for others. Emergency shelters almost certainly reduce the length of time in congregate care when they are included in the calculations and may therefore skew the results if not treated separately.

The final set of analyses to be undertaken here will focus on what happens to the youth after leaving the congregate setting. In this instance, length of time in congregate care will be examined as a factor influencing whether upon leaving the congregate setting the youth is reunified, discharged to a pre-adoptive home or sent to another setting, such as, another congregate care setting. To the extent permitted by time, HZA will follow the youth beyond the initial discharge destination to identify where the youth resides 12 months, 24 months and 36 months after discharge from the congregate setting qualifying him or her for inclusion within the cohort being analyzed.

Goal/Objective 12: Increase number of youth remaining in their home communities.

Measuring the State's achievement on this goal requires identifying a more complexly defined group of youth than is the case for any of the other goals. That is because there are multiple points at which decisions are made which determine whether a youth remains in his or her community. Such a decision is made when a youth first comes to be known to the agency, when a youth is removed from his or her home and every time the youth moves from one out-of-home setting to another. To account for these variations, the waiver treatment group will consist of all youth 12 to 17 for whom there is an open case at any time during the course of the waiver project. Because of the different ways youth can be at risk of being placed outside their communities, separate matched groups will be identified for each of the events which qualify youth for inclusion on this measure. The propensity score match variables will include, along with demographic factors, reasons for removal, length of time since removal, number of prior removals and number of prior placements during this removal episode. As with all of the FACTS based analyses, all those in the target population meeting the criterion for this measurement will be included.

Due to the fact that BCF intends to serve both existing and new cases with the demonstration project, limiting the treatment group to those youth whose cases are newly opened is not sufficient. Instead, the analysis will be analogous to that for goal/objective 10, where the outcome indicator is whether or not an event happened (in

this instance, the youth is placed outside his or her own community) and the denominator is the number of days on which it was possible for that event to occur. As with the previous analysis, t-tests will determine the significance of any difference between the two groups. In addition to that calculation, HZA will also compare the number of days during the period (generally a year but ultimately the entire length of the demonstration project) that treatment group youth and comparison group youth spend outside their own communities. This will again be standardized by calculating the percentage those days comprise of the total during which the youth were in open cases.

HZA will conduct the comparative analysis both for each of the groups as a whole and for the groups defined by each of the qualifying events, comparing, for example, the number and percentage of youth removed from their homes who remain in their communities between the waiver treatment and comparison groups, and then separately making the same kind of comparison for those moving from one foster care setting to another. As with all of the other analyses, additional breakdowns will show whether age, race, gender, reason for removal, number of prior placements, kind of placement setting and/or the type of previous placement had any impact on whether the child remained in the community.

Goal/Objective 13: Reduce rates of initial foster care entry.

According to the State's own Child and Family Services Plan, West Virginia has the highest foster care entry rate in the nation.¹⁷ The target group for the State's Title IV-E waiver plays a large role in all of this. Youth ages 12 to 17 represented just under 40 percent of the children in foster care on the last day of FFY 2013 and 45 percent of the children entering care during the year. Slowing the flow of this group into foster care would appear to be a critical piece of any strategy to reduce the foster care population.

Combining FACTS data with information from the US census, HZA will calculate 1) an overall rate of entry into foster care, 2) a rate of initial (i.e., first-time) entry into care and 3) a rate of current placement in care (i.e., youth in care on a given day). All of these figures will be calculated for the target population 12 to 17, as well as for each of the years in the five year time period from which the matched comparison group will be drawn. It should be noted, however, that this much of the calculation does not involve matching; when the universe is the entire general population, no matching is possible, even with historical cohorts.

For the analysis comparing the treatment and comparison groups, the matched populations related to this goal/objective will consist of youth who are involved in open cases in the child welfare system at some point in time during the demonstration project period (treatment group) or during a previous federal fiscal year (comparison group). Most of the youth in the target population will have entered through the juvenile justice system, so matching between the waiver population and the comparison group will include the reason for the youth's contact with the system, as well as the demographic

¹⁷ West Virginia Child and Family Services Plan, 2015 – 2019, p. 91.

and other factors used in all of the matches, e.g., number of previous contacts with the system.

The analyses comparing the waiver and comparison groups will be similar to some of those above, i.e., calculation of a ratio of the number of initial removals over the total number of care days on which such a removal could have occurred, i.e., the number of days each case was open prior to an initial removal. The statistical tests will also be the same, namely, t-tests. The three separate calculations, i.e., for those entering care, those entering care for the first time and those in care on a given day, will shed light not only on the goal as literally stated but also on whether the size of the foster care population is affected most by intakes, by discharges (or the lack thereof) or by repeat entries. As with all of the other analyses, HZA will examine sub-populations to determine whether the waiver initiative is working better on this goal for some groups than for others.

Goal/Objective 14: Reduce number of youth re-entering any form of foster care.

In calculating the waiver's success in reducing re-entry, two factors are especially important. The first is to define the time frames within which the re-entry has to occur to be counted. HZA will use three time frames: six months after discharge, 12 months after discharge and 24 months after discharge. Those exiting without sufficient time to measure any of these periods fully will be excluded from that particular analysis.

The second factor is the definition of the population. To be broadly consistent with the way the federal government has calculated re-entry during the second and third rounds of the Child and Family Services Reviews, both the waiver and the comparison groups must be comprised of youth discharged from care. However, consideration should also be given to the youth's discharge destination. Those discharged to adoption are generally less likely to return to care than those discharged home, and those discharged because they ran away from their placements should probably not be counted at all. Moreover, with the focus on older youth, it is also necessary to consider the youth's age at the time of the discharge. A youth discharged six months before his or her 18th birthday will not be returning to care a year later.

With these considerations in mind, three overlapping waiver treatment groups will be defined: all those in the target group discharged from care more than six months before their 18th birthdays for other than administrative reasons, e.g., the youth ran away and payment is no longer being made; the sub-set of these who were discharged from care prior to their 17th birthdays; and the subset of these who were discharged prior to their 16th birthdays. These groups will be used to calculate the rates of re-entry at the six-month, one-year and two-year points, respectively.

Aside from the usual analyses breaking down the results by demographic and other standard factors, these results will be broken down by the type of placement in which the youth resided immediately prior to discharge, as well as the previous discharge destination, the number of placements the youth had experienced, whether the last

placement was in the youth's own community, the total time the youth spent out of his or her own community since removal and the total length of time in congregate settings. The purpose of all of these kinds of analyses is to identify factors which reinforce or hinder the achievement of the goal.

Goal/Objective 15: Increase youth safety (e.g., rates of maltreatment/recidivism).

While most youth in the target group of those 12 to 17 years of age are being served by the child welfare system for reasons other than maltreatment, primarily their own behavior, this goal focuses on safety, i.e., absence of maltreatment. Safety should, however, be a concern not only in relation to those who have previously been maltreated but also in relation to those who enter the system for any reason at all.

HZA will therefore define the group as all youth in cases becoming open for services during the waiver period and rates of maltreatment/recidivism as a substantiated incident of maltreatment which occurred at six months, one year and two years after the case was opened, counting only those youth for whom the measurement period is available.¹⁸ The matching factors for identifying a comparison group will include the reasons the youth became known to the agency, the nature of any substantiated allegations, the number of previous substantiated incidents of maltreatment and the number of previous involvements with the agency. Similar to the analysis of re-entry, the date of the incident in relation to the youth's age must also be taken into account; a youth abused when he or she is 17 will not be a victim of child abuse two years later, regardless of what happens. The calculation and statistical analysis of this measure will follow the same pattern as that for entries into congregate care, initial entry into foster care and re-entry.

An important analysis of the results for this goal will be examining whether the youth was removed from the home following the maltreatment incident. One would expect that youth who are removed would be safer from maltreatment than youth who were not, but it is also possible that this effect lasts only while the youth remains in care. Following the youth for two years should offer some insights on this score.

Goal/Objective 16: Increase well-being of youth.

When the goals of the project turn to well-being, FACTS will be of minimal use for the evaluation. Instead, HZA will need to conduct case readings to determine whether youth served through the waiver enjoy better personal functioning, better educational results and better functioning among their family members.

The ideal way in which to assess youth functioning (and family functioning) is to use the results of formal, recognized assessments which are already in use. Because DHHR and private agency workers already utilize the CANS assessment tool, HZA will utilize

¹⁸ If FACTS records the date of the maltreatment incident, that will be used when determining when maltreatment occurred. If the system does not contain that date, the report date will be used.

those results in its case reading.¹⁹ We expect members of the treatment and comparison groups to have multiple, completed CANS assessments. When that is not the case we will be guided by the CANS standards in reading the case records and drawing conclusions about relevant factors. West Virginia has selected a broad array of CANS modules making the tool highly comprehensive. These modules, each of which encompass numerous measures, are: exposure to potentially traumatic/adverse childhood experiences; symptoms related to traumatic/adverse child experiences; child strengths; life domain functioning; acculturation; child behavioral/emotional needs; and child risk behaviors. In addition, the following modules will be assessed if warranted: delinquent behavior; substance abuse; fire setting; sexually abusive behavior; intellectual and developmental disabilities; GLBTQ; expectant and parenting; transition to adulthood; children age five and under; and commercial sexual exploitation. Assessment scores on relevant domains at later points of time in the case will be compared to initial scores for the same cases.

To be fully reflective of the well-being status of each of the groups, two calculations are necessary. The first involves measuring the differences in the changes in scores experienced by the waiver treatment group and by the comparison group, respectively. This result can be deceiving, however, if one or the other group shows high initial functioning in one or more domains. In that event measurable progress is possible only to a limited degree, if at all. The second calculation, therefore, measures the percentage of each group whose scores are at specified levels at the different points in time. Thus, rather than reporting that, say, 20 percent of the group's youth improved their behavioral functioning, this calculation might report that 30 percent of the youth exhibited positive behavioral functioning after one year, compared to 20 percent upon case opening.

Because this measurement requires a case reading, HZA will draw a random sample of those entering the target population each year. Fifty cases will be drawn each year, with another 50 matched cases from previous years. Only cases entering will be selected because these provide assurance that the CANS assessment will be conducted at the outset, and because a good test of the system should exclude any impact of the youth's history in the child welfare system since the most recent case opening. Subsequent measurements will be taken at the six, 12 and 24 month points. For the calculation of the percentage of youth whose functioning improves, HZA will perform t-tests. For the calculation of the percentages of each group at various functioning levels, chi-square will be the preferred statistic.

Goal/Objective 17: Increase educational achievement ((e.g., number/proportion of youth remaining in the same school throughout agency involvement).

The evaluation of the waiver's success in contributing to positive educational results for youth will rely on the same treatment and comparison groups identified for the previous goal, i.e., child well-being, as well as the same data collection method, i.e., case

¹⁹ For purposes of the case reading, the propensity score matching pool of comparison cases will include only those cases which have a CANS completed.

reading. HZA will also explore what information is available from the Department of Education which recently entered an agreement with BCF to share educational system data for youth involved in child welfare.

At least four issues will be examined in determining the extent to which the waiver is contributing to educational achievement. These are: whether the youth remains in school; whether and how frequently the youth is suspended from school; whether the youth remains in the same school (or changes only because he or she has graduated from the previous school); and whether the youth progresses with his or her class. HZA will use the treatment and comparison cohorts established for the outcome study, supplying the information to the Department of Education to answer questions about school drop-out, school suspensions and school moves and use t tests to compare the results. The analyses will be youth-specific. For school progress we will determine what percentage of youth in each group progresses each year from freshman to sophomore, sophomore to junior and so forth. We will first determine the equivalency of the two groups by comparing the child's age to the grade at baseline, and determining what percent are behind, what percent are at par and what percent are ahead using Chi squared test. We will measure progress each year and use t tests to determine if there are statistical differences between the treatment and comparison groups.

It should also be noted that the number or proportion of youth remaining in the same school throughout agency involvement is less an indicator of actual academic achievement than a factor rightly believed to be important in contributing to that achievement. The extent to which this is a factor in youth maintaining their progress through school will also be tested during this evaluation, using logistic regression with the number of schools (counting normal progression with classmates from one grade to another as being a single school even if the progress from a middle to high school, for example, involves a change) and the number of grades ahead or behind at the start of the study as predictors of normal grade progression.

One remaining comment for consideration on the evaluation plan is related to the method for determining if youth are at the appropriate grade level at baseline based on their age (described on page 32), since school enrollment is dependent on the parent, cut off dates determined by the school district, or other factors. Children may enter later than their normal cohort, but never technically be "kept" behind. Conversely, they may be entered early and are able to keep up but are not truly "ahead." We suggest that instead of comparing the child's age to the grade at baseline that they use the school's measure of whether a student is in the appropriate grade based on when they were first enrolled.

Goal/Objective 18: Improve Family Functioning.

Essentially everything that was said about measuring youths' well-being applies to the measurement of this goal, as well. The same case reading of the same cases will be conducted; CANS' Caregiver Resources and Needs component will be used. The specific elements will include: knowledge of child needs and service options; nutrition management; discipline; Learning environment; involvement with care; parent knowledge of rights and responsibilities; financial status; organization and household

management; natural supports; knowledge of social service options; residential stability; job functioning; military transitions; partner relations; relations with extended family; accessibility to child care services; parent/caregiver understanding of impact of own behavior on children; empathy with children; ability to communicate; family stress; physical health; mental health; substance use; developmental; parent/caregiver posttraumatic reactions; hygiene and self-care; independent living skills; and recreation. Additional parental measures include commitment to the child’s permanency plan goal as measured by participation in visits; contact with the caseworker; involvement in treatment; involvement in the child’s life; commitment to reunification; accepting responsibility for maltreatment; relationship with abuser(s); and maltreatment of other children. The Wraparound program will also be consulted for assessment tools that may be consistently in use.

The only difference between youth and family well-being is that the analysis breaking down the successful and unsuccessful cases in each group will use somewhat different factors for family functioning than for youth well-being. These might include, in addition to the above, the number of adults in the household, employment status of the adults and the highest educational level achieved. Even with those factors, however, one might still expect that having the youth in foster care would have a different impact on the family’s functioning than would having him or her at home.

The following table summarizes the Outcome Evaluation information just presented, showing the research question associated with each goal/objective, the topics or measures that will be assessed the level of analysis and the statistical tests to be conducted.

Outcome Evaluation			
Research Question	Measures	Analysis Level	Statistical Measures
To what extent has the project reduced the number of youth placed in congregate care?	<ul style="list-style-type: none"> ▪ No. of unduplicated youth entering congregate care in a year ▪ No. of duplicated entries in a year ▪ No. in care on a given day <ul style="list-style-type: none"> ▪ Characteristics of youth in care (age, race, gender) ▪ Types of congregate care 	<ul style="list-style-type: none"> ▪ Entry cohorts and historical matched comparison groups ▪ Point-in-time cohorts and historical matched comparison groups 	t-test
To what extent has the project reduced the length of stay in congregate care and what impact did that have on the overall length of time in care for the foster care population?	<ul style="list-style-type: none"> ▪ Length of stay for those who enter congregate care <ul style="list-style-type: none"> ▪ Length of stay for those in care on a given day ▪ Length of stay for those who exited care ▪ Discharge reasons ▪ Discharge setting ▪ Length of stay for all children in care 	<ul style="list-style-type: none"> ▪ Entry cohorts and historical matched comparison group 	<ul style="list-style-type: none"> ▪ Man-Whitney U-tests ▪ Kolmogorov-Smirnov two-sample tests

Outcome Evaluation			
Research Question	Measures	Analysis Level	Statistical Measures
To what extent has the project increased the number of youth remaining in their own communities?	<ul style="list-style-type: none"> ▪ Youth leaving own community when becoming known to the agency, being removed from home or entering a new home during the waiver <ul style="list-style-type: none"> ▪ Characteristics of youth (age, race, gender) ▪ Placement setting 	<ul style="list-style-type: none"> ▪ Entry cohorts and historical matched comparison groups 	t-tests
To what extent has the project reduced the rates of initial foster care entry?	<ul style="list-style-type: none"> ▪ Youth in open cases entering foster care for the first time <ul style="list-style-type: none"> ▪ Rate of initial (first-time) entry ▪ Overall rate of entry ▪ Rate of current placement in care on a given day ▪ Characteristics of youth (age, race, gender) 	<ul style="list-style-type: none"> ▪ Entry cohorts and historical matched comparison group 	t-tests
To what extent has the project reduced the number of youth re-entering any form of care?	<ul style="list-style-type: none"> ▪ Re-entry within 6, 12 or 24 months after discharge <ul style="list-style-type: none"> ▪ Initial discharge destination ▪ Number of placements ▪ Length of time in congregate settings ▪ Characteristics of youth 	<ul style="list-style-type: none"> ▪ Three re-entry cohorts and historical matched comparison groups 	t-tests
To what extent has the project improved youth safety/ maltreatment recidivism?	<ul style="list-style-type: none"> ▪ No. with new substantiated maltreatment during waiver at 6-, 12- and 24-months <ul style="list-style-type: none"> ▪ No. with substantiated maltreatment during waiver ▪ Characteristics of youth (age, race, gender) 	<ul style="list-style-type: none"> ▪ Entry cohorts and historical matched comparison groups 	t-tests
To what extent has the project improved the well-being of youth?	<ul style="list-style-type: none"> ▪ Social functioning ▪ Self-care ▪ Sexuality ▪ Family relations ▪ School behavior ▪ School achievement ▪ Conduct ▪ Impulsivity 	<ul style="list-style-type: none"> ▪ Randomly selected entry cohorts and historical matched comparison groups 	<ul style="list-style-type: none"> ▪ t-tests ▪ Chi-square
To what extent has the project improved the educational achievement of youth?	<ul style="list-style-type: none"> ▪ Youth remains in school ▪ Youth remains in same school ▪ Youth progresses with his/her class (see Objective 17 for measurement) ▪ Youth is in age appropriate grade 	<ul style="list-style-type: none"> ▪ Randomly selected entry cohorts and historical matched comparison groups 	<ul style="list-style-type: none"> ▪ t-tests ▪ Chi-square
To what extent has the project improved family functioning?	<ul style="list-style-type: none"> ▪ Medical/physical ▪ Mental health ▪ Substance abuse ▪ Family stress ▪ Housing stability 	<ul style="list-style-type: none"> ▪ Randomly selected entry cohorts and historical matched comparison groups 	<ul style="list-style-type: none"> ▪ t-tests ▪ Chi-square

B. Data Sources and Collection Procedures

For all of the safety, permanency and placement outcomes, HZA proposes to conduct the analyses using West Virginia's SACWIS, called FACTS. Extracts from FACTS will be requested at least semi-annually, and HZA will conduct its own analyses on these data. The extracts will essentially be data dumps of specific tables within FACTS, so that no manipulation of the data is required on the part of DHHR staff, and the format can be in any standard universal format, e.g., comma-delimited text or SQL.

While FACTS is expected to contain the data needed to measure success in relation to safety, permanency and placement settings, it is unlikely to have coded fields which will permit the measurement of well-being in relation to either the youth or the families. For this, HZA will utilize case readings. For each full year of the waiver's operation, with the exception of the final year when following the cases forward would not be possible, HZA will randomly select 50 cases in which youth have received waiver services and then 50 cases from the historical period (see "Data Analysis" below) matched on demographic characteristics, length of service and whether the youth is living at home or in foster care. These cases will be followed forward throughout the remainder of the demonstration project. Thus, each year's case reading will be larger than the previous one, encompassing both new cases and cases which were selected in previous years. (Some cases will also have closed and not be able to be followed after some period of time.)

C. Data Analysis

BCF plans to conduct CANS assessments on each of the youth in the target group and then provide the appropriate services based on the results, whether that involves Wraparound services or not. The treatment group will, however, be limited to those who are referred for case coordination, i.e., for Wraparound services. For those outcomes where FACTS data supply the information, there will be no sampling, i.e., all referred cases will be examined. To determine whether the decision making about which youth receive Wraparound services is unbiased and consistent with the parameters laid out for the Waiver project, HZA will analyze the outcomes for all youth in the target group, as well as for those in the treatment group itself. HZA will be checking to see if there are differences in characteristics between those selected for Wraparound and those in the rest of the target population.

For each outcome HZA will utilize propensity score matching to construct a comparison group matched from prior years to the waiver youth. As noted at the outset of this section, because the goals/objectives are very different, there will need to be different treatment and comparison groups for each one. For instance, in examining how many youth 12 to 17 return to foster care after discharge, it will be necessary to examine only youth in that age range who have been in foster care and been discharged. For youth who might be subject to maltreatment after case opening, the appropriate treatment and matched comparison groups will consist of youth beginning their time in an open case. Identifying different populations for each goal/objective and matching them to

comparison groups of the same type will ensure that the measurements are on target and that the populations for whom each measure is appropriate is matched to another case for whom that measure is also appropriate.

The historical period from which the comparison groups will be drawn will be federal fiscal years (FFY) 2011 through 2015. Matching will occur in semi-annual cohorts, meaning that HZA will select cases from FACTS which became eligible for inclusion in a specific goal/objective's treatment group during a given half year, as well as the cases matched to that treatment group. This will allow ongoing analysis of the outcomes, permitting the agency to make mid-course adjustments if they are needed and to report substantive results both in every semi-annual report and in the interim report required after the 10th quarter of the project.

Most of the details of the analysis have been provided in the discussion above, because different analyses are required for each goal/objective. There are, however, some parts of the analyses which will be common to all of the outcomes.

The first of these is that throughout the analysis of the outcomes, HZA will not only report on the outcomes for the matched groups, but will also answer each question in a straightforward, commonsensical way. For the first goal/objective, for instance, this will mean answering the question: Compared to the historical periods used as comparisons, are fewer youth placed into congregate settings, without regard to whether they are in the waiver or comparison group or in neither group? While this approach is not required for the waiver evaluation, addressing it throughout is important because it is possible that the general population of youth at risk of placement in congregate care during the waiver period will have different characteristics in some important ways than the general population at risk of congregate care in prior periods. Should that happen, it is possible either that the demonstration services are shown to be successful when the outcomes for matched populations are compared but that the number of youth in congregate care has nevertheless risen, or that the demonstration services cannot be shown to be successful when the matched populations are studied but the number of youth in congregate care decreases in any event. Either of these results requires explanation and the examination of the two populations will provide a basis for that explanation, regardless of the results of the demonstration project.

In addition to both answering the common sense question and comparing the overall outcomes of the waiver and comparison groups, HZA will, as indicated in the discussions of each goal/objective, provide breakdowns of the outcome results in such a way as to identify the groups with which the project is most successful on each outcome goal/objective and the groups with which it is least successful. This will be accomplished by showing the success rate for each group, that is, the percentage of the group which has a successful outcome. For instance, in relation to keeping youth out of congregate care, HZA will show the proportion of those 12 to 17 who entered care due to maltreatment who were placed in foster homes or relative homes and the proportion of the 12 to 17 population which entered care due to the youths' own behaviors who were kept in lower levels of care. In addition to the straight statistical tests discussed

above, the breakdown of the results by the child's characteristics and history will allow additional statistical tests, generally linear or logistic regression, to be applied so that HZA will be able to measure the extent to which any differences between the treatment and comparison groups are a result of the project's intervention and which occurred either because of some other factor or simply by chance.

Much of the discussion above is written as though the data analysis will occur just once. It is, however, HZA's intent to collect FACTS data semi-annually and case reading data annually. Moreover, the matching of comparison cases to waiver treatment cases will also occur in these same time frames. Once the data have been collected for a given year or half year, they will be analyzed and the results will be submitted to BCF for inclusion in its next semi-annual report to the Administration for Children and Families (ACF). Each of these analyses will occur both for the cohort of cases which have been selected for that year and for all of the cases on which data have been collected to date. Thus, BCF will be able to determine if the results it is achieving through the waiver are improving from one year to the next and, at the same time, get a preview of what the total results will be at the end of the waiver period.

V. COST ANALYSIS

A. Methodology

The cost evaluation will be closely tied to the outcome evaluation, because the most significant component of it involves calculating the costs of successful cases. Thus, the costs to be analyzed from goals/objectives 20 through 22 will be the costs associated with the relevant waiver and comparison group members for various outcome goals/objectives. In addition, HZA will conduct each of the cost analyses annually, producing results both for the costs of cases added in the most recent complete year and for the entire range of cases having received waiver services up to that point, along with their matched comparisons.

Goal/Objective 20: Compare the cost of the key services received by children and families through the demonstration project to the cost of services available prior to the start of the demonstration, or that were received by the children and families that were not designated to receive demonstration services.

The cost of services child welfare families receive can generally be categorized into three groups: services provided directly by the public agency, generally consisting of casework or case management; placement services provided by foster parents and private agencies; and ancillary services provided by private providers, such as counseling and parenting education. Each of these categories is likely to be recorded in different ways. Services provided directly by the public agency are generally recorded through time studies, such as random moment surveys, the results of which are applied to the agency's total administrative costs through a cost allocation plan. Placement services are paid on a *per diem* basis, generally with allowance made for short absences, so long as those do not involve payment to someone else, e.g., a respite provider. Ancillary services may be paid in a variety of ways, depending on the nature of the service and the terms of the contract. Many, such as individual counseling services, may be paid on a unit of service basis in which a client receives an hour of the service and the public agency pays a fixed rate for that hour. Others, such as group counseling or parenting education, may be paid either on a per client unit of service basis or on the basis of the provider's time, costing the same regardless of the number of clients served.

Determining the cost of each of these types of services will clearly require different methods. For the public agency services the costs have to be derived from the cost allocation plan and the results of the repeated time studies. Placement costs and any ancillary services which are paid on a unit cost basis are fairly straightforward and should be available from claims for payment made to the agency and from payments made to foster parents. To arrive at a per client cost for ancillary services paid on the basis of the provider's time it is probably necessary to use an estimate of the average number of clients served for each unit of the provider's time.

HZA will examine the Department's cost allocation plan and the results of the allocation of funds to calculate an average cost per client for a defined time period. Whether the time period should be a day, a month or a quarter will be a subject for discussion between HZA and the agency. The resulting average cost will be adjusted for inflation to account for the differences in time periods being studied.

For placement costs, HZA's examination will focus on the established rates for each placement. To eliminate the impact of rate increases which might have occurred between the historical time period being studied and the waiver period, waiver period rates will be used. Without that adjustment, the waiver period costs might appear inappropriately higher.

For the ancillary services, HZA will study the relevant contracts and calculate an average cost per client per unit or per time period, depending on the nature of the service and of the contract terms. If the services are substantially the same during the historical and waiver periods, waiver period rates will be used. If they are not the same, the historical costs will be adjusted for inflation.

These calculations will be applied to the same matched groups discussed above in relation to outcomes. This ensures that comparable cases are being examined and it sets up the calculations of the costs of success. The costs calculated for each type of service will be attached to each of the clients in the respective groups and average costs per client for each group will be calculated. Those average costs will take into account the time the client received the service and, where appropriate and knowable, the frequency of the service (primarily for ancillary services). Because some cases may be in the system for very long periods of time, HZA will make its calculations not only for all of the time the clients are served but also for each waiver year. Assuming that the waiver services are successful, waiver clients should show an average of fewer days of service, both in-home and out-of-home, in each year than traditional clients.

As with the outcome analysis, HZA will break down the results so that the agency can determine which groups of waiver clients exhibit the largest differences in costs compared to similar historical clients. In addition, results will be shown for each type of cost, so that where there are differences in either direction, DHHR can see that, for instance, there is a savings in placement costs but not in case management or ancillary services.

Goal/Objective 21: Compare the use of key funding sources, including all relevant Federal sources such as Titles IV-A, IV-B, IV-E, and XIX of the Social Security Act, as well as State and local funds with those of services traditionally provided to children and their families.

This analysis will follow directly from the approach to the previous objective. The costs will have been calculated; all that is required here is to determine where those costs were claimed. This will require examining both the claims for federal funds and the state budget categories toward which each cost was allocated. The same matched

groups will be used. For those claims which are not tied to individual customers (e.g., case management costs and ancillary costs not paid by Medicaid), averages for all customers will be used.

Part of what this analysis will produce is identification of shifts in funding between the historical and the waiver periods. In particular, the waiver should make it possible to use more federal funds for ancillary services and perhaps even for case management. Thus, the analysis will not only show overall shifts in funding sources but also shifts for particular kinds of services.

Goal/Objective 22: Conduct a cost-effectiveness analysis to estimate the costs of each successful outcome achieved through the demonstration.

This analysis will be conducted using one or more of the key outcome measures for which a statistically significant difference is identified. An outcome cannot be considered successful if it does not exhibit statistical significance.

However, this analysis is feasible not only for the outcomes for which a statistically significant difference has been identified, but for all outcomes. Moreover, it is useful to make that comparison even where the differences in outcomes are not statistically significant because the difference in costs may be significant even where the outcomes are not. Therefore, HZA proposes to calculate the cost of success for each outcome where the waiver population shows better outcomes than the matched comparison group, regardless of statistical significance. The implications of the analyses will be different, depending on the significance of the outcome results, because the only implication of a lower cost of success for an outcome which is not statistically significant is that costs can be reduced without a reduction in the rate of success.

As with all of the outcome and cost analyses, the matched groups will be used in these analyses. This will be made easier because the matched groups have been defined individually for each outcome. Thus, the costs of only the appropriate populations will be compared.

Whether further analyses is possible with the costs of success will depend on the sample sizes of the various sub-populations. Ideally, HZA will, for example, determine whether differences in the costs of success are greater for youth in care for maltreatment than for youth in care due to their own behavior issues. While such analysis might not be feasible for a single year's population, by the end of the waiver period, HZA anticipates having sufficient numbers of clients to make at least some of these kinds of analyses.

Goal/Objective 23: Assess cost Neutrality.

The one federally required item which the State's RFP did not request is an analysis of the cost neutrality of the waiver project. However, HZA plans to provide that service.

For this analysis, the use of the comparison groups is not really appropriate. HZA's approach will be to conduct an analysis similar to that for goal/objective 21 but to do it for the entire population. This is actually probably easier than doing it for a carefully controlled sub-population. The data collection will involve much the same data as used earlier, but without the need to calculate per client costs. The costs of concern are the entire system's costs and the overall impact on the various funding sources of changes in those costs. Unlike the remaining parts of the evaluation, the calculation of cost neutrality needs only to be done once, at the very end.

The following table summarizes the Cost Evaluation information just presented, showing the research question associated with each goal/objective, the topics or measures that will be assessed the level of analysis and data collection method.

Cost Evaluation			
Research Question	Measures	Analysis Level	Collection Method
Are the costs of providing the Waiver services to a youth and family less than those provided before the Waiver Demonstration?	<ul style="list-style-type: none"> ▪ Cost of services provided directly by the agency ▪ Cost of placement services ▪ Cost of ancillary services 	<ul style="list-style-type: none"> ▪ Cost per case 	FACTS Medicaid Claims Federal claims Contracts Payment records
How does the Demonstration Project alter the use of state and federal funding sources including Titles IV-A, IV-B, IV-E, and XIX of the Social Security Act as well as state and local funds?	<ul style="list-style-type: none"> ▪ Same as above plus ▪ Cost claims ▪ State budget categories 	<ul style="list-style-type: none"> ▪ Cost per case 	FACTS Medicaid Claims Federal claims Contracts Payment records State budget
What is the cost effectiveness of the Waiver Demonstration (cost of each successful outcome)?	<ul style="list-style-type: none"> ▪ Cost effectiveness, <i>i.e.</i>, of achieving one successful case measured by successful outcomes 	<ul style="list-style-type: none"> ▪ Cost per successful case 	Same as above plus number of successful cases as calculated in outcomes study
Is the project cost neutral?	<ul style="list-style-type: none"> ▪ Cost of services provided directly by the agency ▪ Cost of placement services ▪ Cost of ancillary services 	<ul style="list-style-type: none"> ▪ System-wide 	FACTS Medicaid Claims Federal claims Contracts Payment records

B. Data Sources and Collection Procedures

As indicated in the discussion above, there will be multiple data sources for the cost analyses. Federal claims for Title IV-A, Title IV-B, Title IV-E, Title XIX and Title XX (Social Services Block Grant) will all be analyzed. In addition, HZA will examine the cost allocation plan and results, the contracts for services and the corresponding claims for payment. For Title XIX, where contracts are not likely to play a role, extracts from the Medicaid Management Information System (MMIS) will be requested annually, so that the costs can be tied to individual youth, making a comparison between the treatment and comparison groups possible. Finally, FACTS data will also be used,

although these data will have already been collected and analyzed during the course of the outcome measurements. The data coming from FACTS is not expected to be fiscal in nature, but rather to provide information on which youth are in which group and which ones achieved successful outcomes.

To the extent possible, all the data will be collected electronically. Where that may not be possible, e.g., with the results of the cost allocation and the terms of the service contracts, HZA will collect the data manually and enter them into a database for later analysis.

C. Data Analysis

The details of the analysis have been laid out in the discussion of each goal/objective above. In addition to what has been said there, HZA plans to conduct t-tests of the results of each of those analyses, with the exception of the cost neutrality analysis. This will allow conclusions to be drawn more rigorously than through manually examining the results.

VI. QUALITY CONTROL AND HUMAN SUBJECTS PROTECTION

A. Quality Control

HZA will be obtaining FACTS downloads from West Virginia for data analysis. HZA's quality control and confidentiality measures employ a secure Microsoft SQL Server database employing full encryption at rest to store data. The applications are compatible with and can be viewed in any modern browser. The firm's "software as a service" (SaaS) applications are hosted with the firm's cloud hosting company FireHost, which holds numerous security and confidentiality certifications from multiple sources. FireHost guarantees 100 percent network uptime for its public internet work, excluding scheduled maintenance. Database files are fully backed up nightly and are kept for a period of 14 days before being purged. HZA maintains transaction logs to ensure data can be recovered at any time between full backups.

FireHost has been certified against the Common Security Framework (CSF) from the Health Information Trust Alliance (HITRUST) to address HIPAA compliance. FireHost has also received SOC 1 Type 2, SOC 2 Type 2, SOC 3 and ISAE 3402 reports. These SSAE 16 reports demonstrate the viability of FireHost's control program over time. They have also received a certificate of approval for their robust control program against the globally accepted ISO/IEC 27001:2005 standard for Information Security Management Systems.

HZA will make available to DHHR a Secure File Transfer Protocol shared folder on which DHHR staff may transmit files securely to HZA. DHHR will also have the ability to upload files securely via the web-based user interface. In addition, the website via which reports may be generated and exported will be protected by Transport Layer Security (TLS) version 1.2 encryption of all traffic to and from the site.

B. Human Subjects Protection

HZA employs the United States Centers for Disease Control and Prevention (CDC) guidance documents when determining the extent to which its proposed activities fall into the category of human subject research requiring IRB review. There are some straightforward situations when a review of a study protocol is necessary, for example:

- the results will be published or generalized to the overall population;
- the study involves a physical health experiment;
- the study includes requires a randomized control sample; or
- the study involves personal health records.

However, anonymous surveys, data extracts or other information that cannot be linked to the individual and/or that are collected for the sole purpose of program improvement and evaluation do not require any IRB review. West Virginia's Title IV-E Waiver demonstration falls into this category, consistent with other evaluations that HZA

performs both for Title IV-E Waivers and other purposes. The evaluation does not constitute a clinical trial whereby a randomized group of human subjects is granted or denied treatment. Names of individual clients will be omitted in data transmissions. While the evaluators will review the case records, they will be identified by case IDs not names, therefore protecting the confidentiality of the clients. If any individual client information is needed such as fidelity interviews with families, it will be collected by members of the Division of Planning and Quality Improvement (DPQI) within the state agency and information will be transmitted without personal identification using the procedures described above. Furthermore, all client and staff information is reported in aggregate form only; it is impossible to include any personal identifying information that would violate human rights protection. The West Virginia Bureau of Children and Families agrees that no IRB Review is needed given that the Division of Planning and Quality Improvement will oversee any client-specific data collection with the contractor operating under its authority.

VII. EVALUATION TEAM

The evaluation will be conducted under the leadership of Dennis Zeller, Ph.D., M.S.S.W., who will serve as the Principal Investigator. Helaine Hornby, M.A., the firm's other principal, will serve as the Project Director. Ms. Hornby will be supported by Tana James, M.S.W., who will serve as the Process/Implementation Study Lead; Lynn Kiaer, Ph.D., who together with Dr. Zeller will serve as the Outcome/Effectiveness Study Lead; and Karen Hallenbeck, B.S. who will serve as the Cost Study Lead. They will be supported by Jasmine Patraw, M.A. and Jen Battis, M.Res., serving as Research Associates as well as HZA's Information Technology team led by Tim Reed.

**Title IV-E Waiver Project: Third Party Evaluator
Organization Chart**



Dennis E. Zeller, Ph.D., M.S.S.W., Principal Investigator: Dr. Zeller is President and founder of Hornby Zeller Associates. In the mid-1990's he designed and supervised the implementation of HZA's quality assurance function within the Arkansas Division of Children and Family Services (DCFS), which was given to HZA in 1997. The work in Arkansas was expanded in 2009 to include the supervision of a continuous quality improvement initiative within DCFS as part of the State's Program Improvement Plan in response to its CFSR.

Over the past 20 years, Dr. Zeller has directed projects for many other states, including the Pennsylvania Office of Children, Youth and Families; New Jersey Department of Children and Families; West Virginia Department of Health and Human Resources; Oklahoma Department of Human Services and Nebraska Department of Health and Human Services. Each of the projects was aimed at measuring outcomes and performance. Focusing on state and federal outcome measures, Dr. Zeller has produced reports using SACWIS and Adoption and Foster Care Analysis and Reporting System (AFCARS) data for statewide and local consumption by legislators, agency directors and program managers.

Ongoing performance measurement systems have been a primary focus of Dr. Zeller since he authored the monograph *Model Child Welfare Management Indicators*, published by the National Child Welfare Resource Center at the University of Southern Maine. He co-authored “Kinship Care in America: What Outcomes Should Policy Seek” and “Improving Child Welfare Performance: Retrospective and Prospective Approaches,” both published in *Child Welfare*. Dr. Zeller earned his Master’s Degree in Social Work and his Doctorate from the University of Texas at Austin.

Helaine Hornby, M.A., Project Director: Helaine Hornby is Vice President of HZA and, until 1995, was the Director of the Center for Child and Family Policy at the Edmund S. Muskie Institute of Public Affairs at the University of Southern Maine. In 1985, after a national competition, she succeeded in having the University designated by the US Department of Health and Human Services (DHHS) as the National Child Welfare Resource Center for Management and Administration (subsequently known as Organizational Improvement) which she directed for the next eight years.

Ms. Hornby has directed three national, federally-funded child welfare research projects: an analysis of adoption disruption (four states, six sites), an evaluation of risk assessment systems in child protective services (five states) and a policy study on kinship care (five states). These projects, sponsored by the Administration for Children and Families, DHSS, utilized qualitative and quantitative approaches, including case readings, document analyses, data analyses, interviews, focus groups and cross-site comparisons.

Since becoming a partner at HZA in 1995, she has led child welfare evaluations in numerous states such as Oklahoma, Nebraska, Iowa, Nevada and Arkansas. She works closely with Dr. Zeller and the project teams responsible for evaluating Arkansas’s Title IV-E Waiver and Diligent Recruitment initiatives and is playing the lead role in the Title IV-E Waiver Evaluation in Maine.

As the principal investigator of the Trauma-informed System of Care evaluation in Maine she is very familiar with trauma-informed assessment tools and services. This work led Maine to win a second System of Care evaluation from SAMHSA to bring trauma-informed services to Maine’s juvenile correction system. Like what is being

proposed in West Virginia, that evaluation includes providing Wraparound services to youth and their families to try to avoid penetration deeper into the system.

Ms. Hornby is an expert in qualitative data analysis, as well as organizational and policy analysis. She has published broadly in professional journals including *Social Work*, *Child Welfare*, *OSERS News in Print*, *Children and Youth Review*, *Children Today* and *New England Journal of Human Services*. She has presented papers and conducted workshops at numerous national and state conferences, both domestically and abroad. Ms. Hornby earned her master's degree in public policy and management from the Edmund S. Muskie Institute of Public Affairs at the University of Southern Maine where she received highest honors.

Tana James, M.S.W., Process/Implementation Study Lead: Ms. James has been a key member of the evaluation team of Arkansas's Title IV-E Waiver funded implementation of six initiatives designed to improve the safety and permanency of children. Ms. James has conducted case record reviews and onsite interviews with key stakeholders, conducted content analysis of interviews at baseline and follow-up, and assisted with writing the semi-annual reports. Ms. James is also assisting with the interpretation of the data analysis conducted of Arkansas's SACWIS as it relates to the successful achievement of State and federally prescribed outcomes.

Ms. James is assisting with an assessment aimed at identifying the extent to which youth involved in Virginia's juvenile justice system are also known to the child welfare system, and their involvement with the behavioral health and education systems. She is conducting a document review of policies related to intake, family engagement, discharge and re-entry, as well as dual-service delivery as they relate to youth who are known to multiple systems.

Ms. James came to HZA from the Social Work Education Consortium (SWEC) in Albany, New York, where she spent more than two years conducting evaluations involving children and families in child welfare systems. The focus of one evaluation was a new supervision initiative implemented in several New York counties called *Building a Sustainable Support System in Child Welfare Supervision*. Through one-on-one interviews with child welfare supervisors using protocols she helped to develop, she assessed the effectiveness of structured supervision initiatives.

In addition to her research experience, Ms. James worked as a clinical social worker at Parson's Child and Family Center, a multi-service agency in New York's Capital Region which provides counseling services, maltreatment prevention and treatment, family strengthening programs and residential services. Ms. James' responsibilities included conducting family assessments, developing treatment goals and establishing methods to attain service goals. Ms. James received a B.A. in English and Africana Studies from SUNY Albany in 2006, and went on to earn her M.S.W. from the SUNY Albany School of Social Welfare in 2008. She is presently working toward her doctoral degree, having completed all of her coursework.

Lynn Kiaer, Ph.D., Outcome/Effectiveness Co-Lead: After more than ten years working as the Senior Mathematician in the Industrial Artificial Intelligence Lab for the General Electric Global Research Center where she worked on applied decisions involving optimization, statistical analysis and simulation support, Dr. Kiaer joined HZA to assume the position of lead statistician. She has since developed subject matter expertise in child welfare, Medicaid and children's mental health.

Dr. Kiaer is leading the outcome/effectiveness analysis for the Arkansas IV-E Waiver evaluation. She is responsible for analysis of data stemming from the reviews of case records for the evaluation as well as for a separate federal grant in Arkansas for the Diligent Recruitment of foster families. Combining the Waiver and Grant together, Arkansas has chosen to implement seven initiatives, some of which are statewide and others which will be phased in, making for a complex evaluation design.

For a class action suit initiated by Children's Rights, Inc. in support of children in the conservatorship of the Texas Department of Family and Protective Services (*M.D. v Perry*), Dr. Kiaer led the complex data analysis designed to assess the practices of caseworkers for children in permanent managing conservatorship, specifically determining the extent to which caseworker activities satisfied federal and state laws, regulations and policies. All of the analysis was conducted using Texas' SACWIS data.

As part of the Maine Department of Health and Human Services' Trauma Informed Systems of Care evaluation, Dr. Kiaer performed the cost and service analysis, accounting for the characteristics of children and families. Medicaid data were used to evaluate the mental health treatment initiative for troubled youth in multiple counties across Maine.

HZA is the national evaluator of *Parenting with Love and Limits* (PLL), an evidence-based practice for youth with mental illness or in the juvenile justice system, with Dr. Kiaer as the lead analyst. As the practice is implemented across the country, HZA collects and analyzes the site specific data. Dr. Kiaer develops complex algorithms using propensity score matching to match program participants to youth in the juvenile justice systems not receiving the PLL services to compare outcome achievement. Dr. Kiaer has a Ph.D. in Applied Mathematics from the Florida Institute of Technology.

Karen Hallenbeck, B.S., Cost Study Lead: Since joining the firm in 1998, Ms. Hallenbeck has served as the Director of Project Operations, working from the New York office. She also serves as the project lead for many of HZA's endeavors, most notably those which involve a cost analysis component. Ms. Hallenbeck is currently working on Nevada's IV-E Waiver Cost Study, helping to revise the state's Cost Allocation Plan (CAP), establish mechanisms to monitor spending and measure the cost effectiveness of the Demonstration Project. She is also the Cost Study Lead for Maine's Title IV-E Waiver Evaluation.

Ms. Hallenbeck has been working closely with the Department of Health and Human Services in Maine to identify financial structures and policies to support and sustain

integrated evidence-based substance abuse treatment for youth upon cessation of State Adolescent Treatment-Enhancement Dissemination (SAT-ED) funding. She has met with the Interagency Advisory Council to identify services being provided to youth and how those services are being funded. She is mapping cost data including analysis of Medicaid claims from each agency; she has recently obtained the data for SFY 2014 and compared them to data she collected for SFY 2012 to identify trends and shifts in funding.

This past year she worked closely with the Kansas Department of Corrections to update its CAP, including the random moment sampling process used for administrative cost purposes, based on the merging of the Juvenile Justice Authority, to ensure continued access to Title IV-E funding. In 2013, Ms. Hallenbeck took the lead in updating the cost allocation plan for the Colorado Department of Human Services, while HZA introduced a new, automated tool for conducting the State's random moment time study.

Ms. Hallenbeck played integral parts in the financial assessments of the Mississippi Department of Human Services and Georgia Department of Human Resources which were aimed at increasing Title IV-E revenues. She analyzed the cost allocation plans, the funding streams used to support training and support services, and assisted in developing strategies to maximize Title IV-E and Title XIX funding.

Prior to joining HZA, Ms. Hallenbeck served as the Assistant Project Director for financial projects at the New York State Department of Social Services. During her tenure with the state she was responsible for the coordination of statewide revenue maximization initiatives which focused on retroactive claiming and corrective actions involving Title XIX, IV-E and Title IV-A/EAF programs. Ms. Hallenbeck received her Bachelor's degree in Finance, with an Accounting minor, from Siena College in Loudonville, NY.

Timothy Reed, A.A.S., Information Technology Manager: Mr. Reed is the Information Technology Manager for HZA, working from the firm's South Portland, Maine office. Having joined the firm in 2003 as Help Desk Manager, he is now responsible for the entire company's Information Technology operations, serving both customers and staff. He is responsible for oversight of the firm's web-based applications, including development and administration of case management systems, such as that used by providers across Maine for the state's home visiting programs.

Mr. Reed has worked closely with the firm's project lead and developers in creating, implementing and administering an online tool for Maine's Juvenile Division for a SAMHSA-funded initiative. The project is designed to build an infrastructure and implement an integrated system of care for children involved in the juvenile justice system, helping youth and their families with mental health needs to access longer-term services and supports. He also provides oversight to the team responsible for HZA's Automated Random Moment and Reporting System (ARMARS), which is currently in use in Colorado to capture data quarterly from social services staff to support the state's administrative cost claims. More recently, Mr. Reed has directed the development of

several web-based tools in use for the evaluation of Arkansas's IV-E Waiver initiatives, including family surveys and case record tools.

Prior to joining HZA, Mr. Reed served in the United States Air Force, holding various data management and IT positions over the course of his 20-year military career. After a stint as supervising manager of the Data Management Element of the Central Inertial Guidance Test Facility at Holloman Air Force Base, New Mexico and a posting as the supervising manager of a communications unit in Kuwait, Mr. Reed acted as the Local Area Network administrator for the Radar Target Scatter test facility at Holloman AFB. He completed his service there as the Superintendent of the National Radar Cross Section Test Facility. He holds a degree in Electronic Systems Technology from the Community College of Air Force in Montgomery, Alabama.

Jennifer Battis, M.Res., Research Associate: Working from the firm's South Portland, Maine office, Ms. Battis has been recognized for her expert qualitative analytic skills. For an evaluation of the Maine Home Families Statewide Home Visiting Program, where HZA serves as a sub-contractor to the University of Southern Maine, Ms. Battis analyzes qualitative data analysis using NVivo software. Ms. Battis applies NVivo to data collected from site visits and interviews to identify patterns of client satisfaction and to inform program improvement strategies.

Ms. Battis has served as a researcher for five special purpose court evaluations in Maine. The activities of the research are designed to assess fidelity of the program implementation and ability of the specialty courts to achieve successful outcomes. She conducts structured court observations, interviews with key stakeholders and focus groups with drug court participants to identify enhancements needed to the services for participants. As the lead evaluator, Ms. Battis has been responsible for the data analysis which measures the impact of the specialty court programs in reducing recidivism. She has also been responsible for the longitudinal analysis of a project in Maine aimed at building and implementing an infrastructure for providing an integrated system of care for children with serious emotional disturbances.

Prior to joining HZA, Ms. Battis worked for AmeriCorps VISTA (Volunteers in Service To America), a federal public service program. Her position, with the HealthReach Community Health Centers in Waterville, Maine, involving a variety of tasks, including data analysis, research, public health information tracking and reporting. Ms. Battis holds a Master's degree in Social Research (with Commendation) from the University of Aberdeen, Scotland, a competitive, international graduate program focusing on social research methodologies and statistical software tools (including SPSS, DataNet and NextGen).

Jasmine Patraw, MA, Research Associate: Since joining HZA at the start of 2015, Jasmine Patraw has conducted both qualitative data collection and analysis as well as quantitative data analysis. Working from the firm's Troy, New York office, she has assisted with the evaluation of Arkansas's Title IV-E Waiver grant award. Ms. Patraw has conducted interviews with key stakeholders across the state for a number of the

state's waiver initiatives which are designed to improve the safety and permanency of children known to the child welfare system and conducted the content analysis of those interviews. She has written portions of the reports, which Arkansas provides to its federal oversight partners, which address the progress the state has made in implementing the various initiatives and the baseline measures which will be used in future years to assess success, i.e., improved outcomes.

Ms. Patraw is currently working on an assessment of Alaska's behavioral health systems. Using data from multiple service agencies, she has contributed to the first ever comprehensive assessment of the behavioral health services provided with state funds, and she is currently documenting the methodology to allow the State to continue to monitor the system in the future.

Ms. Patraw received a Master's Degree in Medical Anthropology from East Carolina University, and is currently working toward a PhD in Medical Anthropology from the University at Albany, SUNY.