OHIO NEEDS ASSESSMENT FOR CHILD WELFARE SERVICES

Ohio | Department of Job and Family Services

January 2016

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Ohio | Department of Job and Family Services

Ohio Needs Assessment for Child Welfare Services
January 2016

Executive Summary

PURPOSE

The Ohio Department of Job and Family Services (ODJFS) completed the *Ohio Needs Assessment* to identify service needs of children and families coming to the attention of public children services agencies (PCSAs). In addition to the analysis of service needs, this study also sought to identify the most effective interventions designed to meet those service needs.

The needs assessment answers the following questions:

1. What concerns are children and families served by Ohio's child welfare system experiencing?
2. Are there constellations of concerns evident among the children and families?
3. What are the effective evidence-based interventions identified in peer-reviewed literature that address the concerns of children and families?
4. What do national experts in the field recommend as the most effective service interventions for children and families?
5. What services are children and families currently receiving?
6. What additional evidence-based services are needed to address the concerns?

METHODOLOGY

The needs assessment employed a seven-phase methodology. The seven phases of the project included:

1. Identification of primary and secondary data sources;
2. Use of assessment data collected in Ohio's Statewide Automated Child Welfare Information System (SACWIS) to identify Case Profiles, which reflect the patterns of assessed adult and child concerns across the child welfare population;
3. Completion of a systematic literature review to determine evidence-based interventions to address child and family concerns identified in the SACWIS Case Profiles;
4. Completion of a survey of national experts to determine effective evidence-based interventions for abused, neglected or dependent children and their families experiencing multiple concerns and to solicit expert judgments on the likelihood families would engage in services;
5. Matching of SACWIS, Medicaid, Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance to Needy Families (TANF), and Child Care services data to determine how many services are currently being provided;
6. Data analysis; and
7. Determination of future service needs.

Data on cases active between July 1, 2013 and June 30, 2014 served as the baseline for ODJFS' analysis of concerns of children and families and services provided.

KEY MILESTONES OF THE NEEDS ASSESSMENT

Analysis of Assessed Concerns

Utilizing a technique of statistical analysis known as cluster analysis, ODJFS analyzed assessment data for 91,586 cases. This analysis resulted in the identification of Case Profiles that represent the most prevalent patterns of concerns assessed across families and children served by Ohio's PCSAs. Through the cluster analysis, 60 unique Case Profiles were identified, with the top 35 Case Profiles encompassing 80% of the statewide caseload served during the observation window. The assessed concerns that comprise these Case Profiles include: Domestic Violence; Emotional Illness (Parent); Parenting; Physical Illness (Parent); Cognitive Difficulty (Parent); Substance Abuse (Parent); Financial and Resource Needs; Homelessness; Self-Protection (Child); Stress (Parent); Abuse, Neglect, Dependency; Emotional Behavioral Needs (Child); Physical, Cognitive, Social Needs (Child); Substance Abuse (Child); Sexual Abuse (Child); Sight, Hearing, Speech; Aging out of Care; and Teen Pregnancy.

Identification of Effective Service Interventions

Through a systematic review of the literature published over the past ten years across a variety of disciplines (e.g., psychology, sociology, social work, developmental science, behavioral science, health), ODJFS sought to identify effective evidence-based interventions designed to address the concerns that comprise the Case Profiles. Through this literature review, a comprehensive database of evidence-based interventions appropriate for the child welfare population was developed. This database includes information on 450 evidence-based interventions that address a wide range of concerns reflected in the Case Profiles (e.g., substance abuse, emotional/behavioral needs, and domestic violence). Information in the database includes the populations for which each intervention was designed, ratings of effectiveness for each intervention, and web links for additional information.

Calculation of Service Need

Building on the Case Profiles analysis and literature review, ODJFS then conducted a survey of national experts designed to elicit subject matter experts' professional opinions regarding the most beneficial interventions to meet the needs presented by the various Case Profiles, along with the experts' assessment of the likelihood of completion of recommended services. A total of 85 experts from across the nation participated in this comprehensive survey. Through the survey, the experts were asked to examine a subset of Case Profiles, make specific service recommendations for the concerns identified in the profiles, and assess the likelihood of service benefit and/or the likelihood of family cooperation with the service. Survey data from the national experts was utilized to impute the percentage of cases with each presenting concern that would need (and likely avail themselves of) a service response. These data were then utilized to calculate an unduplicated count of cases in need of a particular Service Category (see discussion on services below).

Identification of Services Provided

In order to identify the services families received during the observation window, ODJFS matched and examined data from five large data systems: (1) SACWIS; (2) Medicaid Claims data; (3) Supplemental Nutrition Assistance Program (SNAP) data; (4) Temporary Assistance to Needy Families (TANF) data, and (5) Child Care data. Since each data system was developed independently and used different terms to refer to the same service (e.g., mental health counseling, psychotherapy), it was critical to establish a set of core service categories in order to map data from these five different systems to a common set of terms (see below).

Adult-Related Service Categories
Medical
Psychotherapy
Parenting
Domestic Violence
Drug Diagnostic
Drug In-Patient or Out-Patient
Financial Support

Child-Related Service Categories
Medical
Psychotherapy
Sight, Hearing and Speech
Child Education
Parenting (Teen Pregnancy)

FINDINGS

Upon determining the number of cases needing a response within each service category as well as the number of services provided, ODJFS was able to calculate the net service need within each service category. The following tables capture the service categories for children and adults, the corresponding case concerns addressed by each service category, the number of cases needing a response within each service category, the number of cases receiving services within each service category, and the net number of cases needing services in each category. Tables with additional detail are included in the full report.

Adult-Related Service Needs

Service Category	Corresponding Case Concerns Addressed by the Service Category	Number of Cases Needing a Service within the Service Category	Number of Cases Receiving Services within the Service Category	Net Number of Cases Needing Services within the Service Category
Medical	Physical Illness Substance Abuse Emotional Illness	17,870	25,351	(7,481)
Psychotherapy	Cognitive Difficulty Domestic Violence Stress Emotional Illness Self-Protection Parenting Abuse, Neglect, Dependency	33,798	21,660	12,138
Parenting	Cognitive Difficulty Stress Self-Protection Parenting Abuse, Neglect, Dependency	33,473	4,302	29,171
Domestic Violence	Domestic Violence	12,735	4,472	8,263
Drug Diagnostic	Substance Abuse	11,506	5,488	6,018
Drug In- and Out-Patient	Substance Abuse	11,506	7,729	3,777
Financial Support	Financial Homelessness	9,522	5,969	3,553

Child-Related Service Needs

Service Category	Corresponding Case Concerns Addressed by the Service Category	Number of Cases Needing a Service within the Service Category	Number of Cases Receiving Services within the Service Category	Net Number of Cases Needing Services within the Service Category
Medical	Physical, Cognitive, Social Sexual Abuse Emotional Behavioral Teen Pregnancy Substance Abuse (Child)	22,074	20,870	1,204
Psychotherapy	Physical, Cognitive, Social Sexual Abuse Emotional Behavioral Aging Out of Care	21,128	17,868	3,260
Sight, Hearing & Speech	Sight, Hearing & Speech	417	401	16
Child Education	Aging Out of Care Teen Pregnancy	462	131	331
Parenting	Teen Pregnancy	87	34	53

How Findings will be Applied

As noted above, the literature review component of Ohio's Needs Assessment identified a wide range of service interventions with sound research backing their efficacy. With the statewide needs assessment now complete, the task ahead for ODJFS is to work with Ohio's PCSAs to move service provision toward greater utilization of these evidence-based interventions. ODJFS will complete a cost analysis based on the service gaps identified in this Needs Assessment and present this cost analysis in a complete report to the Ohio General Assembly no later than May 31, 2016. ODJFS will complete a comprehensive update of this statewide needs assessment no less than every five years in alignment with federal requirements for the development of the state's Title IV-B Child and Family Services Plan (CFSP). Aligning the needs assessment with the CFSP will provide an opportunity to integrate the needs assessment into statewide strategic planning efforts on an ongoing basis.

Ohio Needs Assessment for Child Welfare Services
January 2016

INTRODUCTION

On April 9, 2015, Judge Timothy S. Black, United States District Judge, The United States District Court Southern District of Ohio Western Division, signed an Agreed Oder in the case of John and Mary Roe, et al. vs. Jacqueline Romer-Sensky, et al. (1:83-cv-01704-TS) directing the Ohio Department of Job and Family Services (ODJFS) to comply with the needs assessment provisions of the modified consent decree entered into on July 27, 2006 (Roe v. Staples, et al., 1:83-cv-1704). The April 9, 2015 Agreed Order required the needs assessment contain the following components: (1) description of the methodology used to ensure that the needs assessment relies upon accurate data; (2)description of the methodology employed to conduct the needs assessment; (3) data analysis; and (4) description of pre-placement preventive and reunification services which are needed by a significant number of families on a statewide basis but which are either not available or not available in sufficient quantity to meet such identified needs.

PURPOSE

The *Ohio Needs Assessment for Child Welfare Services* was designed to identify service needs of children and families coming to the attention of public children services agencies (PCSAs). In order to identify the service needs, it was important to obtain answers to the following questions:

1. What concerns are children and families served by Ohio's child welfare system experiencing?
2. Are there constellations of concerns evident among the children and families?
3. What are the effective evidence-based interventions, identified in peer-reviewed literature, that address the concerns of children and families?
4. What do national experts in the field recommend as the most effective service interventions for children and families?
5. What services are children and families currently receiving?
6. What additional evidence-based services are needed to address the concerns?

SCOPE

Data on cases active between July 1, 2013 and June 30, 2014 served as the baseline for analysis of concerns of children and adults and services provided by Ohio's PCSAs. Statewide data were utilized rather than a sample of cases in order to ensure a comprehensive view of statewide issues.

The cases that were the focus of the needs assessment included all response options for screened in reports of abuse, neglect or dependency in Ohio. These included:

- Assessment/Investigation (AI)
- Ongoing Protective Services (In-Home Cases and Foster Care Cases)
- Alternative Response (AR)
- Alternative Response Ongoing (AR-Ongoing)

It should be noted that these classifications may change throughout the life of the case. For example, an Alternative Response case may be referred for Alternative Response Ongoing Services following an assessment. During an assessment, an Alternative Response case may have a pathway switch to the traditional path of Assessment/Investigation, and cases may then be referred to Ongoing Protective Services. All of the varying possibilities were included within the scope of the needs assessment.

Within the observation window, cases were examined if they met any of the following case flow conditions: (1) screened-in by PCSAs for assessment/investigation; (2) closed following completion of a safety assessment and family assessment; (3) closed with referrals to other agencies; (4) open for services and transferred to Ongoing Protective Services; and (5) closed following completion of Ongoing Protective Services. Figure 1 shows this case flow.

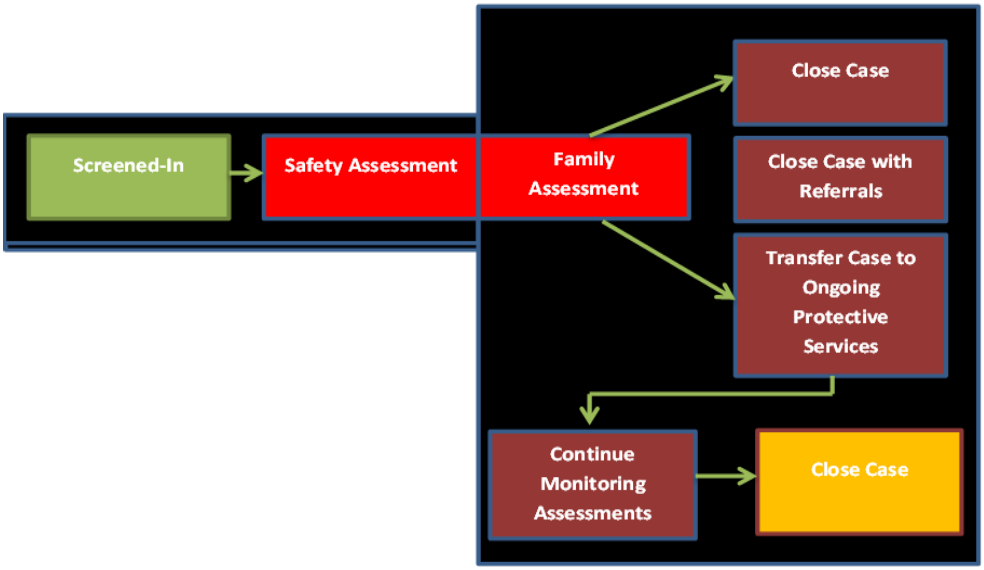


Figure 1. Child welfare case flow.

Within the one-year observation window, cases needed to meet only one of the above circumstances for at least one day to be included in the study. As shown in Figure 2, four case conditions, relative to the beginning and ending of the observation window, are possible. **Type 1** cases involved cases which were open prior to the observation window and were open during the entire observation window. **Type 2** cases constituted cases open prior to the observation window but closed during the observation window. **Type 3** cases were opened during the observation window and closed after the observation window. **Type 4** cases included cases which opened and closed during the observation window. Cases could have been included in more than one type. For example, a case could have been open before the observation window and then closed in the middle of the observation window **(Type 2)**. This case was then opened again during the observation window due to another allegation and remained open for ongoing protective services after the observation window **(Type 3).**

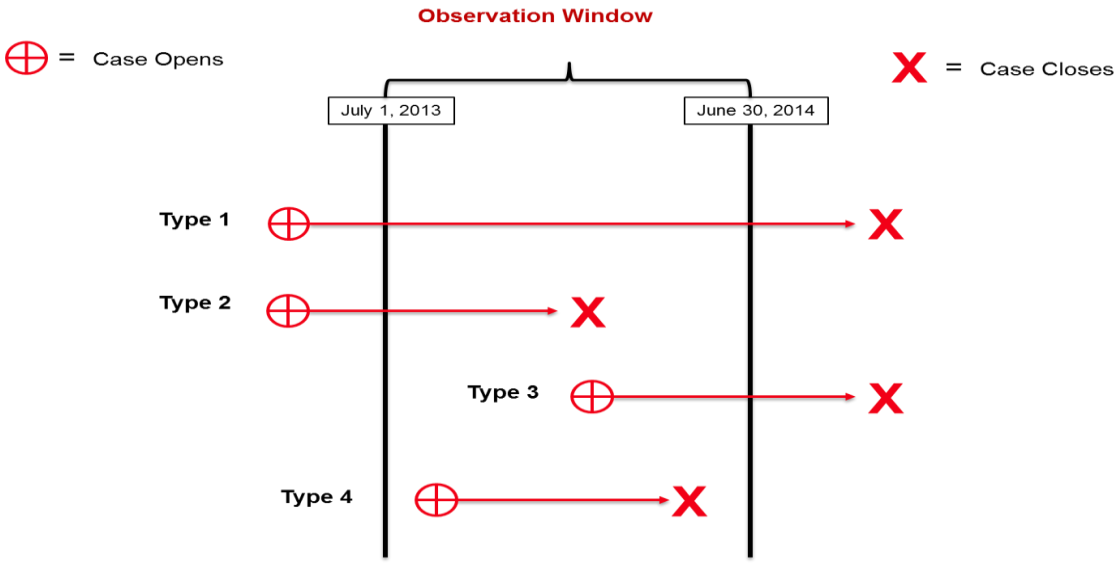


Figure 2. Types of cases falling within the observation window.

Many families experience perpetual problems or problems that reoccur over time. Therefore, historical case information was also included in the analysis where applicable. When cases meeting the conditions for the observation window had previous child welfare involvement, the concerns documented through that past involvement were included in the analysis along with those concerns noted during the observation window. This is shown in Figure 3.

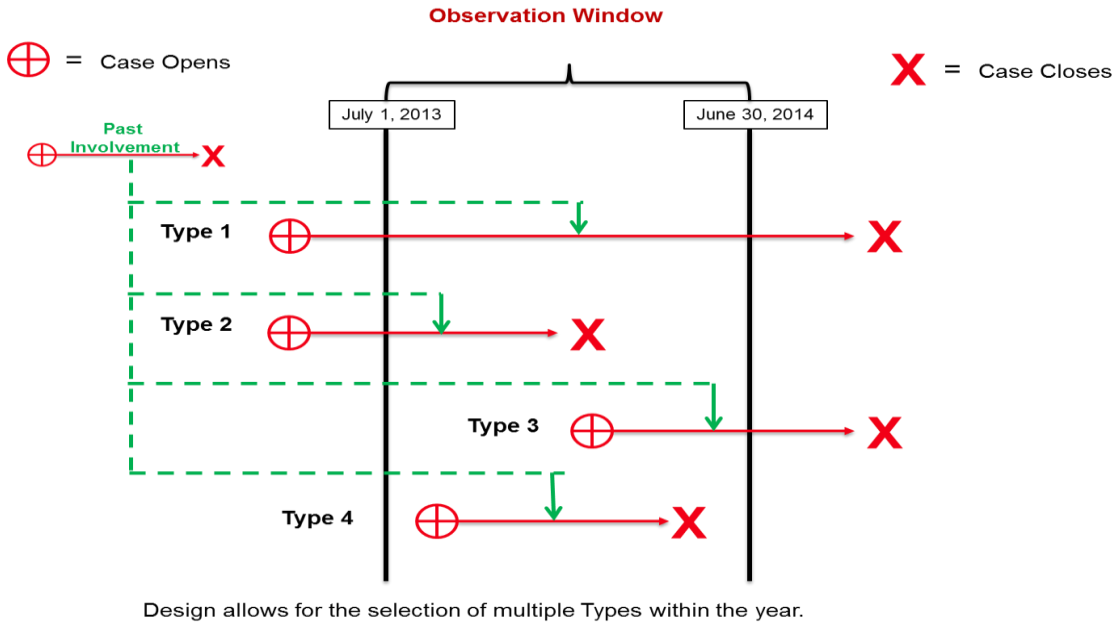


Figure 3. Past involvement is included on cases open during the observation window.

METHODOLOGY EMPLOYED TO CONDUCT NEEDS ASSESSMENT

The needs assessment employed a seven-phase methodology. Depicted in Figure 4, the seven phases incorporated: (1) the identification of primary and secondary data sources; (2) use of the Statewide Automated Child Welfare Information System (SACWIS) to identify Case Profiles; (3) completion of a systematic literature review to determine evidence-based interventions to address child and family concerns identified in the SACWIS Case Profiles; (4) completion of a survey of national experts to determine effective evidence- based interventions for abused, neglected or dependent children and their families experiencing multiple concerns and to solicit expert judgments on the likelihood families would engage in services; (5) use of SACWIS, Medicaid, Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance to Needy Families (TANF), and Child Care services data to determine how many services are currently being provided; (6) data analysis; and (7) determination of future service needs. These phases occurred either independently of each other or sequentially. For instance, Phase I was independent from Phase III, while Phase II and Phase III were required for Phase IV to be completed.

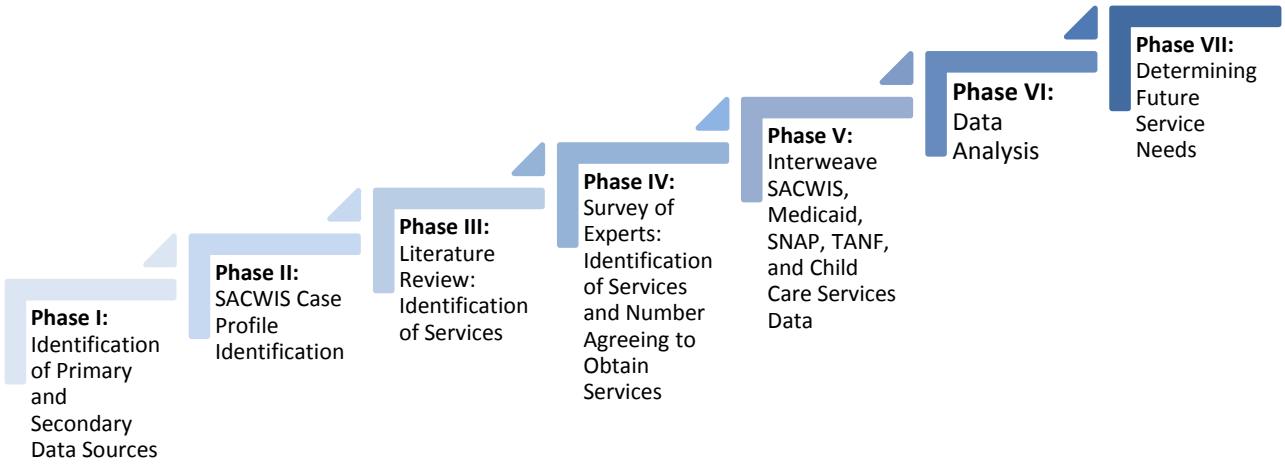


Figure 4. The seven phases of the needs assessment.

Phase I: Identification of Primary and Secondary Data Sources

Primary and secondary data sources were used to obtain a holistic picture of characteristics of children and families coming to the attention of PCSAs and their service needs.

What were the Primary Data Sources?

All 88 PCSAs are mandated to record case information in the Statewide Automated Child Welfare Information System (SACWIS) pursuant to Ohio Administrative Code rule 5101:2-33-23. Case record information encompasses referrals, screening decisions, intake information, assessment/ investigation information, service information, placement information and law enforcement/legal information. Since SACWIS is the vehicle for recording case information, SACWIS data were used as the primary data source to identify: (1) concerns of children and families coming to the attention of PCSAs; and (2) services provided.

Data Quality

Improving data quality is an ongoing activity that occurs on multiple levels throughout the organization. Supervisory or administrative personnel at the county level focus on data quality by reviewing data entered by caseworkers to ensure accuracy of information. Additionally, mechanisms to improve data quality are built into the infrastructure of the SACWIS application. Many data integrity features are coded into system functionality to require specific data elements be entered before work tasks are able to be routed for supervisor approval. To ensure data are complete, visual indicators have been added next to federal Adoption and Foster Care Analysis and Reporting System (AFCARS) related elements to prompt workers to collect and record the information. Alerts also display on the case overview page when AFCARS elements are missing or incomplete. Federal National Child Abuse and Neglect Data System (NCANDS) elements are also required and are likewise subject to multiple system checks to assure data are accurate and consistent. As a component of Continuous Quality Improvement, SACWIS also includes an AFCARS exception report to allow PCSAs to manage their data at the local level.

AFCARS files are routinely checked by using the Federal Data Quality Utilities which are designed to report the errors and inconsistencies. A 10% error threshold is required to submit a compliant file. Ohio routinely submits compliant AFCARS and NCANDS files as noted in the *Ohio Child and Family Services Review Data Profiles* issued by the U.S. Department of Health and Human Services. State SACWIS team members also monitor data quality and the user-community is contacted if issues are identified.

Targeting SACWIS data

Four pertinent areas within SACWIS were targeted to collect information on child and adult concerns for this study. They included: **case** data, **person** data, **assessment** data, and **service** data.

Case data identify global features of cases. These data are used to identify components of the case such as family structure, domestic violence, and abuse/neglect status. Person data contain demographic information specific to the individual such as the person's role on the case and characteristics of the person, including information on diagnoses of medical or mental health concerns (e.g., developmental/ intellectual issues, medical issues, mental health/substance abuse issues, prenatal/birth issues, and traits/behaviors/family history). Assessment data are crucial in understanding the scope and magnitude of the challenges affecting parents, children, and families. Assessment data are captured at intervals established by policy throughout the life of the case. The following is a list of SACWIS modules which capture assessment information:

- Safety Assessment
- Safety Plan
- Family Assessment
- Alternative Response (AR) Family Assessment
- Ongoing Case Assessment
- AR Ongoing Case Assessment
- AR Family Services Plan
- Case Plan
- AR Family Services Plan Review
- Case Review
- Semiannual Administrative Review

- Reunification Assessment
- Risk Re-assessment Scale of Abuse/Neglect

Service data within SACWIS contain structured (drop-down boxes, radio buttons) and unstructured (text) data. Structured information identifies: who received which type of service; the category and type of service; and related dates. Unstructured service information consists of narratives recorded by workers in the following text fields:

- *Case Review: Progress on the Concerns*
  These files contain information on the impact of services designated to address safety, risk, permanency and child well-being.

- *Case Review: Progress on the Strengths and Needs*
  These files contain information on the impact of services on child, adult and family functioning and the likelihood of future maltreatment.

- *Case Review: Reason for the Case Status*
  These files contain information on the reason for the current case status (e.g., continue agency involvement, terminate agency services) and captures whether services provided need to continue or if additional services are needed.

What were the Secondary Data Sources?

Although the original methodological design of the needs assessment combined the SACWIS service module as the primary data source with Medicaid claims data as the secondary data source, ODJFS imbricated additional secondary data sources for a more robust assessment of services, as shown in Figure 5. These additional secondary data sources included Temporary Assistance to Needy Families (TANF) data, Supplemental Nutrition Assistance Program (SNAP) data, and Child Care data. These contextual data provide greater depth to the study to aid in understanding the magnitude of family concerns and services provided to address those concerns.

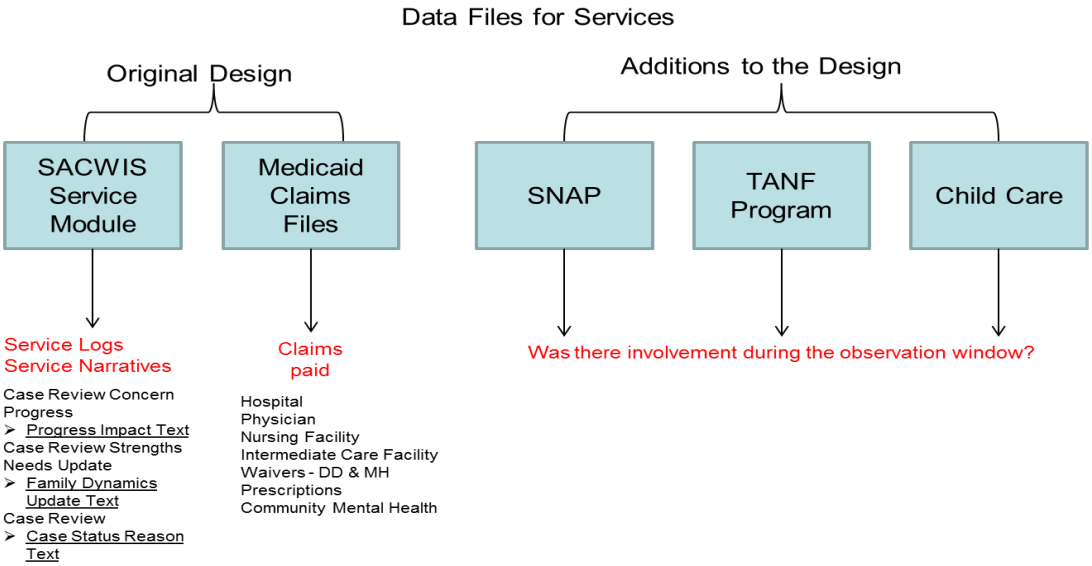


Figure 5. Data files used for primary and secondary data analysis.

Summary

Synthesis of SACWIS service data, Medicaid claims data, SNAP data, TANF data, and Child Care data enhanced the knowledge and analytic results on actual service delivery patterns.

Phase II: SACWIS Case Profile Identification

In the previous phase, primary and secondary data sources were determined. The two questions ODJFS wanted to answer during Phase II were:

- *What concerns are children and adults experiencing?*
- *Are there unique constellations of concerns among children and adults?*

During this phase, information was obtained on the number of cases open within the observation window with specific types of concerns affecting the safety, permanency, and well-being of children. Utilizing a statistical software package, ODJFS identified 18 risk factors, which will be referred to as "Concerns," for analysis from all completed assessments on cases open during the observation window. The Concerns were selected based upon: (1) safety and risk assessments documented in SACWIS throughout the life of the case (see page 5 for the complete list of assessment tools included in the analysis); (2) research conducted by Sullivan and Knutson[1] on the prevalence of maltreatment in children with disabilities; and (3) findings from the Administration for Children and Families on critical concerns within the child welfare population.[2] Figure 6 describes each of the 18 Concerns included in the analysis.

Source		Concerns	Assessment Guidance
Safety and Risk Assessments	**1.**	Domestic Violence (Adult)	Focuses on dynamics and quality of relationships as well as historical or current conflictual or violent interactions between adults. Examines evidence that one caretaker's behaviors or actions may be directly responsible for stressful interactions with the other.
	2.	Emotional/ Behavioral Problems (Child)	Identifies behaviors of children which may increase the potential for negative caretaker responses. Consideration is given to any behavior identified as a trigger for abusive interactions.
	3.	Emotional Illness (Adult)	Identifies if adult caretaker's emotional and mental health functioning may impair the caretaker's capacity to provide care to self and/or child. This also addresses the adult's ability to control impulses of anger, hostility, and physical violence.
	4.	Parenting Difficulties (Adult)	Evaluates the caretaker's view of the child and expectations of the child based on the child's age, physical, and developmental stage. Also addressed are methods of discipline.

[1] Patricia M. Sullivan and John F. Knutson. "Maltreatment and Disabilities: A Population-based Epidemiological Study." Child Abuse & Neglect. Vol. 24, Issue 10, October 2000: 1257.

[2] Development Services Group, Inc. *Protective Factors for Populations Served by the Administration on Children, Youth, and Families."* Bethesda: Development Services Group, Inc. (August 23, 2013): 1.

Source		Concerns	Assessment Guidance
Safety and Risk Assessments	5.	Physical, Cognitive, Social (Child)	Evaluates degree to which a child's physical, cognitive, or social development may affect the child's vulnerability to abuse and/or neglect. Also included is how these issues affect the parent's response to the child.
	6.	Physical illness (Adult)	Evaluates caretaker and/or other adults' physical health in relation to their ability to interact with the child, to protect the child, and to provide appropriate parenting to the child. Also included is the caretaker's physical ability to intervene to protect the child.
	7.	Cognitive Difficulties (Adult)	Evaluates the caretaker's and/or other adult's ability to comprehend risk to the child and respond with appropriate protective action. Also considered is the level of maturity demonstrated by the adult, including the caretaker's ability to make judgments regarding the child's welfare.
	8.	Substance Abuse (Child)	Identifies cases in which there was a positive toxicology result indicated by the caseworker in the case record.
	9.	Substance Abuse (Adult)	Evaluates effects of substance use on adult's emotional and physical state, including the caretaker's ability to control interaction with the child. Effects of substance use on family finances, employment, and criminal activity are evaluated as well as history, severity, duration of substance misuse and escalation of severity of misuse over time.
	10.	Sexual Abuse (Child)	Identifies cases in which there was a substantiation of sexual abuse as a result of the child being the victim of "sexual activity."
	11.	Abuse, Neglect, Dependency- (Child)	Identifies cases in which there was a substantiation of abuse, neglect, or dependency based upon whether the child: (1) exhibited evidence of physical injury or death inflicted other than by accidental means or an injury or death which was at variance with the history given (abuse); (2) suffered physical injury which harmed or threatened to harm the child's health or welfare because of the acts of the child's caretaker (abuse); (3) lacked parental care (neglect); (4) was abandoned (neglect); (5) was not receiving special care for a mental condition due to the caretaker's refusal to provide for the needed care (neglect); (6) was not receiving proper or necessary subsistence, education, medical or surgical care or treatment due to the caretaker's refusal to provide the necessary care (neglect); (7) suffered physical or mental injury that harmed or threatened to harm the child's health or welfare due to the omissions of the caretaker (neglect); (8) was homeless or destitute or without parental care, through no fault of the child's caretaker (dependent); (9) lacked adequate parental care due to the mental or physical condition of the child's caretaker (dependent); and/or (10)

Source		Concerns	Assessment Guidance
			became a ward of the state due to the child's condition or environment (dependent);
Safety and Risk Assessments	**12.**	Financial Distress (Adult)	Identifies whether the family has the economic resources to meet the basic needs of family, including shelter, utilities, food, medical care, and/or clothing.
	13.	Homelessness	Evaluates factors impacting housing stability and history, severity, and duration of housing instability.
	14.	Self-Protection (Child)	Evaluates child's ability to protect oneself. Factors considered include a child's age and issues of abuse or neglect, including whether the child is able to recognize child abuse or neglect.
Sullivan & Knutson (2003)	**15.**	Sight, Hearing, Speech (Child)	Evaluates degree to which a child's visual impairments, hearing impairments, and/or speech impairments may affect the child's vulnerability to abuse and/or neglect. Also included is an evaluation of how these issues affect the parent's response to the child.
Safety and Risk Assessments	**16.**	Stress (Adult)	Focuses on intensity, severity, and number of stressors affecting the care of the child and the adult's response to stressors.
ACF Recommendations (2013)	**17.**	Aging out of Foster Care (Child)	Identifies any child at risk of aging out of foster care within one year.
	18.	Teen Pregnancy (Child)	Identifies teens that are pregnant and/or are teen parents.

Figure 6. The eighteen Concerns included in the analysis.

It should be noted the 18 Concerns listed above were commonly found in cases that were active in the observation window. Five types of analyses were used to understand the mix of Concerns within the cases.

The first analysis, shown in Table 1, involved a rank order of the frequency of Concerns.

Concerns	Number of Cases	Percent of all Cases
Self-Protection (Child)	76,000	82.98
Parenting Difficulties (Adult)	44,017	48.06
Emotional Illness (Adult)	42,049	45.91
Emotional/Behavioral Problems (Child)	41,938	45.79
Domestic Violence (Adult)	39,401	43.02
Substance Abuse (Adult)	38,132	41.64
Physical, Cognitive, Social (Child)	33,453	36.53
Stress (Adult)	32,244	35.21
Abuse, Dependency, Neglect (Child)	23,909	26.11
Financial Distress (Adult)	22,930	25.04
Physical Illness (Adult)	22,292	24.34
Cognitive Difficulties (Adult)	11,283	12.32
Homelessness (Adult)	7,895	8.62
Sexual Abuse (Child)	6,311	6.89
Substance Abuse (Child)	1,975	2.16
Seeing, Hearing, Speech (Child)	1,308	1.43
Aging out of Foster Care (Child)	903	0.99
Teen Pregnancy (Child)	213	0.23

Total Unduplicated Cases: 91,586

Table 1. Number and percent of cases with each Concern.

While the data in Table 1 is helpful, it does not reveal how these Concerns co-occurred with other Concerns. For example, the table does not reveal how many cases had both Substance Abuse (Adult) and Domestic Violence (Adult), or how many cases had Sexual Abuse (Child) and Parenting Difficulties (Adult).

One method of understanding how these Concerns interact is to do a Crosstab Analysis. Table 2 shows the results of this analysis by the number of co-occurring Concerns.

Concerns	Domestic Violence	Emotional Behavioral (Child)	Emotional Illness (Adult)	Parenting Difficulties	Physical, Cognitive, Social (Child)	Physical Illness (Adult)	Cognitive Difficulties (Adult)	Substance Abuse (Child)	Substance Abuse (Adult)	Sexual Abuse	Abuse, Dependency, Neglect	Financial Distress	Homelessness	Self-Protection	Sight, Hearing, Speech	Stress	Aging Out of Foster Care	Teen Pregnancy
Domestic Violence	39,401																	
Emotional Behavioral (Child)	22,402	41,938																
Emotional Illness (Adult)	25,826	26,537	42,049															
Parenting Difficulties	26,518	27,454	34,127	44,017														
Physical, Cognitive, Social (Child)	18,197	24,262	22,212	22,943	33,453													
Physical Illness (Adult)	13,272	15,441	17,898	17,236	13,651	22,292												
Cognitive Difficulties (Adult)	7,092	7,821	9,475	9,611	7,803	6,011	11,283											
Substance Abuse (Child)	827	539	1,141	1,250	1,091	612	243	1,975										
Substance Abuse (Adult)	23,577	20,971	27,047	28,255	18,034	14,243	7,021	1,701	38,132									
Sexual Abuse	2,599	3,990	3,249	3,215	2,731	1,956	1,017	14	2,256	6,311								
Abuse, Dependency, Neglect	14,439	12,399	17,219	18,692	11,579	8,955	4,579	1,545	16,244	1,462	23,909							
Financial Distress	14,639	14,596	18,952	19,904	13,425	10,603	6,166	803	17,007	1,700	11,437	22,930						
Homelessness	4,767	4,294	5,669	5,750	3,829	3,224	1,626	250	5,140	550	3,389	4,424	7,895					
Self-Protection	36,594	37,055	38,838	40,601	31,512	20,443	10,691	1,966	35,396	5,212	22,148	21,551	7,204	76,000				
Sight, Hearing, Speech	915	995	1,278	1,215	1,060	1,098	515	35	959	181	848	932	313	1,255	1,308			
Stress	21,129	20,739	26,025	26,986	17,299	13,307	7,402	1,001	22,118	2,258	13,931	15,098	4,392	30,149	912	32,244		
Aging Out of Foster Care	472	786	778	697	616	545	235	2	533	182	334	509	148	692	69	524	903	
Teen Pregnancy	138	180	177	180	134	124	63	4	147	36	93	129	34	192	9	124	17	213

Table 2. Number of cases in each co-occurring Concern.

While the patterns reflect family dynamics driving the problems that families experience, the weakness of this analysis is that it only captures pairs of concerns.

Another method of examining co-occurrence was a Market Basket analysis. Figure 7 presents a "Web of Concerns" which identified a strong co-occurrence of the Concerns of Parenting, Substance Abuse and Financial Distress (Resources).

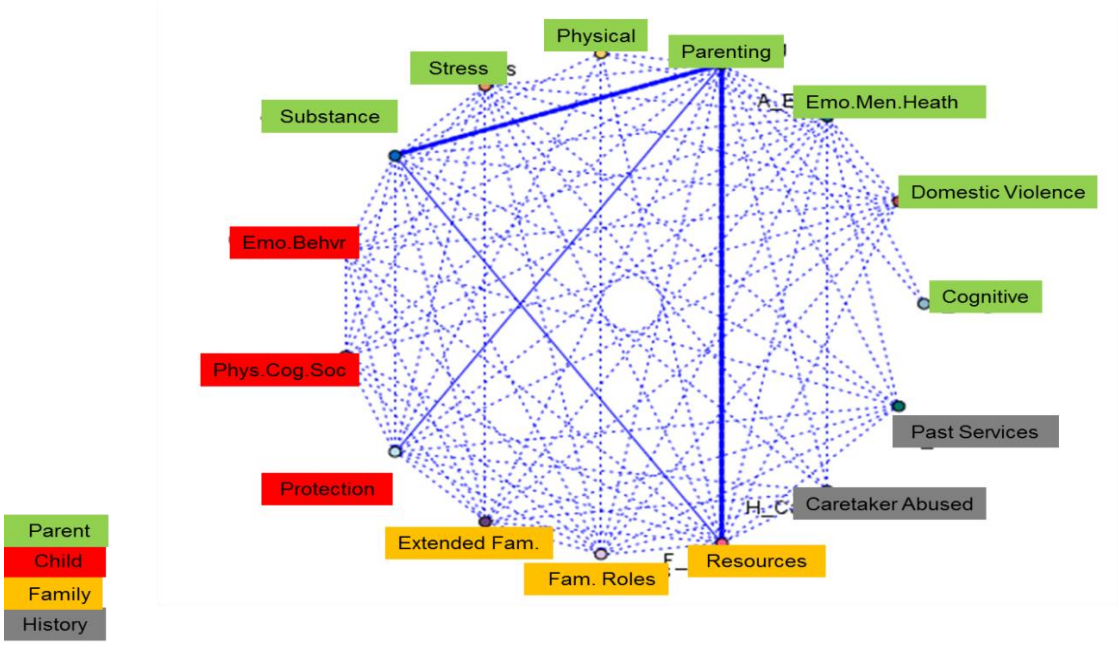


Figure 7. Market Basket Analysis showing the linkages between Substance Abuse, Parenting, and Resources

This method of analysis revealed what had been suspected; namely that some Concerns are highly likely to be associated with one another. The darker the lines are between two Concerns the more cases there are with those two Concerns. Yet, while the Market Basket Analysis was helpful, it required the data analyst to make a lot of choices in determining which patterns were most influential.

Therefore, a fourth method used was Association Analysis to delineate what Concerns were highly associated with each other. For example, as shown in the figures below, of the 38,132 adult substance abuse cases, 27,047 cases also had Concerns associated with emotional illness. Thus, 71% (27,047 cases) of the substance abuse cases included emotional illness.

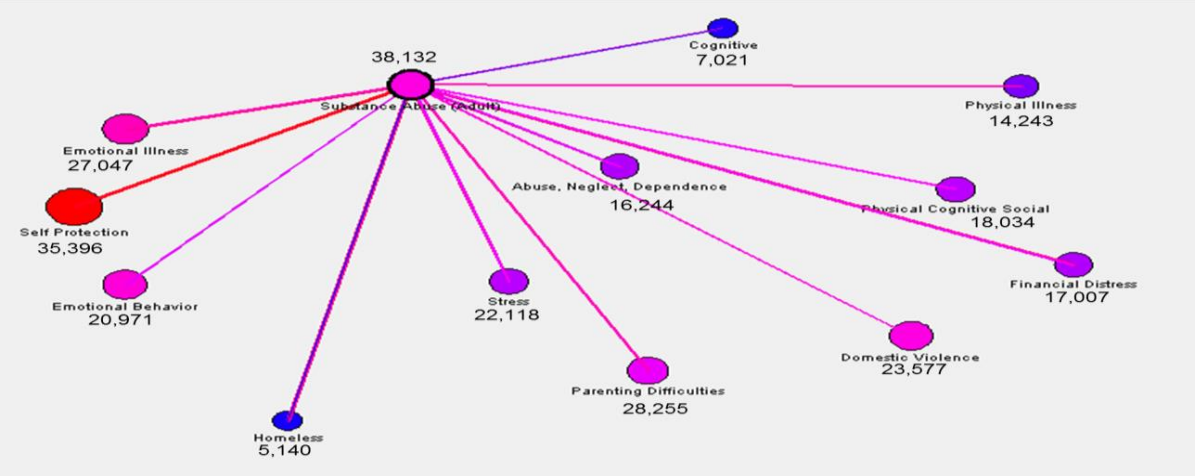


Figure 8. Association Analysis: Number of Concerns when Substance Abuse (adult) is primary.

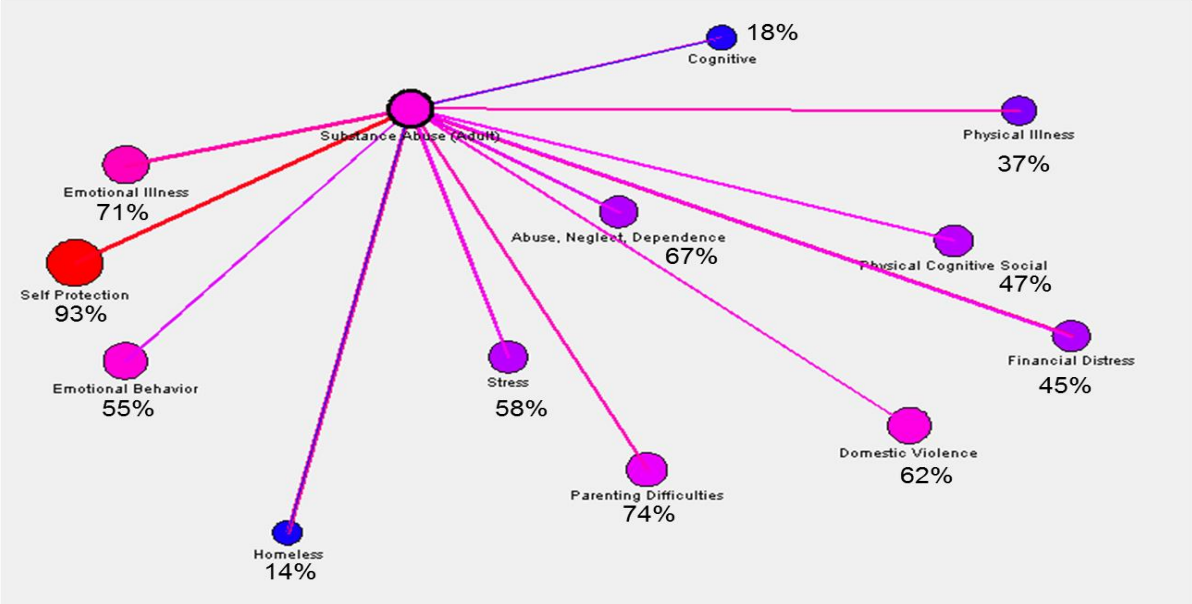


Figure 9. Association Analysis: Percent of Concerns when Substance Abuse (adult) is primary.

While this method of analysis provided valuable data that can inform child welfare assessment practices, its utility was limited in evaluating and quantifying service needs for families who may be experiencing a range of multiple and varying Concerns. Therefore, ODJFS employed a fifth method of analysis to reflect the multidimensional relationships between and among the Concerns.

The final method used to identify patterns of Concerns was a Cluster Analysis. This proved to be most useful for the purpose of developing Case Profiles. Cluster Analysis measures the degree to which every possible pair of cases is similar in terms of their Concerns and then systematically groups similar cases to form Profiles. This analysis resulted in the identification of Case Profiles that represent the most prevalent patterns of Concerns assessed across families and children served by Ohio's PCSAs. Through the Cluster Analysis, 60 unique Case Profiles were identified, with the top 35 Case Profiles encompassing 80% of the

statewide caseload served during the observation window (73,954 cases). Use of these 35 Profiles for the needs assessment analysis exceeded ODJFS' original goal of 70% case inclusion in the study. Table 3 displays the frequency of Concerns within each of the 35 Case Profiles.

Profile	No. of Cases	Domestic Violence	Emotional Behavioral (Child)	Emotional Illness (Adult)	Parenting Difficulties	Physical Cognitive Social (Child)	Physical Illness (Adult)	Cognitive Difficulties (Adult)	Substance Abuse (Child)	Substance Abuse (Adult)	Sexual Abuse	Abuse, Neglect, Dependency	Financial Distress	Homelessness	Self Protection	Sight Hearing Speech	Stress	Aging Out of Foster Care	Teen Pregnancy
1	4803	4803	0	0	527	0	177	96	39	1198	143	731	220	275	4572	0	0	1	0
2	973	187	973	121	124	424	74	37	1	68	973	45	37	31	931	1	73	5	0
3	1045	0	162	990	904	645	2	38	92	932	34	451	0	53	1026	5	133	1	1
4	1123	123	1074	1080	1064	1123	589	63	5	266	130	49	763	48	1060	30	1123	41	8
5	4053	0	4053	0	0	1770	171	96	8	0	0	213	112	118	4053	0	0	7	5
6	1881	244	1881	0	207	195	147	28	0	121	171	108	68	72	0	2	86	11	3
7	1001	0	0	709	902	46	161	119	9	576	30	61	61	49	904	1	1001	2	0
8	2308	2308	1647	2067	2189	0	0	249	20	2308	127	595	990	180	2146	7	2308	16	6
9	1104	999	880	996	1047	0	1104	84	10	1104	92	198	311	133	1028	26	1104	22	7
10	2977	2977	2782	2855	2912	2732	2416	0	130	2977	328	2375	2648	571	2933	211	2977	95	25
11	1133	431	966	1005	1048	1076	646	1133	1	123	96	0	100	65	1091	26	834	20	4
12	969	969	219	920	930	183	595	28	54	909	37	805	934	794	946	52	898	13	1
13	1794	1652	1794	1611	1652	1794	0	188	21	1794	138	339	413	96	1747	18	1598	25	6
14	1955	287	203	1955	374	133	157	174	18	197	79	64	124	102	1955	2	176	3	2
15	1130	1130	0	1125	1065	107	125	99	18	473	39	440	46	108	1061	5	0	1	3
16	2210	2210	2210	269	391	1180	210	113	7	0	0	223	116	84	2163	2	105	4	0
17	2474	669	0	71	213	2474	271	139	57	0	143	212	106	104	2388	0	76	5	1
18	3009	0	206	0	238	330	259	84	254	3009	59	678	203	168	2866	1	322	2	3
19	10707	0	0	0	449	0	428	150	140	0	787	784	245	344	10707	0	222	6	3
20	1286	0	103	1200	1142	111	205	95	137	1247	29	1096	982	0	1226	12	1141	4	0
21	961	960	49	814	902	25	46	134	28	443	24	903	686	36	913	7	961	7	1
22	948	897	0	862	0	85	424	79	20	840	15	153	101	67	898	6	252	1	1
23	1203	1203	0	1008	1083	603	196	70	133	1156	22	1203	189	92	1155	11	1142	3	2
24	1455	1294	1333	1397	1404	1455	1101	1455	2	1221	140	0	1215	202	1415	63	1455	41	7
25	1140	1140	962	1130	1130	1140	1140	1140	75	1140	142	1140	924	261	1125	137	1140	30	18
26	1335	1200	1091	1198	1223	0	147	108	0	0	128	134	83	79	1205	5	1161	10	3
27	1038	324	32	147	1038	169	76	54	54	432	22	1038	137	59	961	1	0	1	0
28	8965	349	0	0	122	125	145	40	1	146	572	397	78	254	0	1	53	43	3
29	1296	0	1296	528	1296	676	8	50	0	0	52	210	53	47	1248	2	0	6	3
30	1463	134	1387	1077	213	1400	1150	150	5	179	86	74	91	72	1348	21	63	38	3
31	964	0	939	124	454	510	75	34	3	132	30	36	33	47	869	0	964	9	0
32	1226	1226	1091	1090	1050	1226	1226	0	4	787	102	0	0	125	1164	49	885	27	6
33	1593	1271	1352	93	431	1167	127	123	51	1593	69	195	78	85	1452	0	83	5	3
34	1351	1351	218	120	324	114	83	65	9	579	36	177	102	75	1249	1	1351	1	2
35	1081	1081	1016	922	946	1081	0	0	2	0	74	268	200	41	1020	3	871	11	2
Number of Cases		31,419	29,919	27,484	28,994	24,099	13,681	6,515	1,408	25,950	4,949	15,395	12,449	4,937	60,825	708	24,558	517	132

Table 3. Case Profiles: Frequency of Concerns within each Profile.

Table 4 displays the percent of Concerns within each of the Case Profiles.

Profile	No. of Cases	Domestic Violence	Emotional Behavioral (Child)	Emotional Illness (Adult)	Parenting Difficulties	Physical Cognitive Social (Child)	Physical Illness (Adult)	Cognitive Difficulties (Adult)	Substance Abuse (Child)	Substance Abuse (Adult)	Sexual Abuse	Abuse, Neglect, Dependency	Financial Distress	Homelessness	Self Protection	Sight Hearing Speech	Stress	Aging Out of Foster Care	Teen Pregnancy
1	4803	100%	0%	0%	11%	0%	4%	2%	1%	25%	3%	15%	5%	6%	95%	0%	0%	0%	0%
2	973	19%	100%	12%	13%	44%	8%	4%	0%	7%	100%	5%	4%	3%	96%	0%	8%	1%	0%
3	1045	0%	16%	95%	87%	62%	0%	4%	9%	89%	3%	43%	0%	5%	98%	0%	13%	0%	0%
4	1123	11%	96%	96%	95%	100%	52%	6%	0%	24%	12%	4%	68%	4%	94%	3%	100%	4%	1%
5	4053	0%	100%	0%	0%	44%	4%	2%	0%	0%	0%	5%	3%	3%	100%	0%	0%	0%	0%
6	1881	13%	100%	0%	11%	10%	8%	1%	0%	6%	9%	6%	4%	4%	0%	0%	5%	1%	0%
7	1001	0%	0%	71%	90%	5%	16%	12%	1%	58%	3%	6%	6%	5%	90%	0%	100%	0%	0%
8	2308	100%	71%	90%	95%	0%	0%	11%	1%	100%	6%	26%	43%	8%	93%	0%	100%	1%	0%
9	1104	90%	80%	90%	95%	0%	100%	8%	1%	100%	8%	18%	28%	12%	93%	2%	100%	2%	1%
10	2977	100%	93%	96%	98%	92%	81%	0%	4%	100%	11%	80%	89%	19%	99%	7%	100%	3%	1%
11	1133	38%	85%	89%	92%	95%	57%	100%	0%	11%	8%	0%	9%	6%	96%	2%	74%	2%	0%
12	969	100%	23%	95%	96%	19%	61%	3%	6%	94%	4%	83%	96%	82%	98%	5%	93%	1%	0%
13	1794	92%	100%	90%	92%	100%	0%	10%	1%	100%	8%	19%	23%	5%	97%	1%	89%	1%	0%
14	1955	15%	10%	100%	19%	7%	8%	9%	1%	10%	4%	3%	6%	5%	100%	0%	9%	0%	0%
15	1130	100%	0%	100%	94%	9%	11%	9%	2%	42%	3%	39%	4%	10%	94%	0%	0%	0%	0%
16	2210	100%	100%	12%	18%	53%	10%	5%	0%	0%	0%	10%	5%	4%	98%	0%	5%	0%	0%
17	2474	27%	0%	3%	9%	100%	11%	6%	2%	0%	6%	9%	4%	4%	97%	0%	3%	0%	0%
18	3009	0%	7%	0%	8%	11%	9%	3%	8%	100%	2%	23%	7%	6%	95%	0%	11%	0%	0%
19	10707	0%	0%	0%	4%	0%	4%	1%	1%	0%	7%	7%	2%	3%	100%	0%	2%	0%	0%
20	1286	0%	8%	93%	89%	9%	16%	7%	11%	97%	2%	85%	76%	0%	95%	1%	89%	0%	0%
21	961	100%	5%	85%	94%	3%	5%	14%	3%	46%	2%	94%	71%	4%	95%	1%	100%	1%	0%
22	948	95%	0%	91%	0%	9%	45%	8%	2%	89%	2%	16%	11%	7%	95%	1%	27%	0%	0%
23	1203	100%	0%	84%	90%	50%	16%	6%	11%	96%	2%	100%	16%	8%	96%	1%	95%	0%	0%
24	1455	89%	92%	96%	96%	100%	76%	100%	0%	84%	10%	0%	84%	14%	97%	4%	100%	3%	0%
25	1140	100%	84%	99%	99%	100%	100%	100%	7%	100%	12%	100%	81%	23%	99%	12%	100%	3%	2%
26	1335	90%	82%	90%	92%	0%	11%	8%	0%	0%	10%	10%	6%	6%	90%	0%	87%	1%	0%
27	1038	31%	3%	14%	100%	16%	7%	5%	5%	42%	2%	100%	13%	6%	93%	0%	0%	0%	0%
28	8965	4%	0%	0%	1%	1%	2%	0%	0%	2%	6%	4%	1%	3%	0%	0%	1%	0%	0%
29	1296	0%	100%	41%	100%	52%	1%	4%	0%	0%	4%	16%	4%	4%	96%	0%	0%	0%	0%
30	1463	9%	95%	74%	15%	96%	79%	10%	0%	12%	6%	5%	6%	5%	92%	1%	4%	3%	0%
31	964	0%	97%	13%	47%	53%	8%	4%	0%	14%	3%	4%	3%	5%	90%	0%	100%	1%	0%
32	1226	100%	89%	89%	86%	100%	100%	0%	0%	64%	8%	0%	0%	10%	95%	4%	72%	2%	0%
33	1593	80%	85%	6%	27%	73%	8%	8%	3%	100%	4%	12%	5%	5%	91%	0%	5%	0%	0%
34	1351	100%	16%	9%	24%	8%	6%	5%	1%	43%	3%	13%	8%	6%	92%	0%	100%	0%	0%
35	1081	100%	94%	85%	88%	100%	0%	0%	0%	0%	7%	25%	19%	4%	94%	0%	81%	1%	0%

Table 4: Case Profiles: Percent of cases with each Concern for each Profile.

In Table 4, cells are shaded by the percent of cases in the Profile. Red-orange is 100% or near 100%; green is near 0% or 0%. Each row is a Case Profile. For example in the first row, Case Profile 1 consisted of 4,803 cases. All cases included Domestic Violence and most cases had an assessed Self-Protection Concern, which is often indicative of very young and/or vulnerable children. These tables provide a wealth of information on the common patterns and volume of cases within each Profile. Over half of the Profiles show Domestic Violence and Emotional Illness to be highly prominent. Self-Protection is common to nearly all Profiles.

To illustrate the power of Case Profiling, Figure 10 presents a close-up look at the 18 Concerns for Case Profile 1 and Case Profile 25. Case Profile 1 and Case Profile 25 both include Domestic Violence and Self-Protection Concerns. However, Cases Profile 25 also includes several other significant Concerns.

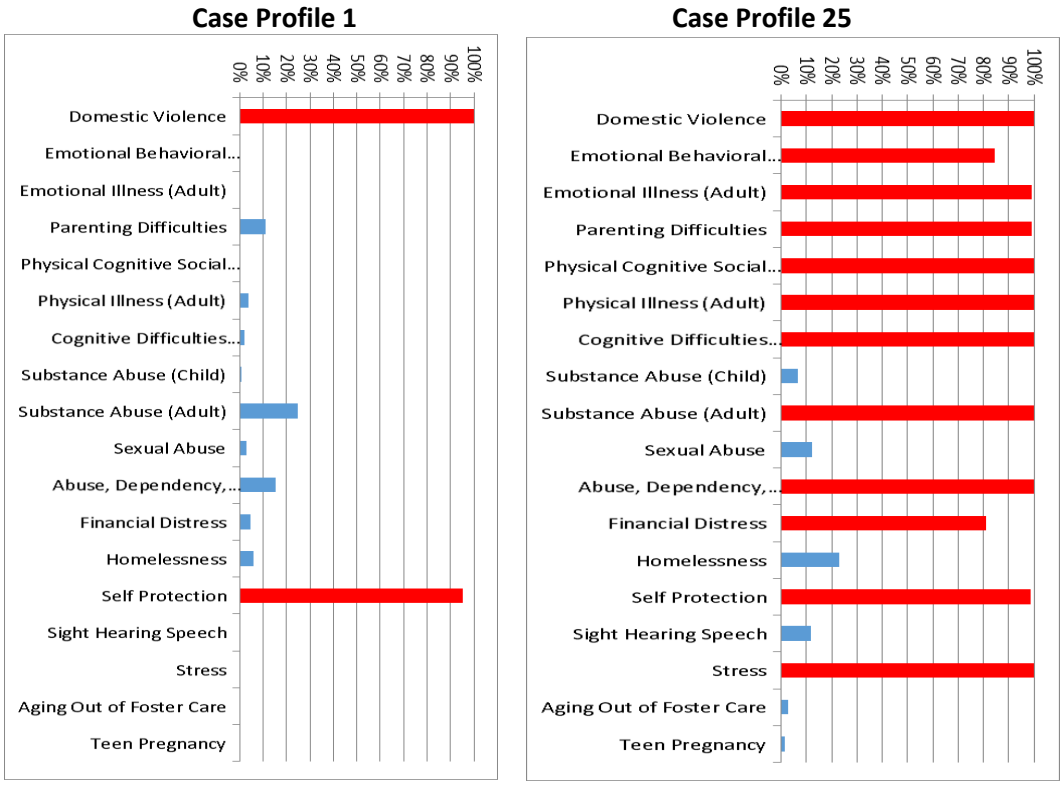


Figure 10. Comparison of Case Profile 1 and Case Profile 25.

Summary

The Cluster Analysis produced a rich picture of the varied patterns of Concerns impacting children and adults. Information learned from this phase was directly utilized in *Phase III: Systematic Review of Literature* and was applied to developing the Case Vignettes used during *Phase IV: Survey of Experts.*

Phase III: Systematic Review of Literature

While SACWIS provides a wealth of information on people and concerns, it does not provide recommendations of effective services. ODJFS sought to obtain information on effective services recommended to address the constellations of adult and child concerns identified in the Case Profiles *(Phase II: SACWIS Case Profile Identification)* by conducting a systematic review of the literature. As a result, service areas of focus in the literature review included the following: (1) domestic violence interventions for survivors, batterers and children; (2) mental health services for adults and children; (3) parent education models; (4) substance abuse treatment; (5) services for sexually abused children; (6) services to address child, abuse, neglect, and dependence; (7) financial services or supports to meet basic needs; (8) services to address homelessness; (9) services to support youth aging out of foster care; (10) services for teen parents; and (11) community-based services.

Literature Review

ODJFS entered into a contract with Steven R. Howe and Associates, LCC to conduct a Systematic Research Review. Systematic Research Reviews are literature reviews that "adhere closely to a set of scientific methods that explicitly aim to limit systematic error (bias), mainly by attempting to identify, appraise and synthesize all relevant studies (of whatever design) in order to answer a particular question."[3]

How was the Literature Review Conducted?

The Systematic Research Review entailed conducting a review of peer-reviewed literature published over the past ten years across a variety of disciplines (e.g., psychology, sociology, social work, developmental science, behavioral science, health) to identify:

- Effective evidence-based interventions;
- Service strategies that are effective and responsive to the commonly occurring risk factors and needs of the child welfare population; and
- Methods for encouraging parents to obtain needed services.

"Evidence-Based Intervention" was defined as a specific service with a specific set of objectives that is carried out according to an established procedure or policy. Ideally its value has been established via randomized clinical trials, but it could also be evaluated using a matched-group or longitudinal quasi-experimental design.

The primary search technique used for Evidence-Based Interventions involved review and synthesis of compendia of interventions that have already been developed by reputable organizations. These compendia were identified through key-informant interviews and internet searches. The compendia used were all accessible online (see Table 5). In many cases, the compendia did not merely name an intervention, but assessed its evidence base and gave citations to published research. These sources of knowledge are readily accessible by using the custom database developed for this project. Every evidence-based intervention located in these sources was included in the database's Intervention Table,

[3] Mark Petticrew and Helen Roberts. *Systematic Reviews in the Social Sciences A Practical Guide.* Oxford: Blackwell Publishing, 2006:9.

unless it had little or no relationship to the kinds of concerns that a children's services worker would have to confront.

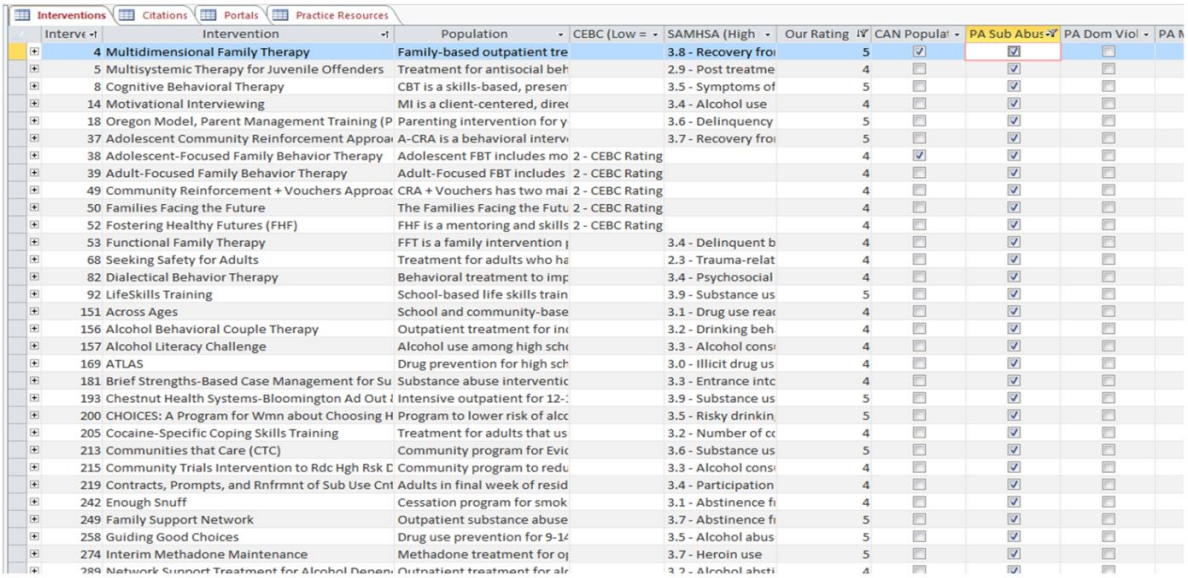
On-line Compendia Search for Evidenced-Based Interventions

- California Evidence-Based Clearinghouse
- Blueprints for Healthy Youth Development
- Child Trends
- Children's Bureau: An Office of the Administration of Children and Families
- Child Welfare Information Gateway
- Frank Porter Graham Child Development Institute (State Implementation & Scaling-Up of Evidence-Based Practices Center)
- Greenbook Initiative
- National Academy Press
- National Child Traumatic Stress Network
- National Resource Center on Domestic Violence: VAW net.org
- National Resource Center for Child Protective Services
- Office of Justice Programs (Crimesolutions.gov)
- Office of Juvenile Justice and Delinquency Prevention Model Program Guide
- Promising Futures: Best Practices for Serving Children, Youth, and Parents Experiencing Domestic Violence
- Promising Practices Network on Children, Families, and Communities
- SAMHSA's National Registry of Evidence Based Programs and Practices
- Social Work Policy Institute
- Top Tier Evidence Initiative
- What Works Clearinghouse

Table 5. On-line Compendia search for Evidence-Based Interventions.

How can Results of the Literature Search be Obtained?

Following completion of the Systematic Review, a Microsoft ACCESS® database was developed containing Evidence-Based Interventions (Compendia, Interventions, Citations, Portals) and Best Practices (Practice Resources) for each identified Concern. Interventions contained in the database also included the California Evidence-Based Clearinghouse (CEBC) and the Substance Abuse and Mental Health (SAMHSA) rating of interventions demonstrated to be effective. The database will be made available to anyone who submits a request to ODJFS. As some individuals may not be familiar with the functionality of Microsoft ACCESS®, a Step-by-Step Guide was developed and can be viewed in Appendix A of this Report. Figure 11 shows a screen shot of the database.



Interventions | Citations | Portals | Practice Resources

Interve	Intervention	Population	CEBC (Low =	SAMHSA (High	Our Rating	CAN Popula	PA Sub Abus	PA Dom Viol	PA M
4	Multidimensional Family Therapy	Family-based outpatient tre		3.8 - Recovery fro	5	☑	☑	☐	
5	Multisystemic Therapy for Juvenile Offenders	Treatment for antisocial beh		2.9 - Post treatme	4	☐	☑	☐	
8	Cognitive Behavioral Therapy	CBT is a skills-based, presen		3.5 - Symptoms of	5	☐	☑	☐	
14	Motivational Interviewing	MI is a client-centered, direc		3.4 - Alcohol use	4	☐	☑	☐	
18	Oregon Model, Parent Management Training (P	Parenting intervention for y		3.6 - Delinquency	5	☐	☑	☐	
37	Adolescent Community Reinforcement Approa	A-CRA is a behavioral interv		3.7 - Recovery fro	5	☐	☑	☐	
38	Adolescent-Focused Family Behavior Therapy	Adolescent FBT includes mo	2 - CEBC Rating		4	☑	☑	☐	
39	Adult-Focused Family Behavior Therapy	Adult-Focused FBT includes	2 - CEBC Rating		4	☐	☑	☐	
49	Community Reinforcement + Vouchers Approac	CRA + Vouchers has two mai	2 - CEBC Rating		4	☐	☑	☐	
50	Families Facing the Future	The Families Facing the Futu	2 - CEBC Rating		4	☐	☑	☐	
52	Fostering Healthy Futures (FHF)	FHF is a mentoring and skills	2 - CEBC Rating		4	☐	☑	☐	
53	Functional Family Therapy	FFT is a family intervention p		3.4 - Delinquent b	4	☐	☑	☐	
68	Seeking Safety for Adults	Treatment for adults who ha		2.3 - Trauma-relat	4	☐	☑	☐	
82	Dialectical Behavior Therapy	Behavioral treatment to imp		3.4 - Psychosocial	4	☐	☑	☐	
92	LifeSkills Training	School-based life skills train		3.9 - Substance us	5	☐	☑	☐	
151	Across Ages	School and community-base		3.1 - Drug use reac	4	☐	☑	☐	
156	Alcohol Behavioral Couple Therapy	Outpatient treatment for ind		3.2 - Drinking beh	4	☐	☑	☐	
157	Alcohol Literacy Challenge	Alcohol use among high sch		3.3 - Alcohol cons	4	☐	☑	☐	
169	ATLAS	Drug prevention for high sch		3.0 - Illicit drug us	4	☐	☑	☐	
181	Brief Strengths-Based Case Management for Su	Substance abuse interventic		3.3 - Entrance into	4	☐	☑	☐	
193	Chestnut Health Systems-Bloomington Ad Out A	Intensive outpatient for 12-1		3.9 - Substance us	5	☐	☑	☐	
200	CHOICES: A Program for Wmn about Choosing H	Program to lower risk of alcc		3.5 - Risky drinkin	5	☐	☑	☐	
205	Cocaine-Specific Coping Skills Training	Treatment for adults that us		3.2 - Number of cc	4	☐	☑	☐	
213	Communities that Care (CTC)	Community program for Evic		3.6 - Substance us	5	☐	☑	☐	
215	Community Trials Intervention to Rdc Hgh Rsk D	Community program to redu		3.3 - Alcohol cons	4	☐	☑	☐	
219	Contracts, Prompts, and Rnfrmnt of Sub Use Cnt	Adults in final week of resid		3.4 - Participation	4	☐	☑	☐	
242	Enough Snuff	Cessation program for smok		3.1 - Abstinence fi	4	☐	☑	☐	
249	Family Support Network	Outpatient substance abuse		3.7 - Abstinence fi	5	☐	☑	☐	
258	Guiding Good Choices	Drug use prevention for 9-14		3.5 - Alcohol abus	5	☐	☑	☐	
274	Interim Methadone Maintenance	Methadone treatment for op		3.7 - Heroin use	5	☐	☑	☐	
289	Network Support Treatment for Alcohol Depen	Outpatient treatment for alc		3.2 - Alcohol absti	4	☐	☑	☐	

Figure 11. Screenshot from the literature search database.

Summary

Results from the Systematic Review of the Literature were used during Phase IV*: Survey of National Experts* when experts were asked to identify, from a listing of evidence-based interventions provided, which interventions could be beneficial to the family with a specified Concern(s).

Phase IV: Survey of National Experts

During this phase a survey of national experts was conducted to determine which evidence-based interventions would be the most effective in addressing each of the 18 Concerns contained within the Case Profiles identified during Phase II: *SACWIS Case Profile Identification*. There were two populations of National Experts surveyed: Casework Experts and Disciplinary Experts. The rationale for bifurcation of the survey is outlined later in this section.

Identification of Evidence-Based Interventions

What Interventions were Included in the Survey?

Evidence-based interventions selected for inclusion in the survey were a subset of those identified in the Systematic Review of the Literature which occurred in Phase III. Because so many interventions were identified in the literature review, prioritization of these interventions was needed. Criteria used to exclude interventions from the Survey of Experts were the following: (1) the intervention appeared to have been implemented in a very limited area; (2) the intervention appeared to be no longer the subject of interest for researchers; (3) the intervention appeared to be a variant of another well-known intervention; or (4) the intervention was school-based or neighborhood-based and designed to a specific population, often with the goal of prevention (an example would be a school-based bullying prevention program for 7th graders.)

The evidence-based interventions utilized in the survey which were associated with each of the 18 Concerns are contained in Appendix B. An example of evidence-based interventions identified for the Concern Substance Abuse (Adult) is presented in Figure 12.

Concern	Evidence –Based Interventions
Substance Abuse (Adult)	Healthy Families America
	Alcohol Behavioral Couple Therapy
	Brief Strength-Based Case Management
	CHOICES: A program for women about choosing healthy behavior
	Family Drug Court
	Interim Methadone Maintenance
	Motivational Interviewing
	Network Support Treatment for Alcohol Dependence
	Positive Family Support
	Safe Environment for Every Kid (SEEK)
	Twelve Step Facilitation Therapy

Figure 12. Relationship between one Concern and multiple evidence-based interventions.

Development of Case Vignettes for the Survey

Results of the analysis conducted in *Phase II: SACWIS Case Profile Identification* identified the top 35 Case Profiles for inclusion in the study, and thus, in the National Survey of Experts. Of the 35 Case Profiles, one Case Profile consisted of cases with essentially no Concerns identified and, as a result, this Case Profile (Case Profile 28) was excluded from the National Expert Survey on the grounds that no interventions were necessary, leaving 34 Case Profiles to be included in the survey. ODJFS then identified cases within SACWIS that exemplified each of the 34 Case Profiles and prepared a case vignette that summarized demographic, structural, and process data thought to be relevant for the purpose of service planning. An example of a Case Vignette which included Domestic Violence, Substance Abuse and Self Protection Concerns is shown in Figure 13.

Case 1

The family consists of the mother and father (Alicia age 42 and Kevin age 43) and their 14 year old son, Ethan.

The father called the agency asking for assistance. He was just released from jail after completing his two week sentence for domestic violence. He stated while he was in jail, his wife (Alicia) and Ethan were drinking and smoking marijuana. Kevin stated that Alicia is divorcing him, and he is not living with them.

Alicia, the mother to Ethan, does not report cognitive delays, physical or emotional problems. She reports that she was divorcing Kevin because of domestic abuse. She stated that 15 years ago her then boyfriend would hit her when he was intoxicated, and she has no tolerance for such abusive individuals. Leaving Kevin, she stated, is a huge positive. She stated that he constantly brought the family down and failed to contribute to the family's well-being. She stated she does not drink alcohol, but smokes marijuana. She stated she does not smoke marijuana around Ethan.

Alicia and Ethan were observed to interact very well with one another. They talked to one another, appeared to be comfortable in each other's presence, and made ample amount of eye contact.

Alicia and Ethan have safe and stable housing as Alicia works full-time. A major support system is Alicia's parents.

Figure 13. A sample vignette used by national experts.

Since ODJFS was interested in obtaining information from the national experts on service interventions for cases involving the Concerns of Teen Pregnancy and Aging Out of Foster Care, two case vignettes were developed for each of these Concerns (in addition to the 34 Case Profile vignettes developed), bringing the total number of case vignettes created for the survey to 38.

Survey Development

Why were Casework Experts and Disciplinary Experts Surveyed?

The initial plan for the survey was to have child welfare casework experts review each case vignette, and for each of the Concerns identified, make recommendations about what interventions would be most appropriate. Through field testing of the survey instrument, it became apparent that casework experts might not have the expertise required to make service recommendations for every Concern. For example, a child welfare expert may not be able to make a diagnosis of a serious mental illness and know what kind of treatment to recommend but would know when a referral to a qualified clinician for further assessment of mental illness is required. It was therefore decided to expand the scope of the survey to include disciplinary experts who would, for instance, have expertise in substance abuse, mental illness, and developmental disorders in order to make specific service recommendations. As piloting of this survey unfolded, additional redesign of the questions was needed. For example, a disciplinary expert would not have expertise in every single Concern, nor would they have the casework experience to be able to judge the likelihood that a family would agree to an intervention.

How did the Experts Complete the Survey?

Piloting and planning revealed that an expert would be able to evaluate between nine and eleven case vignettes, each with an average number of Concerns in a reasonable amount of time. As a result, four different versions of the Casework Expert survey were prepared, as were four different versions of the Disciplinary Expert survey. Each casework expert and disciplinary expert received one survey containing nine to eleven case vignettes. Each survey had a different group of Case Profiles, with each Case Profile containing a different cluster of Concerns. Questions contained in the survey varied depending on the Concern and the type of expert being surveyed. Respondents were not limited to selecting only from the listed interventions provided but could make other recommendations for effective services. Respondents were also provided with an opportunity to make additional comments about their observations of the case. Figures 14 and 15 provide examples of questions contained in the surveys for Casework Experts (Figure 14) and Disciplinary Experts (Figure 15) addressing the case vignette Concerns of Domestic Violence, Substance Abuse and Self-Protection.

Concern: Domestic Violence

1. Which of the following statements best represents your view regarding this concern?
   - ○ This concern does not require a response at this time. SKIP TO NEXT CONCERN.
   - ○ This concern may require a response in the future; the case should not be closed until further assessment allows the caseworker greater insight into this issue. SKIP TO NEXT CONCERN.
   - ○ The concern is important but would be addressed if the caseworker successfully managed all of the other concerns identified in this case. SKIP TO THE NEXT CONCERN.
   - ○ This concern if of secondary importance and may be addressed at the caseworker's discretion.
   - ○ This concern requires a response that would have to be successfully implemented before the case could be closed.

2. Following are several evidence based interventions that can be appropriate for some people who experience domestic violence. Select all interventions you would recommend for this case.
   - ○ Community Advocacy Project
   - ○ Family Thriving Program
   - ○ Prevention and Relationship Enhancement Program
   - ○ Prolonged Exposure Therapy for PTSD for Adults
   - ○ Seeking Safety for Adults
   - ○ Healthy Families America
   - ○ Narrative Exposure Therapy
   - ○ Other Interventions [followed by text box]

3. How likely would the family be to fully cooperate in obtaining services to address this concern?
   - ○ Very likely
   - ○ Somewhat likely
   - ○ Somewhat unlikely
   - ○ Very unlikely

4. How likely would there be a substantial benefit from services intended to address this concern?
   - ○ Very likely
   - ○ Somewhat likely
   - ○ Somewhat unlikely
   - ○ Very unlikely

Concern: Substance Abuse

1. Which of the following statements best represents your view regarding this concern?
   - ○ This concern does not require a response at this time. SKIP TO NEXT CONCERN.
   - ○ This concern may require a response in the future; the case should not be closed until further assessment allows the caseworker greater insight into this issue. SKIP TO NEXT CONCERN.
   - ○ The concern is important but would be addressed if the caseworker successfully managed all of the other concerns identified in this case. SKIP TO THE NEXT CONCERN.
   - ○ This concern if of secondary importance and may be addressed at the caseworker's discretion.
   - ○ This concern requires a response that would have to be successfully implemented before the case could be closed.

2. How strongly do you agree or disagree that this case should be referred for assessment and intervention planning by an organization qualified to address this concern.
   - ○ Agree strongly
   - ○ Agree
   - ○ Disagree
   - ○ Disagree strongly

3. How likely would the family be to fully cooperate in obtaining services to address this concern?
   - ○ Very likely
   - ○ Somewhat likely
   - ○ Somewhat unlikely
   - ○ Very unlikely

4. How likely would there be a substantial benefit from services intended to address this concern?
   - ○ Very likely
   - ○ Somewhat likely
   - ○ Somewhat unlikely
   - ○ Very unlikely

Concern: Self Protection

1. Which of the following statements best represents your view regarding this concern?
   - ○ This concern does not require a response at this time. SKIP TO NEXT CONCERN.
   - ○ This concern may require a response in the future; the case should not be closed until further assessment allows the caseworker greater insight into this issue. SKIP TO NEXT CONCERN.
   - ○ The concern is important but would be addressed if the caseworker successfully managed all of the other concerns identified in this case. SKIP TO THE NEXT CONCERN.
   - ○ This concern if of secondary importance and may be addressed at the caseworker's discretion.
   - ○ This concern requires a response that would have to be successfully implemented before the case could be closed.

2. Please describe what type of referral you would make to address this concern. [followed by text box]

3. How likely would there be full cooperation by the family in addressing this concern?
   - ○ Very likely
   - ○ Somewhat likely
   - ○ Somewhat unlikely
   - ○ Very unlikely

4. How likely would there be a substantial benefit from services intended to address this concern?
   - ○ Very likely
   - ○ Somewhat likely
   - ○ Somewhat unlikely
   - ○ Very unlikely

Figure 14. Casework Expert Survey.

Concern: Domestic Violence

1. Which of the following statements would you most strongly agree with?
   - I do not have expertise in regard to this concern. SKIP TO NEXT CONCERN.
   - While I possess relevant experience, I do not believe enough is known about this family at this time in order to recommend services. SKIP TO NEXT CONCERN.
   - I am comfortable making service recommendations at this time, with the understanding that my recommendations are based only on those few salient features of the case as presented above.
2. Assuming the following interventions were available to the family, please check each of those that you believe could be of benefit to the family. You may check any number of interventions.
   - Community Advocacy Project
   - Family Thriving Program
   - Prevention and Relationship Enhancement Program
   - Prolonged Exposure Therapy for PTSD for Adults
   - Seeking Safety for Adults
   - Healthy Families America
   - Narrative Exposure Therapy
   - Other evidence-based interventions[followed by text box]
3. How likely would there be a substantial benefit from services intended to address this concern?
   - Very likely
   - Somewhat likely
   - Somewhat unlikely
   - Very unlikely
4. Are there any other comments you would like to make about this case?

Concern: Substance Abuse

1. Which of the following statements would you most strongly agree with?
   - I do not have expertise in regard to this concern. SKIP TO NEXT CONCERN.
   - While I possess relevant experience, I do not believe enough is known about this family at this time in order to recommend services. SKIP TO NEXT CONCERN.
   - I am comfortable making service recommendations at this time, with the understanding that my recommendations are based only on those few salient features of the case as presented above.
2. Assuming the following interventions were available to the family, please check each of those that you believe could be of benefit to the family. You may check any number of interventions.
   - Healthy Families America
   - Alcohol Behavioral Couple Therapy
   - Brief Strength-Based Case Management
   - CHOICES: A program for women about choosing healthy behavior
   - Family Drug Court
   - Interim Methadone Maintenance
   - Motivational Interviewing
   - Network Support Treatment for Alcohol Dependence
   - Positive Family Support
   - Safe Environment for Every Kid (SEEK)
   - Twelve Step Facilitation Therapy
   - Other evidence based interventions [followed by text box]
3. How likely would there be a substantial benefit from services intended to address this concern?
   - Very likely
   - Somewhat likely
   - Somewhat unlikely
   - Very unlikely
4. Are there any other comments you would like to make about this case?

Concern: Self Protection

1. Which of the following statements would you most strongly agree with?
   - I do not have expertise in regard to this concern. SKIP TO NEXT CONCERN.
   - While I possess relevant experience, I do not believe enough is known about this family at this time in order to recommend services. SKIP TO NEXT CONCERN.
   - I am comfortable making service recommendations at this time, with the understanding that my recommendations are based only on those few salient features of the case as presented above.
2. Assuming the following interventions were available to the family, please check each of those that you believe could be of benefit to the family. You may check any number of interventions.
   - Cognitive Behavioral Intervention for Treatment in Schools (CBITS)
   - Trauma Affect Regulation
   - Trauma Systems Therapy
   - Trauma-Focused Cognitive Behavior Therapy
   - Child-Parent Psychotherapy
   - Family Connections
   - CAST (Coping and Support Training)
   - Peacebuilders
   - Other evidence based interventions [followed by text box]
3. How likely would there be a substantial benefit from services intended to address this concern?
   - Very likely
   - Somewhat likely
   - Somewhat unlikely
   - Very unlikely
4. Are there any other comments you would like to make about this case?

Figure 15. Disciplinary Expert Survey.

The complete set of Casework and Disciplinary Expert Survey Instruments is contained in Appendix C.

National Experts Surveyed

How were the Casework Experts Identified?

Solicitations for help identifying experts were sent to directors of top academic social work programs, to directors of children services in other states, and to one contact each at Casey Family Programs and the Annie E. Casey Foundation. As there was no basis to judge what response might be obtained, invitations were sent out in batches every few days. Eventually 13 schools and 22 governments were contacted in addition to the two foundations. Contacts were encouraged to have potential respondents reply directly to Steven R. Howe and Associates, LLC indicating willingness to participate, at which point the respondent would be sent an email that included a link to a Survey Monkey survey. Approximately equal numbers of respondents were mailed each of the four versions of the Casework Expert Survey. Forty casework experts completed surveys, with 10 experts, on average, completing each version of the survey.

How were the Disciplinary Experts Identified?

Experts for the Disciplinary Survey were identified by the ODJFS Interdisciplinary Coordinator, the Roe v. Staples Court Approved Expert, and the Ohio Council of Behavioral Health and Family Services Providers. As was the case for the Casework Expert Survey, there were four surveys with each survey containing a different group of Case Profiles. Thirty-five disciplinary experts were recruited and completed the survey, with an average of nine experts completing each of the four versions.

Survey Results

When all surveys were returned, responses for each Concern were pooled to identify: recommended interventions most often made to address each Concern; the probability that the Concern would need to be addressed; the probability that an adult/child would cooperate in obtaining the identified service; and the probability that an adult/child would benefit from the identified service. Families reflected in different Case Profiles may share one or more individual Concerns, but because the Case Profiles differ, these families may benefit from different services or be more or less likely to participate in certain services. Results from the pooling of responses by Concern are found in Appendix D.

Examination of data on recommended evidence-based interventions revealed some recommended interventions could address multiple concerns. For example Psychotherapy would be an appropriate intervention for the following Concerns: Emotional Behavioral (Child), Emotional Illness (Adult) and Self-Protection.

Summary

The Survey of National Experts served to identify evidence-based interventions by Concern and provided information to guide decisions on calculating the number of services needed.

Phase V: Interweave SACWIS data, Medicaid Claims data, Supplemental Nutrition Assistance Program (SNAP) data, Temporary Assistance to Needy Families (TANF) data, Child Care data

The question ODJFS wanted to answer during this Phase was: *What services were cases already receiving?* Answering this question involved examining data from five large data systems, which included: (1) SACWIS Service Module data, SACWIS Structured Data, and SACWIS Unstructured Data; (2) Medicaid Claims data; (3) Supplemental Nutrition Assistance Program (SNAP) data; (4) Temporary Assistance to Needy Families (TANF) data, and (5) Child Care data. Since each data system was developed independently and used different terms to refer to the same service (e.g., mental health counseling, psychotherapy) it was critical to establish a Core Service Array so data from these five different systems could be mapped to a common set of terms.

Following review of SACWIS Service data and Medicaid Claims data, a Core Services Array was established that served as the foundation for Service Mapping of the five databases into Service Categories, as shown in Figure 16.

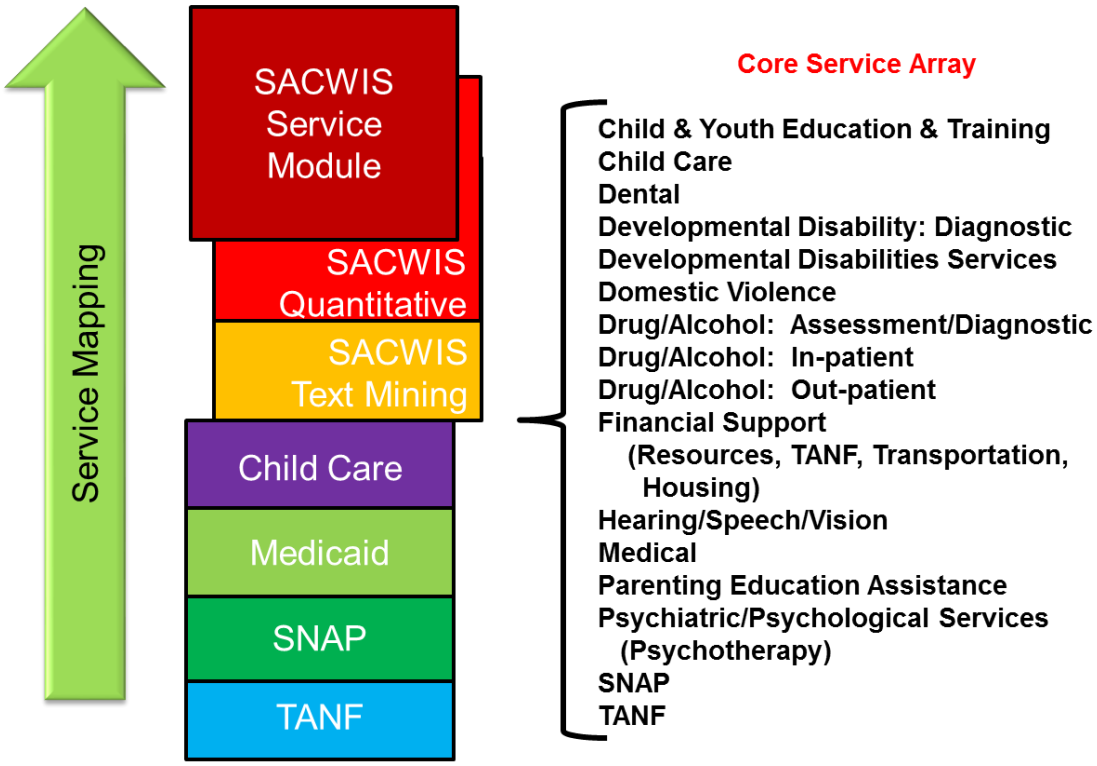


Figure 16. Mapping Services into Categories.

SACWIS Service Data Analysis

To ensure that ODJFS obtained comprehensive services data from SACWIS both structured (drop-down boxes, radio buttons) and unstructured (text) data was utilized. The following procedures occurred to extract and analyze the unstructured (text) data:

Step 1. Developed a list of service-related search terms to form a "word bank" for use with text mining software. Examples of these service-related terms were: mental health counseling, substance abuse treatment, and domestic violence shelter.

Step 2: Identified narrative fields within SACWIS for text mining.

Files mined included:

- *Case Review: Progress on the Concerns*
  These files contain text narratives on the impact of services to address safety, risk, permanency and well-being.

- *Case Review: Progress on the Strengths and Needs*
  These files contain text narratives on the impact of services.

- *Case Review: Reason for the Case Status*
  These files contain text narratives on the reason for the current case status (e.g., continue agency involvement, terminate agency services) and discusses whether services provided need to continue or if additional services are needed.

Step 3: The text mining software is designed to apply a "word bank" (identified in Step 1) to the text files (identified in Step 2) to create an augmented list of words and concepts found in the narratives. With this expanded list of words/concepts, the analytic team then refined the "word bank" and reprocessed the text files to identify the cases having specific services.

Step 4: The services identified through the text mining were mapped to the Service Categories presented on the previous page.

Medicaid Claims Data Analysis

Review of the Medicaid Claims Data identified sixteen classifications of claims that were applicable to children services for a total of 155 unique Medicaid services. These services were also mapped to the categories within the Core Service Array. Figure 17 shows the list of categories identified in the Medicaid Claims data.

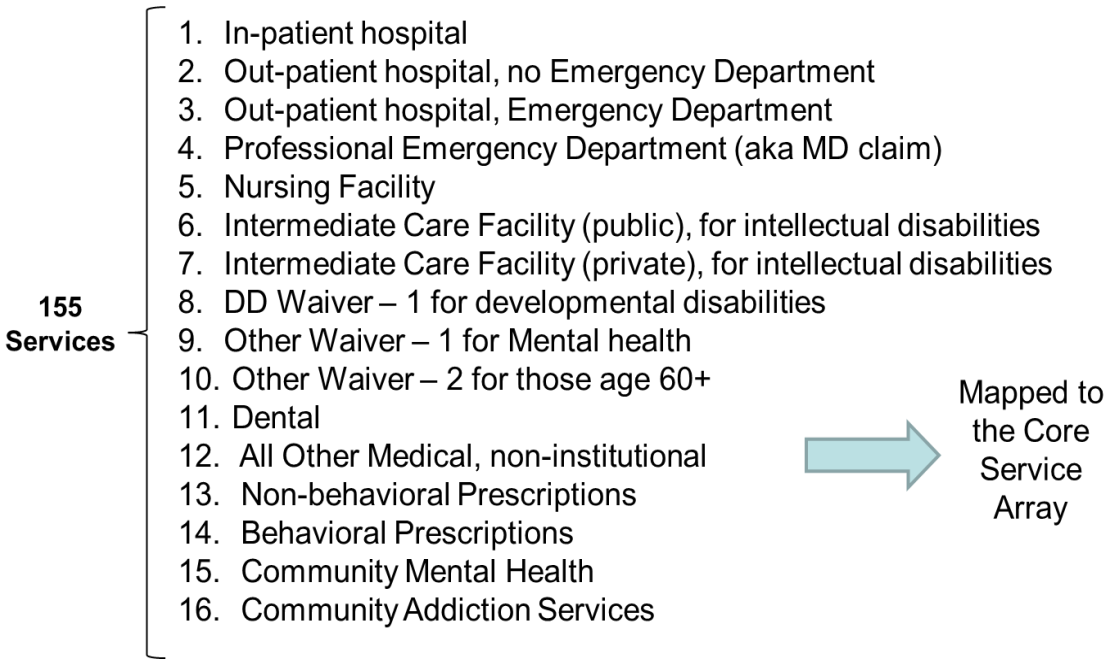


Figure 17. Mapping Medicaid Claim Files to Core Service Array.

TANF, SNAP, Child Care Data

TANF, SNAP, and Child Care Data were also mapped to the Core Service Array. These data provided information on the number of children services cases that received each of these services in the observation window.

Results

Services data from each of the five sources noted above (SACWIS, Medicaid, TANF, SNAP, and Child Care) were matched with the 73,954 cases represented within the 35 Case Profiles. On a case-by-case level, data matching revealed whether appropriate services were provided for each assessed Concern. For example, if Domestic Violence was assessed as a Concern on a given case, the data matching process allowed ODJFS to see whether services appropriate for Domestic Violence were provided in that case. Through this analysis, ODJFS was able to create a count of cases receiving services to address each Concern across the population studied. Figures 18 and 19 provide a breakdown of Service Categories, the Concerns these Service Categories address, and the total number of cases receiving services within each Service Category. It is important to note that each Service Category represents a range of interventions. For example, the Service Category of Psychotherapy would include a wide range of behavioral health interventions such as Cognitive Behavioral Therapy, family or group counseling, or Multisystemic Therapy, among many others.

Service Category	Concerns Addressed	Total Number of Cases Receiving Services
Psychotherapy	Cognitive Difficulty Domestic Violence Stress Emotional Illness Self-Protection Parenting Abuse, Neglect, Dependency	21,660 cases
Medical Services	Physical Illness Substance Abuse Emotional Illness	25,351 cases
Parenting Services	Cognitive Difficulty Stress Self-Protection Parenting Abuse, Neglect, Dependency	4,302 cases
Domestic Violence	Domestic Violence	4,472 cases
Drug Diagnostic	Substance Abuse	5,488 cases
Drug In and Out Patient	Substance Abuse	7,729 cases
Financial Support	Financial Homelessness*	5,969 Cases

Figure 18. Concerns addressed through the provision of services to adults.

*This number does not include families that received housing assistance through federal Housing and Urban Development (HUD) programs or other types of financial or housing assistance not captured in SACWIS and TANF data. A limitation of the needs assessment was a lack of available data that could be matched with ODJFS' SACWIS data to obtain a reliable number of families receiving housing assistance. However, other research reflects that a significant portion of the child welfare population is receiving these services. In an evaluation of Ohio's Differential Response System completed in 2010, 17.2% of the 804 families surveyed for the study indicated they were receiving housing assistance. The same study explored housing instability within the child welfare population by asking families about the number of recent residential moves they had made. Frequent moves are associated with extreme poverty, inability to make rent payments, eviction and/or fines. Two-fifths of the families in the sample (41.3%) reported they had changed their residence at least once in the past year, and of these, nearly half indicated they had moved two or more times.[4]

[4] Loman, Anthony l., Ph.D., Christine Shannon Filonow, MSSW, and Gary Siegel, Ph.D. Ohio Alternative Response Evaluation Final Report. April 2010.

Service Category	Concerns Addressed	Total Number of Cases Receiving Services
Psychotherapy	Emotional Behavioral Sexual Abuse Physical, Cognitive, Social Aging Out of Care	17,868 cases
Parenting Services	Teen Pregnancy	34 cases
Medical Services	Emotional Behavioral Physical, Cognitive, Social Sexual Abuse Substance Abuse (Child)* Teen Pregnancy	20,870 cases
Sight, Hearing, Speech	Sight, Hearing, Speech	401 cases
Child Education	Aging Out of Foster Care Teen Pregnancy	131 cases

Figure 19. Concerns addressed through the provision of services to children.

*Substance Abuse (Child) is indicative of cases in which a positive toxicology result was noted in the case record by the caseworker, and thus, the service category to address this Concern is Medical Services. Under Ohio's child welfare assessment model, caseworkers document information about substance abuse concerns involving older youth in the family under Physical, Cognitive, Social and/or Emotional Behavioral Concerns. Because this specific population was subsumed within these broader categories of Concerns, ODJFS was unable to determine the precise number of youth with these Concerns in need of substance abuse diagnostic or treatment services. However, their service needs are reflected within the counts for Psychotherapy, which is inclusive of Behavioral Health Services, and Medical Services. Analysis of the Medicaid Claims data found that 1,009 youth ages 18 and under received Medicaid-supported addiction services.

What other Findings did the Data Matching Yield?

In addition to the mapping of services provided by Concern, data matching yielded several important contextual findings that contribute to a better understanding of services received by Ohio's child welfare population. Analysis of cases involved in the study revealed that 9.8% of the cases had children who were in the custody of the PCSA and placed in out-of-home care, while 90.2% of the cases were receiving preplacement prevention services. In addition to Medicaid services, families were also receiving federal support services including TANF (20.7% of cases), SNAP (70.7% of cases), and subsidized child care (8.5% of cases).

Additionally, a subset of families received services for Developmental Disabilities (268 cases). Although this is a small number relative to the study population, it is proportional to statewide data on children and adults receiving Department of Developmental Disability (DODD) services. The statewide percentage of children who receive DODD services is 1.56%, and the percentage of Ohio adults receiving DODD services is .56%

Summary

Through data matching across SACWIS, Medicaid, TANF, SNAP and Child Care data sets, ODJFS was able to identify the number of cases receiving services for each of the 18 Case Concerns reflected in the 35 Case Profiles. These counts were then utilized in Phase VI: Data Analysis to assist in determining the gap between services provided and the overall service need.

Phase VI: Data Analysis

This Phase entailed synthesizing the data collected during Phases II through V to obtain a holistic picture of the study population and quantify the service needs among cases in the population. Determining the actual number of cases needing a service is a challenge given the natural resistance individuals have to modifying their behavior; i.e., many individuals who need a specific service will refuse to obtain it. The Survey of National Experts provided a wealth of data allowing ODJFS to overcome this challenge and determine the number of cases that would agree to obtain services. This section demonstrates how these calculations were done using one Concern (Domestic Violence). The logic in this example can be applied to any of the 18 Concerns to produce the number of cases that will obtain services, with the exception of the Concern of Substance Abuse (Child). As noted above, the Concern Substance Abuse (Child) indicates a positive toxicology result at birth. Therefore, ODJFS assumes that 100% of cases with a Concern of Substance Abuse (Child) require medical services.

Is a Service Needed?

Child welfare workers investigate a wide range of issues. Some of these issues do not warrant a service response, but many issues require an array of services. To quantify this need, as discussed in Phase IV, experts were asked to read a case vignette that was representative of one of 34 Case Profiles or the Concerns of Teen Pregnancy or Aging Out of Foster Care and answer a series of questions for each Concern assessed in the case. Two of these questions were pertinent in determining the number of cases agreeing to obtain services. The first question asked experts to select one of the following alternatives indicating how the caseworker should respond to the Concern:

a. This concern does not require a response at this time.
b. This concern may require a response in the future; the case should not be closed until further assessment allows the caseworker greater insight into the issue.
c. This concern is important but would be addressed if the caseworker successfully managed all of the other concerns identified in this case.
d. This concern is of secondary importance and may be addressed at the caseworker's discretion.
e. This concern requires a response that would have to be successfully implemented.

These five alternatives were conservatively classified into one of three Response Categories: Not requiring a response (i.e., alternative *a*); may require a response (i.e., alternatives *b* and *c*); or requires a response (alternatives *d* and *e*).

After the data were collected, the experts' responses for each Domestic Violence Concern were summed across all vignettes with Domestic Violence as a Concern. Pooling the results in this manner was an important step to control for differences across Case Profiles sharing the same Concern. Although multiple Case Profiles have the Concern of Domestic Violence in common, the unique characteristics of

each Profile may make it more or less likely that a family will participate in or benefit from services. Pooling the results across all of the vignettes by Concern provides a more accurate picture of the total service need across all of the varying Profiles sharing that Concern. Table 6 presents an example of these pooled results and the associated Response Categorization for the Concern of Domestic Violence.

Survey Question	Number of Survey Responses	Percent of Survey Responses	Response Categorization
a. This concern does not require a response at this time.	24	16.33%	Not Required
b. This concern may require a response in the future; the case should not be closed until further assessment allows the caseworker greater insight into the issue.	39	26.53%	May Require
c. This concern is important but would be addressed if the caseworker successfully managed all of the other concerns identified in this case.	12	8.16%	May Require
d. This concern is of secondary importance and may be addressed at the caseworker's discretion.	23	15.65%	Requires
e. This concern requires a response that would have to be successfully implemented.	49	33.33%	Requires
Total	147	100%	

Table 6. Survey responses for the Concern of Domestic Violence pooled across all vignettes.

It would be easy to determine the total number of cases needing a response if all cases either needed a response (alternatives *d* and *e*) or did not need a response (alternative *a*). However, alternatives *b* and *c* present an unknown number of cases requiring a response. Based on the experts' responses, they may (or may not) require a response. To overcome this unknown, ODJFS utilized a standard method of imputation to determine how many of these unknown cases would actually require a response.

The principal underlying imputation allows one to generalize what is "**known**" to that which is "not known." The **known** responses are alternatives *a, d, e*. The unknown responses are alternatives *b* and *c*. To impute, calculations are first determined for the cases **known**, and then applied to the unknown. Table 7 summarizes what is **known**.

Survey Question	The Known…	
	Survey Responses Indicating a Service is Required	Survey Responses Indicating a Service is Not Required
a. This concern does not require a response at this time.		24
b. This concern may require a response in the future; the case should not be closed until further assessment allows the caseworker greater insight into the issue.		
c. This concern is important but would be addressed if the caseworker successfully managed all of the other concerns identified in this case.		
d. This concern is of secondary importance and may be addressed at the caseworker's discretion.	23	
e. This concern requires a response that would have to be successfully implemented.	49	
Total	**72**	**24**
Grand Total	**96**	

Table 7. Survey responses indicating a definitive service need in response to the Concern of Domestic Violence, pooled across all vignettes.

What is **known** is that 24 responses (across all vignettes) indicated that a service is not required, and 72 responses (across all vignettes) indicated that a service is required for the Concern of Domestic Violence. It is **known** that 72 of the 96 responses (75%) indicate a service need, and the balance (24) of the 96 responses (25%) indicate that no service is needed for the Concern of Domestic Violence. These proportions are critical in applying to the unknown, shown in Table 8.

Survey Question	The Unknown
	Survey Responses Indicating a Potential Need for Service
a. This concern does not require a response at this time.	
b. This concern may require a response in the future; the case should not be closed until further assessment allows the caseworker greater insight into the issue.	39
c. This concern is important but would be addressed if the caseworker successfully managed all of the other concerns identified in this case.	12
d. This concern is of secondary importance and may be addressed at the caseworker's discretion.	
e. This concern requires a response that would have to be successfully implemented.	
Total	**51**

Table 8. Survey responses indicating a possible service need in response to the Concern of Domestic Violence, pooled across all vignettes.

Using standard imputation methods, these responses allow ODJFS to determine if a service was needed. As Table 8 shows, there are 51 cases that are unknown. From the data in Table 7, we know that 75% of the responses indicate a need for service and 25% indicate no need. We impute those proportions to the 51 responses in which the service need is unknown. Therefore, 38.25 (75% x 51) will need a service, and 12.75 (25% x 51) will not need a service. When 38.25 is added to 72 (the number needing a response from the **known** in Table 7), there are 110.25 responses out of 147 (total number of responses for the Concern of Domestic Violence in Table 6), that indicate a service is needed (75%).

With 75% of the Domestic Violence Concerns identified in the Expert Survey as Needing a Service, how many Domestic Violence Cases in the Study Population will Require Services?

As show in Table 3, there were 31,419 cases with the Concern of Domestic Violence. According to the data analyzed from the experts, 75% of these cases will need a service. Therefore, 23,564.25 (= 31,419 x 75%) will need a service. This number only means they need a service, and does not mean they will cooperate in obtaining services. Results from another question answered by the experts provided a clearer picture of the number who will actually avail themselves of the needed services.

How Likely Would a Family be to Fully Cooperate?

Some families are more likely to cooperate in obtaining services than others. Another question answered by experts asked them to state how likely a family would be to fully cooperate in obtaining services to address the Domestic Violence Concern. Experts answered the question using the following scale: Very Likely; Somewhat Likely, Somewhat Unlikely; Very Unlikely. Again, these responses were pooled across all of the case vignettes to account for differences within each of the Case Profiles sharing the Concern of Domestic Violence. Table 9 shows the percent of cases falling into each category, multiplied by the total number of cases needing a response, to obtain the number of Domestic Violence cases likely to cooperate.

Response Categories	Experts' Responses: How likely would a family be to fully cooperate in obtaining services to address this Concern (Domestic Violence)?	Number likely to cooperate when there are 23,564.25 Domestic Violence Cases
Very Likely (75% to 100%; Midpoint 87.5%)	7.353%	1732.6793 (= 23,564.25 x 7.353%)
Somewhat Likely (50%-74.9%; Midpoint 62.5%)	57.353%	13514.8043 (= 23,564.25 x 57.353%)
Somewhat Unlikely (25% to 49.9%; Midpoint 37.5%)	29.412%	6930.7172 (= 23,564.25 x 29.412%)
Very Unlikely (0% to 24.9%; Midpoint 12.5%)	5.882%	1386.0492 (= 23,564.25 x 5.882%)

Table 9. Likelihood of service cooperation for the Concern of Domestic Violence.

Although 1732.6793 are "Very Likely" to obtain services, 100% of those in the "Very Likely" category will not obtain services. Likewise, more than 75% (the lowest end of the quartile range for "Very Likely") will obtain services. Therefore, ODJFS applied a statistical assumption, given the large number of cases, that the midpoint for each quartile of the cases will obtain services. Thus, 87.5% of the number of cases (1732.6793) that are Very Likely to obtain services will obtain services (1516.094). The same logic is applied to the remaining categories. Table 10 shows the calculations for each of the response categories.

Response Categories	Midpoint	Candidates for Potential Service	Number Agreeing to Obtain Services
Very Likely (75%-100%)	87.50%	1,732.6793	1516.094 (= 87.5% x 1732.6793)
Somewhat Likely (50%-74.9%)	62.50%	13,514.8043	8446.753 (= 62.5% x 13514.8043)
Somewhat Unlikely (25%-49.9%)	37.50%	6,930.7172	2599.019 (= 37.5% x 6930.7172)
Very Unlikely (0%-24.9%)	12.50%	1,386.0492	173.256 (= 12.5% x 1386.0492)
Total Number of Cases Needing and Agreeing to Obtain Services			**12,735**

Table 10. Likelihood of service cooperation for the Concern of Domestic Violence.

Table 11 shows, for each Concern, the critical values for determining the number of cases that will agree to obtain services.

Concerns	Does not Require a Response	Can't Determine Now	Other Response Will Address	Secondary Importance	Primary Importance	% Very Likely	% Somewhat Likely	% Somewhat Unlikely	% Unlikely	Number of Cases	Cases Agreeing to Services
Domestic Violence	24	39	12	23	49	7.353%	57.353%	29.412%	5.882%	31,419	12,735
Emotional Behavioral	18	37	22	17	73	39.773%	47.727%	11.364%	1.136%	29,919	17,212
Emotional Illness	19	30	22	10	73	20.988%	50.617%	24.691%	3.704%	27,484	13,357
Parenting Difficulties	14	22	20	22	127	15.493%	57.746%	23.944%	2.817%	28,994	15,632
Physical Cognitive Social	36	30	25	25	52	24.658%	60.274%	13.699%	1.370%	24,099	10,601
Physical Illness	24	10	6	4	11	40.000%	60.000%	0.000%	0.000%	13,681	3,815
Cognitive Difficulty	8	7	3	4	8	0.000%	66.667%	33.333%	0.000%	6,515	2,117
Substance Abuse (Child)*	17	0	0	0	0	.	.	.	.	1,408	.
Substance Abuse	24	38	7	9	111	10.619%	49.558%	31.858%	7.965%	25,950	11,506
Sexual Abuse	9	5	3	5	42	34.783%	50.000%	8.696%	6.522%	4,949	2,731
Abuse Neglect Dependency	4	14	13	2	62	52.459%	40.984%	6.557%	0.000%	15,395	8,581
Financial Difficulty	4	16	10	16	45	27.119%	54.237%	13.559%	5.085%	12,449	7,401
Homelessness	3	4	1	4	13	70.588%	29.412%	0.000%	0.000%	4,937	3,363
Self-Protection	24	33	31	18	103	53.913%	40.870%	3.478%	1.739%	60,825	30,520
Sight, Hearing, Speech	0	1	0	1	6	0.000%	85.714%	14.286%	0.000%	708	417
Stress	7	16	22	11	26	14.286%	57.143%	28.571%	0.000%	24,558	12,169
Aging Out of Foster Care	1	1	1	0	14	66.667%	33.333%	0.000%	0.000%	517	382
Teen Parent	1	1	1	0	13	50.000%	33.333%	16.667%	0.000%	132	87

Table 11: Critical values to determine the number of cases agreeing to obtain services by Concern.

*No imputation performed for the Concern of Substance Abuse (Child). As noted on page 29, the study assumes 100% require medical services as this Concern denotes positive toxicology.

The percent of cases needing a response varied depending on the type of Concern. For the Concern of Domestic Violence, national experts indicated 40.53% of adults would agree to obtain services. When Emotional Illness was a concern, national experts indicated that 48.60% of adults would agree to obtain services. Tables 12 and 13 show for each Concern, the number of cases presenting the Concern, the number agreeing to obtain services, and thus, the percent of cases needing a service for both the adult and child Concerns.

Concern	Number of Cases	Number Cases Agreeing to Services	Percent of Cases with Presenting Concern Needing a Service
Domestic Violence	31,419	12,735	40.53%
Emotional Illness	27,484	13,357	48.60%
Parenting	28,994	15,632	53.91%
Physical Illness	13,681	3,815	27.89%
Cognitive Difficulty	6,515	2,117	32.49%
Substance Abuse	25,950	11,506	44.34%
Financial	12,449	7,401	59.45%
Homelessness	4,937	3,363	68.12%
Self-Protection	60,825	30,520	50.18%
Stress	24,558	12,169	49.55%
Abuse, Dependency, Neglect	15,395	8,581	55.74%

Table 12. Adult Concerns.

Concern	Number of Cases	Number Cases Agreeing to Services	Percent of Cases with Presenting Concern Needing a Service
Emotional Behavioral	29,919	17,212	57.53%
Physical, Cognitive, Social	24,099	10,601	43.99%
Substance Abuse	1,408	.	100.00%
Sex Abuse	4,949	2,731	55.18%
Sight, Hearing, Speech	708	417	58.90%
Aging Out of Care	517	382	73.89%
Teen Pregnancy	132	87	65.91%

Table 13. Child Concerns.

What Services should be Provided?

It can be a daunting challenge to determine the appropriate service array for the variety of Concerns. Rather than relying on "known" or commonly utilized services, ODJFS relied on the Systematic Literature Search and on the recommendations of those participating in the Survey of National Experts to identify evidence-based and evidence-informed services. The results revealed, as expected, most Concerns can benefit from more than one type of service. For instance, for a Domestic Violence Concern, psychotherapy and a specialized domestic violence service is needed. For an Emotional Illness concern, a medical evaluation is needed as well as psychotherapy. Tables 14 and 15 show the relationship between the Concerns and service categories for Adults and Children.

		Services								
Adult Concerns	Percent of Cases Needing a Response	Psychotherapy	Domestic Violence	Medical	Parenting	Drug Diagnostic	Drug In- or Out Patient	Financial Supports	Sight, Hearing, Speech	Child Education
Domestic Violence	40.53%	■	■							
Emotional Illness	48.60%	■		■						
Parenting	53.91%	■			■					
Physical Illness	27.89%			■						
Cognitive Difficulty	32.49%	■			■					
Substance Abuse	44.34%			■		■	■			
Financial	59.45%							■		
Homelessness	68.12%							■		
Self-Protection	50.18%	■			■					
Stress	49.55%	■			■					
Abuse, Dependency, Neglect	55.74%	■			■					

Table 14. Concerns and corresponding service categories for Adults.

		Services								
Child Concerns	Percent of Cases Needing a Response	Psychotherapy	Domestic Violence	Medical	Parenting	Drug Diagnostic	Drug In- or Out Patient	Financial Supports	Sight, Hearing, Speech	Child Education
Emotional Behavioral	57.53%	■		■						
Physical, Cognitive, Social	43.99%	■		■						
Substance Abuse	100.00%			■						
Sex Abuse	55.18%	■		■						
Sight, Hearing, Speech	58.90%								■	
Aging Out of Care	73.89%	■								■
Teen Pregnancy	65.91%			■	■					■

Table 15. Concerns and corresponding service categories for Children (corrected 2/5/2016).

* Medical services were identified as the most appropriate service category for the Concern of Substance Abuse (Child), which denotes positive toxicology.

ODJFS used these tables to determine the number of cases needing each of these services. The task appears easy: If there are 100 cases with Domestic Violence Concerns, then 41 need psychotherapy and 41 need Domestic Violence services. If there are 100 Emotional Illness cases, then 49 need psychotherapy and 49 need Medical. By adding these numbers for each service across all concerns (e.g., total psychotherapy, total domestic violence services), it appears that the total number of services needed is obtained. However, this method, although intuitive, cannot be used to provide an accurate count of the service need.

The first reason, confirmed by examining the Case Profiles, is that most child welfare cases have more than one Concern, for example Domestic Violence and Emotional Illness. The second reason is that many Concerns have services that are in common (i.e., shared) with other Concerns. Specifically, the Domestic Violence concern shares the Psychotherapy service category with Emotional Illness. The analytic dilemma is how to determine the percentage of cases needing a service that is shared by at least two Concerns.

Following are three scenarios that highlight the dilemma and the solution.

Scenario 1:

There are 100 cases with only a Domestic Violence concern. Results from the national expert survey recommended that 40.53% would agree to services. The service categories for Domestic Violence are (1)

specific Domestic Violence Services and (2) Psychotherapy. Under this scenario, ODJFS would plan for 41 Domestic Violence Services and 41 Psychotherapy Services.

Scenario 2:

There are 100 cases with only Emotional Illness. Results from the national expert survey recommended that 48.60% would agree to obtain services. Service categories for Emotional Illness included Medical Services and Psychotherapy. Under this scenario, ODJFS would plan for 49 Medical Services and 49 Psychotherapy Services.

Scenario 3:

In this scenario, there are 100 cases that have Domestic Violence and Emotional Illness Concerns. The relevant services include Domestic Violence Services, Medical Services, and Psychotherapy Services. Drawing on the results of the expert survey, ODJFS would plan for 41 to obtain Domestic Violence Services and 49 to obtain Medical Services. Since Psychotherapy is a shared service of both Concerns, there are two options. (1) Use the proportion recommended for the Domestic Violence Concern (41 cases), or (2) Use the proportion from the Emotional Illness Concern (49 cases). If the former alternative is used, there would be individuals with Emotional Illness who would not be obtaining needed Psychotherapy services. Therefore, the ODJFS solution is to enforce an analytic rule to select the highest proportion when there are shared services between or among Concerns. Table 16 contrasts the impact of each of these scenarios.

Services	Scenario 1: Domestic Violence Only	Scenario 2: Emotional Illness Only	Scenario 3: Domestic Violence + Emotional Illness
Domestic Violence Service	41	Not Needed	41
Medical	Not Needed	49	49
Psychotherapy	41	49	49 (higher)

Table 16. Comparison of the Three Scenarios.

Summary

Findings from the Analysis of Data served as the foundation for determining future services in Phase VII.

PHASE VII: DETERMINING FUTURE SERVICE NEEDS

Determining the number of additional services that need to be made available is a function of two calculations. The first is the number of cases that would agree to accept services. This is called "Total Services Needed" and is the cumulative result of the Case Profiles, Systematic Literature Search, and Survey of National Experts as described in the previous sections.

The second calculation is the Total Services Provided and represents the number of cases that have received services. The Total Services Provided is a result of integrating SACWIS structured and unstructured data and the Medicaid Claims data. Subtracting the Total Services Provided from the Total Services Needed yields the Future Service Need, also known as the Service Gap.

These data are shown for adults and children in Tables 17 and 18, respectively. These tables also reflect the relationship between the Service Categories and the Concerns.

	Services								
Adult Concerns	**Psychotherapy**	**Domestic Violence**	**Medical**	**Parenting**	**Drug Diagnostic**	**Drug In-or Out Patient**	**Financial Supports**	**Sight, Hearing, Speech**	**Child Education**
Domestic Violence									
Emotional Illness									
Parenting									
Physical Illness									
Cognitive Difficulty									
Substance Abuse									
Financial									
Homelessness									
Self-Protection									
Stress									
Abuse, Dependency, Neglect									
Total Services Needed	33,798	12,735	17,870	33,473	11,506	11,506	9,522		
Total Services Provided	21,660	4,472	25,351	4,302	5,488	7,729	5,969		
Service Gap	12,138	8,263	(7,481)	29,171	6,018	3,777	3,553		

Table 17. Services Needed, Provided, and Service Gaps for Adults.

	Services								
Child Concerns	**Psychotherapy**	**Domestic Violence**	**Medical**	**Parenting**	**Drug Diagnostic**	**Drug In-or Out Patient**	**Financial Supports**	**Sight, Hearing, Speech**	**Child Education**
Emotional Behavioral									
Physical, Cognitive, Social									
Substance Abuse									
Sex Abuse									
Sight, Hearing, Speech									
Aging Out of Care									
Teen Pregnancy									
Total Services Needed	21,128		22,074	87				417	462
Total Services Provided	17,868		20,870	34				401	131
Service Gap	3,260		1,204	53				16	331

Table 18. Services Needed, Provided, and Service Gaps for Children.

Ohio's Needs Assessment: Next Steps

The *Ohio Needs Assessment* identified a wide range of service interventions with sound research backing their efficacy. In the weeks ahead, ODJFS will complete a cost analysis based on the service gaps identified in this needs assessment and present this cost analysis in a complete report to the Ohio General Assembly no later than May 31, 2016.

In the long-term, ODJFS will complete a comprehensive update of this statewide needs assessment no less than every five years in alignment with federal requirements for the development of the state's Title IV-B Child and Family Services Plan (CFSP). Aligning the needs assessment with the CFSP will provide an

opportunity to integrate information learned from the needs assessment into statewide strategic planning efforts on an ongoing basis. This integration will support ODJFS' ongoing efforts to expand the use of evidence-based and evidence-informed interventions in the service array for Ohio's children and families.