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## Statewide Policies to Improve Early Intervention Services: Promising Practices and Preliminary Results<sup>1</sup>

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**Abstract:** The State of Nebraska Co-Lead agencies, who are responsible for developing statewide early intervention policies, rolled out professional development for two evidence-based strategies across several pilot sites. Implications of these strategies for child/family assessment, Individualized Family Service Plan (IFSP) development, and Early Intervention service delivery were examined utilizing family ( $n=30$ ) and professional interviews ( $n=50$ ), and analyses of IFSPs ( $n=30$ ). The results of this mixed method study indicate widespread strategy implementation with fidelity fosters early working relationships with families and enables teams to generate, using family members' own words, a robust group of high-quality child and family IFSP outcomes. Family engagement in planning services such as identifying service providers and setting the frequency and length of home visits was limited. In addition, further professional development is needed to strengthen use of routines-based interventions during home visits and promote family-professional collaboration to monitor child/family progress. Implications for systematic scale-up of evidence-based practices as a function of state policy implementation are reported.

**Keywords:** home visits; program implementation; educational policy; mixed methods research

### **Políticas estatales para mejorar los servicios de intervención temprana: Prácticas prometedoras y resultados preliminares**

**Resumen:** Las organizaciones responsables de desarrollar políticas de intervención temprana para el estado de Nebraska implementó desarrollo profesional para dos estrategias basadas en evidencia en varios sitios piloto. Las implicaciones de estas estrategias para la evaluación del niño / familia, el desarrollo del Plan de Servicio Familiar Individualizado (IFSP) y la prestación de servicios de Intervención Temprana se examinaron mediante entrevistas familiares ( $n=30$ ) y profesionales ( $n=50$ ), y análisis de los IFSP ( $n=30$ ). Los resultados de este estudio de métodos mixtos indican que la implementación generalizada de la estrategia con fidelidad fomenta las relaciones laborales tempranas con las familias y permite a los equipos generar, utilizando las propias palabras de los miembros de la familia, un grupo sólido de resultados IFSP para niños y familias de alta calidad. La participación de la familia en la planificación de servicios, como la identificación de proveedores de servicios y el establecimiento de la frecuencia y duración de las visitas domiciliarias, fue limitada. Además, se necesita más desarrollo profesional para fortalecer el uso de intervenciones basadas en rutinas durante las visitas domiciliarias y promover la colaboración entre la familia y el profesional para monitorear el progreso del niño y la familia. Se informan las implicaciones para la ampliación sistemática de las prácticas basadas en la evidencia como una función de la implementación de políticas estatales.

**Palabras-clave:** visitas domiciliarias; implementación de programa; política educativa; investigación de métodos mixtos

### **Políticas estaduais para melhorar os serviços de intervenção precoce: Práticas promissoras e resultados preliminares**

**Resumo:** Organizações responsáveis por desenvolver políticas de intervenção precoce para o estado de Nebraska implementaram o desenvolvimento profissional para duas estratégias baseadas em evidências em vários locais piloto. As implicações dessas estratégias para a avaliação da criança / família, o desenvolvimento do Plano Individualizado de Serviços à Família (IFSP) e a prestação de serviços de Intervenção

Precoce foram examinadas por meio de entrevistas familiares ( $n=30$ ) e profissionais ( $n=50$ ), e análise IFSP ( $n=30$ ). Os resultados deste estudo de métodos mistos indicam que a implementação generalizada da estratégia com fidelidade promove relações de trabalho precoces com as famílias e permite que as equipes gerem, usando as próprias palavras dos membros da família, um conjunto robusto de resultados do IFSP para crianças e famílias de alta qualidade. O envolvimento da família no planejamento dos serviços, como a identificação de prestadores de serviços e o estabelecimento da frequência e duração das visitas domiciliares, era limitado. Além disso, é necessário mais desenvolvimento profissional para fortalecer o uso de intervenções rotineiras durante as visitas domiciliares e para promover a colaboração família-profissional para monitorar o progresso da criança e da família. As implicações para a expansão sistemática das práticas baseadas em evidências são relatadas como uma função da implementação da política estadual.

**Palavras-chave:** visitas domiciliares; implementação do programa; política educacional; pesquisa de métodos mistos

## Introduction

Part C of the Individuals with Disabilities Education Improvement Act of 2004 requires that Early Intervention (EI) teams craft effective, individualized plans to meet the needs of young children with special needs and their families (Küpper, 2012). The Recommended Practices in Early Intervention/Early Childhood Special Education (Division for Early Childhood [DEC], 2014) reiterate the importance of promoting families' active participation in making decisions regarding goals, supports, and the services needed for their children and themselves. Specifically, EI teams are reminded of the importance of embracing a set of practices that are family-centered, capacity-building, and collaborative (DEC, 2014). These practices are key to supporting families' efforts to achieve their goals.

In Nebraska, Part C services are co-administered by the Nebraska Departments of Education and Health and Human Services. Together, these Co-Lead agencies are responsible for policy development and oversight of EI services across the state. Their responsibilities include: compliance monitoring, responsiveness to state and federal requirements, distribution of funding, data review and management, as well as planning and delivering professional development for teams of EI service providers and service coordinators. Professional development has been provided to EI teams across Nebraska for the Routines Based Interview, use of Primary Service Providers, coaching, and child assessment, however participation in trainings and implementation of practices has been inconsistent and by local choice rather than through a statewide systematic plan.

Beginning in 2014, the federal Office of Special Education Programs initiated Results-Driven Accountability, a process designed to reflect a shift in balance from a focus on compliance with special education law to a focus on results (U.S. Department of Education, 2019). Through Results-Driven Accountability, the Office of Special Education Programs intended to target federal efforts and resources to support state plans for improved outcomes for infants, toddlers, children, and youth with disabilities. In Nebraska, the Co-Lead agencies led the multi-year Results-Driven Accountability process to improve EI results for verified infants and toddlers and their families. Nebraska's State Systemic Improvement Plan identified three coherent strategies which, when viewed as a unified set, are referred to as Routines-Based Early Intervention. The improvement strategies reflect three areas of need across the state: (a) evidence-based child/family assessment, (b) development of functional outcomes that align with family-identified priorities, and (c) home visitation practices that provide supports specific to family-identified priorities within the context of family routines (Nebraska Early Development Network, 2013).

Co-Lead agency staff envisioned a roll out of systematic, rigorous professional development and technical assistance focusing on three evidence-based strategies to address the areas of need. Strategies included the use of Routines Based Interviews (McWilliam, 2010) for assessment of child and family needs and priorities, as well as development of functional Individualized Family Service Plan (IFSP) outcomes (e.g., goals/targets for growth), and the use of the *Getting Ready* framework (Sheridan et al., 2008) for quality routines-based home visits. Such strategies would enable EI teams in the state to more effectively meet a number of Results-Driven Accountability core principles, including responsiveness to needs and expectations identified by the ultimate consumers of the services (i.e., children with disabilities and their families; Office of Special Education Programs, n.d.).

To prepare for statewide scale-up of the State Systemic Improvement Plan, the Co-Lead agencies identified seven of Nebraska's 29 Planning Region Teams to serve as pilot sites for standardized, systematic, and rigorous training in and implementation of the Results-Driven Accountability strategies. Each Planning Region Team represents a particular region of the state through a local interagency coordinating council that plans for and implements EI policies.

## Literature Review

### Systems-level Scale-up of Evidence-based Practices

Implementation science points to successes and challenges encountered in efforts to scale-up practices supported by research in real-world environments. Odom (2009) defined implementation as occurring when a program is “delivered to and experienced by participants...and their families” (p. 56). Several scholars have identified crucial components of this process including evidence-based interventions, leadership, organizational supports, teaming practices, coaching linked to professional development, committed workforces, continuous monitoring, evaluation, and improvement loops, and adequate financing (Britto et al., 2018; Nores & Fernandez, 2018; Odom, 2009). Two important scale-up features espoused by Nores and Fernandez (2018) were found in Nebraska’s Results-Driven Accountability efforts. The strategies were integrated into an existing platform (i.e., EI services) and were inserted in a phased manner (i.e., beginning with pilot sites). Finally, a key component of effective implementation described by Odom (2009) is “enlightened professional development approaches” (p. 59). For scale-up of the specific strategies chosen as components of Nebraska’s Results-Driven Accountability plan, such approaches included participation-based professional development, coaching support for implementation, rigorous fidelity checks, and data-based evaluation (Boavida et al., 2016). These features (detailed below in the research process section) differentiated the pilot site professional development approach from previous “business as usual” trainings that had been held across the state.

A decade ago, Bruder (2010) decried the “lack of available and appropriate professional development opportunities for [EI] service providers” and the effects of this on the “quality of services...provided to children and families” (p. 348). She further issued a challenge to the field to implement and carefully evaluate comprehensive professional development opportunities “to facilitate the acquisition and subsequent use of evidence-based practices by all practitioners” (Bruder, 2010, p. 349). In spite of this call to action, literature specifically reporting effective professional development techniques for EI home visitors remains sparse. A small group of professionals were successfully trained to teach families how to support their children with strategies embedded in daily routines (Salisbury et al., 2017). Two studies reported adding performance-based feedback or coaching via technology to initial training sessions in efforts to improve the active coaching skills of professionals (Krick Oborn & Johnson, 2015; Marturana & Woods, 2012). These professional development efforts in EI primarily focused on professionals’ support and training of families in home visits rather than a package consisting of thorough initial assessment of child and family needs, development of functional, high-quality IFSP outcomes, as well as high-quality home visiting practices.

### Development of Functional IFSP Outcomes

The Routines Based Interview (McWilliam, 2010) has garnered support as an evidence-based strategy for ecological assessment of both child and family strengths and needs. When implemented with fidelity, families are prompted to share detailed information about daily routines with their child, including expectations for the child’s participation and social interactions in routines, as well as the families’ level of satisfaction with the routines. This assessment provides information key to the generation of quality IFSP goal or outcome statements (Boavida et al., 2014). Use of the Routines Based Interviews for development of IFSPs has been found to result in (a) greater family satisfaction with the process of creating IFSPs, (b) a larger number of outcomes developed by the IFSP teams, and (c) outcomes that were more functional in nature than those generated by approaches that used historical child-focused evaluations (McWilliam et al., 2009). Effective assessment of child/family

needs and priorities has the potential to provide essential information to EI teams regarding the type, frequency, and intensity of services and supports each child/family would need to meet the outcomes most valued by the family.

While IFSPs are highly individualized to meet child and family outcomes, all such documents contain a number of required elements. Family contact information is documented. There is a detailed description of the child's current developmental abilities, as well as an outline of the family's strengths, resources, concerns, and priorities. The IFSP contains measurable outcomes for child and/or family with suggested strategies to meet these goals. There is also a detailed plan for EI and/or community services that includes the identification of providers, and the planned frequency and duration of contacts. Thus, IFSP documents contain a rich trove of both quantitative and descriptive information related to the experiences of families and professionals engaged in EI.

### **Planning EI Services**

EI teams aim to encourage children's caregivers to weave into the fabric of their everyday lives rich, interesting, and engaging learning opportunities. Everyday experiences become development-instigating learning opportunities (Dunst et al., 2001) when they promote children's exploration of their environments and practice toward competence. In addition to stimulating home experiences, the responsiveness of caregivers can enhance children's development as contingent reinforcement of children's social initiations often prompts their learning and generalization. Thus, optimization of natural learning environments and empowerment of caregivers as supports and first teachers of their children must result from EI.

A multitude of potential opportunities for children's learning occurs *between* visits from the service provider. Conducting an in-depth interview early in a relationship with referred families has the potential to uncover rich detail about caregiver traits, family contexts, and environmental factors that could be tapped to plan meaningful IFSPs and design successful interventions. Furthermore, the "parent's level of engagement in intervention activities has been found to relate to...use of the strategies between home visits" (Peterson et al., 2007, p. 121). This intentional utilization of strategies with children within natural environments and daily routines is important to bring about meaningful, functional improvements for children.

### **Purpose of Study**

The purpose of this research study was to evaluate the practices of professionals and experiences of families in pilot sites after systematic training in and implementation of Strategy 1—use of Routines Based Interviews for assessment of child and family strengths, needs, and priorities; and Strategy 2—translation of Routines Based Interview information into high-quality, functional IFSP outcomes. In addition, information about "business as usual" practices was gathered from three non-pilot Planning Region Teams that had **not yet** received widespread systematic training in Strategy 1 or 2. Understanding how these systematic training and support efforts have influenced IFSP quality and the EI service delivery process would guide the Co-Lead Agencies in developing robust policies and scaling up effective practices statewide.

The study addressed two research questions. First, how have systematic training and support in the two strategies informed IFSP development (e.g., types of IFSP outcomes, quality and functionality of IFSP outcomes) and EI service delivery (e.g. content/frequency/length of home visits and caregiver use of interventions between visits) in the pilot sites? Second, what similarities and/or differences are noted in how participants describe the current practices used in pilot and non-pilot sites for child/family assessment, partnering with families in IFSP development, and EI service delivery (including practices implemented in home visits)?

## Method

A convergent parallel mixed methods design was utilized for this study (Creswell & Plano Clark, 2011; Morse, 1991). Quantitative and qualitative data on the topic of interest was gathered to better understand multiple dimensions of the same phenomenon (Greene, 2007). In addition, data was analyzed from multiple sources for pilot ( $n=5$ ) and non-pilot sites ( $n=3$ ). In keeping with the parallel-databases variant of the convergent design, the quantitative and qualitative data gathered about this topic were independently collected and analyzed (Creswell & Plano Clark, 2011). There was a point of mixing for purposes of complementarity when each group's quantitative and qualitative results were integrated to provide a thick, rich description of that particular group. Complementarity encourages researchers to examine different facets of constructs of interest together in order to "broaden the overall interpretations and inferences from the study" (Greene, 2007, p. 101). In evaluating the complexity of strategies and practices utilized in EI services across Nebraska, a complementarity approach allows for integration of multiple types of information as well as an assessment of convergence and divergence across groups (Greene, 2007). Thus, the cross-group analysis of pilot- and non-pilot site findings illuminates the similarities and differences between these groups, as well as generalizations about "what was learned" (Creswell, 2013).

Due to the inclusion of human subjects and sensitive documents, approval of this study was sought from and granted by the first author's Institutional Review Board. There were two data sources. Interviews were conducted with selected EI supervisors, service coordinators, EI service providers, and family members. Throughout the remainder of this article supervisors, service coordinators, and EI service providers are referred to as "professionals." In addition, a representative sample of de-identified IFSPs was obtained from both pilot and non-pilot sites.

### Setting and Participants

The setting for this study was eight of the 29 Planning Region Teams that exist in the state of Nebraska. The sites varied in size, serving rural, suburban, and urban communities across the state. Within each site, there is a structure in place to assess infants and toddlers who are referred and provide EI and service coordination to those children identified with developmental delays or disabilities and their families. Professional personnel within these structures typically include supervisors/administrators, service coordinators, and EI service providers (e.g., early childhood special educators, speech/language therapists, occupational therapists, physical therapists). Families of verified children are key partners in EI services, and thus, a non-randomized sample of family members was recruited to participate in the study. Five of the selected Planning Region Teams had participated as pilot sites—receiving systematic, intensive professional development and technical assistance in the Results-Driven Accountability Strategies 1 and 2—when this study was completed. The remaining three sites had not yet received systematic Planning Region-wide training in the practices, although some professionals in these sites had completed previous Routines Based Interview and IFSP outcome writing trainings offered across the state.

The lead investigator contacted Planning Region Team leaders about the study and provided a short synopsis of the inclusion criteria to be shared with all eligible professionals. Once the professionals agreed to participate in the study, the research team provided English- and Spanish-language versions of a family flier that professionals distributed to families on their caseloads meeting the inclusion criteria. Families then contacted the research team if they chose to participate. Families were offered a small stipend to compensate them for their time. All family and professional participants consented to having their interviews audio-recorded.

From the pilot sites, 22 parents from 19 different families participated in interviews. These parents (average age = 31 years) had a total of 21 children (average age = 28.5 months) receiving EI services. Thirty-one professionals including EI service providers, service coordinators, and supervisors/administrators were also interviewed. From the non-pilot sites, eight parents participated in interviews. The parents (average age = 33 years) had a total of nine children (average age = 20.2 months) receiving EI services. Nineteen professionals, again with a variety of roles on the EI teams, were also interviewed. Demographic characteristics of the parents, children, and professionals from the two groups are found in Table 1.

**Table 1**

## Interview Participant Demographic Data

Characteristic	Pilot Site PRT Participants			Non-Pilot Site PRT Participants		
	Parent ( <i>n</i> =22)	Child ( <i>n</i> =21)	Professional ( <i>n</i> =31)	Parent ( <i>n</i> =8)	Child ( <i>n</i> =9)	Professional ( <i>n</i> =19)
Age (Mean)	31.1 yr <i>SD</i> = 6.8	28.5 mon <i>SD</i> = 8.9	44.5 yr <i>SD</i> = 11.0	33.0 yr <i>SD</i> = 4.7	20.2 mon <i>SD</i> = 9.3	49.8 yr <i>SD</i> = 10.3
Gender						
Male	13.64%	71.43%	6.45%	---	55.56%	10.53%
Female	86.36%	28.57%	93.55%	100.00%	44.44%	89.47%
Race/Ethnicity						
Black/AA	---	4.76%	---	---	---	---
American Indian	9.09%	9.52%	---	---	---	---
Asian	---	---	---	---	---	---
Caucasian	72.73%	71.43%	100.00%	100.00%	100.00%	94.74%
Two or more	18.18%	14.29%	---	---	---	5.26%
Hispanic	4.54%	19.05%	---	---	---	---
Non-Hispanic	95.45%	80.95%	100.00%	100.00%	100.00%	100.00%
Highest Level of Education Completed						
Less than HS	---		---	12.50%		---
HS/GED	18.18%		---	12.50%		---
Training past HS	36.36%		3.23%	50.00%		5.26%
Two-year degree	13.64%		---	12.50%		---
Four-year degree	18.18%		16.13%	12.50%		15.79%
Graduate degree	13.64%		80.65%	---		78.95%
Years Employed in Current EC Position			$\bar{x}$ = 12.1 <i>SD</i> = 10.7			$\bar{x}$ = 12.7 <i>SD</i> = 8.9
Years Employed in Early Childhood (Birth–Age 8)			$\bar{x}$ = 16.4 <i>SD</i> = 11.9			$\bar{x}$ = 21.4 <i>SD</i> = 11.4



## Research Process

### *Professional Development and Technical Assistance*

State facilitators who were experienced early interventionists participated in a week-long “trainer of trainers” program conducted by Dr. Robin McWilliam for utilizing Routines Based Interviews for child and family assessment and the development of high quality IFSP outcomes. After demonstrating Routines Based Interview fidelity, the state facilitators then conducted 2-day, intensive “boot camps” in the pilot sites to train professional members of the EI teams. Facilitators followed a training script to ensure standardization. Facilitators were assisted by coaches who had been previously trained in Routines Based Interviews and successfully passed fidelity protocol. Coaches were also trained to reliably score participant-conducted Routines Based Interviews using an adapted version of the Routines Based Interview Implementation Checklist (McWilliam, 2010), and follow established guidelines to provide feedback to participants using the checklist.

The boot camps included a demonstrated Routines Based Interview, as well as opportunities for participants to conduct three hands-on practice interviews with volunteer families. Coaches provided in-time feedback to boot camp participants during practice interviews. The boot camp training also included instruction on writing high quality IFSP outcomes based on Routines Based Interview information, and state facilitators provided participants with feedback on IFSP outcomes written from boot camp practice sessions.

After boot camp, pilot site participants had a 3-month window to strengthen Routines Based Interview and IFSP outcome writing practices on-the-job, after which they submitted a video of an interview and a copy of resultant IFSP outcomes to their coach. Coaches checked the interviews for 85% or better fidelity using the adapted Routines Based Interview Implementation Checklist (McWilliam, 2010). If participants did not reach 85% fidelity, they received additional feedback from the coach and subsequently submitted a second video. All pilot site participants eventually achieved fidelity and were considered “Routines Based Interview approved.” As a follow-up, each professional’s interview implementation fidelity was assessed the following year using the same checklist by either a coach or another Routines Based Interview-approved EI service provider.

In addition, state level facilitators provided written feedback to pilot site professional participants regarding submitted IFSP outcome quality guided by the IFSP Outcome Quality Checklist (Bainter & Hankey, 2015). Further training in writing quality outcomes was conducted via a refresher course the following year. Professional participants and facilitators scored professional-submitted outcomes using the IFSP Outcome Quality Checklist, then compared and discussed the results.

### *Data Collection*

**Interviews.** Seventy-seven interviews with 80 participants were conducted by the first author. Within each site, a purposeful sample of participants was selected to reveal various perspectives of the topics of interest identified in this study (Creswell, 2013). Service coordinator supervisors, EI administrators, early interventionists, service coordinators, and family members were asked to participate in Zoom or face-to-face interviews. Family members could choose to be interviewed in their own homes or neutral sites. Interviews lasted 30–45 minutes and were audio-recorded and transcribed. To protect confidentiality, each interview participant was assigned a numerical identifier and any personally identifying information was stored separately from the data.

Two interview protocols were utilized—one for professionals and one for families. Questions probed the experiences of the participants with child/family assessment (e.g., What would have made that initial process of identifying those strengths, concerns, and priorities better

for you and your family?), development of IFSP outcomes (e.g., How would you describe the role of family members in choosing and writing the outcomes/goals?), planning of services during IFSP development (e.g., Describe how your team determines what services the child/family will receive and who will deliver those services.), home visit practices (e.g., What does a typical home visit look like for you and your child?), and caregiver use of interventions between home visits (e.g., How would you describe family participation in Early Intervention services in your community in terms of families implementing planned interventions between home visits?). Copies of interview protocols are available from the corresponding author. Interview transcripts were uploaded to MAXQDA (Kuckartz, 2007) software for data storage and organization, efficient coding, and thematic development.

**IFSP Documents.** A randomly-selected sample of 30 IFSPs (pilot  $n=19$ ; non-pilot  $n=11$ ) from reported years 2015- 2016 and 2016- 2017 were obtained by the Co-Lead agencies. That is, all of the IFSPs completed during these two calendar years were assigned a number and a random-number generator was used to identify the 30 IFSPs the Co-Lead agencies would obtain. Personal identifying information was removed from the documents by Co-Lead agency staff prior to sharing the IFSPs with the research team, and each IFSP was assigned a numerical identifier for data management. Due to the quasi-experimental nature of the selection strategy for the IFSPs, researchers did not know whether or not any of the IFSPs were for the children of the families interviewed for this project. What was known, was that the IFSPs obtained from the pilot sites had been completed by teams whose professionals had been trained to fidelity in the first two Results-Driven Accountability strategies, while the IFSPs obtained from the non-pilot sites were completed by teams using “business as usual” practices. A data collection protocol (Stake, 2006) was developed to provide for systematic review of these archival documents. Data collected from the IFSPs included descriptive information such as the Planning Region Team from which it was obtained, number of child and family outcomes, frequency of home visits planned, length of home visits planned, and role(s) of the service provider(s) assigned to deliver the supports.

In addition, the IFSP Outcome Quality Checklist (Bainter & Hankey, 2015) was utilized to analyze the quality of the outcomes found in these IFSPs. This checklist is a modified version of McWilliam’s *Goal Functionality Scale III* (2009). The two co-developers of the modified checklist scored the sample of IFSPs, reconciled any differences in scoring that emerged, and shared the results with researchers.

### Data Analysis Plan

Analysis of two sources of data allowed the research team to triangulate evidence, and thus corroborate findings regarding Nebraska’s EI practices (Merriam, 2009; Morse, 1991).

**Qualitative Analysis.** A thematic analysis (Merriam, 2009) was utilized to qualitatively examine this data. The pilot data was analyzed first, then the non-pilot data. This allowed the research team to describe and understand each group’s experiences, then ultimately compare and contrast the two groups.

Members of the research team performed a constant comparative method of thematic analysis (Merriam, 2009). During a first cycle coding, transcripts were read, and meaningful segments of the text identified and labeled with initial codes by two independent coders. Researchers then compared the data within their respective identified codes and reached consensus on the parameters and essence-capturing labels for the codes (Miles et al., 2019). The majority of codes that emerged from the first cycle of analysis were descriptive (i.e., conveying basic topics) and process (i.e., conveying actions or interactions) codes. Next, a second cycle of coding occurred whereby

researchers identified clusters of codes resulting in patterns and themes related to the research questions. These themes were given extended phrases that summarized the concept described. Finally, themes were elaborated, and *in vivo* quotations woven into the narrative to achieve a thick, rich description of the experiences of the pilot site participants.

Similar iterative and inductive procedures were used for the non-pilot site interview transcripts; however, the coding system from the first group offered a coding frame that was used when coding the non-pilot site transcripts. Additionally, new codes were created as unique segments of interest emerged from the non-pilot site interviews. As described above, researchers compared the new assignment of codes and came to consensus when in disagreement, and returned to the data for a second cycle of thematic development.

**Quantitative Analysis.** A quasi-experimental design was chosen for the quantitative phase of the study, as it was not possible to utilize random assignment to control and treatment conditions in this context. Rather, IFSPs from two non-randomly formed groups were studied, a pilot treatment group where all professional IFSP team members writing the plans had received professional development and technical assistance in two evidence-based Results-Driven Accountability strategies and a non-pilot control group where professional IFSP team members writing the plans were characterized as “business as usual” (i.e., non-pilot team members may or may not have taken training previously offered in the state, previous trainings were not conducted using the intensive, hands-on “boot camp” format, and participant fidelity to the intervention was not evaluated). Both groups of Planning Region Teams consisted of rural, suburban, and urban school districts which provided a similar scope of resources to serve infants/toddlers with disabilities. Additionally, for this analysis IFSPs from a specified time frame were randomly selected for each of the two groups, providing control for selection and historical bias.

First, descriptive statistics were conducted using the IFSP data to determine the average number of child-focused, family-focused, and total outcomes for the two groups. These averages were subsequently compared with independent t-tests, and effect sizes of differences were calculated using Hedges’ *g* tests. Next, the IFSP Outcome Quality Checklist (Bainter & Hankey, 2015) was used to analyze the presence of quality indicators in the child-focused and family-focused outcomes for the two groups. Average percentages of the quality indicators present were compared across groups with independent t-tests, and effect sizes again calculated using Hedges’ *g* tests.

### ***Methodological Integrity***

Several strategies were implemented in an effort to ensure the credibility, integrity, and fidelity of study findings. First, analysis of multiple sources of data provided an opportunity to triangulate data and corroborate evidence (Merriam, 2009; Morse, 1991.) Use of the IFSP Outcome Quality Checklist allowed the creators of the tool to systematically code for the presence or absence of quality indicators across child and family outcomes. These quantitative findings were compared with multiple sources of information (i.e., interviews with family members, service coordinators, etc.) to strengthen the methodological integrity of the study through supplemental checks (Levitt et al., 2018). Next, rigorous strategies were applied to ensure the integrity of the qualitative results. At least two coders independently coded all interview data, compared identified segments, and resolved differences through consensus, bringing interrater agreement to the process of coding and thematic development (Armstrong et al., 1997).

Finally, preliminary findings from the pilot sites were shared with some participants and other interested persons at the annual state Part C stakeholder meeting and feedback was requested regarding the accuracy of the findings. This member check is considered by some scholars to be

“the most critical technique for establishing credibility” (Lincoln & Guba, 1985, p. 314) of qualitative findings.

## Results

### Qualitative Findings

Three qualitative themes emerged as the interview data from the pilot and non-pilot sites was analyzed and compared. These themes are explicated below and illustrated by representative quotes from the participants.

#### *Theme 1: Evaluation and Assessment Processes Varied*

Descriptions of the approaches predominantly used by EI teams in pilot versus non-pilot sites for assessing child and family needs as well as determining eligibility of services differed. Initial professional development efforts in the pilot sites focused on training the use of Routines Based Interviews to fidelity across all of the EI teams. This served as an integral addition to the practices previously used by EI teams to assess family/child strengths and needs, priorities and concerns, as well as evaluate children for eligibility for EI services. Pilot site participants identified several profound impacts of the use of such interviews. They reported that family-centered practices were enhanced by a process that was “better for families” and “more family-driven.” The wording used by the professionals to describe the Routines Based Interviews also shed light on their experiences using it with families: “conversation,” “detail,” “structured,” “intensive,” “personal questions,” “family-led,” “has helped (families) feel more involved,” and “we have better (family) participation.”

Pilot site families and professionals described the in-depth interview experience as quickly building a “foundation” for the parent-professional relationship. None of the family members in this study used the term “Routines Based Interview” to identify this process. Almost all, however, used wording that would apply to this procedure in describing their experiences. Family members used terms such as “in-depth questions,” “lengthy conversation,” and “thorough look at our day.” One mother stated that by walking through the family’s day in this detailed manner, she “started to identify where the entire family was affected” by the child’s disability.

Details gleaned from Routines Based Interviews were often used by pilot site teams to complete norm-referenced tools used for verification for EI services, thus mitigating duplication of questions asked of families. The interviews’ information also provided preliminary insight to EI service providers about the supports needed by families to achieve their prioritized outcomes. This was reportedly linked to IFSP development decisions about types and frequency of services. There were, however, infrequent reports of services/frequency decisions made by pilot site administrators.

Some service providers in the non-pilot sites had also been trained in and were utilizing Routines Based Interviews in the evaluation and assessment process. Depending on whether or not the participants were on teams using Routines Based Interviews, the role of families in this process was described quite differently. Six non-pilot site professionals specifically referenced the utility of Routines Based Interviews for establishing a “family-driven” focus within the parent-professional relationship: “They’re... driving the process as far as we just have a systematic way of gathering that information through the Routines Based Interviews.”

In contrast, twelve of the non-pilot site participants described families’ involvement in the process as one of answering questions to complete norm-referenced evaluations or screening checklists or being engaged in providing general health and developmental information. Some non-pilot site EI teams reported using multiple tests and/or checklists such as instruments designed for domain specific measurement in their evaluation process. Professional team members from both groups indicated they highly valued information provided by families.

### ***Theme 2: Development of IFSP Outcomes***

Participants in pilot and non-pilot sites described the content of IFSP outcomes (i.e., wording used, relationships to families' routines, measurement criteria), and roles of providers and parents in writing outcomes. Pilot site participants revealed a fundamental shift in IFSP outcome development practices after trainings for the first two Results-Driven Accountability strategies. Professionals identified essential changes that resulted in outcomes expressed in the words of parents and related to functional, everyday routines and activities. Service providers described their roles in IFSP outcome development as sources of guidance to families. They shared that they "asked parents questions" to identify "specific" routines and measurement criteria for the outcome, offering "choices or suggestions" if parents were unable to articulate these components on their own.

Occasionally, pilot site parents needed a model or example of a way to measure their child's progress toward a desired outcome, but most parents reported soon catching on to this practice. Many parents readily and accurately described setting the measurement criteria for their children's outcomes. Parents articulated measuring success using the following terms: "distance walked," "number of steps walked," "number of feedings taken from the feeding tube reduced," "number of times he crawls with his head up off the floor throughout a week," "percentage of time he sits by himself without falling over," "saying 50 words," and "having under three (toileting) accidents a day." These criteria represented skills families found to be easily observed and measured across the routine activities of everyday life. Most pilot site participants expressed a high level of satisfaction with this process and attributed the ease of writing IFSP outcomes with families to the detailed information gathered when assessment included a Routines Based Interview.

In the non-pilot sites, many family members reported that their professional team members helped them develop IFSP outcomes by prompting them to identify what they wanted to work on, or by helping them get their thoughts down in writing. One parent said, "The wording is kind of confusing...but they would break it down [for] me," and another reported, "We set some family goals too."

The interviewer probed for information about measurement criteria in the outcomes by asking families how they would know if an outcome was met. Non-pilot site parents described being able to observe a particular skill, such as, "go[ing] down a curb without having to hold onto something," "walking," "crawling," "drinking on her own," or "climbing stairs." Family members did not mention specific routines or child/family activities into which such skills would be embedded. One mother said, "It was just basic...it was...family or therapist, would like to see her walk. Or family would like to see her say different words." Many parents and professionals mentioned an emphasis on family wording or language being used to state the outcomes, with shaping or "guidance" from professionals.

There were some professionals in the non-pilot sites, however, who described outcomes as generated by the service providers: "Our [Early Development Network] coordinator actually writes the IEPs, develops the goals," and "the [Early Childhood Special Education] teacher prepares the draft." In all such cases, professionals stated that families were able to edit or approve the outcomes before finalizing the IFSP document.

### ***Theme 3: What Happens in a Home Visit***

Participants were asked to describe a "typical" home visit. In the pilot sites, the active engagement of families in home visits was reported to be generally high, with some exceptions noted by every service provider. Many participants attributed families' active engagement in visits to the selection of goals salient to families as a result of the Routines Based Interview method of assessment. Service providers acknowledged, however, that some portion of families on their

caseloads were much less engaged.

Similarly, across the non-pilot sites professionals' perceptions of the families' level of engagement in home visits were mixed. Many reported high levels of parent participation and effective partnering relationships, while some professionals were much less satisfied with levels of family engagement. Across pilot and non-pilot sites, descriptors that emerged with regard to family engagement in home visits included: "50-50", "hit or miss", "it varies, it depends," and "very active, very good." One parent said: "[I] will try out a strategy once in a while."

In addition, the structure of a typical home visit was found to be similar across pilot and non-pilot sites. Often visits began with the professional receiving updates from the family regarding changes in the child or family status, new concerns for child/family, or questions the family had for the provider. A number of elements that have been identified in adult educational coaching literature (Hanft et al., 2004; Stormont et al., 2015) were mentioned as present during home visits. Participants referenced "parent training," "giving feedback," "modeling," "demonstrating," "problem solving," "giving suggestions," and making an "action plan."

Within the Nebraska Results-Driven Accountability initiatives, families' daily routines have served as the foundation for the assessment process utilizing Routines Based Interviews, as well as the development and wording of IFSP outcomes. When asked specific questions about the role of routines in home visit intervention practices, however, families' daily routines seemed less likely to influence the structure or focus of home visits on a consistent basis, even in the pilot sites. Rather, pilot and non-pilot site participants described similar practices commonly used during home visits.

Parents were asked if the service provider helped them or their child participate in family activities/routines during the home visit. Participants mentioned that the following routines had, at least at one point in time, served as the context for real-time coaching or intervention: "feeding baby food while in high chair," "meal" or "snack" time, "dressing," "cleaning up toys," "playing," "reading books," "changing sibling's diaper," "playing at the park," "walking up and down stairs at home and in the community," "climbing on swing set," "crawling up into the car," "getting out of bed," and use of particular toys (e.g., "push toys," "chalkboard"). Other parents described discussing routines with their providers, such as, "bed time," "walking in the park," "cuddling and watching TV with family," "toilet training," and "making choices at meal time."

Few parents reported regularly planning to convene a home visit around a particular routine. Some parents denied that their service provider(s) helped them or their children participate in any family activities or routines. Their comments included: "I wouldn't say they do that," "No, they just kind of let me do that," "No, We haven't had that," "They usually just like to help him and we watch," and "It hasn't worked out scheduling wise to do that yet, no."

Professionals and parents reported documentation of the home visit as occurring on a regular basis. Some parents described the documentation forms used by their teams as action plans prompting caregiver efforts to implement strategies between the home visits. One mother explained, "They fill out their paperwork and talk with me further... 'OK, here's what you should focus on...before the next time I come. Let's try to make this happen.'"

Another area of focus in the interviews was family use of planned interventions between home visits. Professionals were asked to share their sense of whether or not families implemented the strategies. Across pilot and non-pilot sites, reports were mixed—some respondents thought their families did fairly well based on follow-up discussions at the subsequent visit, several thought their families fell on a continuum from consistent use to not using planned strategies at all. None of the professionals reported collecting on-going data regarding strategy use or child progress. Families were asked how service providers made sure they were comfortable using strategies with their children after the service provider had gone. Most reported "talking" about their comfort level with

the strategy. Few reported trying it out when the service provider was there. A few parents said that if they had trouble using a strategy they waited until the next visit to ask for help from or to problem-solve with their service provider. This occurred even though the parents acknowledged that they had the service providers' contact information and would feel comfortable e-mailing, texting, or calling them.

**Quantitative Findings**

***Number and Functionality of IFSP Outcomes***

The outcomes on the 30 IFSPs were evaluated using the IFSP Outcome Quality Checklist (Bainter & Hankey, 2015). The checklist notes the presence or lack thereof of five quality indicators for each child outcome and three quality indicators for each family outcome that is listed on the IFSP. See Table 2 for a description of these quality indicators.

**Table 2**

IFSP Outcome Quality Checklist Indicators for Child and Family Outcomes

Child Outcomes: Does the outcome	Yes (+)	No (-)
1. Emphasize child participation in a <b>routine(s)</b> ? (Child will participate in <i>outside time</i> by....NOT child will participate in <i>running</i> ).		
2. Include an <b>observable indicator</b> of what the child will do that is necessary, clearly connected, and/or useful in participating in the <b>above routine(s)</b> ? (Child will <i>hold spoon for 4 bites</i> during ....NOT <i>grasps spoon</i> ; or child will <i>use word or sign to let family know</i> during....NOT child will <i>not scream</i> ).		
3. Include a reasonable time frame for completion, with <b>criteria</b> that are clearly linked to the outcome? (Child will hold spoon for 4 bites at lunch <i>each day for 2 weeks...</i> NOT <i>3 of 4 trials</i> ).		
4. Describe priorities in words the family would use (i.e., jargon-free)?		
5. Link to the family priorities as listed on page 2 of the IFSP?		
Family Outcomes: Does the outcome	Yes (+)	No (-)
1. State specifically what the family will do (i.e., the family is the actor) based on a family priority as listed on page 2 of the IFSP, thus reflecting a family need or interest? (Sally will <i>get information about child care or respite...</i> NOT <i>have knowledge of medical, financial, and developmental services</i> ).		
2. Include an indicator of when or how the family will know the goal is met? (Raymond will find child care by June 15 or by the end of the month).		
3. Use words the family would use? (i.e., jargon-free.... NOT <i>family will utilize resources in their community</i> . <b>(If it is difficult to determine whether the outcome is written in the “family’s words”, score as a “yes”).</b>		

Note: Adapted from “IFSP Outcome Quality Checklist,” by Bainter & Hankey, 2015.

For each IFSP the number of child and family outcomes, as well as the total number of outcomes, was tabulated. Across these IFSPs, the number of outcomes varied. Therefore, for every IFSP, the percentage of outcomes in which each of the eight child and family quality indicators was present was calculated. Mean number of child and family, as well as total, outcomes and mean percentages of quality indicators present for each of the two groups are reported in Table 3. An exploratory statistical comparison of the means was conducted via independent *t*-tests. Due to the small sample sizes of these groups, the Hedges' *g* was calculated to estimate the effect size, that is, the degree of the difference between the means of the two groups. These results are also in Table 3.

**Table 3**

Descriptive Statistics and Results and Effect Sizes of Independent *T*-Tests of Pilot and Non-Pilot Site Number and Quality of IFSP Outcomes

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>df</i>	<i>p</i> -value	Hedges' <i>g</i>
Child IFSP Outcome Quality							
# of Child Outcomes							
Pilot Sites	19	3.7	2.3	2.30	25.42	.030*	0.81
Non-pilot Sites	11	2.0	1.8				
% Present of Child Indicator 1							
Pilot Sites	18	84.1	29.0	2.82	15.31	.013*	1.19
Non-pilot Sites	11	41.8	44.3				
% Present of Child Indicator 2							
Pilot Sites	18	76.1	37.0	2.15	18.39	.045*	0.86
Non-pilot Sites	11	41.8	44.3				
% Present of Child Indicator 3							
Pilot Sites	18	41.0	30.8	2.88	26.63	.008**	1.00
Non-pilot Sites	11	13.4	20.8				
% Present of Child Indicator 4							
Pilot Sites	18	80.3	33.4	0.70	18.39	.488	0.28
Non-pilot Sites	11	70.1	40.0				
% Present of Child Indicator 5							
Pilot Sites	18	85.3	27.4	-0.87	26.94	.394	0.30
Non-pilot Sites	11	92.5	17.2				
Family IFSP Outcome Quality							
# of Family Outcomes							
Pilot Sites	19	2.3	1.8	3.14	28.00	.004**	1.031
Non-pilot Sites	11	0.7	1.0				
% Present of Family Indicator 1							
Pilot Sites	18	85.2	34.8	-0.78	16.56	.445	0.26
Non-pilot Sites	5	93.4	14.8				
% Present of Family Indicator 2							
Pilot Sites	18	70.4	42.6	-0.14	6.32	.895	0.07
Non-pilot Sites	5	73.4	43.5				
% Present of Family Indicator 3							
Pilot Sites	18	90.7	27.6	0.51	4.88	.632	0.34
Non-pilot Sites	5	80.0	44.7				



**Table 3 cont.**Descriptive Statistics and Results and Effect Sizes of Independent *T*-Tests of Pilot and Non-Pilot Site Number and Quality of IFSP Outcomes

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>df</i>	<i>p</i> -value	Hedges' <i>g</i>
Total IFSP Outcome Quality							
Total # of Outcomes							
Pilot Sites	19	6.2	2.7	3.86	25.44	.001**	1.37
Non-pilot Sites	11	2.7	2.1				

\**p* < .05. \*\**p* < .01.

The group of 19 IFSPs from the pilot sites had an average of 6.2 outcomes per IFSP, with an average of 3.7 of those focusing on child outcomes, while 2.3 focused on family outcomes. An emphasis on the child's participation in a routine (84% of outcomes met Child Indicator 1) and a link to the family's priorities (85% met Child Indicator 5) were most commonly seen in the child-focused outcomes. The criterion for outcome completion (Child Indicator 3), however, was only present, on average, in 41% of the child outcomes. For the family-focused outcomes, using words the family would use (91% of outcomes met Family Indicator 3) was most commonly seen. The criterion for completion of a family goal (Family Indicator 2) was found, on average, in just 70% of the family outcomes.

The group of 11 IFSPs from the non-pilot sites had an average of 2.7 total outcomes per IFSP, with an average of 2.0 of those focusing on child outcomes, while an average of 0.7 focused on family outcomes. An emphasis on using the words the family would use to describe the outcome (70% of outcomes met Child Indicator 4) and linking the outcome to the family's priorities as stated on the IFSP (92% met Child Indicator 5) were the most commonly seen quality indicators in the child-focused outcomes. The criterion for outcome completion (Child Indicator 3), however, was only present in an average of 13% of the child outcomes. It is important to note that six out of the 11 IFSPs from the non-pilot group had no family outcomes. The five IFSPs that did, however, contained high percentages of the three family outcome quality indicators.

Training in the development of high quality IFSP outcomes had been systematically conducted across the pilot sites, while professionals in the non-pilot sites may or may not have taken advantage of offered trainings. This exploratory statistical comparison of pilot and non-pilot site outcome quality ratings suggests positive and substantial impacts of the systematic professional development initiatives on both the number and some demonstrated indicators of quality of outcomes. Specifically, pilot site IFSPs had more child outcomes ( $M = 3.7$ ,  $SD = 2.3$ ) than the non-pilot site IFSPs ( $M = 2$ ;  $SD = 1.8$ ). This mean difference was significant,  $t(25.42) = 2.3$ ,  $p = .03$ ,  $g = 0.81$ . Theoretically, the degree of standardized mean differences (i.e., Hedges'  $g$ ) in this type of group design can take any value, but Lipsey and Wilson (1993) reported that 95% of the mean effect sizes found in their review of 302 social sciences meta-analyses fell between -0.08 and +1.08. Historically, effect sizes greater than .8 are considered to be large (Cohen, 1977). Thus, in this exploratory study, systematic training and support for the first two Results-Driven Accountability strategies resulted in a large effect size for number of child outcomes. Pilot site IFSPs also had more family outcomes on average ( $M = 2.3$ ,  $SD = 1.8$ ), when compared to the non-pilot sites ( $M = .7$ ,  $SD = 1.0$ ). The effect size was even greater for this significant result,  $t(28) = 3.14$ ,  $p = .004$ ,  $g = 1.031$ .

With regard to total number of outcomes, the pilot site IFSPs were, on average, within the range of overall number of six to ten outcomes that McWilliam (2010) suggested would result from Routines Based Interviews implemented with fidelity ( $M = 6.2$ ,  $SD = 2.7$ ). The non-pilot site IFSPs had a lower total number of outcomes ( $M = 2.7$ ,  $SD = 2.1$ ). This mean difference was significant,

$t(25.44) = 3.9, p = .001, g = 1.37$ , and a large effect size was indicated.

There were also significant differences between the two groups for three out of five child outcome quality indicators. This was analyzed by comparing the average percentages of each indicator found on the IFSPs. This approach allowed researchers to control for the differing number of outcomes per IFSP. Pilot site IFSPs had a higher mean percentage for child quality indicator 1—emphasizes child participation in a routine—( $M = 88.1, SD = 29.0$ ), when compared to the non-pilot sites ( $M = 41.8, SD = 44.3$ ). The effect size was large for this significant result,  $t(15) = 2.82, p = .013, g = 1.19$ . Pilot site IFSPs also had a higher mean percentage for child quality indicator 2—includes observable behavior ( $M = 76.1, SD = 37.0$ ), when compared to the non-pilot sites ( $M = 41.8, SD = 44.3$ ). The effect size was large for this significant result,  $t(18) = 2.15, p = .045, g = 0.86$ . Finally, pilot site IFSPs had a higher mean percentage for child quality indicator 3—criteria for completion that are reasonable and linked to the outcome—( $M = 41.0, SD = 30.8$ ), when compared to the non-pilot sites ( $M = 13.4, SD = 20.8$ ). The effect size was also large for this significant result,  $t(27) = 2.88, p = .008, g = 1.00$ . The mean differences in the percentages present for child indicators 4—uses words the family would use—and 5—linked to a family priority on the IFSP—were not significantly different between the two groups.

While statistical analysis showed the two groups were significantly different with regard to the number of family outcomes present on the IFSPs, no significant differences were found between them with regard to the quality of family outcomes as measured by three indicators. That is, when non-pilot sites' IFSPs included family outcomes, they tended to demonstrate a similar level of quality to the pilot sites' IFSP family outcomes. Some possible explanations for this finding are that when teams write family outcomes it may be generally easier to attain the quality indicators for family outcomes than it is to attain quality indicators for child outcomes, or the non-pilot site IFSPs that contained family outcomes had been written by teams who had participated in the professional development strategies of Routines Based Interviews and/or quality outcome training. This finding regarding quality of family outcomes should, however, be interpreted with caution, as six of the 11 non-pilot site IFSPs contained no family outcomes while all 19 of the pilot site IFSPs contained one or more family outcomes. Further investigation of this phenomena with a larger sample size of IFSPs would be useful.

### ***Service Providers Assigned to Support Families***

The service pages of the IFSPs yielded descriptive data about the providers assigned to deliver the supports needed to accomplish the IFSP outcomes. All 30 plans listed a service coordinator who would visit the family one time per month. The length of visits varied across these plans from 15 to 60 minutes. Seventeen of 19 pilot site IFSPs and six of 11 non-pilot site IFSPs listed a primary EI service provider. In the pilot sites, the majority of primary service providers were early childhood special educators ( $n=9$ ), followed by speech/language pathologists ( $n=5$ ), and occupational therapists ( $n=2$ ). One plan did not identify the role of the primary service provider. Two plans listed two providers. In the non-pilot sites, the majority of primary service providers were speech/language pathologists ( $n=3$ ), followed by an early childhood special educator ( $n=1$ ), physical therapist ( $n=1$ ), and occupational therapist ( $n=1$ ). Four plans listed two providers, and one plan listed three.

### ***Frequency and Length of EI Services***

The IFSP service pages also reported the frequency and length of visits planned. For the 19 pilot site IFSPs, a range from less than one visit per month up to three visits a month were reported, with one visit a month appearing most frequently ( $n=8$ ). For the 11 non-pilot site IFSPs, the range

was from less than one visit a month to five visits a month, with one to two visits a month appearing most frequently ( $n=6$ ). With regard to length of visits, all IFSPs reported visits falling within a range of 30 to 60 minutes.

### **Synthesis of Qualitative and Quantitative Findings: Implications for Practice**

A synthesis of the qualitative and quantitative findings that emerged from a mixed method investigation yielded key understandings pertinent for the state of Nebraska regarding (a) IFSP outcome quality, (b) family partnerships in IFSP planning, (c) the focus of EI home visits, and (d) practices used for monitoring child and family progress toward attaining IFSP outcomes. Synthesized findings and related implications for each of these points are discussed below.

#### ***IFSP Outcome Quality***

Seventeen out of 19 pilot site IFSP documents examined contained both child-focused and family-focused outcomes. Interviews with the pilot site parents provided further support of this phenomena in that all of the parents acknowledged identifying both child and family outcomes for their IFSPs. McWilliam (2010) suggests that “the product of a successful needs assessment and intervention planning process... would be 6 – 10 functional outcomes” (p. 97). In this study, the pilot site IFSP documents had an average of 6.16 total outcomes, with a range from 1 to 13 outcomes. These findings suggest that use of Routines Based Interviews in the assessment phase enables teams to generate an expected number of outcomes, and that both child and family outcomes are subsequently represented on the IFSPs in the pilot sites.

With regard to outcome quality, pilot site participant interviews yielded rich descriptions of parents actively prioritizing their desired outcomes for their children and stating those outcomes in their own words during IFSP development. The IFSP Outcome Quality Checklist confirmed this finding in that high percentages of the pilot site IFSPs met Child Indicator 4—uses words the family would use, and Child Indicator 5—links to family priority on the IFSP. Interestingly, interviewed parents across the pilot sites were highly adept at explaining in specific and measurable terms how they were able to tell if the children achieved those outcomes. The related IFSP Outcome Quality Checklist indicator for this (Child Indicator 3), however, was found in under half of the outcomes written. A possible explanation for this discrepancy may lie in the more stringent standard set for measurability of an outcome by the checklist, while interviewed parents were able to explain measurability clearly, but in a less formal manner.

For the non-pilot sites, quantitative and qualitative data regarding IFSP outcomes was somewhat inconsistent. One area of discrepancy was found regarding the inclusion of family outcomes on the IFSP. Over half of the non-pilot IFSPs examined contained no family outcomes. All eight of the interviewed non-pilot site parents, however, indicated that their IFSPs had at least one family outcome and they were able to discuss their level of satisfaction in meeting their family goal(s). While child-focused outcomes are important, addressing family outcomes has a crucial role in supporting families' abilities and resources to care for children with disabilities. Thus, this inconsistency points out a gap across the families served in the non-pilot sites that preliminary data suggests was ameliorated by systematic training in the two Results-Driven Accountability strategies in the pilot sites. For the non-pilot site IFSPs with family outcomes, the percentage of quality indicators present was very high. Child outcomes, however, often lacked an emphasis on child participation in a routine, an observable, measurable behavior, and any criteria for completion of the outcome. Similarly, when asked to share about their child's IFSP outcomes, families interviewed rarely mentioned particular routines nor specific criteria for success. Strengths of the child outcomes in the non-pilot site sample were their family-centeredness with regard to using family language and

focusing on family priorities. These qualities were confirmed in participant interviews.

Findings from this study provides preliminary confirmation of the effectiveness of the two evidence-based strategies that have been promoted by Nebraska's Co-Lead agencies in the first two stages of Results-Driven Accountability training and technical assistance (Nebraska Early Development Network, 2013), with an implication that further expansion of these systematic trainings across the state is warranted. The statistical analysis of IFSP outcome quality of the pilot and non-pilot groups suggests that universal training and implementation with fidelity of Routines Based Interviews and IFSP quality outcome training yields significant and meaningful improvements in the number of IFSP child and family outcomes. Furthermore, child outcome quality indicators such as emphasizing child participation in a routine, identifying an observable child behavior, and establishing a criterion for successful completion of the outcome are advanced by this type of child/family assessment. In addition, the quantitative evidence is corroborated by qualitative descriptions provided by study participants. The State of Nebraska Co-Lead Agencies have a multi-year plan for furthering the reach of the Results-Driven Accountability EI improvement strategies across all Planning Region Teams in Nebraska. This is expected to bring uniformity to the state's policy that teams use best practices for child/family assessment and writing high-quality, functional IFSP outcomes.

### ***Family-Professional Partnerships in IFSP Planning***

The degree to which families participated as partners in planning EI services was of interest in this study. As IFSPs are written, key decisions are made identifying one or more service providers and determining the frequency and length of home visits. While findings revealed the influence of Strategy 1 and 2 training and implementation on improving IFSP outcome quality, there was little evidence that teams further partnered with families to plan other aspects of EI service delivery.

Qualitative findings indicated that parents from pilot sites were not typically included in the decision-making process of who would deliver EI services to their child/family. Rather, decisions were driven primarily by the developmental domain identified as the initial concern at referral as that often determined the role of the service providers tapped for the child and family's initial evaluation and assessment. An effective administration of a Routines Based Interview, itself, reportedly promotes an early bond between professionals and families due to the in-depth and personal nature of the questions and active listening skills demonstrated by the interviewer. Thus, teams tended to choose one of these initial family contacts as the EI primary service provider. A number of EI teams stated that service provider decisions were guided by a structured decision-making process developed by Sheldon and Rush (2010). This was completed by professionals in their team meetings. Parents often reported that their input regarding or approval of this selection was sought at the IFSP meeting. As parents became comfortable with EI, some said they asked for co-visits from other service providers or were comfortable changing service providers as warranted due to changing priorities for their children. Other families demonstrated a lack of awareness of the specific "role(s)" of their service provider(s).

With regard to the frequency and length of home visits, quantitative data from the IFSP documents were compared to qualitative data from parent participant interviews. There were some differences noted between parents' reports of frequency and length of home visits and related information documented on the 19 pilot site IFSPs. In the interviews, the majority of families reported having home visits two to four times a month, and for the majority of respondents, these lasted an hour. The majority of the IFSPs indicated planned visits one to two times a month, with most lasting 30 to 45 minutes. The families who participated in this study were notified of the study by their service provider and volunteered for the interviews, thus, there may be inherent differences

in these families' levels of engagement and participation in EI services when compared to other family members who were not invited to or interested in being interviewed. Another possible explanation for the differences between parent report and IFSP documentation of frequency and length of home visits may simply be that some teams document conservative numbers and lengths of visits to ensure that levels of service delivery stated on the IFSPs are met.

An essential goal of EI is to build families' competence and confidence in advocating for their children. Thus, an implication of this particular study finding is that more transparency and inclusion of families in the IFSP team decision-making process regarding selection of a primary service provider and establishment of length/frequency of home visits is warranted. Professionals may be able to set the stage for family partnerships in such decisions by providing more information to families about various team members' areas of expertise, how team members collaborate and coach each other across developmental domains, what options for service delivery might complement the family's desired outcomes, and what other families with similar priorities have done. This may, admittedly, require even more time for outreach and communication with families during what professionals experience as an already tight federally mandated timeline.

### ***The Focus of EI Home Visits***

A cross-case analysis of pilot and non-pilot site data revealed that home visitation practices described by the two groups were more similar than different. Across groups, common activities of service providers during home visits include obtaining updates from families, modeling strategies, giving suggestions and feedback, and completing documentation of the visit. Some key coaching behaviors were not mentioned in either pilot or non-pilot site interviews (e.g., reflection, practice, goal-setting). With the exceptions of meal times and play times, families are reportedly rarely coached to practice a strategy with their child in the context of a family routine during the home visit. Thus, an implication can be drawn from this study that higher quality IFSPs are not sufficient in and of themselves to prompt the use of routines-based interventions during home visits.

This finding provides a call to action to state-level leaders to emphasize focusing the content of EI home visits on family activities and routines. While engagement in a Routines Based Interview provides an effective process for families to prioritize outcomes for their child and family, and for teams to write IFSP outcomes in functional and measurable terms, these practices alone did not necessarily translate into professional or family member focus on routines-based interventions during the home visits. Results from this study indicate service providers across trained and untrained sites are not widely using family activities and routines as contexts for discussing, demonstrating, practicing, providing feedback on, or reflection upon evidence-based interventions, in spite of such activities/routines appearing in written IFSP outcomes. It is in real-life contexts that caregivers most benefit from coaching support for implementing interventions with their children (Hanft et al., 2004; McWilliam, 2010; Woods et al., 2004). Further, EI programs stressing families' consistent application of such interventions across time have shown positive child outcomes (Salisbury & Copeland, 2013). Coaching families within daily activities and a wider variety of routines would re-focus teams on parent priorities and strengthen the connections for these adult learners between proposed strategies and on-going use of the strategy.

This would also set the stage for more intentional action planning, including setting of goals for when, where, and by whom a strategy would be implemented, and documenting the plan in writing to leave with the family. These features are key to maximizing the implementation of interventions—that is the frequency, intensity, and fidelity of interventions for infants and toddlers—that occurs between visits.

### ***Practices Used for On-going Progress Monitoring***

In the current study, both professionals and family members reported sensing great variability across families in their implementation of planned interventions between visits. One method for gaining better understanding of family use of intervention strategies between home visits is through formal monitoring of progress toward the measurable outcomes found on the IFSPs. No EI professionals from either the pilot or non-pilot site Planning Region Teams sampled in this study reported frequent, on-going collection of data regarding child or family progress. In addition, the IFSP documents examined did not contain evidence of progress monitoring such as reports of changes over time or plans for how particular outcomes would be monitored.

Utilization of a written action plan has the potential to support service providers' efforts at follow-up home visits to collect data about family use of an intervention between visits—a key in a collaborative data-based decision making process (Bernheimer & Keogh, 1995; Sheridan et al., 2006). Such data provides evidence regarding the appropriateness of the planned frequency and intensity of interventions for ultimately achieving child and family outcomes. Thus, an implication of this finding is that additional professional development around a set of strategies for EI providers to engage family members in observing their children and documenting their use of and satisfaction with interventions between home visits is warranted.

### **Limitations**

A number of limitations are inherent with any mixed method convergent design (Creswell & Plano Clark, 2011). From the standpoint of qualitative approaches, it is not possible to interview all participants, and those who may feel marginalized by the processes used by the Planning Region Teams may, in particular, be difficult to access for interviews. In addition, the information provided by the interviews is self-reported. These factors limit the transferability of the findings (Levitt et al., 2018). This study was designed to minimize this limitation by utilizing purposeful sampling to ensure a wide variety of member roles were represented in the interviews and random sampling to collect quantitative IFSP data, thereby ensuring that a representative sample was analyzed in this study. In addition, the use of multiple data sources allowed for triangulation of evidence, thus controlling for researcher bias. These elements of the study design and execution result in conclusions that are plausible, convergent, and therefore, transferable to comparable settings (Miles et al., 2019).

Further, the quantitative findings that resulted from the quasi-experimental approaches used in this study must be interpreted with caution. Quality ratings from IFSPs written in pilot and non-pilot sites before the professional development was implemented were not collected and analyzed. It is possible, therefore, that the pilot and non-pilot sites were fundamentally different in this respect prior to implementation. Thus, not all possible alternative explanations for these findings were ruled out. Careful attention to selecting a cross-section of representative “business as usual” non-pilot sites and random selection of IFSPs from these sites allowed a number of plausible explanations for the results to be ruled out, thus addressing some threats to internal validity (Shadish et al., 2002). In addition, this preliminary exploratory analysis yielded strong, positive results. Further exploration of this phenomena that includes comparison of groups prior to professional development is warranted.

### **Conclusion**

In Nebraska, Part C services for infants and toddlers with developmental delays or disabilities and their families are co-administered by the Departments of Education and Health and Human Services. The Co-Lead agencies are responsible for developing policies aimed at improving outcomes for these children and families. Over the past several years, the Co-Lead agencies have

rolled out professional development and technical assistance for the first two evidence-based strategies of a Results-Driven Accountability process in several pilot sites across the state. Implications of these strategies for IFSP development and EI service delivery were examined. The results of this study indicate widespread use of Routines Based Interviews with fidelity fosters early working relationships with families, and enables families to generate, using their own words, a group of quality IFSP outcomes.

Currently, the third phase of the Results-Driven Accountability process is underway as the pilot sites complete professional development and training to add the *Getting Ready* framework to home visits. It is anticipated that these evidence-based approaches will add structure and consistency to what happens in a home visit, refocus the professional and family on daily activities and routines of concern, strengthen coaching practices, and prompt creation and follow-up evaluation of action plans (Sheridan et al., 2008). Further professional development may be needed to prompt providers and families to systematically gather data regarding child and family progress toward achieving the IFSP outcomes that are of such great importance to these families. These are vital steps toward addressing the third area of need in Nebraska—strengthening of home visitation practices to provide support within the context of family routines.

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