Program evaluation of service delivery trends in early intervention

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PROGRAM EVALUATION OF SERVICE DELIVERY TRENDS IN EARLY INTERVENTION

by

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1987

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A dissertation submitted in partial fulfillment of the requirements for the

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ABSTRACT

Program Evaluation of Service Delivery Trends in Early Intervention

by

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This study was conducted to evaluate utilization of seventeen services, including occupational and physical therapy, provided through Nevada Early Intervention Services (NEIS) – South between July 2003 and June 2005. Eligibility for services was determined by the child’s qualifying diagnosis according to the Individuals with Disabilities Act (1997) and was based on either 1) Diagnostic and Statistical Manual of Mental Disorders – 4th Edition Text Revision (DSM-IV-TR) or medical diagnosis or 2) developmental delay as defined by the Nevada Administrative Code for children ages birth through three years. Analyses of the services provided based on the eligibility criteria was undertaken to determine service referral trends and provide suggestions to NEIS – South based on compiled program data.

All children who received an initial Individualized Family Service Plan through NEIS – South during the two year period were included in this study with a resultant 1516 files analyzed. The premise of the study was that all children referred to NEIS – South received necessary services. Two specific research questions were addressed in this
study. First, did children who possessed a DSM-IV-TR or medical diagnosis as the qualifier for Part C services receive more early intervention services than children diagnosed with developmental delay based on the types of services per month and interventions received? Second, did children with a DSM-IV-TR or medical diagnosis receive occupational and/or physical therapy more frequently than children with a diagnosis of developmental delay?

Data analysis indicated that 486 (32.1%) of children qualified for services through NEIS – South based on a DSM-IV-TR or medical diagnosis. There were 1030 (67.9%) children who qualified based on a diagnosis of developmental delay. Three of the seventeen identified services received the largest number of referrals and were determined to be statistically significant through Chi square analyses. These services were speech language pathology (n= 642, 14.74%), specialized instruction (n= 1231, 28.27%), and parent/family training (n= 1450, 33.3%).

Recommendations for evaluation of service categories and training programs were provided for NEIS – South as well as agencies bidding to provide subcontracting services through NEIS – South.
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CHAPTER 1

INTRODUCTION

Early intervention for young children at risk for or experiencing developmental delays between the ages of birth to two years of age and their families encompasses a wide range of services. To optimize the services provided by rehabilitation therapists, the practitioner must consider for whom services are primarily designed (Hanft, 1988). Rehabilitation therapy roles, in particular occupational and physical therapy, within early intervention Part C programs have changed since their initial introduction to the field during the 1980's. Initially described as child-based direct service providers, therapists have evolved into family educators. Therapeutic techniques originally delivered in clinics as part of the early intervention program are now carried out in the natural environment.

The provision of occupational and physical therapy services in early intervention settings was initiated in 1986 through P.L. 99-457. At the time, therapists were viewed as motor specialists who consulted with the team regarding the child’s individual gross and fine motor developmental needs. In terms of role delineation, occupational therapists assisted children to develop and refine their fine motor (i.e., grasp, pinch, in-hand manipulation) and self care skills (i.e., feeding, hygiene, dressing). Physical therapists assisted children in their mobility skills, including strength and range of motion.

In 1990, the Individuals with Disabilities Education Act (IDEA, P.L. 102-119) specified services for infants, toddlers, and their families and strengthened the role of
family involvement and education (Washington & Schwartz, 1996). Part C professionals, those who work in early intervention, have advocated that parents and caregivers know their children best and are skillful determiners of the child's best interests. Thus, parents and caregivers were encouraged to be the primary teacher for home activity [and therapy] programs (Jirikowic et al., 2001; Piggot, Hocking & Paterson, 2003).

Occupational and physical therapists roles changed as provision of early intervention services moved to family-centered services with an emphasis on family education. Establishment of meaningful goals and outcomes required modification of intervention approaches to include the family and their wishes for intervention. As this change occurred, therapists had to shift from traditional medical and educational outcomes to family focused education (McEwen & Shelden, 1995).

At the same time, the rehabilitation profession went through a number of different stages to reach present attitudes and beliefs about parent involvement in early intervention environments. Initially trained in the medical model, the health professional was deemed expert and the primary treatment focus was the child with limited parent participation (Dunst & Trivette, 1987). A modification of the medical model emerged in 1975 when the Education for All Handicapped Children Act (P.L. 94-142) was adopted and parents of children with disabilities became involved as adjunct therapists (Turnbull & Turnbull, 1982). A philosophical shift from child-centered to family-centered intervention occurred with P.L. 99-457 (1986) facilitating the need to adopt a collaborative model for working with families to meet their needs (Bazyk, 1989).

The family-centered functional therapy approach is based on theoretical concepts from family-centered services as well as a systems approach to motor development. The
systems approach includes an emphasis on the child’s overall functional performance when their movement behaviors are amenable to change (Law et al., 1998). Parental participation for children with physical delays became increasingly important and moved parents from co-therapists to equal partners in the intervention program (Ketelaar, Vermeer, ‘t Hart, van-Petegem-van Beek, & Helders, 1998). Integrated home programs for children with special health needs required specific parental training to carry out developmental strategies and facilitate effective communication among professionals (Jirikowic et al., 2001; Mahoney et al., 1999). Parent education included an expectation that parents would acquire the knowledge and skills needed to provide therapeutic interventions with their child during daily routines (Mahoney et al., 1999).

Early intervention therapists who successfully integrate strategies into the family routines have often approached working with the family as a consultant or “coach” (Campbell, 1997). This challenged therapists who were accustomed to the outpatient medical model in which the child received services on a weekly or bi-weekly basis. The identification of family concerns, priorities, and resources were key to the development of a collaborative approach with the parent, and help determine the level of early intervention (Washington & Schwartz, 1996). To meet the objectives of the Individualized Family Service Plan (IFSP), therapists must teach family and early intervention team members to promote motor development in the natural environment (McEwen & Shelden, 1995).

Purpose

The purpose of this study was to conduct an outcomes-based evaluation of occupational and physical therapy utilization at Nevada Early Intervention Services
(NEIS) – South over a 24-month period. NEIS – South, the primary Part C provider in southern Nevada, combined two separate early intervention programs in July 2003. Prior to July 2003, Special Children’s Clinic operated through the Nevada Department of Health and First Step operated through the Nevada Department of Family and Child Services. The current NEIS – South, in its third year of operation under the Nevada Department of Health, provided participants with early intervention services in Clark, Nye, Esmeralda, and lower Lincoln counties.

The components that were examined in this project were:

1. service provision for children with a Diagnostic and Statistical Manual of Mental Disorders – 4th Edition Text Revision (DSM-IV-TR) or medical diagnosis (e.g., cerebral palsy, Down syndrome, seizure disorder, as diagnosed by a medical doctor or psychologist working in the field of early intervention) as the qualifier for Part C services and indicated on the IFSP based on hours of services per month and the types of interventions received

2. service provision for children with a developmental delay (as defined by the Nevada Administrative Code for children ages birth through three years) as the qualifier for early intervention and indicated on the IFSP based on hours of services per month and the types of interventions received

3. referral rates to occupational and/or physical therapy for children who possess a DSM-IV-TR or medical diagnosis as the qualifier for early intervention based on the child’s initial IFSP
4. referral rates to occupational and/or physical therapy for children

diagnosed with a developmental delay as the qualifier for early intervention
based on the child’s initial IFSP

This evaluation served as a formative evaluation as NEIS – South continued to
determine optimal service delivery for the population served. The results of this study
provide suggestions for occupational and physical therapy improvement and determine
efficient referral procedures for these professionals within the program.

Problem

Depending upon the training and experience of the individual therapists, the role
of occupational and physical therapy in Part C can overlap. Role delineation differs
among programs across the United States. Therapists are often involved in evaluation of
infant and toddler program eligibility and treatment related to motor (e.g., gross and fine
motor skills) and adaptive domains. Unfortunately, the demand for occupational and
physical therapists working in early intervention programs often goes unmet (American
Occupational Therapy Association, 2005).

Wolery and Bailey (2002) noted further research was needed on the intensity or
amount of services provided to young children with identified needs. Mahoney,
Robinson, and Perales (2004) stated research was needed in relation to the “intensity of
[therapy] services” in early intervention (p. 297). These research mandates were posed
due to the lack of studies within the fields of early intervention and rehabilitation
occupational and physical therapy in an early intervention program over a six-month
period in Boston, Massachusetts. However, the results primarily focused on family-therapist interaction and the implementation of home therapy programs.

Based upon the recommendations identified in the literature (Wolery & Bailey, 2002; Mahoney, Robinson, & Perales, 2004) this researcher examined trends in occupational and physical therapy service provision for early intervention in southern Nevada. This was particularly important due to the recent reconfiguration of early intervention services in the State and the continued population boom in the greater Las Vegas area.

The population growth experienced in southern Nevada has impacted the availability of services provided by NEIS – South. Fourteen years ago there were 741,459 people living in Clark County (Clark County Historical Population, 1990). The southern Nevada census population estimate indicated the population had increased by more than 1 million people in 2001 (Clark County Demographic Quick Facts, July 2004). The State of Nevada Demographers office estimated the population of children ages birth to four years in Clark County increased by over twenty-five thousand between 2000 and 2005 (Nevada State Demographer’s Office, ASRHO Report, 2004). The demand to meet the eligibility and ongoing needs of infants, toddlers, and their families has resulted in more State and contracted personnel hires for developmental specialists and rehabilitation therapists. The 2005 FY Quarterly Report (BEIS, 2004) reflected that 946 children were served by NEIS – South. In addition, 295 children were waiting 45 days or more to receive early intervention services (Haatz, 2005).
Research Questions

Research questions were identified upon a review of the literature and the desire of NEIS – South to have previously collected data analyzed for functional use in program and personnel planning.

1. Did children who possessed a DSM-IV-TR or medical diagnosis as the qualifier for Part C services receive more early intervention services than children diagnosed with developmental delay based on types of services per month and interventions received?

2. Did children with a DSM-IV-TR or medical diagnosis receive occupational and/or physical therapy more frequently than children with a diagnosis of developmental delay?

Definitions

It was appropriate to clarify and define specific terminology.

Crystal Reports – detailed reports generated through the crystal computer program utilized by BEIS.

Developmental Delay – Nevada Administrative Code (NAC) Chapter 388 stated Except as otherwise provided in subsection 5, a pupil under the age of 6 years may be identified with a developmental delay if the eligibility team, comprised of the persons described in subsections 2 and 3, concludes that he demonstrates a delay in at least two standard deviations in one, or at least one standard deviation in two or more of the following areas:

(a) Receptive or expressive language.

(b) Cognitive abilities.
(c) Gross motor or fine motor function.

(d) Self-help.

(e) Social or emotional condition.

Nevada Administrative Code [http://www.leg.state.nv.us/NAC/NAC-388.html#NAC388Sec001](http://www.leg.state.nv.us/NAC/NAC-388.html#NAC388Sec001)

Developmental Specialist – The minimum qualifications require a Bachelor's degree from an accredited college or university in early childhood, special education, human growth and development, psychology, counseling, social work or closely related field and three years of experience in an early intervention program, early childhood program, early childhood special education setting, mental health or mental retardation facility, or a clinical setting providing developmental, special education, or treatment-oriented services; an equivalent combination of education and experience. Developmental specialists develop, coordinate and monitor the implementation of client treatment activities to facilitate achievement of identified goals for the specific developmental and behavioral management needs of each client in the least restrictive environment possible (State of Nevada Department of Personnel Website [http://www.dop.nv.gov/10-140m.html](http://www.dop.nv.gov/10-140m.html)).

Early Intervention - applies to children aged birth to three who have or at risk of developing a handicapping condition or other special need that may affect their development. Early intervention consists of the provision of services
for children and their families to lessen the effects of the condition and can be remedial or preventive in nature (Hanson & Lynch, 1995).

Nevada Early Intervention Services – The mission of Nevada’s Bureau of Early Intervention Services (BEIS) is to identify infants and toddlers who are at-risk for, or who have developmental delays; provide services and supports to families to meet the individualized developmental needs of their child; and facilitate the child’s learning and participation in family and community life through the partnerships of families, caregivers and service providers (Bureau of Early Intervention Website [http://health2k.state.nv.us/BEIS/]).

Nevada Early Intervention Services (NEIS) Southern Region – Serves urban and rural Clark, Nye, Esmeralda, and lower Lincoln counties. NEIS South is staffed by pediatricians, social workers, psychologists, speech pathologists, audiologists, developmental specialists, nutritionists, physical and occupational therapists, and family specialists. Services include comprehensive evaluations, service coordination, infant and toddler intervention, and specialty clinics such as genetics, craniofacial, and metabolic clinics (State of Nevada Early Intervention Programs Website [http://health2k.state.nv.us/BEIS/programs.htm]).

Occupational therapy – Therapy based on meaningful activities of daily life (self-care, education, work, or social interaction), especially to enable or encourage participations in such activities despite impairments or limitations in physical or mental functioning. The occupational therapist’s
educational background includes study of human growth and development with specific emphasis on the social, emotional, and physiological effects of illness and injury and enters the field with a bachelors, masters, or doctoral degree (American Occupational Therapy Association Website http://www.aota.org).

Physical therapy – Physical therapy is aimed at preventing the onset and/or slowing the progression of conditions resulting from injury, disease, and other causes. The physical therapist provides these services to people of all ages who have functional conditions resulting from back and neck injuries, sprains/strains and fractures, arthritis, burns, amputations, stroke, multiple sclerosis, birth defects such as cerebral palsy and spina bifida, injuries related to work and sports, and others. The physical therapist enters the profession with a post-baccalaureate degree (American Physical Therapy Association Website http://www.apta.org).

Tracking Resources and Children (TRAC) Forms – completed for all children ages birth through three years referred to NEIS – South and who received a Part C initial IFSP.

Research Hypothesis

For the purposes of this study, the research hypothesis was that there were no significant differences in the hours of service per month and types of interventions received between children who possess a DSM-IV-TR or medical diagnosis as a qualifier for their developmental delay status and children diagnosed with developmental delay in the absence of a medical diagnosis.
Significance of Study

To increase understanding and demonstrate overall effectiveness and quality, programs must be evaluated (Weiss, 1998). Specifically, this study examined program trends and suggestions to improve the program will be provided as indicated by the data.
CHAPTER 2

REVIEW OF LITERATURE

A literature search through ERIC was conducted using key word phrases such as “early intervention and rehabilitation” and “early intervention training and therapy.” A search through OT Search, a bibliographic database covering the literature of occupational therapy and related subject areas, was also accessed. This search focused on literature involving key words “occupational therapy” and “early intervention” or “therapy for children.” Occupational and physical therapy research was then reviewed to identify treatment delivery models for children with a focus on early intervention programs. References from articles obtained were used as a second level of review for this literature search.

Early intervention service delivery models have changed through the years. Initially center based for provision of services, Part C providers now work with children and their families in the natural environment. Occupational and physical therapy roles have also changed as the family-centered approach to early intervention emerged with a greater emphasis on family education. Historically, therapy education has focused on the medical model. As the changes in Part C provision occurred, rehabilitation therapists were required to shift from traditional medical and educational outcomes to family focused education (McEwen & Shelden, 1995).
The purposes of the literature review were to identify early intervention models that identified occupational and physical therapy participation and service coordination delivery models that supported collaboration and referrals among professional team members. The relevance of this review related to potential recommendations for NEIS—South in terms of occupational and physical therapy referral processes and potential training opportunities for Part C practitioners on the role of therapy in early intervention.

Collaborative Training Models

*Early Intervention Training*

A review of training research was conducted to determine whether physical and occupational therapy was directly identified within studies. A variety of topics were identified in the literature that focused on the effective implementation of P.L. 99-457. Assessing specific training opportunities for early interventionists specifically related to physical and occupational therapy has not been conclusive.

A three-year model demonstration project was conducted to assess the professional practice of service providers in early intervention in Connecticut (Bruder & Nikitas, 1992). Over the course of the project a total of twenty-one training institutes were conducted leading to 141 trained early interventionists. A series of nine training sessions focused on the philosophy and implementation of P.L. 99-457, family-centered care, family systems theory and empowerment, the roles of early intervention, the types and methods of family assessment, child assessments, team meetings, goal setting and collaborating with families, the IFSP and writing functional outcomes, and transitions.
The authors stated that the training was effective based upon documented interventionist changes while working with the birth to age three population and overall scores on competency tasks. Bruder and Nikitas (1992) reflected that collaborative training activities that included demonstration, feedback, support, and evaluation were essential in changing the practice patterns of interventionists. As physical and occupational therapists are part of early intervention teams, training early interventionists and therapists to effectively work together could have been another aspect of the training conducted.

Bruder and Brand (1993) conducted a training project focused on children identified with disabilities receiving early intervention services. The purpose of the study was to establish an inservice training model for early interventionists. Sixteen early intervention programs in New York were identified and six separate institutes conducted as part of the study. The institutes included didactic and activity-based sessions. The primary focus of the training was to develop interventionist skills to implement P.L. 99-457. Follow up sessions were conducted 4-6 months after the last training session. Overall, results of the training were positive and reflected greater implementation of services for children with disabilities. Incorporating training for early interventionists that include aspects of rehabilitation is important as many children receiving early intervention services also receive physical and/or occupational therapy. Training targeted for early interventionists on the purpose and implementation of therapeutic techniques could enhance the child-family sessions conducted in the natural environment.
Service Coordination

Delivery Models

Service coordination models differ among Part C program providers. Although the aspects of family-centered care and natural environments link individual programs, the service model embodied by the program may differ. For the family who has received early intervention services from more than one provider, the personal experience may ultimately determine program effectiveness for their child.

A national survey of Part C early intervention program providers and parents of children with disabilities was used to determine outcomes of service coordination (Dunst & Bruder, 2002). A questionnaire format with 879 respondents determined participants’ judgments on the benefits of service coordination. A repeated measures ANOVA was used to analyze summated outcome category scores. Systems coordination, information and referral, and family support and resources were found to be desired outcomes of service coordination for both provider and parent groups.

Effective collaboration was assessed through a qualitative study conducted by Dinnebeil, Hale, and Rule (1999). The purpose was to explore program practices that impacted collaboration from the perception of both the service coordinator and the parent. A 42% return rate (623 questionnaires) revealed five major categories related to effective collaboration. In particular, a theme of quality program personnel emerged. Not only was the importance of employing qualified personnel within the early intervention program identified but also people who embodied a family-centered approach. The authors identified that early interventionists are often in short supply. This category, in particular, could be identified as a training focus area for early interventionists trained.
from an educational perspective and the physical and occupational therapists providing treatment from a medical model focus.

Thirteen mothers were interviewed for a qualitative study in Utah. Barriers were identified that indicated why these families did not seek early intervention services for their child (Hendrickson, Baldwin, & Allred, 2000). Although limited by a small sample size and demographic identifiers (White, urban families), the information obtained was deemed important for practitioners working in early intervention. The mothers interviewed indicated that their primary health provider displayed a lack of knowledge regarding the child's developmental delay and did not provide appropriate referral information. The participants' frustration could serve as a call for Part C providers to collaborate more effectively with health care providers to ensure that children who require services actually obtain early intervention.

Family-centered care is not a philosophy exclusive to community based, early intervention. Medical providers working with children must also address the concerns, priorities, and resources of the family. A pilot study of parental attitudes towards the effectiveness of family centered care within an acute care hospital was conducted at a children's hospital in Vancouver, British Columbia (Macnab, Thiessen, McLeod, & Hinton, 2000). Telephone interviews were conducted 3-4 weeks post-discharge with 39 eligible families. Based upon the results of the study, the hospital sought methods to improve their discharge procedures to include additional training (i.e., medication side effects). Participants in the study were English speaking and had access to a telephone; both items were identified as limitations of the project. Although the focus of this study involved health care providers within a hospital in Canada, the impact of training and
communication during a stressful period can be critical for Part C personnel. Part C providers offer similar education and services to those identified within family centered hospital programs.

Occupational and Physical Therapy Treatment Perspective

Traditional Rehabilitation Model

Occupational and physical therapists traditionally delivered services within the rehabilitation science model. This service framework evolved from the medical model with the therapist viewed as the expert of the child’s specific condition. Although child-centered, the therapist established goals specifically to improve developmental skills (Rosenbaum, King, & Law, 1998). Treatment related questions were traditionally left to the clinical judgment of the therapist and included the need for related services, frequency of service provision, and how therapy services would be provided (i.e., directly by therapist, consultative basis, or through another team member) (Giangreco, 1995). The increased importance of the family in the child’s development over the last decade has placed greater emphasis on the value of family-based research and parent advocacy (Rosenbaum et al., 1998). These changes lead to the development of specific guidelines to alleviate present day practice limitations. The establishment of collaborative teams, defined educational program components, decision making value systems, and the determination of service provider functions have helped to improve delivery of services within early intervention.

Effective generalization of developmental skills within the natural environment has been identified as an important factor particularly when collaboration between the
family and early interventionist has occurred. McWilliam and Bailey (1994) conducted a survey of 2000 rehabilitation therapists working in early childhood special education settings with children ages birth to six with 775 completed and returned for the study. The authors found minimal literature related specifically to occupational, physical, and speech-language therapists and the effectiveness of practice formats in early childhood. The survey's purpose was to assess practitioner attitudes toward integrated early childhood practice.

Intensity of Service Delivery

Enhancement of the child-caregiver relationship is one role of the early interventionist. Mahoney, Boyce, Fewell, Spoker, and Wheeden (1998) reviewed four studies conducted within two different philosophical models. A meta analysis review indicated that child-focused models utilized direct teaching for the acquisition of developmental skills. In contrast, the relationship-focused model supported caregiving techniques in the development of optimal milestones. One specific conclusion the authors offered following their review was that increased intensity of services did not impact the effectiveness of the intervention for the child or their caregivers.

Lawlor and Henderson (1989) created an 80-item questionnaire to assess clinical practice patterns among pediatric occupational therapists. To assist participants for the telephone interview a preparatory work sheet was mailed in advance. The response rate was 99.4% with 118 therapists completing the survey. Therapists had worked an average of 9 years in pediatrics with the majority working in urban school-based settings. Qualitative analysis of demographic information was completed. Three primary areas for data collection included child's diagnosis for services, therapist functions (i.e.,
evaluation, treatment, consultation), and frequency of occupational therapy services provided. Open-ended questions were entered in narrative format and retained for qualitative analysis. Of interest was the information related to team approach. An overlap of services with other disciplines was noted by 85.6% of respondents (i.e., gross motor skills with physical therapy).

Mahoney, Robinson, and Perales (2004) indicated that exploration of issues related to the intensity of services was warranted within early intervention. The authors conducted a 12-month study in which children received early intervention services based on either a Neurodevelopmental treatment (NDT) approach (n=28) or a developmental skills approach (n=22). Services were community based and the children’s eligibility was based on a medical diagnosis. Results concluded that intervention specialists who were not physical therapists conducted the developmental skills approach. The NDT approach was utilized by physical therapists. Parental involvement in sessions also varied from 73% of sessions during developmental skills approach sessions and only 41% for NDT based sessions.

Kaminer and Robinson (1993) indicated two problems in the provision of developmental rehabilitative therapies in early intervention. An over-provision of services for some children while others were placed on the waiting list for therapy services was determined to be one of the reasons to reexamine the role of occupational and physical therapy. Sessions that were not effective due to the child’s individual condition could be interpreted negatively by the caregivers and as a result, therapy continued. A strong linkage between the child’s disability and recommended treatment was an essential component identified for therapy. A shift in focus from rigid guidelines
that entitled a child with a particular disability to a given number of hours of intervention by a specific discipline should be reevaluated and driven by goals that emerge from a discussion between the parent and professional.

_Rehabilitation Service Delivery in School Based Programs_

Supporting the student to function within the academic environment has been the role of school-based occupational therapy and not provision of a full rehabilitation program. Long (2003) conducted a review of 464 cases of students discharged from school-based occupational therapy services over a seven-year period. Students’ spanned kindergarten through high school graduation and general statements about service patterns could be ascertained based on this convenience sample. Variability was noted in length of provided services. Students with multiple disabilities were more likely to receive occupational therapy longer than three years. Budget constraints, administrative concerns, and ethical questions related to the provision of service were the impetus for the search for a more concrete answer to the question of how long services were likely to be needed.

Clark and Miller (1996) discussed a problem solving approach to connect evaluation and intervention. A functional assessment process examined differences between the students’ performance and demands of the educational setting rather than on the child’s disability. The authors identified that documentation to support the role of occupational therapy in education settings was critical. Other factors discussed included the determination of types of student concerns that respond better to intervention, the length and format of intervention, and specific characteristics of students responding to occupational therapy intervention.
Summary

Parameters for personnel training are guided by the service delivery model structuring the early intervention program. Early interventionists receive training specific to Part C implementation. However, training specifically related to collaboration with occupational and physical therapists was not conclusively in the literature. Focused collaborative training for early interventionists and rehabilitation therapists could enhance the family focused model for intervention and strengthen the repertoire of motor skill strategies. This potential avenue of training would be ideal for Part C providers in communities experiencing a lack of qualified providers to serve eligible children. The establishment of collaborative professional teams cannot dismiss the perspective provided by the child’s family.

As more occupational and physical therapists find employment in early intervention settings, the treatment perspective must change from a traditional rehabilitation to a family-focused model. Therapy services provided in the natural environment must address the developmental needs of the child as well as the family’s desires for treatment. Therapists must be attuned to the nuances of Part C implementation including frequency and method of therapy service provision.

The review of literature indicated that an examination of collaborative training models including physical and occupational therapy were inconclusive. Methods and rates of referral for occupational and physical therapy within early intervention were not located in the literature.

This study foci were a) service provision patterns for children receiving services from NEIS – South, based upon their initial qualifier for Part C based upon the child’s
initial IFSP and b) referral patterns for occupational and physical therapy based upon the child’s initial Part C qualifying status. The data were obtained directly from NEIS – South for analysis and recommendations were provided to the agency at the conclusion of the study.
CHAPTER 3

METHODOLOGY

Overview

The purpose of this study was to analyze intake, eligibility, and service provision data collected through NEIS – South. Specifically, occupational therapy and physical therapy services for children diagnosed with a DSM-IV-TR or medical diagnosis as the qualifier for Part C services were compared to services received by children identified as having a developmental delay as the qualifier for Part C services. Occupational and physical therapy referral rates for Part C services were also compared.

Research Questions

Data were collected to evaluate the types of services children received through NEIS – South between July 2003 and June 2005.

Research Question 1: Did children who possessed a DSM-IV-TR or medical diagnosis as the qualifier for Part C services receive more early intervention services than children diagnosed with developmental delay based on types of services per month and interventions received?

It was predicted that there would be no significant difference between Part C qualifier status and the types of services and interventions received.
Research Question 2: Did children with a DSM-IV-TR or medial diagnosis receive occupational and/or physical therapy more frequently than children with a diagnosis of developmental delay?

It was predicted that there would be no significant difference in referral rates to occupational and/or physical therapy based upon Part C qualifier status.

Participants

Analysis of data, previously collected through NEIS – South was utilized for this study. Specific client records were compiled by NEIS – South and submitted to BEIS during the specified time frame from July 2003 through June 2005. Tracking Resources and Children (TRAC) forms for all children ages birth through three years who received a Part C initial IFSP were used for this study. This time frame was used because it corresponded to the merger of Special Children’s Clinic and First Step on July 1, 2003. A sample TRAC form is located in Appendix A.

No prior baseline analysis was conducted through NEIS – South to portray the specific questions posed for this study. The results from the study serve as a partial needs assessment and as a baseline for future research conducted through NEIS – South.

All Part C data were compiled through the Nevada Division of Health BEIS and specific query requests were submitted directly to BEIS. Crystal reports were not used in their original format due to the confidential nature of information on these forms. Summary data were provided in a synthesized spreadsheet format that was color coded to identify different cases. A review of individual client charts was conducted as required to verify information required for this study.
Design and Procedures

In this study, client data collected through NEIS – South from June 2003 through July 2005 were analyzed. Specific queries and chart reviews were conducted to determine the types of services and interventions children received based upon their initial IFSP.

Pre-study

Consent. Consent was obtained through the BEIS, Nevada Health Division. The Health Insurance Portability and Accountability Act (HIPPA) Business Associate Agreement served as the agreement between NEIS – South and Yvonne M. Randall, doctoral student, University of Nevada, Las Vegas (UNLV) and Nancy M. Sileo, Ed.D., doctoral committee advisor, UNLV. HIPPA provided protection of health information. At the discretion of BEIS, approval was not required through the State of Nevada Investigative Review Board (IRB) due to the use of the HIPPA form. Further, general council for the Nevada System of Higher Education (NSHE) reviewed the Business Associate Agreement and determined that the document was not an appropriate mechanism for this research project as internal IRB and the HIPPA forms were signed. IRB approval is located in Appendix B. HIPPA forms are located in Appendix C. The NSHE general counsel letter is located in Appendix D.

Data Collection

This researcher analyzed data collected from NEIS – South between July 2003 and June 2005. Data utilized for this study were previously collected by NEIS – South and were not standardized or controlled for the purposes of this study.
TRAC reports from BEIS were accessed for IFSP information related to types and frequency of services received. TRAC was the database from which reports are generated for all children who received early intervention services in Nevada. Data collected through TRAC included referral source, demographic information, eligibility criteria, and IFSP support services (e.g., service status, frequency and intensity, dates of service). The TRAC database could only be updated by specified personnel (i.e., site based Administrative Assistant(s)). The accuracy of the data entered into TRAC was dependent upon accuracy of the data received and provided by developmental specialists. TRAC reports were utilized by developmental specialists for caseload maintenance and were used by NEIS – South supervisors for monthly reports.

The computer program created for BEIS to house all data collected through TRAC was called "crystal." Detailed reports generated through this computer program were called "crystal reports." Queries were posed through this computer program on specific data fields that were not accessible through TRAC (i.e., historical data). A BEIS office manager in Carson City was the contact person to conduct queries for this study.

The SPSS® 14.0 (2006) statistical package was used to complete data analyses. Frequency data were imported from Excel (Microsoft Office, 2003). Frequency counts and Chi square analyses were then completed using SPSS® 14.0.

**Reliability Procedures**

Once data was received from BEIS on the TRAC spreadsheet, the data were then input into an Excel spreadsheet. Data were key punched into Excel by a graduate student from a local institution of higher education who was contracted by the researcher.
Interrater reliability was established at 100% by the researcher who verified all 1516 cases by sight comparison between the TRAC spreadsheet and the Excel spreadsheet.

Treatment of the Data

Data collected through TRAC and crystal report queries were analyzed to answer the following questions.

Research Question 1: Did children who possessed a DSM-IV-TR or medical diagnosis as the qualifier for Part C services receive more early intervention services than children diagnosed with developmental delay based on types of services per month and interventions received?

Analysis: Collected data were obtained through TRAC and Crystal reports. TRAC forms contained demographic information related to eligibility diagnosis and services received (i.e., audiology, nutrition, social work, vision) at the time of the initial IFSP. Crystal reports were generated to verify data collected through TRAC and provide historical comparisons between data fields. Frequency distributions were used to portray data collected. Chi-square analyses were used to compare observed frequencies based on data collection.

Research Question 2: Did children with a DSM-IV-TR or medial diagnosis receive occupational and/or physical therapy more frequently than children with a diagnosis of developmental delay?

Analysis: TRAC forms contained demographic information related to eligibility diagnosis and provision of occupational and/or physical therapy on the initial IFSP. The indication of whether the child received therapy services through NEIS – South using the
family-centered model of intervention or through the community medical-model format was indicated on the TRAC form. For purposes of this study, only data for services provided directly through NEIS – South were collected. Crystal reports were generated to verify data collected through TRAC and provide historical comparisons between data fields. Frequency distributions were used to portray data collected. Chi-square analyses assisted in the comparison of observed frequencies based on data collection.
CHAPTER 4

RESULTS

This study compared initial services indicated on the IFSP for children referred to NEIS – South based on the qualifying Part C criteria. Data collection was conducted in cooperation with BEIS, Nevada Health Division. A total of 1516 files were accessed between July 2003 and June 2005. All children referred to NEIS – South with an initial IFSP generated were included in this study. Twenty-four months of data were provided by BEIS in spreadsheet format with individual child information color coded to indicate the services provided for each case. The purpose of this study was to 1) determine service frequency rates for children receiving NEIS – South services based on Part C qualifying criteria and 2) determine the frequency of referrals specifically to occupational and physical therapy based on the child’s initial Part C qualifying criteria. This chapter provides a description of the participants and setting as well as a review of the research questions, hypotheses, and data pertinent to each hypothesis.

Participants and Setting

A total of 1516 cases were analyzed for this study. Children referred to NEIS – South who had an IFSP generated to initiate early intervention services between the months of July 2003 and June 2005 were included. Of this sample, 486 (32.1%) children qualified for services based on a DSM-IV-TR or medical diagnosis and 1030 (67.9%) children qualified for services based on a diagnosis of developmental delay.
Children referred to NEIS – South between July 2003 and June 2005 lived in Clark, Nye, Esmeralda, or lower Lincoln counties of Nevada. Although available through TRAC and crystal reports, no other demographic information was provided by BEIS on subjects for the purpose of this study.

Research Questions

This study answered the following research questions:

Research Question 1: Did children who possessed a DSM-IV-TR or medical diagnosis as the qualifier for Part C services receive more early intervention services than children diagnosed with developmental delay based on types of services per month and interventions received?

Research Question 2: Did children with a DSM-IV-TR or medical diagnosis receive occupational and/or physical therapy more frequently than children with a diagnosis of developmental delay?

Data Pertinent to the Hypotheses

Research Question 1

It was predicted that there would be no significant difference between Part C qualifier status and the types of services and interventions received through NEIS – South.

Results were initially tabulated according to the two qualifying Part C criteria. As indicated in Table 4.1, 486 (32.1% over the two year period) children qualified for NEIS – South services based upon a DSM-IV-TR or medical diagnosis and 1030 (67.99%
over the two year period) children qualified based upon developmental delay over the two year period. (See Table 4.1.)

Table 4.1

<table>
<thead>
<tr>
<th>Part C Eligibility Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligibility Criteria</td>
</tr>
<tr>
<td>DSM-IV-TR or</td>
</tr>
<tr>
<td>Medical Diagnosis</td>
</tr>
<tr>
<td>Developmental</td>
</tr>
<tr>
<td>Delay</td>
</tr>
<tr>
<td><strong>Year</strong></td>
</tr>
<tr>
<td>July 2003 – June 2004</td>
</tr>
<tr>
<td>Count</td>
</tr>
<tr>
<td>Percentage within Year</td>
</tr>
<tr>
<td>July 2004 – June 2005</td>
</tr>
<tr>
<td>Count</td>
</tr>
<tr>
<td>Percentage within Year</td>
</tr>
<tr>
<td><strong>Total Count</strong></td>
</tr>
<tr>
<td>Percentage</td>
</tr>
</tbody>
</table>

N = 1516 Initial IFSP’s

Between July 2003 and June 2004, 217 (31.4%) children qualified for Part C services through NEIS – South with a DSM-IV-TR or medical diagnosis. During the same period, 474 (68.6%) children qualified for Part C services due to developmental delays. Between July 2004 and June 2005, 269 (32.6%) children qualified for Part C services.
services with a DSM-IV-TR or medical diagnosis. For the same period, 556 (67.4%) children qualified for Part C services due to developmental delays. Overall, for the two year time period between July 2003 and June 2005, 486 (32.1%) children based on the initial IFSP qualified for Part C services through NEIS – South due to a DSM-IV-TR or medical diagnosis. During the same two year time period, 1030 (67.9%) children based on the initial IFSP qualified for Part C services through NEIS – South due to developmental delay.

Data were then analyzed according to the Part C services for both DSM-IV-TR or medical diagnosis and developmental delay categories indicated on each child’s initial IFSP. The information was categorized by year and the seventeen individual services provided through NEIS – South. Percentage of children receiving each of the seventeen services was rounded to the nearest hundredth. These data are illustrated in Table 4.2.
<table>
<thead>
<tr>
<th>Service Type</th>
<th>DSM-IV-TR or Medical Diagnosis</th>
<th>Developmental Delay</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistive Technology</td>
<td>0010 (01.36%)</td>
<td>0008 (00.62%)</td>
<td>0011 (01.38%)</td>
</tr>
<tr>
<td>Audiology</td>
<td>0016 (02.17%)</td>
<td>0026 (02.03%)</td>
<td>0025 (03.13%)</td>
</tr>
<tr>
<td>Health Services</td>
<td>0001 (00.14%)</td>
<td>0000 (00.00%)</td>
<td>0000 (00.00%)</td>
</tr>
<tr>
<td>Medical Services</td>
<td>0005 (00.68%)</td>
<td>0003 (00.23%)</td>
<td>0001 (00.13%)</td>
</tr>
<tr>
<td>Nursing</td>
<td>0001 (00.14%)</td>
<td>0000 (00.00%)</td>
<td>0000 (00.00%)</td>
</tr>
<tr>
<td>Nutrition</td>
<td>0033 (04.48%)</td>
<td>0032 (02.49%)</td>
<td>0032 (04.01%)</td>
</tr>
<tr>
<td>Occupational Therapy</td>
<td>0056 (07.60%)</td>
<td>0071 (05.53%)</td>
<td>0038 (04.76%)</td>
</tr>
<tr>
<td>Parent/Family Training</td>
<td>0203 (28.90%)</td>
<td>0449 (34.97%)</td>
<td>0261 (32.71%)</td>
</tr>
<tr>
<td>Psychology</td>
<td>0005 (00.68%)</td>
<td>0005 (00.39%)</td>
<td>0002 (00.25%)</td>
</tr>
<tr>
<td>Physical Therapy</td>
<td>0115 (15.60%)</td>
<td>0099 (07.71%)</td>
<td>0110 (13.78%)</td>
</tr>
</tbody>
</table>
Table 4.2
Initial Services Identified for Part C Services (continued)

<table>
<thead>
<tr>
<th>Service</th>
<th>DSM-IV-TR or Medical Diagnosis</th>
<th>Developmental Delay</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respite</td>
<td>0000 (0.00%)</td>
<td>0000 (0.00%)</td>
<td>0000 (0.00%)</td>
</tr>
<tr>
<td>Social Work</td>
<td>0000 (0.00%)</td>
<td>0001 (0.08%)</td>
<td>0004 (0.50%)</td>
</tr>
<tr>
<td>Specialized Instruction</td>
<td>0189 (25.64%)</td>
<td>0377 (29.36%)</td>
<td>0207 (25.94%)</td>
</tr>
<tr>
<td>Speech Language Pathology</td>
<td>0080 (10.85%)</td>
<td>0191 (14.88%)</td>
<td>0088 (11.03%)</td>
</tr>
<tr>
<td>Transportation</td>
<td>0001 (0.14%)</td>
<td>0002 (0.16%)</td>
<td>0000 (0.00%)</td>
</tr>
<tr>
<td>Vision</td>
<td>0022 (02.99%)</td>
<td>0011 (00.08%)</td>
<td>0014 (01.75%)</td>
</tr>
<tr>
<td>Intensive Behavioral Services</td>
<td>0000 (00.00%)</td>
<td>0009 (00.70%)</td>
<td>0005 (00.63%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>0737 (100%)</td>
<td>1284 (100%)</td>
<td>0798 (100%)</td>
</tr>
</tbody>
</table>
Based on the NEIS – South initial IFSP data, three services received the largest number of referrals between July 2003 and June 2005 out of the total 4355 referrals indicated on the initial 1516 IFSP’s. These services were speech language pathology (n = 642; 14.74%), specialized instruction (n = 1231; 28.27%), and parent/family training (n = 1450; 33.30%). Six services received fewer than 10 referrals over the two-year period based on the initial 1516 IFSP’s. These services were respite (n = 0; 00.00%), nursing (n = 1; 00.02%), health services (n = 3; 00.07%), transportation (n = 3; 00.07%), social work (n = 6; 00.14%), and medical services (n = 9; 00.21%).

For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, assistive technology was indicated on 10 (01.36%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, 8 (00.62%) indicated assistive technology for the same Part C qualifier. For children qualifying for Part C services with developmental delay, assistive technology was indicated on 11 (01.38%) of the 798 total referrals specified on the 474 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1536 total referrals specified on the 556 initial IFSP’s, 19 (01.24%) indicated assistive technology for the same Part C qualifier.

For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, audiology was indicated on 16 (02.17%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, 26 (02.03%) indicated audiology for the same Part C qualifier. For children qualifying for Part C services with
developmental delay, audiology was indicated on 25 (03.13%) of the 798 total referrals specified on the 474 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1536 total referrals specified on the 556 initial IFSP’s, 32 (02.08%) indicated audiology for the same Part C qualifier.

For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, health services were indicated on 1 (00.14%) of the 737 total referrals specified on the 217 initial IFSP between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, none (00.00%) indicated health services for the same Part C qualifier. For children qualifying for Part C services with developmental delay, out of the 798 total referrals specified on the 474 initial IFSP’s, health services were indicated on none (00.00%) between July 2003 and June 2004. Between July 2004 and June 2005, of the 1536 total referrals specified on the 556 IFSP’s, 2 (00.13%) indicated health services for the same Part C qualifier.

For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, medical services were indicated on 5 (00.68%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, 3 (00.23%) indicated medical services for the same Part C qualifier. For children qualifying for Part C services with developmental delay, medical services were indicated on 1 (00.13%) of the 798 total referrals specified on the 474 initial IFSP between July 2003 and June 2004. Between July 2004 and June 2005, out of the 1536 total referrals specified on the 556 initial IFSP’s, none (00.00%) indicated medical services for the same Part C qualifier.
For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, nursing was indicated on 1 (00.14%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, none (00.00%) indicated nursing for the same Part C qualifier. For children qualifying for Part C services with developmental delay, out of 798 total referrals specified on the 474 initial IFSP’s, nursing was indicated on none (00.00%) between July 2003 and June 2004. Between July 2004 and June 2005, of the 1536 total referrals specified on the 556 IFSP’s, none (00.00%) indicated nursing for the same Part C qualifier.

For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, nutrition was indicated on 33 (04.48%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, 32 (02.49%) indicated nutrition for the same Part C qualifier. For children qualifying for Part C services with developmental delay, nutrition was indicated on 32 (04.01%) of the 798 total referrals specified on the 474 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1536 total referrals specified on the 556 initial IFSP’s, 21 (01.37%) indicated nutrition for the same Part C qualifier.

For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, occupational therapy was indicated on 56 (07.60%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, 71 (05.53%) indicated occupational therapy for the same Part C qualifier. For children qualifying for
Part C services with developmental delay, occupational therapy was indicated on 38 (04.76%) of the 798 total referrals specified on the 474 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1536 total referrals specified on the 556 initial IFSP’s, 36 (02.34%) indicated occupational therapy for the same Part C qualifier.

For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, parent/family training was indicated on 203 (28.90%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, 449 (34.97%) indicated parent/family training for the same Part C qualifier. For children qualifying for Part C services with developmental delay, parent/family training was indicated on 261 (32.71%) of the 798 total referrals specified on the 474 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1536 total referrals specified on the 556 initial IFSP’s, 537 (34.96%) indicated parent/family training for the same Part C qualifier. Multiple referrals for parent/family training were made on some of the initial IFSP’s between July 2003 and June 2005.

For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, psychology was indicated on 5 (00.68%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, 5 (00.39%) indicated psychology for the same Part C qualifier. For children qualifying for Part C services with developmental delay, psychology was indicated on 2 (00.25%) of the 798 total referrals specified on the 474 initial IFSP’s between July 2003 and June 2004. Between July 2004

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and June 2005, of the 1536 total referrals specified on the 556 initial IFSP’s, 9 (0.59%) indicated psychology for the same Part C qualifier.

For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, physical therapy was indicated on 115 (15.60%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, 99 (07.71%) indicated physical therapy for the same Part C qualifier. For children qualifying for Part C services with developmental delay, physical therapy was indicated on 110 (13.78%) of the 798 total referrals specified on the 474 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1536 total referrals specified on the 556 initial IFSP’s, 107 (06.97%) indicated physical therapy for the same Part C qualifier.

For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, respite was indicated on none (00.00%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, none (00.00%) indicated respite for the same Part C qualifier. For children qualifying for Part C services with developmental delay, respite was indicated on none (00.00%) of the 798 total referrals specified on the 474 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1536 total referrals specified on the 556 initial IFSP’s, none (00.00%) indicated respite for the same Part C qualifier.

For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, social work services were indicated on none (00.00%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004
and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, 1 (0.08%) indicated social work services for the same Part C qualifier. For children qualifying for Part C services with developmental delay, social work services were indicated on 4 (0.50%) of the 798 total referrals specified on the 474 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1536 total referrals specified on the 556 initial IFSP’s, 1 (0.07%) indicated social work services for the same Part C qualifier.

For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, specialized instruction was indicated on 189 (25.64%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, 377 (29.36%) indicated specialized instruction for the same Part C qualifier. For children qualifying for Part C services with developmental delay, specialized instruction was indicated on 207 (25.94%) of the 798 total referrals specified on the 474 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1536 total referrals specified on the 556 initial IFSP’s, 458 (29.82%) indicated specialized instruction for the same Part C qualifier. Multiple referrals for specialized training were made on some of the initial IFSP’s between July 2003 and June 2005.

For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, speech language pathology was indicated on 80 (10.85%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, 191 (14.88%) indicated speech language pathology for the same Part C qualifier. For
children qualifying for Part C services with developmental delay, speech language pathology was indicated on 88 (11.03%) of the 798 total referrals specified on the 474 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1536 total referrals specified on the 556 initial IFSP’s, 283 (18.42%) indicated speech language pathology for the same Part C qualifier.

For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, transportation was indicated on 1 (00.14%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, 2 (00.16%) indicated transportation for the same Part C qualifier. For children qualifying for Part C services with developmental delay, transportation was indicated on none (00.00%) of the 798 total referrals specified on the 474 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1536 total referrals specified on the 556 initial IFSP’s, none (00.00%) indicated transportation for the same Part C qualifier.

For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, vision services were indicated on 22 (02.99%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, 11 (00.08%) IFSP’s indicated vision services for the same Part C qualifier. For children qualifying for Part C services with developmental delay, vision services were indicated on 14 (01.75%) of the 798 total referrals specified on the 474 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1536 total referrals specified on the 556 initial IFSP’s, 9 (00.59%) indicated vision services for the same Part C qualifier.
For children qualifying for Part C services with a DSM-IV-TR or medical diagnosis, intensive behavioral services were indicated on none (0.00%) of the 737 total referrals specified on the 217 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1284 total referrals specified on the 269 initial IFSP’s, 9 (00.70%) indicated intensive behavioral services for the same Part C qualifier. For children qualifying for Part C services with developmental delay, intensive behavioral services were indicated on 5 (00.63%) of the 798 total referrals specified on the 474 initial IFSP’s between July 2003 and June 2004. Between July 2004 and June 2005, of the 1536 total referrals specified on the 556 initial IFSP’s, 22 (01.43%) indicated intensive behavioral services were indicated for the same Part C qualifier.

Chi square analyses were conducted to determine if there was statistical significance in referral categories. Data were reported for Part C qualifying diagnosis (DSM-IV-TR or medical diagnosis or developmental delay) and the services indicated on the initial IFSP in raw frequencies in mutually exclusive categories which allowed chi square analysis. The $p$ value was set at .05 for this analysis (Hinkle, Wiersma, & Jurs, 2003). Three categories of service were found to be significant in this study: parent/family training, specialized instruction, and speech language pathology. (See Table 4.3).
Table 4.3

Chi square Analysis of Service Categories – (July 2003 – June 2005)

<table>
<thead>
<tr>
<th>Service Category</th>
<th>Significance</th>
<th>Chi-square</th>
<th>Total Referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistive Technology</td>
<td>ns</td>
<td>000.750</td>
<td>0048</td>
</tr>
<tr>
<td>Audiology</td>
<td>ns</td>
<td>002.920</td>
<td>0099</td>
</tr>
<tr>
<td>Health Services</td>
<td>ns</td>
<td>000.330</td>
<td>0003</td>
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<tr>
<td>Medical Services</td>
<td>ns</td>
<td>003.000</td>
<td>0009</td>
</tr>
<tr>
<td>Nursing</td>
<td>ns</td>
<td>000.000</td>
<td>0001</td>
</tr>
<tr>
<td>Nutrition</td>
<td>ns</td>
<td>001.220</td>
<td>0118</td>
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<tr>
<td>Occupational Therapy</td>
<td>ns</td>
<td>000.716</td>
<td>0201</td>
</tr>
<tr>
<td>Parent/Family Training</td>
<td>$p &lt; 0.05$</td>
<td>187.920</td>
<td>1450</td>
</tr>
<tr>
<td>Psychology</td>
<td>ns</td>
<td>002.330</td>
<td>0021</td>
</tr>
</tbody>
</table>
Table 4.3

Chi square Analysis of Service Categories – (July 2003 – June 2005) (continued)

<table>
<thead>
<tr>
<th>Service Category</th>
<th>Significance</th>
<th>Chi-square</th>
<th>Total Referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Therapy</td>
<td>ns</td>
<td>0.000.419</td>
<td>0.0431</td>
</tr>
<tr>
<td>Respite</td>
<td>ns</td>
<td>0.000.000</td>
<td>0.0000</td>
</tr>
<tr>
<td>Social Work</td>
<td>ns</td>
<td>0.000.667</td>
<td>0.0006</td>
</tr>
<tr>
<td>Specialized Instruction</td>
<td>$p &lt; 0.05$</td>
<td>156.560</td>
<td>1.231</td>
</tr>
<tr>
<td>Speech Language Pathology</td>
<td>$p &lt; 0.05$</td>
<td>195.850</td>
<td>0.0642</td>
</tr>
<tr>
<td>Transportation</td>
<td>ns</td>
<td>0.000.333</td>
<td>0.0003</td>
</tr>
<tr>
<td>Vision</td>
<td>ns</td>
<td>0.004.570</td>
<td>0.0056</td>
</tr>
<tr>
<td>Intensive Behavioral Services</td>
<td>ns</td>
<td>0.018.780</td>
<td>0.0036</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>4355</td>
<td></td>
</tr>
</tbody>
</table>

N = 1516 Initial IFSP's
Using frequency counts and Chi square analyses, three services were highly utilized within NEIS – South between July 2003 and June 2005. These were speech language pathology (n = 642, Chi square = 195.850, \( p < 0.05 \)), specialized instruction (n = 1231, Chi square = 156.560, \( p < 0.05 \)), and parent/family training (n = 1450, Chi square = 187.920, \( p < 0.05 \)).

High moderate utilization of services were noted in three of the seventeen services provided through NEIS – South. Nutrition (n = 118, Chi square - ns), occupational therapy (n = 201, Chi square - ns), and physical therapy (n = 421, Chi square - ns).

Low moderate utilization of services were noted in five of the seventeen services provided through NEIS – South. Psychology (n = 21, Chi square - ns), intensive behavioral services (n = 36, Chi square - ns), assistive technology (n = 48, Chi square - ns), vision services (n = 56, Chi square - ns), and audiology (n = 99, Chi square - ns).

Limited utilization of services were noted in six of the seventeen services provided through NEIS – South. Respite (n = 0, Chi square - ns), nursing (n = 1, Chi square - ns), transportation (n = 3; Chi square - ns), health services (n = 3, Chi square - ns), social work (n = 6, Chi square - ns), and medical services (n = 9, Chi square - ns).

None of the high, high moderate, low moderate, or limited usage categories were statistically significant when Chi square analyses were conducted.

Research Question 2

It was predicted that there would be no statistically significant difference in referral rates to occupational and/or physical therapy based upon Part C qualifier status.
Data were tabulated according to the two qualifying Part C criteria, DSM-IV-TR or medical diagnosis and developmental delay. Over the two year period, occupational and physical therapy were identified on 632 initial IFSP’s. Of these, 341 (54.00%) were children qualified for NEIS – South services based upon a DSM-IV-TR or medial diagnosis and 291 (46.04%) children qualified based upon developmental delay. These data can be seen in Table 4.4.

Table 4.4

| Occupational and Physical Therapy Services based on Part C Eligibility Criteria |
|---------------------------------|-------------------------------|--------------------------|
|                                 | DSM-IV-TR or Medical Diagnosis | Developmental Delay |
| Occupational/Physical Therapy   | Total                          |
| July 2003 – June 2004           | 171 (53.60%)                  | 148 (46.40%)            |
| July 2004 – June 2005           | 170 (54.31%)                  | 143 (45.67%)            |
| Total                           | 341 (54.00%)                  | 291 (46.04%)            |
| N = 1515 Initial IFSP’s         | 632 (100%)                    |

Specific analysis of IFSP’s on a monthly basis for occupational and physical therapy was also undertaken to determine trends in service identification rates. The data can be seen in Table 4.5 and reflects NEIS – South’s fiscal year beginning in July and ending in June.
Table 4.5
Rates of Referral for Occupational and Physical Therapy Based on Month

<table>
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</thead>
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<tr>
<td></td>
<td>OT</td>
<td>PT</td>
<td>OT</td>
<td>PT</td>
</tr>
<tr>
<td>July</td>
<td>007 (05.51%)</td>
<td>007 (03.27%)</td>
<td>006 (08.11%)</td>
<td>013 (05.99%)</td>
</tr>
<tr>
<td>August</td>
<td>005 (03.94%)</td>
<td>013 (06.08%)</td>
<td>002 (02.70%)</td>
<td>018 (08.30%)</td>
</tr>
<tr>
<td>September</td>
<td>005 (03.94%)</td>
<td>006 (02.80%)</td>
<td>008 (10.81%)</td>
<td>017 (07.83%)</td>
</tr>
<tr>
<td>October</td>
<td>011 (08.66%)</td>
<td>021 (09.81%)</td>
<td>006 (08.11%)</td>
<td>018 (08.30%)</td>
</tr>
<tr>
<td>November</td>
<td>008 (06.30%)</td>
<td>015 (07.01%)</td>
<td>005 (06.76%)</td>
<td>022 (10.14%)</td>
</tr>
<tr>
<td>December</td>
<td>007 (05.51%)</td>
<td>012 (05.61%)</td>
<td>001 (01.35%)</td>
<td>010 (04.61%)</td>
</tr>
<tr>
<td>January</td>
<td>013 (10.24%)</td>
<td>021 (09.81%)</td>
<td>005 (06.76%)</td>
<td>017 (07.83%)</td>
</tr>
<tr>
<td>February</td>
<td>003 (02.36%)</td>
<td>010 (04.67%)</td>
<td>002 (02.70%)</td>
<td>007 (03.23%)</td>
</tr>
<tr>
<td>March</td>
<td>014 (11.02%)</td>
<td>024 (11.22%)</td>
<td>008 (10.81%)</td>
<td>025 (11.52%)</td>
</tr>
<tr>
<td>April</td>
<td>022 (17.32%)</td>
<td>037 (17.29%)</td>
<td>016 (21.62%)</td>
<td>029 (13.36%)</td>
</tr>
<tr>
<td>May</td>
<td>019 (14.96%)</td>
<td>029 (13.55%)</td>
<td>005 (06.76%)</td>
<td>023 (10.60%)</td>
</tr>
<tr>
<td>June</td>
<td>013 (10.24%)</td>
<td>019 (08.88%)</td>
<td>010 (13.51%)</td>
<td>018 (08.30%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>127 (100%)</td>
<td>214 (100%)</td>
<td>074 (100%)</td>
<td>217 (100%)</td>
</tr>
</tbody>
</table>

N = 1516 Initial IFSP’s

The months of March (n= 71; 11.23%), April (n= 104; 16.46%), May (n= 76; 12.03%), and June (n= 60; 9.49%) accounted for the highest concentration of occupational and physical therapy rates of referral on IFSP’s over the two years.
December (n=30; 4.75%) and February (n=22; 3.48%) accounted for the two lowest months of identification on initial IFSP's.

The highest rates of referral for occupational and physical therapy occurred during a four-month time frame based on the initial IFSP. These months were March, April, May, and June. During March 2004, based on initial IFSP's, occupational therapy was indicated on 14 (11.02%) files and physical therapy was indicated on 24 (11.22%) files. During March 2005, there were 8 (10.81%) occupational therapy referrals indicated on the initial IFSP and 25 (11.52%) for physical therapy.

During April 2004, based on initial IFSP's, occupational therapy was indicated on 22 (17.32%) files and physical therapy was indicated on 37 (17.29%) files. During April 2005, there were 16 (21.62%) occupational therapy referrals indicated on the initial IFSP and 29 (13.36%) for physical therapy.

During May 2004, based on initial IFSP's, occupational therapy was indicated on 19 (14.96%) files and physical therapy was indicated on 29 (13.55%) files. During May 2005, there were 5 (6.76%) occupational therapy referrals indicated on the initial IFSP and 23 (10.60%) for physical therapy.

During June 2004, based on initial IFSP's, occupational therapy was indicated on 13 (10.24%) files and physical therapy was indicated on 19 (8.88%) files. During June 2005, there were 10 (13.51%) occupational therapy referrals indicated on the initial IFSP and 18 (8.30%) for physical therapy.

Moderate rates of referral were identified in three separate months. These months included October, November, and January. During October 2003, based on initial IFSP's, occupational therapy was indicated on 11 (8.66%) files and physical therapy was
indicated on 21 (9.81%) files. During October 2004, there were 6 (8.11%) occupational therapy referrals indicated on the initial IFSP and 18 (8.30%) for physical therapy.

During November 2003, based on initial IFSP’s, occupational therapy was indicated on 8 (6.30%) files and physical therapy was indicated on 15 (7.01%) files. During November 2004, there were 5 (6.76%) occupational therapy referrals indicated on the initial IFSP and 22 (10.14%) for physical therapy.

During January 2004, based on initial IFSP’s, occupational therapy was indicated on 13 (10.24%) files and physical therapy was indicated on 21 (9.81%) files. During January 2005, there were 5 (6.76%) occupational therapy referrals indicated on the initial IFSP and 17 (7.83%) for physical therapy.

Five months were identified with the lowest rates of referral based on the initial IFSP. These months were December, February, July, August, and September. During December 2003, based on initial IFSP’s, occupational therapy was indicated on 7 (5.51%) files and physical therapy was indicated on 12 (5.61%) files. During December 2004, there was 1 (1.35%) occupational therapy referral indicated on the initial IFSP and 10 (4.61%) for physical therapy.

During February 2004, based on initial IFSP’s, occupational therapy was indicated on 3 (2.36%) files and physical therapy was indicated on 10 (4.67%) files. During February 2005, there were 2 (2.70%) occupational therapy referrals indicated on the initial IFSP and 7 (3.23%) for physical therapy.

During July 2003, based on initial IFSP’s, occupational therapy was indicated on 7 (5.51%) files and physical therapy was indicated on 7 (3.27%) files. During July 2004,
there were 6 (8.11%) occupational therapy referrals indicated on the initial IFSP and 13 (5.99%) for physical therapy.

During August 2003, based on initial IFSP’s, occupational therapy was indicated on 5 (3.94%) files and physical therapy was indicated on 13 (6.08%) files. During August 2004, there were 2 (2.70%) occupational therapy referrals indicated on the initial IFSP and 18 (8.30%) for physical therapy.

During September 2003, based on initial IFSP’s, occupational therapy was indicated on 5 (3.94%) files and physical therapy was indicated on 6 (2.80%) files. During August 2004, there were 8 (10.81%) occupational therapy referrals indicated on the initial IFSP and 17 (7.83%) for physical therapy.

When Chi square analyses were calculated, there were no statistically significant differences noted for the referral categories of occupational and physical therapy. (See Table 4.3).

Implications of the Results

The results from the study are discussed in terms of service frequency rates for children receiving NEIS – South services based on Part C qualifying criteria. Of this sample, more children were accepted by NEIS – South based on a Part C qualification of developmental delay (n=1030) as compared to the Part C qualifier of a DSM-IV-TR or medical diagnosis (n=486). There was no significant statistical difference between Part C eligibility criteria and fourteen of the services identified on the initial IFSP (Chi square, \( p > .05 \)).
Using frequency counts, six services offered through NEIS - South were identified on a limited basis on the initial IFSP. These services included respite (n = 0; 00.00%), nursing (n = 1; 00.02%), health services (n = 3; 00.07%), transportation (n = 3; 00.07%), social work (n = 6; 00.14%), and medical services (n = 9; 00.21%). Over the two year period indicated for this study, these services were individually identified fewer than ten times for the 1516 cases reviewed. Speech language pathology (n= 642; 14.74%), specialized instruction (n= 1231; 28.27%), and parent/family training (n = 1450; 33.30%) received the highest concentration of service referrals as indicated on the initial IFSP’s. Although not statistically significant, children with a Part C qualifier of DSM-IV-TR or medical diagnosis were more likely to have occupational and/or physical therapy identified on the initial IFSP (n= 341) as compared to children with a diagnosis of developmental delay (n=291).

Summary

In conclusion, no statistically significant differences were found between Part C eligibility criteria and rates of referral for fourteen services provided by NEIS – South. Statistical significance was found for the three services categories with the highest rates of referrals at the $p < 0.05$ level. The three services were speech language pathology, specialized instruction, and parent/family training. In addition, results indicated no statistically significant difference between Part C eligibility and referral rates for occupational and physical therapy. These results were obtained from data received from the BEIS.
Research question one stated: Did children who possessed a DSM-IV-TR or medical diagnosis as the qualifier for Part C services receive more early intervention services than children diagnosed with developmental delay based on types of services per month and interventions received? Therefore, for research question one, fail to reject hypothesis. No statistically significant differences were found between eligibility criteria and rates of referral for fourteen of the seventeen services provided through NEIS – South.

Research question two stated: Did children with a DSM-IV-TR or medical diagnosis receive occupational and/or physical therapy more frequently than children with a diagnosis of developmental delay? Therefore, for research question two, fail to reject hypothesis. No statistically significant differences were found between eligibility criteria and rates of referral to occupational and physical therapy.
CHAPTER 5

DISCUSSION

The purposes of this study were to 1) determine service frequency rates for children receiving NEIS – South services based on Part C qualifying criteria and 2) determine the frequency of referrals specifically to occupational and physical therapy based on the child's initial Part C qualifying criteria. It was anticipated that the results of this study will benefit NEIS – South and those bidding to provide subcontracting services through NEIS – South to improve overall service provision for infants and toddlers with developmental delays in southern Nevada.

Previous research found through a review of the literature provided a framework for the NEIS – South study. Identified as a tool to educate employees on natural environments and Part C legislation was the establishment and implementation of specific training protocols for early intervention programs (Bruder & Nikitas, 1992; Bruder & Brand, 1993). Service coordination within early intervention programs were determined by the primary service delivery model adopted by the agency. Collaboration for Part C providers continued to be a key element in the determination of whether service coordination was effective (Dunst & Bruder, 2002; Dinnebeil, et al, 1999).

Specific research related to the practice patterns of occupational and/or physical therapists working in early intervention programs were not identified in the review of literature. Overall, clinical practice patterns among pediatric occupational therapists were...
determined to be child-centered (Rosenbaum, et al, 1998; McWilliam & Bailey, 1994; Lawlor & Henderson, 1989). The intensity of physical therapy services provided within early intervention was identified only for children with medical diagnoses (Mahoney, et al, 1998; Mahoney, Robinson, & Perales, 2004; Kaminer & Robinson, 1993).

This study utilized previous research as a framework and provided a baseline analysis of service delivery within NEIS – South for future clinical practice patterns and service intensity. Previous early intervention studies did not specifically reflect referral and utilization patterns for occupational and physical therapy. Within NEIS – South, utilization of occupational and physical therapy was based primarily on the professional’s availability and whether they had an opening in their schedule to assess a child for eligibility or for ongoing treatment.

Prior to July 2003, two separate agencies provide early intervention services in southern Nevada. Special Children’s Clinic operated through the Nevada Department of Health and First Step operated through the Nevada Department of Family and Child Services. A year prior to the merger, both Special Children’s Clinic personnel and First Step personnel along with representation from other stakeholders (i.e., parents, university faculty) were involved in a transition phase to ease personnel into one centralized organization known as NEIS – South.

The premise of the study was that all children referred to NEIS – South received necessary services. A total of 1516 cases were included in the data analysis. All children who received an initial IFSP through NEIS – South between July 2003 and June 2005 living in southern Nevada were included in the study. Between July 2003 and June 2004,
691 initial IFSP’s were completed to initiate services through NEIS – South. Between July 2004 and June 2005, the number of initial IFSP’s increased to 825.

Possible reasons for the increase in initial IFSP’s include the addition of new developmental specialists on both a contracted and state employee basis. By having a large number of developmental specialists, NEIS – South hoped to decrease the waiting list for Part C services. IDEA (1997) required that a service coordinator, evaluation, eligibility, and the initial IFSP meeting conducted within a 45 day time period, initiated at the time of referral. The continued population growth in southern Nevada challenged NEIS – South personnel to meet this requirement. As estimated by the State of Nevada Demographers office (ASRHO Report, 2004) the population of children ages birth to four years increased by over twenty-five thousand between 2000 and 2005.

Research Question 1

Research question one stated: Did children who possessed a DSM-IV-TR or medical diagnosis as the qualifier for Part C services receive more early intervention services than children diagnosed with developmental delay based on types of services per month and interventions received? It was hypothesized that no difference would be noted between the Part C qualifying criteria for children receiving services through NEIS – South.

Data indicated children with a DSM-IV-TR or medical diagnosis received more early intervention services than children with a developmental delay diagnosis in three areas. Statistical significance was attained for three of the services provided through NEIS – South between July 2003 and June 2005 based on the number of referrals
indicated on initial IFSP’s. Of these services, parent/family training and specialized instruction were specifically identified as required components of Part C training through IDEA (1997) and are essential to any effective early intervention program. Parent/family training and specialized instruction are implemented at NEIS – South through or under the direction of the developmental specialist. The higher numbers for these services reflected on the initial IFSP’s are expected as the developmental specialists are in essence case managers for the children on their caseload. Between July 2003 and June 2004 there were 652 initial IFSP’s reflecting the need for parent/family training. This number increased to 798 between July 2004 and June 2005. Specialized instruction also showed an increase based on initial IFSP referral rates. Between July 2003 and June 2004 there were 566 referrals and between July 2004 and June 2005 the number increased to 665. Again, these increases could be related to the number of developmental specialists hired to decrease the waiting list of children requiring Part C services.

Speech language pathology services were also indicated to be statistically significant based on referral rates between July 2003 and June 2005. Many children were typically referred to Part C services as a result of not achieving developmental milestones in language (Hanson & Lynch, 1995). This scenario was reflected in the referrals to NEIS – South. As a result, the number of speech language pathologists who contract with NEIS – South continued to rise to meet referral demands of the agency.

Although statistical significance was not ascertained between eligibility criteria and rates of referral for fourteen of the seventeen services provided through NEIS – South, practical significance could be determined.
Six services offered through NEIS – South were identified on a limited basis through referral rates on initial IFSP’s. Between July 2003 and June 2004, the services related to respite (n = 0; 00.00%), nursing (n = 1; 00.02%), health services (n = 3; 00.07%), transportation (n = 3; 00.07%), social work (n = 6; 00.14%), and medical services (n = 9; 00.21%) were identified fewer than ten times for the 1516 cases reviewed. As new early intervention personnel were hired, it was likely these services were highlighted as “low demand” areas for infants and toddlers. Services may have been provided through other identified service categories (i.e., health services and nursing provided through medical services) or provided within the community (i.e., medical services provided through the child’s pediatrician). Of interest was the fact that respite was not identified on any of the 1516 initial IFSP’s reviewed for this study.

Perhaps NEIS – South could reassess these particular services to determine effective service provision or whether other specialized agencies could be identified to subcontract and provide services for these referrals. The redirection of personnel to provide the services may be warranted should NEIS – South determine that these services were critically important in terms of child outcome success and that they should be provided within their own organizational structure.

Three services experienced a decrease in referral rates between the two years of this study. Vision services decreased from a total number of 33 referrals between July 2003 and June 2004 and 23 between July 2004 and June 2005. Nutrition referral decreased from a total number of 65 between July 2003 and June 2004 to 53 referrals between July 2004 and June 2005. The largest decline in referral rates was noted in occupational therapy. Between July 2003 and June 2004 there were 127 initial IFSP’s
reflecting the need for occupational therapy. This number decreased to 74 between July 2004 and June 2005. Reasons for the decline in services may be related to personnel shortages or a lack of understanding about these particular services with the new early intervention personnel hired during the same time period.

**NEIS – South Service Delivery Model**

NEIS – South adopted the transdisciplinary service delivery model approach when Special Children’s Clinic and First Step merged in July 2003. This was the primary model utilized by the previous agencies prior to the merger and therefore, should not be a primary reason for any changes in referral rates or utilization of services. Hanson and Lynch (1995) indicated that the transdisciplinary approach provided “the highest degree of coordinated services and involvement of parents” (p. 15). This model was frequently identified as a guiding model for early intervention programs and emphasized the collaboration of different professionals along with the family to evaluate and determine appropriate services for the child (Blasco, 2001, Hanson & Lynch, 1995, Roberts, Rule & Innocenti, 1998). Ongoing staff development, role sharing and collaboration were identified as key components required for the success of transdisciplinary teams in early intervention (Hanson & Lynch, 1995).

**NEIS – South Training Projects**

Specific Parent/Staff Training Labs were conducted during the spring and summer in 2005. The objectives of the training labs were to increase teaming and the overall quality of services to children and caregivers. The series of training sessions were site-based so early intervention teams could learn together in smaller work groups and invite specific children and their caregivers. Training modules were identified to strengthen
team interaction and services provided to children and their caregivers. Initially eight different training modules were determined for early intervention personnel (motor, communication, cognitive, sensory (vision and hearing), social/emotional development (behavior), autism, parent/child relationship, and assistive technology). Two pilot modules were identified to initiate the process. Motor was conducted by an occupational therapist and physical therapist team. Communication was conducted by a speech language pathologist. It was later determined that assistive technology would be integrated into all sessions. In particular, early intervention team members were provided strategies to effectively work with their children and families to facilitate skill development. Some of the services provided training over multiple dates (i.e., four sessions for motor skills lab; three sessions for communication skills lab). Trainings were conducted for specific early intervention teams within NEIS – South according to geographic location.

Although specific Parent/Staff Training Labs were not conducted on assistive technology, the importance of determining a child’s need for assistive technology was highlighted during the pilot motor and communication labs. Perhaps referrals for assistive technology increased following the training sessions. Between July 2003 and June 2004, there were 18 referrals indicated on initial IFSP’s for assistive technology. However, between July 2004 and June 2005, the number of initial IFSP’s reflecting a need for assistive technology increased to 30.

NEIS – South contracted with a professor at a local state university to conduct 6-month training session related to autism. Six half-day training workshops were presented on Positive Behavioral Supports, Curriculum Development, Picture Exchange
Communication System (PECS), Applied Behavioral Analysis (ABA), Reinforcer Assessment and Rapport Building, and Teaching Communication.

The autism workshop series was initiated by providing participants a framework for Positive Behavioral Supports. Positive Behavior Supports referred to a set of methodologies that focused on environmental modifications to reduce problem behaviors while providing the child support to achieve developmental milestones. Curriculum Development addressed specific concepts to promote the child’s skill enhancement across the developmental domains of adaptive, motor, cognitive, communication, and social/emotional skills. PECS was illustrated as an augmentative, alternative communication system for children with autism and other communication difficulties to initiate communication. The highly structured process of breaking down skills into smaller discrete tasks and involved systematic rewards to reinforce desired behaviors was provided during the ABA workshop. Specific skills were taught to participants in the identification of appropriate child reinforcements during the Reinforcer Assessment and Rapport Building session. Teaching Communication encouraged participants to use functional means within the natural environment to promote the child’s communication.

Higher referral rates for intensive behavioral services may have been impacted through the autism training seminar. Between July 2003 and June 2004, there were 9 initial IFSP’s reflecting intensive behavioral services as a primary service. Between July 2004 and June 2005, the year in which the training occurred, there were 27 initial IFSP’s reflecting intensive behavioral services.

New staff trainings were conducted on an ongoing basis between July 2003 and June 2005 and were facilitated by NEIS – South supervisors. Sessions included the Intake
Process, Individuals with Disabilities Act Training and Eligibility, IFSP Development, and Determination of Functional Outcomes. The session on Intake Process provided new employees specific training in NEIS – South procedures related to initial intake and evaluation. The training included instruction on routine based assessments and eco maps, two assessments specifically used by NEIS – South. Training on the Individuals with Disabilities Act and Eligibility provided a foundation for legal aspects involved in providing services through Part C. IFSP development focused on appropriate completion of the document to initiate ongoing services for infants and toddlers receiving services through NEIS – South. The session on Determination of Functional Outcomes provided participants with skills required to write IFSP objectives that were appropriate, measurable, and achievable.

Research Question 2

Research question two stated: Did children with a DSM-IV-TR or medical diagnosis receive occupational and/or physical therapy more frequently than children with a diagnosis of developmental delay? Although statistic significance was not attained there were practically significant implications determined through data analysis.

Occupational and physical therapists were identified as “motor” therapists for NEIS – South eligibility purposes. For the purpose of determining whether a child was eligible for Part C services based on a motor delay, either professional could assess the child and sign the NEIS – South eligibility form. Once eligibility was determined, the physical therapist would be identified as part of the child’s IFSP team if the child had primarily gross motor delays affecting ambulation. An occupational therapist would be
identified as part of the child’s IFSP team for children with fine motor delays or sensory processing deficits that impacted motor development. This process was determined by NEIS – South to provide a seamless transition between eligibility and provision of services for children and lead to consistency for children and their caregivers.

During the two years indicated for this study, physical therapy referral rates remained consistent with 214 referrals noted between July 2003 and June 2004 and 217 referrals between July 2004 and June 2005. Occupational therapy referral rates declined from 127 between July 2003 and June 2004 and 74 between July 2004 and June 2005. It was likely that personnel shortages were reflected in these frequency counts. Another possibility reflected a trend to refer to physical therapy when an occupational therapist could not be retained to provide services for a child.

When frequency counts were analyzed according to months, additional trends were noted. The largest rates of referral for occupational and physical therapy were reflected during March (n = 71), April (n = 104), May (n = 76), and June (n = 60). These months could be perceived as the most stable months for families as a whole. Relatively few holidays occur during these months and when older siblings were in the family fewer breaks from school occurred during this time period. Perhaps families sought Part C services (including occupational and physical therapy) when self perceptions of consistency in family routines were achieved.

Moderate referral rates were noted on the initial IFSP’s during October (n = 56), November (n = 50), and January (n = 56). These months may be viewed as a time to “gearing up for” or “recover from” the holidays. It was determined through the data that families consistently sought early intervention services during these months.
The months illustrating the lowest rates of referral were December (n = 30), February (n = 22), July (n = 33), August (n = 38), and September (n = 36). Families may be focused on other events during December and may not seek Part C services until “after the holidays.” It is also possible that the summer months may be times of transition for families. The lower referral rates could be a result of new families moving into southern Nevada and not seeking services until they have moved into a new residence. Often summer months may be the only time for an entire family to vacation or complete other travel commitments. This could be reflective of summer vacation school schedules for older siblings in the family. Caregivers may decide to wait until the school year starts before seeking Part C services younger for an infant or toddler.

**NEIS – South Parent/Staff Training Labs**

An occupational therapist and physical therapist team conducted three separate motor skills training labs during spring and summer 2005. Each motor skills lab course consisted of four classes over a two month period. The training lab participants were geographically located at one of the NEIS – South sites. The ultimate goal of the training labs was for early intervention personnel to develop basic handling skills to help children on their caseloads and their caregivers in relation to developmental motor milestones. The sessions were not intended to replace the professional skills of the occupational and physical therapist. The therapists instructed developmental specialists in strategies and handling skills that would be taught to caregivers.

Session One included an introduction to the motor skills lab course, the role of occupational and physical therapy at NEIS – South, a review of normal movement patterns, an exercise in analyzing posture and alignment, and activities focused on
specific transitional movements of rolling and progressing into a seated position, and maintaining sitting. Participants were expected to wear comfortable clothing, actively participate in the lab sessions, and bring a doll for movement and positioning instruction.

Session Two focused on the addition of two to three children and their caregivers. The premise was for the early intervention team to identify children who required additional motor skill practice related to the developmental skills of rolling, moving into a seated position, or maintaining a seated position. The occupational and physical therapist would work with the children present and show the early intervention team members as well as the family specific strategies to facilitate motor milestone development.

Session Three included an introduction to the lab, a Developmental Jeopardy game, specific discussion on muscle tone including range of motion and positioning, an overview of sensory processing, and activities focused on transitional movements of sit to kneel, kneel to stand, and stand to cruise/walk.

Session Four focused on the addition of two to three children and their caregivers. Again, the premise was for the early intervention team to identify children who required additional motor skill practice related to the developmental skills of progressing from a seated position into standing and walking.

It was possible that the motor skills training labs affected the number of occupational therapy referrals due to increased developmental specialist confidence in handling skills and facilitation of techniques to enhance fine motor skill progression with the children on their caseloads. The higher referral rates for physical therapy may have been related to developmental specialists improved knowledge of gross motor skill
progression and the importance of referring to physical therapy earlier in the early intervention process.

Limitations of Study

This study analyzed data collected from NEIS – South between July 2003 through June 2005. Limitations of this study included:

1. No baseline data existed for this study. The results from this study serve as the baseline for future research conducted at NEIS.

2. Completion of this study serves as a needs assessment and may assist in program and personnel decisions in the future, but will not have an impact on services immediately.

3. The study was limited to data collected between July 2003 and June 2005.

4. Data utilized for this study were previously collected by NEIS – South and were not standardized or controlled for the purposes of this study.

5. One person at BEIS was identified for compiling TRAC and crystal report information which proved to be a challenge due to work demands and staffing changes in that particular department.

6. Time delays occurred in obtaining the data from BEIS resulting in six months of lag time before converting all data for analysis.

7. The study hoped to examine the hours of services per month for the seventeen different service categories. This information was not accessed on the compiled data files provided by BEIS for the purpose of this study. BEIS provided
information on yearly basis. Therefore, results are indicative of changes and frequencies on a yearly basis only.

8. Due to the nature of the compiled data files provided by BEIS, gender, age, and ethnicity were not identified for the purpose of this study.

Conclusions

Several conclusions may be drawn from this study. They are based on the BEIS quantitative data provided for this study’s analyses.

1. More children qualified for Part C services through NEIS – South with a developmental delay diagnosis (69.9%) as compared to a DSM-IV-TR or medical diagnosis (32.1%).

2. Children who qualified for Part C services through NEIS – South with a DSM-IV-TR or medical diagnosis (54.00%) had an advantage of having occupational and/or physical therapy indicated on their initial IFSP as compared to children with a Part C qualifier of developmental delay (46.04%).

3. Parent/family training (33.30%), specialized instruction (28.27%), and speech language pathology (14.74%) accounted for the largest referral rates based on the initial IFSP between July 2003 and June 2005.

4. Five services provided through NEIS – South received fewer than 10 referrals each over the two year period of this study and 1516 data files reviewed (respite = 0, nursing = 1, health services = 3, transportation = 3, social work = 6, medical services = 9).
5. Between July 2003 and June 2005, four months were determined to have the highest rates of referral for occupational and physical therapy (March = 71, April = 104, May = 76, June = 60).

6. The two months accounting for the lowest rates of referral for occupational and physical therapy between July 2003 and June 2005 (December = 30; February = 22).

Recommendations for NEIS - South

Evaluation of Service Categories

As previously indicated, six services offered through NEIS – South were identified on a limited basis through referral rates on initial IFSP’s. Respite (n = 0; 00.00%), nursing (n = 1; 00.02%), health services (n = 3; 00.07%), transportation (n = 3; 00.07%), social work (n = 6; 00.14%), and medical services (n = 9; 00.21%) were identified fewer than ten times for the 1516 cases reviewed between July 2003 and June 2004. Perhaps NEIS – South personnel could reassess these particular services to determine effective service provision or whether other specialized agencies could be identified to subcontract and provide services for these referrals. Should NEIS – South personnel determine that these service categories were deemed important for child outcomes, redirection of personnel may be warranted to provide the services within their own organizational structure. NEIS – South personnel could reassess these particular services and determine whether effective service provision could better be served through other specialized agencies on a subcontracted basis.
Training Programs

NEIS – South personnel provided a wealth of training for employees during the two years included in this study. Trainings were provided for staff to effectively complete required Part C paperwork, develop child handling skills to facilitate infant and toddler mobility, identify communication tools for language enhancement, and an entire series specifically related to working with children identified with autism spectrum disorders. These trainings enabled new and seasoned personnel to gain additional knowledge and skills within the context of working with young children. Although the trainings were appropriate for all children eligible for Part C services, strengthening specific diagnosis related trainings may prove to be beneficial for personnel and the children and families on their caseloads.

Common diagnosis categories tend to be reflected for infants and toddlers referred to Part C with a DSM-IV-TR or medical diagnosis (Case-Smith, 2005, Blasco, 2001). Although not illustrated on data provided by BEIS, it was likely that this trend was also evident in referrals to NEIS – South. Perhaps NEIS – South personnel or other agencies bidding to provide subcontracting services through NEIS – South could enhance training related to high referral diagnoses. Diagnoses often referred to NEIS – South include prematurity, cerebral palsy, Down syndrome, spina bifida, Prader Willi syndrome, congenital heart disease, Fetal Alcohol Syndrome, and visual impairment (J. Rodriguez, personal communication, February 15, 2006). Lower incidence diagnoses referred to NEIS – South could also be addressed to provide personnel with general information and appropriate referral mechanisms. These diagnoses include congenital anomalies and disorders (i.e., osteogenesis imperfecta, Marfan’s syndrome, arthrogryposis,

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developmental hip dysplasia), seizure disorders, hydrocephalus, and peripheral nerve injuries (i.e., Erb-Duchenne palsy).

Specific training workshops focused on the DSM-IV-TR or medical diagnosis could follow a developmental format to address motor communication, cognitive, social/emotional, and adaptive skills. The intent of the workshops would extend beyond service category eligibility (e.g., what is occupational therapy? when should the developmental specialist refer a child to nutrition?) and could facilitate staff knowledge as well as enhance skills required to better serve children and their families.

Many children receiving Part C services through NEIS – South have difficulties with eating and feeding (R. Colson, personal communication, October 19, 2005). Families with children who exhibit feeding difficulties tend to rank this concern high on their list of priorities for intervention (Case-Smith, 2005, Morris & Klein, 2000). Perhaps ongoing intensive training workshops related to feeding intervention could provide personnel with basic to intermediate skills to effect change in feeding patterns. Sessions could include the anatomy and physiology of eating, normal development of eating skills, factors that limit feeding skill development, issues of nutrition, and treatment strategies. During the anatomy and physiology session, specifics on the oral and pharyngeal structures, importance of respiration and cardiac systems, and swallowing process could be addressed. Normal development of eating skills could highlight the sequential process of feeding skills that take place between birth and three years of age. Factors that limit feeding skill development could stress internal and environmental aspects that influence a child’s ability to successfully eat oral foods. The session on nutrition could be used to teach the importance of dietary records, intake and output factors, as well as meeting the
nutritional needs in terms of calories, dietary diversity, and special health concerns. Several sessions related to treatment strategies could be conducted to include problems with oral structures (i.e., jaw clenching, tongue thrust, nasal reflux), positioning for efficient eating, sensory aspects that limit self-feeding, and feeding related to specific diagnoses (i.e., autism, visual impairment, cleft palate) (Morris & Klein, 2000).

Recommendations for Further Study

As the population of Nevada continues to grow, the need for early intervention services provided for children will continue to rise. It is important that NEIS – South be prepared for future children and their families as directed by evidence based practices. Continued research focused on efficacy of service provision for children eligible for Part C services needs to be addressed within the field of early childhood special education. Based on the results of this study, the following areas are suggested for further study.

1. A comparison study involving NEIS – South data and NEIS – North data to determine Nevada state trends for early intervention services.

2. A comparison study involving Nevada and other states focused on the service category of Respite to determine national trends based on initial IFSP’s.

3. A study to determine regional trends based on the identification of low service categories through NEIS – South (e.g., nursing, health services, transportation, social work, and medical services).

4. A study to determine the intensity of services provided through NEIS – South based upon hours of services per month per service category.
5. A study to evaluate developmental specialist education and training and potential effects on referral rates.

6. A study to determine high Part C qualifying diagnoses and personnel training provided to enhance child and family outcomes.

Summary

This study supported previous research related to training protocols and service coordination programs in early intervention. It provided a basis for service delivery patterns based on referral rates among seventeen NEIS – South categories. During the two year study, children with a Part C qualifier of developmental delay were more likely to seek services through NEIS – South. However, during the same time period, children referred to NEIS – South with a DSM-IV-TR or medical diagnosis as their Part C qualifier were more likely to have occupational and/or physical therapy indicated on their initial IFSP. The results indicated a need to assess future clinical practice patterns and service intensity for all children referred for Part C services through NEIS – South.

Statistical significance was achieved in the three service categories with the highest referral rates based on the initial IFSP. This was deemed appropriate as two of the categories (parent/family training and specialized instruction) were mandated for Part C services through IDEA (1997). The third category (speech language pathology) traditionally is a high referral category based on families seeking early intervention based on language delays.

In conclusion, the results of this study were provided to assist NEIS – South personnel and other agencies who sought to subcontract with NEIS – South in the
provision of optimal services for young children and their caregivers in southern Nevada. This was a timely study and provided information that could be useful in future research studies as well as reassessment of existing early intervention programs. Provision of effective services for infants and toddlers is essential as they transition into early childhood programs, school, and ultimately adulthood.
APPENDIX A

TRAC FORM
EI PROGRAM TRAC III DATA COLLECTION FORM

New

El Child Code: ____________________ Child’s Last Name: ____________________ Child’s First Name: ____________________

AKA: ____________________ Date of Birth: ____________________ SSN: ____________________

Sex: M F Intake Coordinator: ____________________ Service Coordinator: ____________________

Race: American Indian or Alaskan Native
Asian or Pacific Islander
Black or African American
Hispanic or Latino
Native Hawaiian or other
White
Unknown (Only for referral status)

Status: Referral to program (No IFSP)
Eligible/Pending IFSP
Not Eligible (Fill-in Exit Information on page 4)
Active/Receiving Services (Child has a current IFSP)
Exited with an IFSP (Fill-in Exit Information on page 4)
Exited No IFSP (Fill-in Exit Information on page 4)

Misc. Code: ____________________ Primary Physician: ____________________ Referral Date: ____________________

Referral Source: Hospital
SaM (Screening and Monitoring)
Physician/Pediatrician
Parent
Child Care Facility
School District
Public/Community Health Facilities (e.g. WIC, CHS)
Other Social Service Agencies (e.g. CPS)
Other Health Care Providers (e.g. other EI programs)
Other/Friends/Relatives
Newborn Hearing

Referral Date: ____________________
Reason For Referral: ____________________
First Appl. Date/Time: ____________________
First Appl. Location: ____________________
Date Rights Mailed: ____________________

Funding Source:
(Primary) Children with Special Health Care Needs
Katie Beckett
Medicaid
Medicaid HMO
Nevada Checkup
None
Private Insurance – Permission to Bill? Y N
SSI
Tricare

Other source/Secondary Source:
Children with Special Health Care Needs
Katie Beckett
Medicaid
Medicaid HMO
Nevada Checkup
None
Private Insurance – Permission to Bill? Y N
SSI
Tricare

Related Account Num/Info: ____________________

Person completing this form: ____________________ Date: ____________________ Site: ____________________

TRAC3 Form – Revised September 3, 2004
EI PROGRAM TRAC III DATA COLLECTION FORM

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<td></td>
</tr>
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EI Child Code: __________ Child's Last Name: ____________________________ Child's First Name: __________

Child Contact (Primary) Enter each contact separately! If other contacts have same address as Primary put "same as primary" in that line.

Primary Language: __________________________________________ Interpreter Needed? Yes No

Relationship: □ Biological Parent □ Grand Parent □ Adoptive Parent □ Foster Parent □ Surrogate Parent □ Other Relative □ Social Worker

First Name: __________________________ Last Name: __________________________

Mailing Address: ____________________________________________ Zip: __________

Physical Address: ____________________________________________ City: __________

Phone:

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<tr>
<td>Note:</td>
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</table>

Child Contact 2

Primary Language: __________________________________________ Interpreter Needed? Yes No

Relationship: □ Biological Parent □ Grand Parent □ Adoptive Parent □ Foster Parent □ Surrogate Parent □ Other Relative □ Social Worker

First Name: __________________________ Last Name: __________________________

Mailing Address: ____________________________________________ Zip: __________

Physical Address: ____________________________________________ City: __________

Phone:

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Child Contact 3

Primary Language: __________________________________________ Interpreter Needed? Yes No

Relationship: □ Biological Parent □ Grand Parent □ Adoptive Parent □ Foster Parent □ Surrogate Parent □ Other Relative □ Social Worker

First Name: __________________________ Last Name: __________________________

Mailing Address: ____________________________________________ Zip: __________

Physical Address: ____________________________________________ City: __________

Phone:

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Person completing this form: __________________________ Date: __________ Site: __________

TRAC3 Form - Revised September 3, 2004

Page 2
EI PROGRAM TRAC III DATA COLLECTION FORM

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<th>Exit</th>
<th>Re-Open</th>
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<td>Child's Last Name:__________________________</td>
<td>Child's First Name:__________________________</td>
<td></td>
</tr>
</tbody>
</table>

Eligibility Date: ________________________

Eligibility Code: Hearing Impaired
Deaf/Blind (Dual Sensory)
Physical or Mental Condition
Visually Impaired (Blind, Low Vision)
50% Delay in one area
25% Delay in two areas

Eligibility Diagnosis (confirmed): ________________________

Clinical Opinion Criteria: ________________________

Developmental Domains: (Choose only one)
Cognition
Communication (Exp & Recp=1)
Social or Emotional
Adaptive
Physical Development (FM & GM =1)

Developmental Domains: (Choose two)
Cognition
Communication (Exp & Recp=1)
Social or Emotional
Adaptive
Physical Development (FM & GM =1)

Additional Diagnosis (AFTER eligibility is determined)

IFSP Dates: State _____________ Current ____________ Interim ____________ Transition Mtg. Held: ________________________

IFSP Primary Service Setting:
Program Designed for Children with Developmental Delays/Disabilities
Home
Hospital (inpatient)
Other Setting (Description of Setting: ________________________
Service Provider Location (not EI Program)
Residential Facility
Program Designed for Typically Developing Children

Service Status: C=Current, N=Needed (if on IFSP), R=Received
Frequency: W=Weekly, M=Monthly, Q=Quarterly, 6m=6 months

<table>
<thead>
<tr>
<th>IFSP Support Services</th>
<th>Service Status</th>
<th>Quantity</th>
<th>Amount</th>
<th>Frequency</th>
<th>Intensity in Minutes</th>
<th>Services From Date</th>
<th>Services To Date</th>
<th>Location</th>
<th>Provider Name</th>
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<td>Assistive Tech</td>
<td>C N R</td>
<td>W M Q 6m</td>
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<td>W M Q 6m</td>
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<td>W M Q 6m</td>
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<tr>
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<td>W M Q 6m</td>
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<td>C N R</td>
<td>W M Q 6m</td>
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<td>C N R</td>
<td>W M Q 6m</td>
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<td>Parent/Family Training</td>
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<td>W M Q 6m</td>
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<td>Pay. Services</td>
<td>C N R</td>
<td>W M Q 6m</td>
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<td>PT</td>
<td>C N R</td>
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<tr>
<td>Respite</td>
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<tr>
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<td>Special Instr. (any</td>
<td>C N R</td>
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<tr>
<td>Intens. Beh.Svs.</td>
<td>C N R</td>
<td>W M Q 6m</td>
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Person completing this form: ________________________ Date: ________________________ Site: ________________________

TRAC3 Form - Revised September 3, 2004

Page 3

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EI PROGRAM TRAC III DATA COLLECTION FORM

El Child Code: __________ Child’s Last Name: ________________________ Child’s First Name: __________________

Child Exit Date: ____________________ (For children in any status exiting EIS)

<table>
<thead>
<tr>
<th>IFSP Exit Code: (If child has an IFSP – must select from this list)</th>
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<tbody>
<tr>
<td>(Please Circle Only One)</td>
</tr>
<tr>
<td>Completion of IFSP prior to reaching maximum age for Part C</td>
</tr>
<tr>
<td>Part B Eligible</td>
</tr>
<tr>
<td>Not Eligible for Part B, Exit to other programs</td>
</tr>
<tr>
<td>Not Eligible for Part B, Exit with no referrals</td>
</tr>
<tr>
<td>Part B Eligibility not determined</td>
</tr>
<tr>
<td>Deceased</td>
</tr>
<tr>
<td>Moved out of State</td>
</tr>
<tr>
<td>Withdrawal by Parent/Guardian (must choose one below)</td>
</tr>
<tr>
<td>• Dissatisfaction with Program Method/Philosophy</td>
</tr>
<tr>
<td>• Transportation</td>
</tr>
<tr>
<td>• Inconvenient Scheduling</td>
</tr>
<tr>
<td>• Frequent Illness of Child</td>
</tr>
<tr>
<td>• Refused Services</td>
</tr>
<tr>
<td>Attempts to Contact Family Unsuccessful</td>
</tr>
<tr>
<td>Transferred to Another Part C Program (Region) Within the State</td>
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Exit Location: ____________________ (e.g. Home, Head Start, School District)

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<th>School Dist CODE</th>
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<td>Lincoln</td>
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<td>Churchill</td>
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<td>Lyon</td>
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<td>Clark</td>
<td>MCSD</td>
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<td>SCSD</td>
<td>Storey</td>
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<td>Humboldt</td>
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<td>LCSD</td>
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School Dist Information: IEP Date: __________ IEP Svs. Set to start: __________

IFSP/Child Transfer Location (to another EIS Region): EIS North EIS South

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<tbody>
<tr>
<td>(Please Circle Only One)</td>
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<tr>
<td>Child Referred, Parent Has No Concerns</td>
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<tr>
<td>Moved</td>
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<tr>
<td>2.9 years Referred to School District</td>
</tr>
<tr>
<td>Contact with Family Unsuccessful (no response to 10 day letter)</td>
</tr>
<tr>
<td>Child Died</td>
</tr>
<tr>
<td>Services Not Accessed/Family Choice</td>
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</table>

Notes Subject: __________________________________________________________

Notes Body: __________________________________________________________________________________________

Person completing this form: __________________________________________ Date: __________ Site: __________

TRAC3 Form - Revised September 3, 2004
NOTICE TO ALL RESEARCHERS:
Please be aware that a protocol violation (e.g., failure to submit a modification for any change) of an IRB approved protocol may result in mandatory remedial education, additional audits, re-consenting subjects, researcher probation suspension of any research protocol at issue, suspension of additional existing research protocols, invalidation of all research conducted under the research protocol at issue, and further appropriate consequences as determined by the IRB and the Institutional Officer.

DATE: May 18, 2005
TO: Dr. Nancy Sileo, Special Education
FROM: Office for the Protection of Research Subjects
RE: Notification of IRB Action by Dr. Michael Stitt, Chair
Protocol Title: Program Evaluation of Service Delivery Trends in Early Intervention
Protocol #: 0505-1582

This memorandum is notification that the project referenced above has been reviewed by the UNLV Social/Behavioral Institutional Review Board (IRB) as indicated in Federal regulatory statutes 45 CFR 46. The protocol has been reviewed and approved.

The protocol is approved for a period of one year from the date of IRB approval. The expiration date of this protocol is May 17, 2006. Work on the project may begin as soon as you receive written notification from the Office for the Protection of Research Subjects (OPRS).

Should there be any change to the protocol, it will be necessary to submit a Modification Form through OPRS. No changes may be made to the existing protocol until modifications have been approved by the IRB.

Should the use of human subjects described in this protocol continue beyond May 17, 2006; it would be necessary to submit a Continuing Review Request Form 60 days before the expiration date.

If you have questions or require any assistance, please contact the Office for the Protection of Research Subjects at OPRSHumanSubjects@ccmail.nevada.edu or call 955-2794.

Office for the Protection of Research Subjects
4505 Maryland Parkway • Box 451037 • Las Vegas, Nevada 89154-1037
(702) 895-3794 • FAX: (702) 895-0805

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APPENDIX C

HIPPA FORMS
HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT (HIPAA)

BUSINESS ASSOCIATE AGREEMENT

BETWEEN

THE NEVADA STATE HEALTH DIVISION
hereinafter referred to as "Covered Entity"

and

Nancy M. Sileo, Ed.D.
hereinafter referred to as "Business Associate"

This Agreement is entered into between Covered Entity and Business Associate, effective as of September 30, 2004.

Business Associate acknowledges and agrees that all protected health information that is created or received by Covered Entity and disclosed or made available in any form, including paper record, oral communication, audio recording, and electronic medium by Covered Entity or its operating units to Business Associate on Covered Entity's behalf shall be subject to this agreement.

OBLIGATIONS AND ACTIVITIES OF the BUSINESS ASSOCIATE

1. Business Associate agrees to not use or disclose Protected Health Information other than as permitted by this Agreement or as Required by Law.
2. Business Associate agrees to use appropriate safeguards to prevent use or disclosure of the Protected Health Information other than as provided by this Agreement.
3. Business Associate agrees to mitigate, to the extent practicable, any harmful effect that is known to Business Associate of a use or disclosure of Protected Health Information by Business Associate in violation of the requirements of this Agreement.
4. Business Associate agrees to report to Covered Entity any use or disclosure of the Protected Health Information not provided for by this Agreement of which it becomes aware.
5. Business Associate agrees to ensure that any agent, including a subcontractor, to whom it provides Protected Health Information received from, or created or received by Business Associate on behalf of Covered Entity agrees to the same restrictions and conditions that apply through this Agreement to Business Associate with respect to such information.
6. Business Associate agrees to provide access, at the request of the Covered Entity, and in the time and manner as set forth in the contract's Inspection and Audit provisions, to Protected Health Information in a Designated Record Set, to Covered Entity or, as directed by Covered Entity, to an Individual in order to meet the requirements under 45 CFR 164.524.
7. Business Associate agrees to make any amendments to Protected Health Information in a Designated Record Set that the Covered Entity directs or agrees to pursuant to 45 CFR 164.526 at the request of Covered Entity or an Individual, and in the time and manner as mutually agreed between the parties.
8. Business Associate agrees to make internal practices, books, and records, including policies and procedures and Protected Health Information, relating to the use and disclosure of Protected Health Information received from, or created or received by Business Associate on behalf of, Covered Entity, available to the Covered Entity, or the Secretary, in a time and manner as set forth in the contract's Inspections and Audit provisions or designated by the Secretary, for the purpose of the Secretary determining Covered Entity's compliance with the Privacy Rule.

9. Business Associate agrees to document such disclosures of Protected Health Information and information related to such disclosures as would be required for Covered Entity to respond to a request by an Individual in accordance with 45 CFR 164.528.

10. Business Associate agrees to provide to Covered Entity or an Individual, in time and manner as set forth in the contract's Inspection and Audit provisions, information collected in accordance with the previous section of this Agreement, to permit Covered Entity to respond to a request by an Individual for an accounting of disclosures of Protected Health Information in accordance with 45 CFR 164.528.

PERMITTED USE AND DISCLOSURES BY BUSINESS ASSOCIATE

General Use and Disclosure Provisions
1. Except as otherwise limited in this Agreement, Business Associate may use or disclose Protected Health Information to perform functions, activities, or services for, or on behalf of, Covered Entity as specified in the contract, provided that such use or disclosure would not violate the Privacy Rule if done by Covered Entity or the minimum necessary policies and procedures of the Covered Entity.

2. Except as otherwise limited in this Agreement, Business Associate may use Protected Health Information for the proper management and administration of Business Associate or to carry out the legal responsibilities of Business Associate.

3. Except as otherwise limited by this Agreement, Business Associate may disclose Protected Health Information for the proper management and administration of Business Associate, provided that the disclosures are:
   a. Required by Law, or
   b. Business Associate obtains reasonable assurances from the person to whom the information is disclosed that it will remain confidential and used or further disclosed only as Required by Law or for the purpose for which it was disclosed to the person, and
   c. The person notifies Business Associate of any instances of which it is aware in which the confidentiality of the information has been breached.

4. Except as otherwise limited by this Agreement, Business Associate may use Protected Health Information to provide Data Aggregation services for Covered Entity as permitted by 45 CFR 164.504(e)(2)(i)(B)

5. Business Associate may use Protected Health Information to report violations of law to appropriate Federal and State authorities, consistent with 45 CFR 164.502(j)(1).
OBLIGATIONS OF COVERED ENTITY:

1. Covered Entity shall notify Business Associate of any limitations in its Notice of Privacy Practices in accordance with 45 CFR 164.520, to the extent that such limitation may affect (Business Associate's) use or disclosure of Protected Health Information.

2. Covered Entity shall notify Business Associate of any changes in, or revocation of, permission by an Individual to use or disclose Protected Health Information, to the extent that such changes may affect Business Associate's use or disclosure of Protected Health Information.

3. Covered Entity shall notify Business Associate of any restriction to the use or disclosure of Protected Health Information that (Covered Entity) has agreed to in accordance with 45 CFR 164.522, to the extent that such restriction may affect Business Associate's use or disclosure of Protected Health Information.

PERMISSIBLE REQUESTS BY COVERED ENTITY

Except in the event of lawful data aggregation or management and administrative activities, Covered Entity shall not request Business Associate to use or disclose Protected Health Information in any manner that would not be permissible under the Privacy Rule if done by Covered Entity.

TERM AND TERMINATION

1. TERM:
The Term of this Agreement shall extend beyond the termination of the contract and shall terminate when all of the Protected Health Information provided by Covered Entity to Business Associate, or created or received by Business Associate on behalf of Covered Entity, is destroyed or returned to Covered Entity, or, if it is infeasible to return or destroy Protected Health Information, protections are extended to such information, in accordance with the termination.

2. EFFECT OF TERMINATION:
   a. Except as provided in paragraph (b) of this section, upon termination of this Agreement, for any reason, Business Associate shall return or destroy all Protected Health Information received from (Covered Entity), or created or received by Business Associate on behalf of Covered Entity. This provision shall apply to Protected Health Information that is in the possession of subcontractors or agents of Business Associate. Business Associate shall retain no copies of the Protected Health Information.
   b. In the event that Business Associate determines that returning or destroying the Protected Health Information is infeasible, Business Associate shall provide to (Covered Entity) notification of the conditions that make return or destruction infeasible.

Upon a mutual determination that return or destruction of Protected Health Information is infeasible, Business Associate shall extend the protections of this Agreement to such Protected Health Information and
limit further uses and disclosures of such Protected Health Information to
those purposes that make return or destruction infeasible, for so long as
Business Associate maintains such Protected Health Information.

MISCELLANEOUS:

1. AMENDMENT: The parties agree to take such action as is necessary to amend
this Agreement from time to time as is necessary for Covered Entity to comply
with the requirements of the Privacy Rule and the Health Insurance Portability

2. SURVIVAL: The respective rights and obligations of Business Associate under
EFFECT OF TERMINATION of this Agreement shall survive the termination of
this Agreement.

3. INTERPRETATION: Any ambiguity in this Agreement shall be resolved to permit
Covered Entity to comply with the Privacy Rule.
HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT (HIPAA)
BUSINESS ASSOCIATE AGREEMENT
BETWEEN
THE NEVADA STATE HEALTH DIVISION
hereinafter referred to as "Covered Entity"

and

Yvonne M. Randall, MHA, OTR/L
hereinafter referred to as "Business Associate"

This Agreement is entered into between Covered Entity and Business Associate, effective as of September 30, 2004.

Business Associate acknowledges and agrees that all protected health information that is created or received by Covered Entity and disclosed or made available in any form, including paper record, oral communication, audio recording, and electronic medium by Covered Entity or its operating units to Business Associate on Covered Entity's behalf shall be subject to this agreement.

OBLIGATIONS AND ACTIVITIES OF the BUSINESS ASSOCIATE

1. Business Associate agrees to not use or disclose Protected Health Information other than as permitted by this Agreement or as Required by Law.
2. Business Associate agrees to use appropriate safeguards to prevent use or disclosure of the Protected Health Information other than as provided by this Agreement.
3. Business Associate agrees to mitigate, to the extent practicable, any harmful effect that is known to Business Associate of a use or disclosure of Protected Health Information by Business Associate in violation of the requirements of this Agreement.
4. Business Associate agrees to report to Covered Entity any use or disclosure of the Protected Health Information not provided for by this Agreement of which it becomes aware.
5. Business Associate agrees to ensure that any agent, including a subcontractor, to whom it provides Protected Health Information received from, or created or received by Business Associate on behalf of Covered Entity agrees to the same restrictions and conditions that apply through this Agreement to Business Associate with respect to such information.
6. Business Associate agrees to provide access, at the request of the Covered Entity, and in the time and manner as set forth in the contract's Inspection and Audit provisions, to Protected Health Information in a Designated Record Set, to Covered Entity or, as directed by Covered Entity, to an Individual in order to meet the requirements under 45 CFR 164.524.
7. Business Associate agrees to make any amendments to Protected Health Information in a Designated Record Set that the Covered Entity directs or agrees to pursuant to 45 CFR 164.526 at the request of Covered Entity or an Individual, and in the time and manner as mutually agreed between the parties.

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8. Business Associate agrees to make internal practices, books, and records, including policies and procedures and Protected Health Information, relating to the use and disclosure of Protected Health Information received from, or created or received by Business Associate on behalf of, Covered Entity available to the Covered Entity, or the Secretary, in a time and manner as set forth in the contract's Inspections and Audit provisions or designated by the Secretary, for the purpose of the Secretary determining Covered Entity's compliance with the Privacy Rule.

9. Business Associate agrees to document such disclosures of Protected Health Information and information related to such disclosures as would be required for Covered Entity to respond to a request by an Individual in accordance with 45 CFR 164.528.

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2. Except as otherwise limited in this Agreement, Business Associate may use Protected Health Information for the proper management and administration of Business Associate or to carry out the legal responsibilities of Business Associate.

3. Except as otherwise limited by this Agreement, Business Associate may disclose Protected Health Information for the proper management and administration of Business Associate, provided that the disclosures are:
   a. Required by Law, or
   b. Business Associate obtains reasonable assurances from the person to whom the information is disclosed that it will remain confidential and used or further disclosed only as Required by Law or for the purpose for which it was disclosed to the person, and
   c. The person notifies Business Associate of any instances of which it is aware in which the confidentiality of the information has been breached.

4. Except as otherwise limited by this Agreement, Business Associate may use Protected Health Information to provide Data Aggregation services for Covered Entity as permitted by 45 CFR 164.504(e)(2)(i)(B).

5. Business Associate may use Protected Health Information to report violations of law to appropriate Federal and State authorities, consistent with 45 CFR 164.502(h)(1).
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1. Covered Entity shall notify Business Associate of any limitations in its Notice of Privacy Practices in accordance with 45 CFR 164.520, to the extent that such limitation may affect Business Associate's use or disclosure of Protected Health Information.

2. Covered Entity shall notify Business Associate of any changes in, or revocation of, permission by an Individual to use or disclose Protected Health Information, to the extent that such changes may affect Business Associate's use or disclosure of Protected Health Information.

3. Covered Entity shall notify Business Associate of any restriction to the use or disclosure of Protected Health Information that Covered Entity has agreed to in accordance with 45 CFR 164.522, to the extent that such restriction may affect Business Associate's use or disclosure of Protected Health Information.

PERMISSABLE REQUESTS BY COVERED ENTITY

Except in the event of lawful data aggregation or management and administrative activities, Covered Entity shall not request Business Associate to use or disclose Protected Health Information in any manner that would not be permissible under the Privacy Rule if done by Covered Entity.

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1. TERM: The Term of this Agreement shall extend beyond the termination of the contract and shall terminate when all of the Protected Health Information provided by Covered Entity to Business Associate, or created or received by Business Associate on behalf of Covered Entity, is destroyed or returned to Covered Entity, or, if it is infeasible to return or destroy Protected Health Information, protections are extended to such information, in accordance with the termination.

2. EFFECT OF TERMINATION:
   a. Except as provided in paragraph (b.) of this section, upon termination of this Agreement, for any reason, Business Associate shall return or destroy all Protected Health Information received from (Covered Entity), or created or received by Business Associate on behalf of Covered Entity. This provision shall apply to Protected Health Information that is in the possession of subcontractors or agents of Business Associate. Business Associate shall retain no copies of the Protected Health Information.
   b. In the event that Business Associate determines that returning or destroying the Protected Health Information is infeasible, Business Associate shall provide to (Covered Entity) notification of the conditions that make return or destruction infeasible.

Upon a mutual determination that return or destruction of Protected Health Information is infeasible, Business Associate shall extend the protections of this Agreement to such Protected Health Information and
limit further uses and disclosures of such Protected Health Information to those purposes that make return or destruction infeasible, for so long as Business Associate maintains such Protected Health Information.

MISCELLANEOUS:

1. AMENDMENT: The parties agree to take such action as is necessary to amend this Agreement from time to time as is necessary for Covered Entity to comply with the requirements of the Privacy Rule and the Health Insurance Portability and Accountability Act of 1996, Public Law No. 104-191.

2. SURVIVAL: The respective rights and obligations of Business Associate under EFFECT OF TERMINATION of this Agreement shall survive the termination of this Agreement.

3. INTERPRETATION: Any ambiguity in this Agreement shall be resolved to permit Covered Entity to comply with the Privacy Rule.

Yvonne M. Randall

[Signature]

5/5/05

[Date]
APPENDIX D

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GENERAL COUNCIL LETTER
Ms. Stephen and Ms. Crawford,

Yvonne Randall was instructed by UNLV to contact me to review the HIPAA Business Associate Agreement that Yvonne and Dr. Nancy Sileo were asked to sign from the Nevada Early Intervention Services. As one of the General Counsel's in the Nevada System of Higher Education, I have been spearheading HIPAA implementation statewide, and I have had substantial experience with the use of business associate agreements.

Although I have had a number of research questions, mostly from the UNLV and UNR Institutional Research Boards regarding the appropriate protocols for human subject research in light of the new federal privacy rules under HIPAA, this is the first request I am aware of for a researcher to sign a business associate agreement.

After reviewing the law, I do not believe this is the appropriate mechanism to set up this relationship. I will try to explain why recognizing that HIPAA is a complicated rule. First, business associate agreements are an appropriate mechanism to convey protected health information without patient authorization to a third party that is performing a particular administrative service for the covered entity. The Office of Civil Rights (OCR) HIPAA Guidance released December 3, 2002 identifies business associate functions as "claims processing or administration; data analysis, processing or administration; utilization review; quality assurance; billing; benefit management; and repricing." (OCR Guidance, p. 40).

However, the Guidance also states that business associate agreements are not necessary for disclosures for research purposes. (Guidance, p.47). I am also attaching a copy of the Department of Health and Human Services' answer to the same question that a covered entity does not need a business associate agreement to disclose information to a researcher.

The basic reason why a business associate agreement is not useful in this situation is that under HIPAA, a patient's health information can essentially only be disclosed in five major ways: 1) written authorization from the patient; 2) if authorization is not feasible, disclosure based on determination and specific privacy protocols established by an IRB or privacy board; 3) use of only deidentified information; 4) a limited data set, or 5) use solely to set up a research design.

If patient authorization is obtained or if there is an appropriate finding by an IRB as to feasibility of authorization and that will protect patient privacy, then the data is primarily governed by the research protocol - not HIPAA. In my opinion, a business associate agreement cannot be used as a substitute to obtaining patient authorization or obtaining the IRB finding as referenced above.

In short, my recommendation is that the parties should focus on whether the IRB has made the appropriate findings so that patient authorization is not required, and that there is an agreement between Nevada Early Intervention Services and the researchers that the researchers will follow all IRB protocols as well as additional, if any, privacy standards that Nevada Early Intervention Services deems necessary to protect patient privacy.

I am attaching a couple of guides that may be useful in dealing with HIPAA and research. I apologize if this is adding more complexity, but I think it is important to set this up in the right way at the start.

Please let me know if you have any questions and I would be happy to talk with your deputy attorney general or state privacy officer. I know this research is important to both parties.

Bart Patterson
General Counsel
NSC & CCSN
702-651-7325
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VITA

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Presentations:


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Committee Member, Dr. Susan Miller, Ph.D.
Committee Member, Dr. Amanda Boutot, Ph.D.
Graduate Faculty Representative, Dr. Peggy Perkins, Ph.D.