

## A Collaborative Model of Early Intervention Service Delivery

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## Aims:

1. Present a model for implementation of Early intervention services that emphasizes team collaboration and family centered care in natural environments



## Aims:

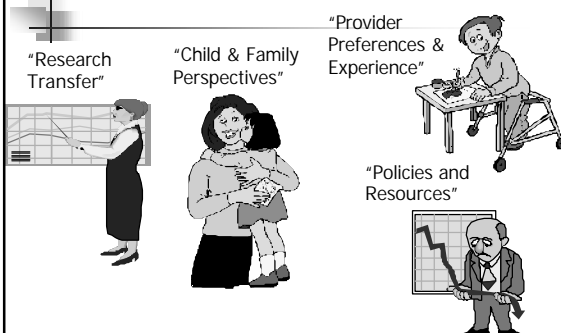
2. Involve participants in discussion of specific strategies for implementation and evaluation of the model



## Schedule

- 12:30 - 1:00 Introduction & Frameworks
- 1:00 - 1:30 Outcomes
- 1:30 - 2:00 Intervention
- 2:00 - 2:15 Discussion
- 2:15 - 2:30 Break
- 2:30 - 2:45 Introduce case
- 2:45 - 3:25 Group - Outcomes
- 3:25 - 3:35 Break
- 3:35 - 4:15 Group - Intervention
- 4:15 - 4:30 Wrap-up

## Determinants of "Best Practice" in Early Intervention



## Evidence Based Practice in In Early Intervention

Applied through decisions made by families and service providers





## Evidence-Based Practice

Use of the best available knowledge and research to guide decision making within context of individual client

(Sackett, 1995; Thomson-O'Brien & Moreland, 1998)

## Model for Evidence Based Decision Making

Adapted from Haynes et al, 2002



## Clinical Reasoning

(Mattingly, 1991)

- How practitioners think about and interpret information and ideas
- The process of deciding on the appropriate action for a client at a particular time

## Decision Making:

### Research is Never Enough!

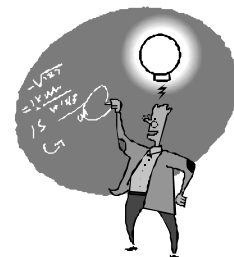
- Transfer of research evidence into practice involves consideration of:
- Family values and preferences
  - Child's unique characteristics
  - Resources and supports

## Shared Decision Making Involves:

- Respect & trust
- Encouragement to share information
- Active listening
- Identification of choices / options
- Deliberation / discussion

## Theories and Models

Relevance  
for evidenced  
based practice



## Theory

Abstract idea or collection of ideas used to explain a physical or social phenomenon

## Theory

- Developed from practice or research
- In agreement with existing knowledge
- Provides a perspective for understanding
- Provides a basis for effective action

## Model

A framework for organization of theory and knowledge in a clinically relevant context

## What's the difference between a theory and a model?

**Theory**- Conceptual framework

**Model** - Explains how a conceptual framework is applied to practice

## Theory & Policy That Informed Our Model

## Part C - Individuals with Disabilities Education Act (IDEA)

Early intervention Services:

- Family centered
- Provided in natural environments
- Interdisciplinary and coordinated team efforts

## International Classification of Functioning, Disability and Health (World Health Organization, 2001)

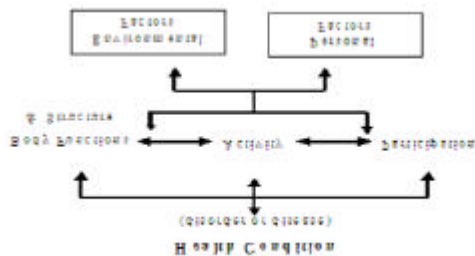
### Aim:

Provide a standard language and framework for the description of health and health-related states. language and framework for the description of health and health-related states.

## International Classification of Functioning, Disability and Health (ICF)

- A systematic and comprehensive framework to describe the relationships among body structures and functions, activities, and participation for children with developmental delays or disorders
- Application for making decisions on outcomes and interventions

### Current Understanding of Interactions Between Components of Health (ICF, 2002)



### Part I: Functioning & Disability

System Level: Body Functions and Structure

Person Level: Activity

Person-Environment  
Interaction Level: Participation

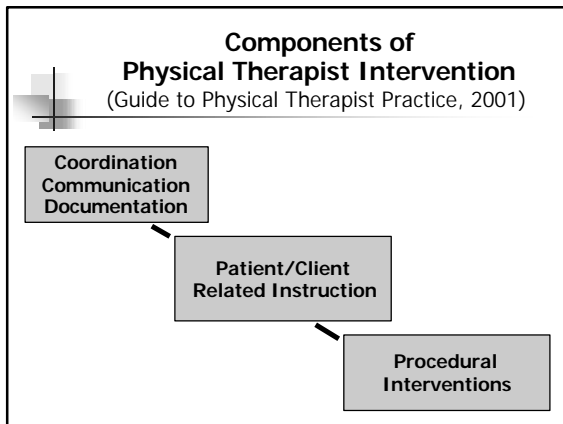
### Part 2: Contextual Factors

- Personal Factors
- Environmental Factors

### Application to Early Intervention

Identification of:

- Relationships among the dimensions of health that are most relevant for a child
- Personal and environmental factors that enhance or restrict activity and participation.
- Assumptions and rationale for making decisions



**Guide to Physical Therapist Practice  
(APTA, 2001)**

All physical therapist interventions include all three components!

**Knowledge & Research That  
Informed Our Model**

- Themes for Early Intervention**
- Providing families the opportunity to identify their concerns and needs
  - Sharing information with families
  - Identification of meaningful outcomes
  - Providing individualized services that support family experiences and address the child's developmental needs
  - Collaboration to ensure services are appropriate and meet family needs
- (Guralnick, 1998; Jackson, 1998; Filer & Mahoney, 1996; McWilliam, et al., 1995; Shonkoff et al. 1993)

**Limited research on intervention  
strategies and procedures that are  
most effective for children and  
families receiving early intervention**

- Home-based, Family-Centered Model**  
Chiarello and Palisano (1998)
- Procedural interventions within context of motor play
  - Mothers were able to promote child's motor development through play
  - Positive social interactions
  - Mothers reported high satisfaction and indicated needs were addressed

### **Infant and Mother Characteristics, Family Functioning and Interactive Ability** Palisano, Chiarello and Haley (1993)

- 36 mothers and infants with motor delays receiving early intervention
- Infants at higher levels of motor development provided clearer cues and were more responsive to their mothers
- Family resources were the strongest predictor of infant's interactive ability.

### **Mothers' Perception of Family-Centered Care in Early Intervention**

O'Neil, Palisano and Westcott, 2001

- Parenting stress was the strongest determinant of mothers' perception of physical therapist service
- Child related parenting stress was correlated with mother satisfaction with physical therapy
- Findings support a family-centered approach and suggest that family ease of care giving is an important outcome of early intervention

### **Physical Therapist Attitudes Towards Family-Centered Care in Early Intervention** (O'Neil, et al., 2001; O'Neil & Palisano, 2000)

- Therapists reported strong; positive attitudes towards family-centered care
- Mothers' reported that therapists use family-centered behaviors
- Most mothers found therapists to be helpful, knowledgeable, positive, and good communicators
- Most therapists thought that it is "very important" to "extremely important" to emphasize functional activities and use toys to motivate and engage a child

### **Focus Groups: What Families' Value from Therapists in Early Intervention**

(Chiarello, 199?)

21 caregivers of children in early intervention

Four themes emerged:

- Trusting relationship
- Commitment
- Sharing knowledge and provision of resources
- Team approach.

### **IFSP Objectives with a Motor Component** (Deitz-Curry, Aaron, & Chiarello, 2001)

- 102 objectives reviewed from from 10 IFSPs
- The child was the focus of all but one objective
- 73% of objectives related to activity, 27% to body structure and function, 0% to participation
- IFSP objectives may not completely reflect IDEA
- Procedural interventions, particularly functional training in a play context, were the primary emphasis during home visits

**Thank-you!**

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## Early Intervention Outcomes

## Outcomes

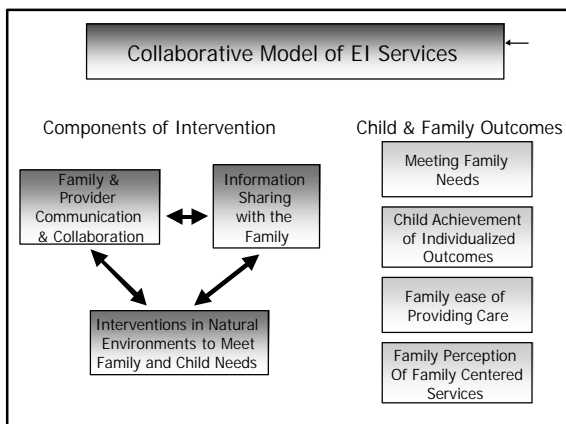
- "A final or decisive result"
  - Webster Dictionary
- "Results of patient/client management, which include remediation of functional limitations and disability, optimization of patient/client satisfaction, and primary or secondary prevention"
  - Guide to Physical Therapist Practice, 2001

## Outcomes

- End result of clinical activity or service
- Information about child's performance improvement
- Information on change
  - Law et al 2000

## Outcomes in EI

- A Top Down Approach & Framework
  - Disablement Model – functional deficit
  - Enablement Model – functional abilities
- The IFSP meeting
  - The team identifies outcomes based on child and family goals and needs
- IFSP Objectives
  - Parent goals for their children
    - Observable & Measurable



## Achieving Outcomes

- Purpose
  - To determine if IFSP objectives have been met
    - Systematic documentation
  - To attribute changes to EI services
    - Clinical decision making
  - To provide information for program improvement
    - Program accountability
  - To contribute to knowledge base
    - Evidence based practice

## Achieving Outcomes

- Tasks
  - Examine IFSP objectives
  - Determine measurable indicators of interventions and outcomes
  - Collect and analyze information about effectiveness of services
  - Make changes to services as appropriate

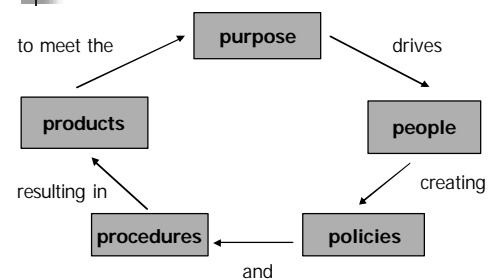
## Achieving Outcomes

- Data Collection
  - Child and family data (i.e., case review, questionnaires, interviews, standardized measures, observations)
  - Data on service level characteristics

## Evaluation Questions: Achieving Outcomes

- EI Program
  - What characteristics of EI services are associated with positive changes in child and family well-being?
  - Do some children and families benefit more than others?
- Ecological Context
  - What child, family, and community characteristics are associated with positive changes in child and family well-being?
  - Do some children and families benefit more than others?

## Problem-solving process of program evaluation (AOTA, 1999)



## Meeting Family Needs

- Need to determine Family Needs
  - Family Need Survey (Bailey, 1992)
  - Family Resource Scale (Dunst et al, 1984)
  - Family Support Scale (Dunst et al, 1988)
  - Parenting Stress Index (Abidin, 1995)
  - Structured interview

## Child Achievement of Individualized Outcomes

- Top-Down Approach
  - Environment
    - Context
  - Participation
    - Performance measure
  - Activity
    - Functional measure (capability)
  - Body Function & Structure
    - Impairment & pathophysiology

## Environment

- Physical
- Social
- Cultural
- Institutional
- Family
- Economic

## Participation

- Home & community context
  - Interpersonal relationships
  - Community life
  - Education
  - Self-management
  - Work leisure
  - Mobility

## Participation

- Home & community context
  - Performance Measure: Observable/measurable
    - Goal Attainment Scaling
    - Home Observation for Measurement in the Environment (HOME)
  - Judgment Measure: Questionnaires
    - PPTOMS
    - Family Routines Inventory (Gallagher, 1983)

## Activity

- Functional ability
  - Personal Care
  - Communication
  - Movement
  - Social Skills & Behaviors
  - Cognition and Learning

## Activity

- Functional Ability Measures
  - Observation
    - Gross Motor Function Measure (GMFM)
    - Functional Independence Measure for Children (WeeFIM)
    - Bayley Scales of Infant Development (BSID)
    - Peabody
    - Alberta Infant Motor Scale (AIMS)
  - Judgment
    - Pediatric Evaluation of Disability Inventory (PEDI)
    - Vineland Adaptive Behavior Scale (VABS)

## Body Structure & Function

- Impairment (systems)
  - Neurological
    - Kinesthetics, sensation, pain, reflexes
  - Urogenital
    - Bowel and bladder function
  - Musculoskeletal
    - Body movement, strength, flexibility, ROM, tone
  - Psychological
    - Mood, affect, motivation

## Body Structure & Function

- Impairment measures
  - Voice/Speech/Hearing
    - Attention to sound, sound production
  - Vision
    - Tracking, orientation to objects
  - Digestion
    - Chewing swallow
  - Respiratory & Cardiovascular
    - Color, respiratory rates, heart rate

## Family Ease of Care-giving

- Family concerns/supports
  - Parent Behavior Checklist
  - Child Behavior Checklist
  - Nursing Child Assessment Teaching Scale (NCATS)
    - Teaching component
  - Child Health Questionnaire (CHQ)
  - Parent Satisfaction
  - Parenting Stress Index
    - Parent-child interaction scales

## Family Perceptions of FCC

- Measures of Processes of Care
  - (King et al, 1995)
- Brass Tacks: A self-rating of family centered practices in early intervention
  - McWilliam et al, 1991
- Family centered program rating scale
  - Murphy & Lee, 1991

## Practical Application

- Do I do a family assessment to identify service needs (needs assessment)?
- Do I provide services in a timely and appropriate manner (monitoring and accountability)?
- Do I assist the family in identifying outcomes important to them and their child (process)?

## Practical Application

- Do I promote a partnership with the family (quality, process)?
- Do my intervention methods match family needs (quality, process)?
- Have my services contributed to achieving child and family outcomes (outcomes)?

## Key Issues in Outcomes

- Meaningful
- Observable
- Measurable

## Writing IFSP objectives and measures

IFSP Objectives & Measures	Video Analysis
Meeting Family Needs	
Achievement of Individualized Outcomes	
Family Ease of Caregiving	
Family Perception of Family Centered Service	

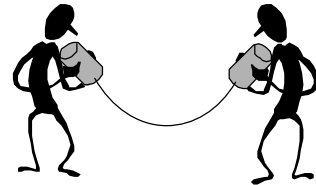
Thank you!

- Questions?
- [Moneil@drexel.edu](mailto:Moneil@drexel.edu)

## Intervention



## Family and Provider Communication & Coordination



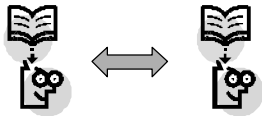
## Key Concepts

- Communication
  - Passing on and receiving information among team members
- Coordination
  - Systematic process to identify need for services, assure services are accessed, and provide integrated services
- Challenge
  - Structure and process of EI service delivery
  - Two systems: EI and healthcare

## Sample Strategies

- Health Care Professionals
  - Communicate and coordinate with a health care provider identified by the team and document the interaction.
- Community Resource
  - Assist family in identifying and accessing community resources to meet child and family needs.
  - If indicated, provide community resource with information to support child and family participation.
- Early Intervention Team
  - Participate in a co-visit or consultation visit with another early intervention team member to coordinate strategies to promote child and family outcomes.
  - Develop and implement a mechanism for routine team collaboration regarding child and family needs.

## Sharing Information with Families



## Key Concepts

- Meeting information needs: Key outcome of EI
- Sharing with each other knowledge, skills & expertise
- "Parent education" controversy > "partnership education"
- What knowledge and skills do we learn from families?
- What knowledge and skills do we provide to families?
- How do we provide knowledge and skills to families?

## Sample Strategies

- Family Routine and Outcome Matrix (Bricker, 1998)
  - Family Discussion: What does the family like to do? What goes well and not so well? What are the family goals for the child?
  - Provide strategies that the family can use during their daily routines to promote their child and family outcomes.

	Exploring objects	Gesturing to make wants known	Sitting by self
Bath time			
Outside play time			
Bedtime			

### Provide Information

- Family Discussion: Information needs of the family
- Provide resource information on the identified topics through books, worksheets, pictures, videotapes, websites, etc.

### Care Providers

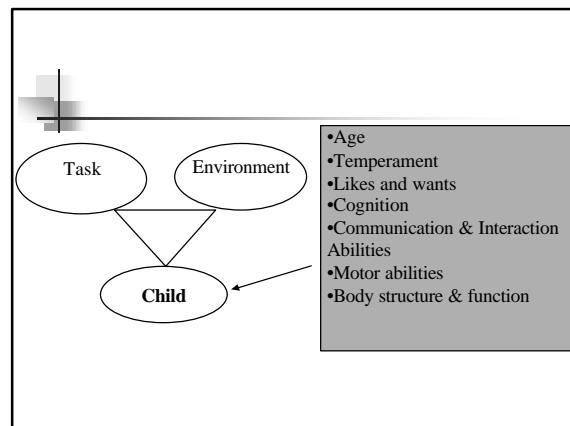
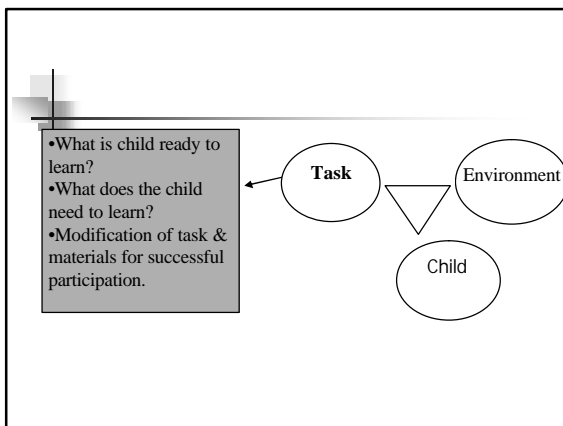
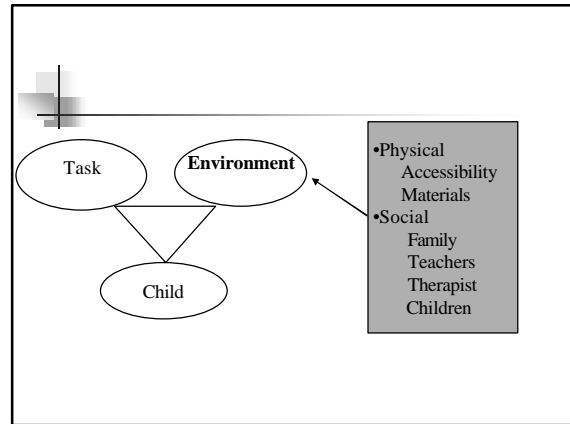
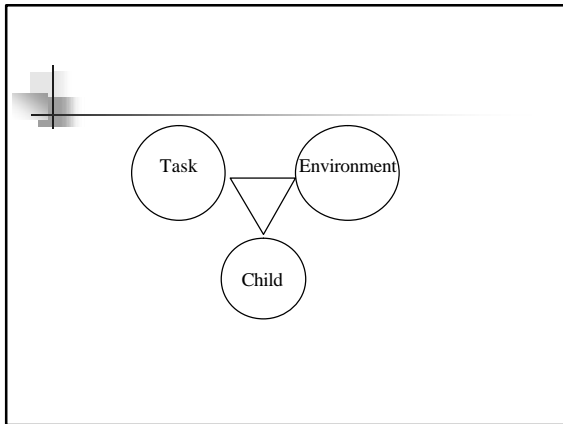
- Provide an early intervention visit at a time when another care provider who is important in the child's life can be present.
- Support the care provider's ability to interact with the child.

## Interventions in Natural Environments



## Key Concepts

- Strategies to directly influence child's development, activity, and participation in family life
- Location / Setting: Where the child lives, learns, and plays
- Routines / Activities: What events / tasks the child participates in during the day?
- Learning Opportunities: What abilities need to be enhanced to enable child to participate?



### Intervention Focus in EI

- Foundation: self-regulation, parent-child interactions, play
- Self-care: feeding, bathing, dressing, carrying

### Self-regulation

- Day-night rhythms, Emotions, Attention
- Self-awareness
- Structure & predictability
- Coping

## Parent-child interaction

- Foundation for social competence
- Essential for optimal development
- Responsiveness, appropriateness, sensitivity, reciprocity, adaptation, repertoire of behavior



## Playfulness

- Intrinsically motivated
- Internally controlled
- Process oriented
- Provides the freedom to suspend reality
- Fun
- Confirms child's self concept
- Play as a domain in its own right
- Play with motion, objects, language, roles, and rules



## Self-care

- Positioning
- Materials & equipment
- Functional training
- Holistic



## Sample Strategies

- Context of Intervention
  - Provide visits at a community location identified by the family such as the playground to promote the child's participation in the community.
  - During visits to the home / childcare setting, provide intervention in a variety of rooms / locations to support the child's participation in daily activities and routines.
- Daily Activities and Routines
  - Provide support and intervention activities during identified daily routines by the family (such as play, feeding, bathing) in order to address the child and family outcomes on the IFSP
  - Provide recommendations to adapt the environment, task, or materials including the use of assistive technology.

## Intervention Work Group

Component	Strategy	How to Implement?	Facilitator	Barrier
Communication & Coordination				
Sharing Information				
Natural Environments				

## Thank You!

- Questions?
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