

Progress Monitoring in Early Childhood Programs

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Defining Terms

Progress Monitoring:

- a scientifically based practice that is used to assess students' academic performance and evaluate the effectiveness of instruction.

Progress monitoring can be implemented with individual students or an entire class.

- National Center on Student Progress Monitoring
- 
- A decorative graphic consisting of several sets of concentric circles, resembling ripples in water, located in the bottom right corner of the slide.

In Early Childhood, we carry out assessments for many reasons:

- To determine the existence of a delay or disability
- To determine eligibility for services
- To determine what to teach (develop IEP/IFSP goals/objectives)
- To monitor individual child progress—is current set of interventions working?
- To determine whether a program as a whole is improving children's outcomes
- To be accountable

Goals for all of us are...

- To minimize the amount of assessment and maximize the amount of service and intervention....



So, in the name of efficiency, we often try to use the same tool for as many purposes as possible....

But different tools offer specific advantages for different purposes.

In Early Childhood, we
have two approaches for
progress monitoring...

1. Critical Skills Mastery
 2. General Outcomes Measurement
- 

DEC Recommendations for Curriculum, Assessment and Program Evaluation (2007)

- EC Assessment Teams have 2 assessment options for monitoring progress:
 - *Critical Skills Mastery Approach*--(e.g., Curriculum Based Assessment [not the same as CBM])—mastery of individual skills at single points in time)
 - *General Outcome Measurement Approach*—(e.g., IGDIs—Individual Growth and Development Indicators)—vocabulary growth trajectory based on many points in time

Developers of GOMs in Early Childhood

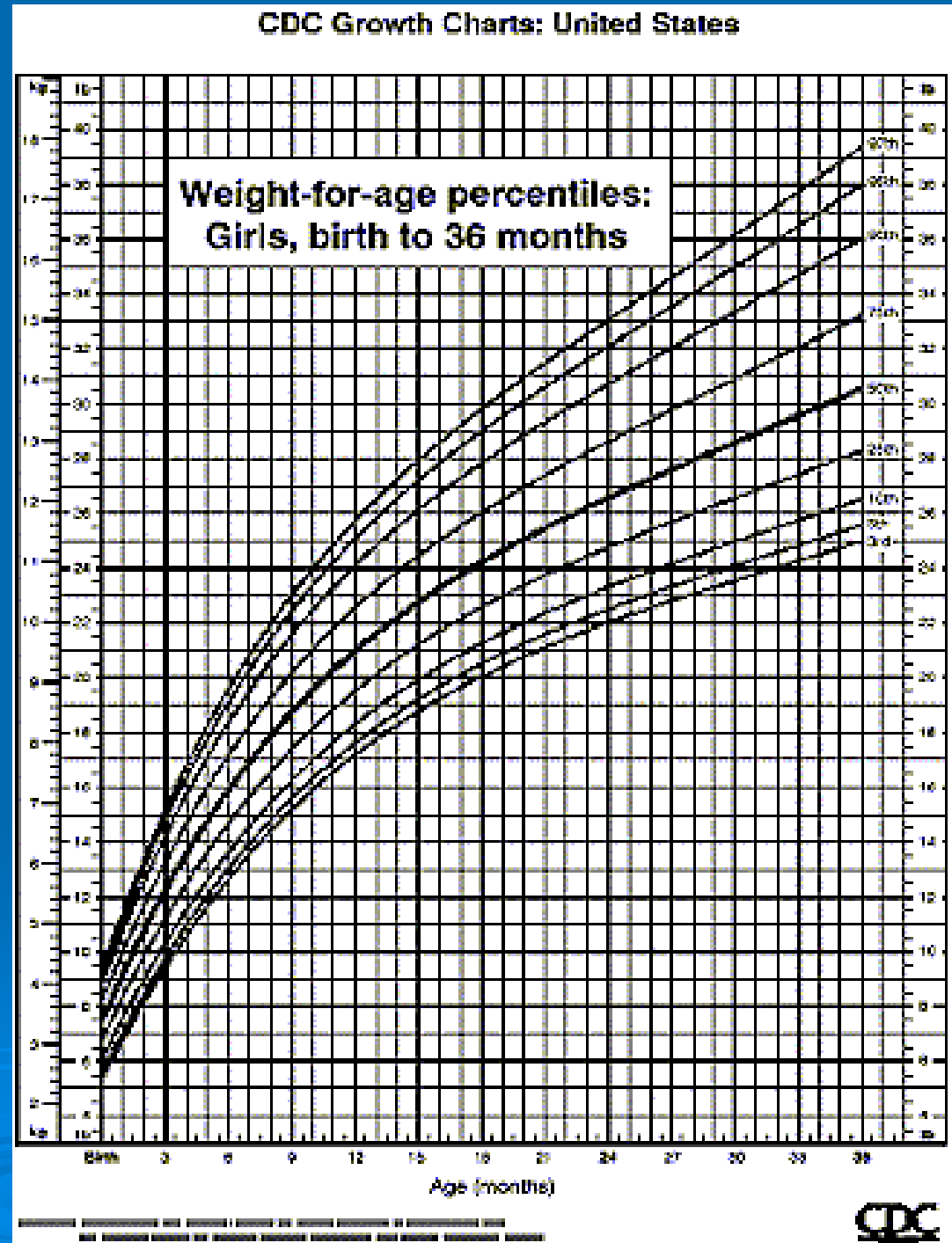
- University of Kansas: Charles Greenwood, Dale Walker, Jay Buzhardt, Kathleen Baggett, Judith Carta
- University of Minnesota: Scott McConnell & Mary McEvoy
- University of Oregon & Dynamic Measurement Group: Ruth Kaminski & Roland Good
- Others: Pat Snyder, Amanda VanDerHeyden, Jim DiPerna & Paul Morgan

Features of Progress Monitoring Measures in a GOM Framework

- Reflect progress toward a socially valid general outcome
- Strategic (a leading indicator) not comprehensive measurement
- Chart an individual's progress
- Brief and quick to administer
- Repeatable (rate of growth, slope)
- Trend line compares expected vs. actual rates of learning

The most well known IGDIs are Pediatric Growth Charts

Widely used by pediatricians and parents



Trajectory or Rate of Growth is a Key Feature of GOM Approach to Progress Monitoring

- Shows whether child's current rate of growth is adequate for reaching the outcome.
- Can easily communicate progress with family members, other professionals
- Can indicate whether change in intervention is needed
- Even when trajectory is far from typical, a positive trendline deflection in response to an intervention can convey when changes are "closing the gap"

Measures for Very Young Children: *Individual Growth and Development Indicators (IGDIs)*

- For Infants and Toddlers (<http://www.igdi.ku.edu>)
 - Early Communication (Language)
 - Early Problem Solving (Cognition)
 - Early Movement (Motor)
 - Early Social (Social/Emotional)
- For Preschoolers (Early Literacy) (<http://ggg.umn.edu/>)
 - Picture naming (Spoken Vocabulary)
 - Alliteration
 - Rhyming

Early Communication Indicator (ECI) for Infants and Toddlers

➤ The General Outcome

- “The child uses gestures, sounds, words, or sentences to convey wants and needs or to express meaning to others.”
- In a national survey of parents and practitioners, expressive communication was a highly rated outcome of early childhood
 - Priest et al., 2001

ECI Constructs and Key Skills

Early Communication Indicator

General Outcome: "The child uses gestures, sounds, words, or sentences to convey wants and needs or to express meaning to others"

Constructs:

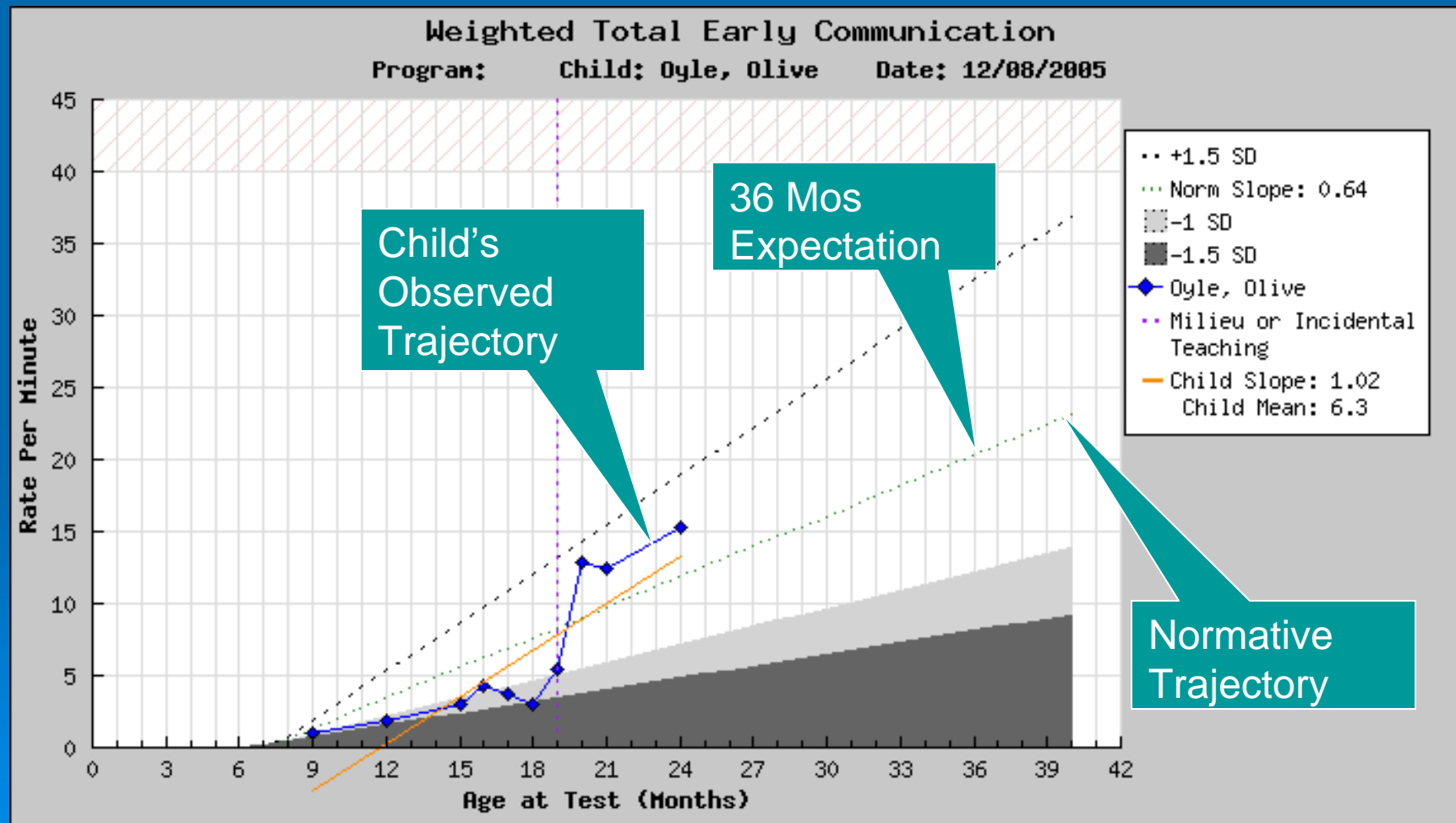


Key Skills: Gesture Vocalization Single Words Multiple Words

Early Communication Indicator for Infants and Toddlers

- Key Skill Elements
 - Gestures
 - Vocalization
 - Single Words/Signs
 - Multiple Words/Signs
- Combine to form
Total Communication
Indicator

Individual Level Results: *Total Communication Growth Chart*



Uses of Progress Monitoring in GOM Approach

- Identifying children who need additional support
- Monitoring improvement
- Informing decisions about intervention for individuals, programs, local, state
- Informing state OSEP accountability
 - See ECO Crosswalk
<http://www.fpg.unc.edu/~eco/pdfs/IGDI0-3Crosswalk7-03-06posted.pdf>

Crosswalk to OSEP Outcomes

Individual Growth and Development Indicators for Infants and Toddlers (IGDI 0-3) Crosswalk to Child Outcomes

| Outcome 1: Positive social relationships | Outcome 2: Acquires and uses skills and knowledge | Outcome 3: Takes appropriate action to meet needs |
|---|---|---|
| <p><u>Early Social Indicator</u></p> <ul style="list-style-type: none"> ▪ Positive Nonverbal Social Behavior Toward Peer ▪ Positive Verbal Social Behavior Toward Peer ▪ Positive Nonverbal Social Behavior Toward Adult ▪ Positive Verbal Social Behavior Toward Adult ▪ Positive Nonverbal Social Behavior (Nondirected) ▪ Positive Verbal Social Behavior (Nondirected) ▪ Negative Behaviors | <p><u>Early Communication Indicator</u></p> <ul style="list-style-type: none"> ▪ Gestures ▪ Vocalizations ▪ Single Words ▪ Multiple Words <p><u>Early Problem-Solving Indicator</u></p> <ul style="list-style-type: none"> ▪ Looks ▪ Explores ▪ Functions ▪ Solutions | <p><u>Early Movement Indicator</u></p> <ul style="list-style-type: none"> ▪ Transitional Movements* ▪ Grounded Locomotion* ▪ Vertical Locomotion* |

* Precursor skills for functional behaviors. These skills may not be appropriate or expected for some children, including those with sensory, motor, or other impairments.

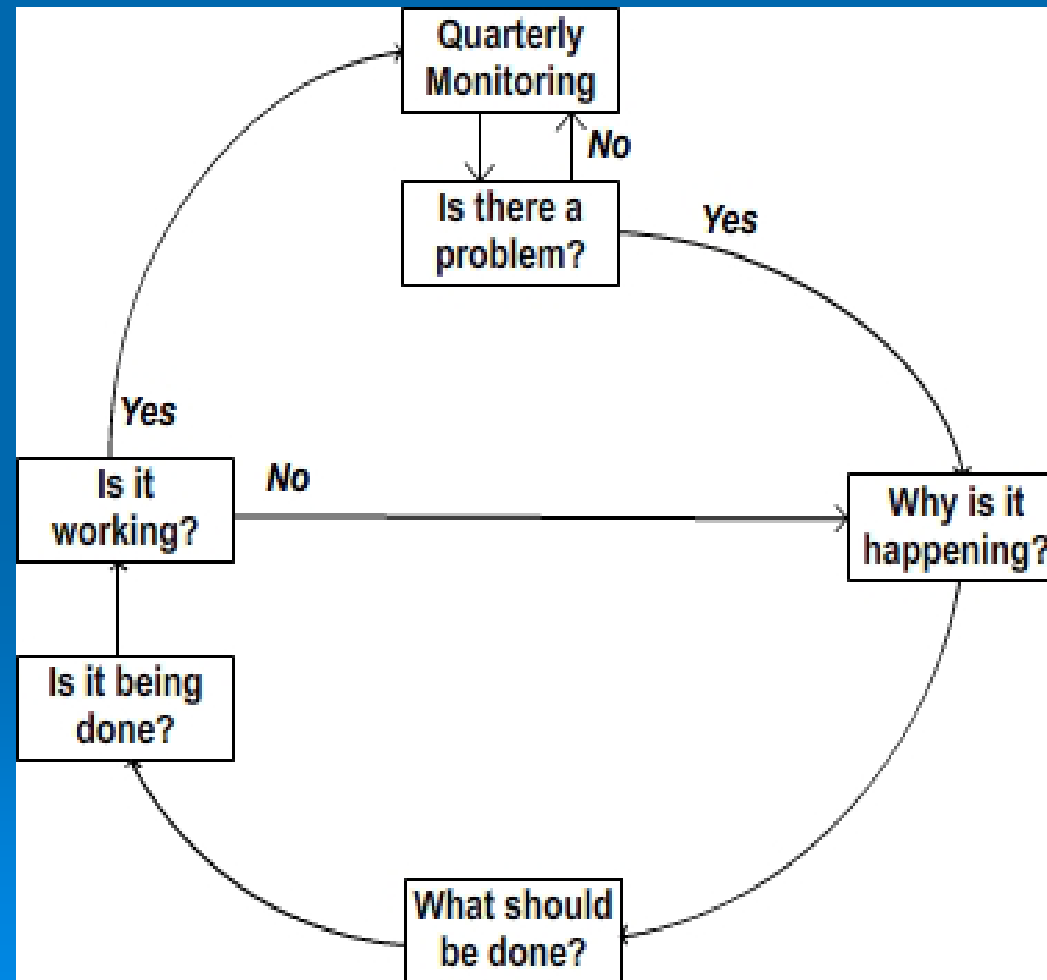
Note: Indicators or key skills that are not precursor to or components of any of the three outcomes, and therefore not included in the crosswalk, were:

Early Movement Indicator

- Throwing/Rolling
- Catching/Trapping

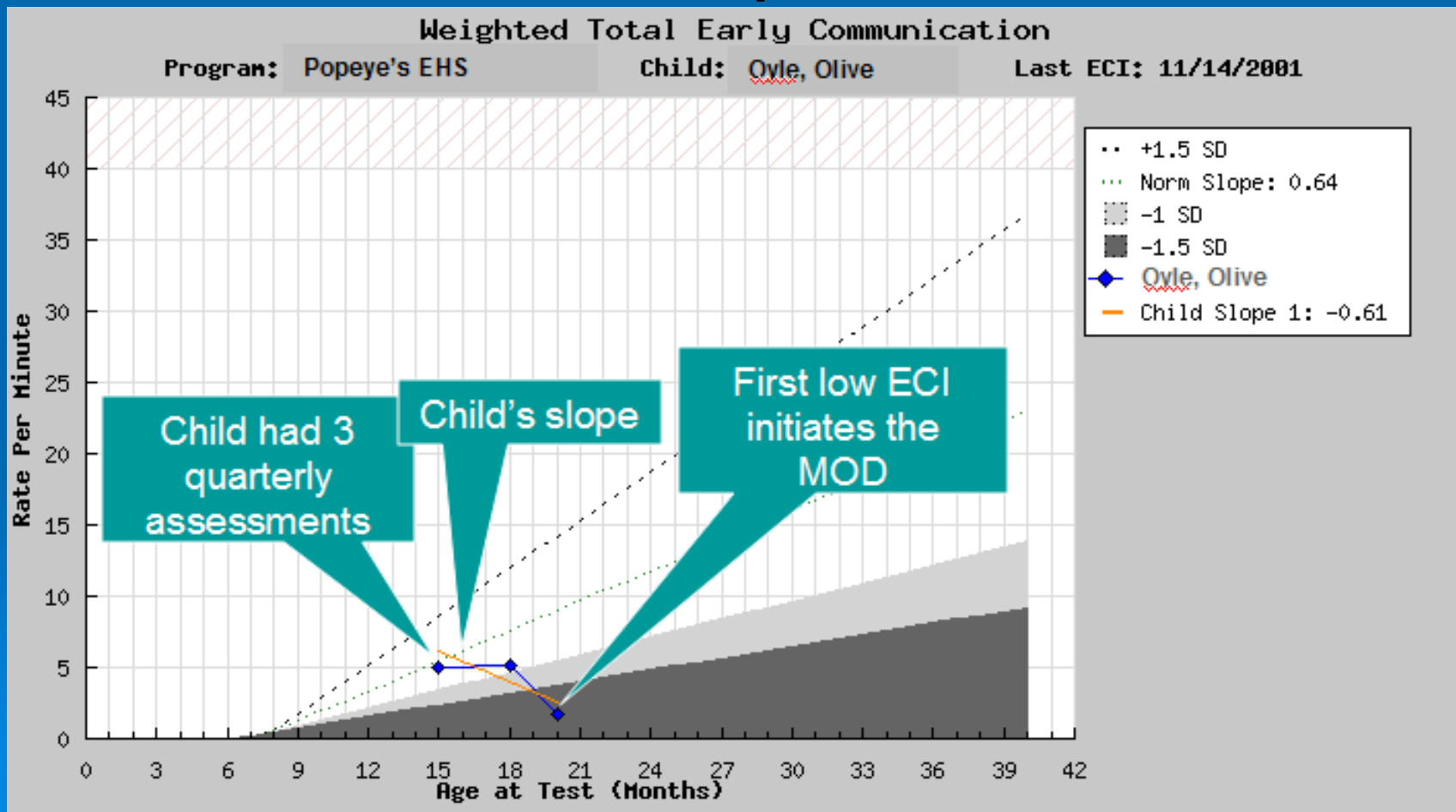
Instruction Decision-Making Model Using GOMs

- More Dynamic
- More Data-Driven
- More Responsive



Using GOM for Instructional Decision-Making

Is there a problem?

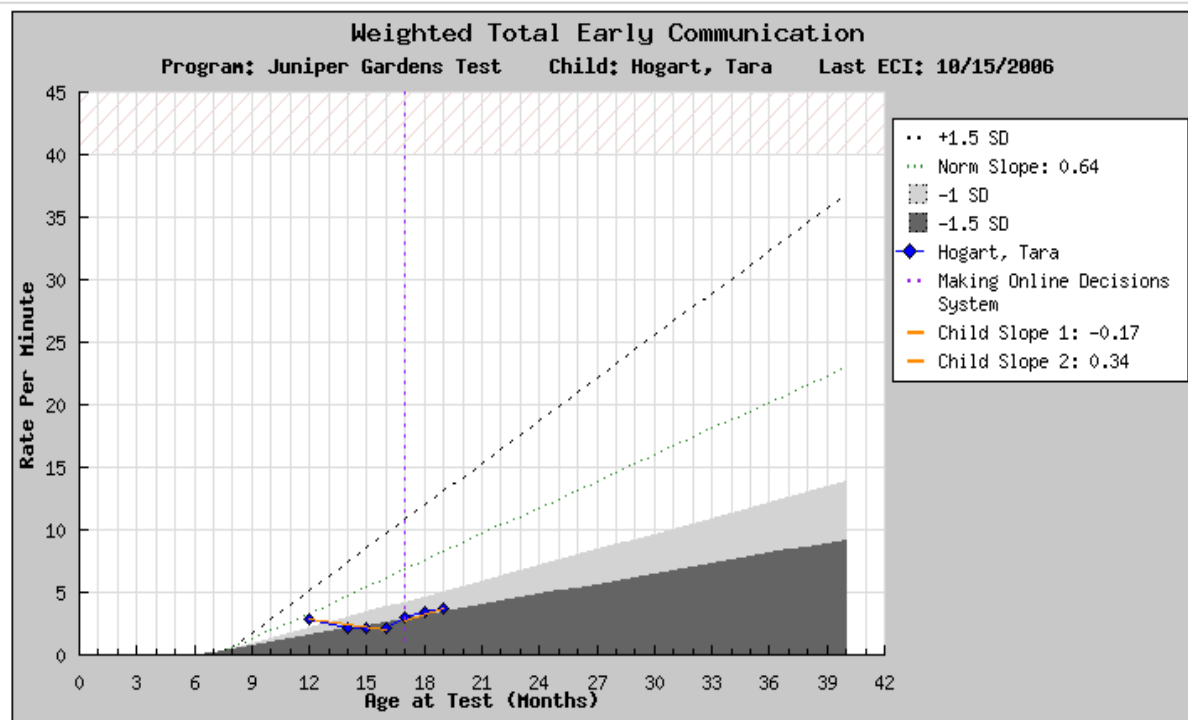


Making Online Decisions (MOD)

MOD for child Tara Hogart

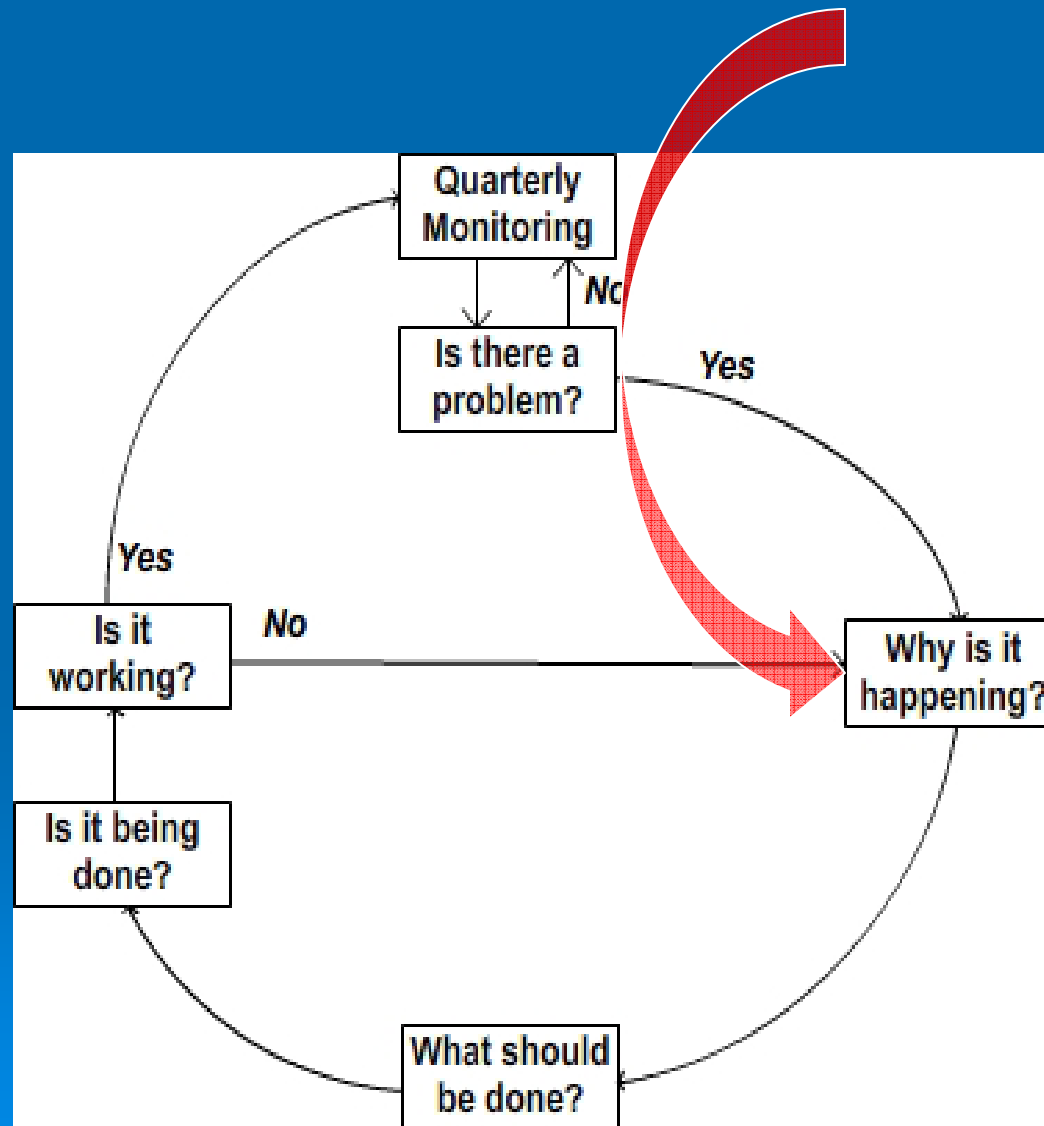
Currently on Step 4 - Home Visitor's Fidelity Follow-up Checklist

| Step | Complete? | Completed on |
|--|-----------|--------------|
| Step 1 - Is there a problem? | Yes | 02/17/2008 |
| Step 1 - Is there a problem? | Yes | 02/17/2008 |
| Step 2 - Why is it happening? | Yes | 02/17/2008 |
| Step 3 - What should be done? | Yes | 02/17/2008 |
| Step 4 - Is it being done? | | |
| Step 4 - Home Visitor's First Fidelity Checklist View/Print First Checklist <i>(for observation done on 07/12/2006)</i> | Yes | 02/17/2008 |
| Step 4 - Home Visitor's Fidelity Follow-up Checklist View/Print Follow-up <i>(for observation done on 08/13/2006)</i> | Yes | 02/17/2008 |
| Step 4 - Home Visitor's Fidelity Follow-up Checklist View/Print Follow-up <i>(for observation done on 09/14/2006)</i> | Yes | 02/17/2008 |
| Step 4 - Home Visitor's Fidelity Follow-up Checklist View/Print Follow-up <i>(for observation done on 10/15/2006)</i> | Yes | 02/17/2008 |
| Step 5 - Is it working? | | |



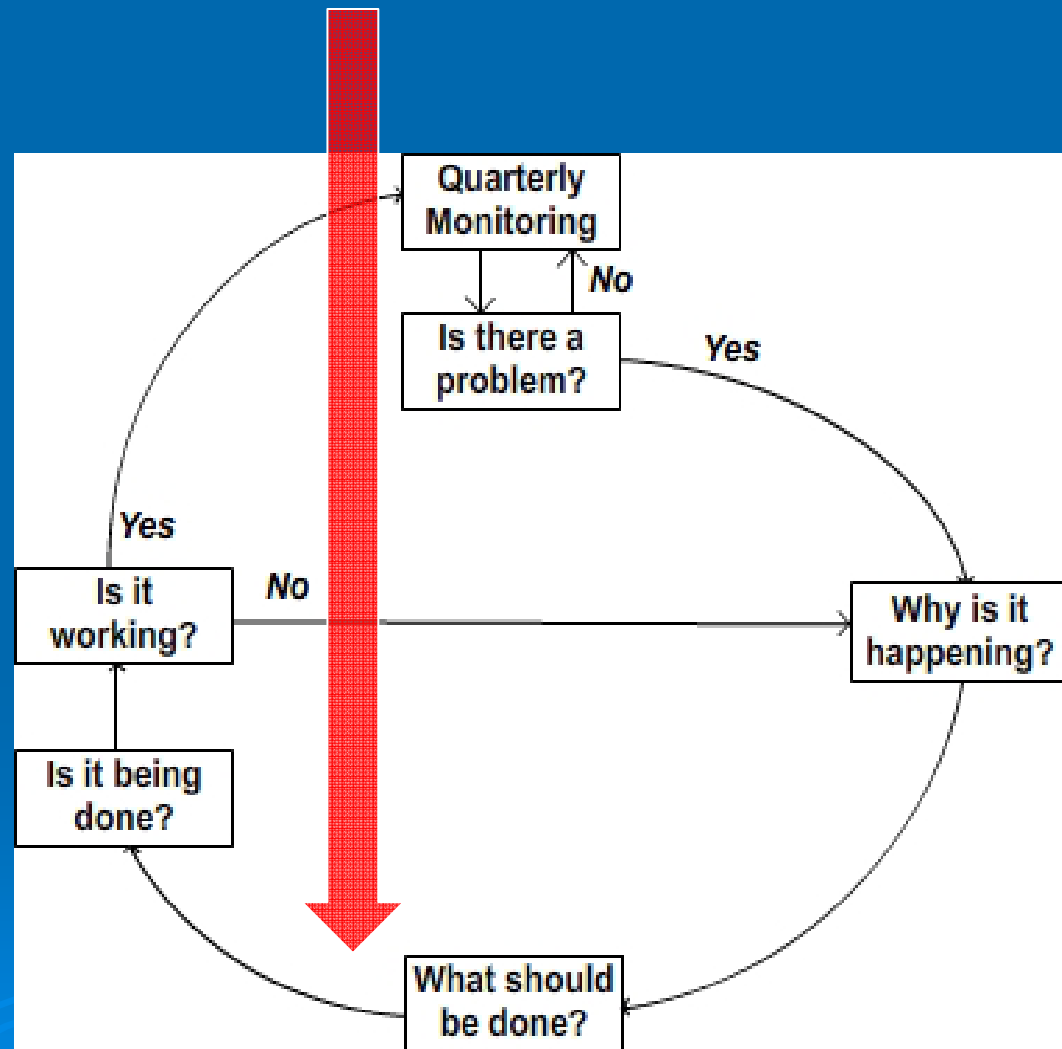
Why is it happening?

Team gathers information about **child's current development**, environment, medical issues, past interventions,



What Should Be Done?

- What Routines?
- Where?
- Who Should Do?

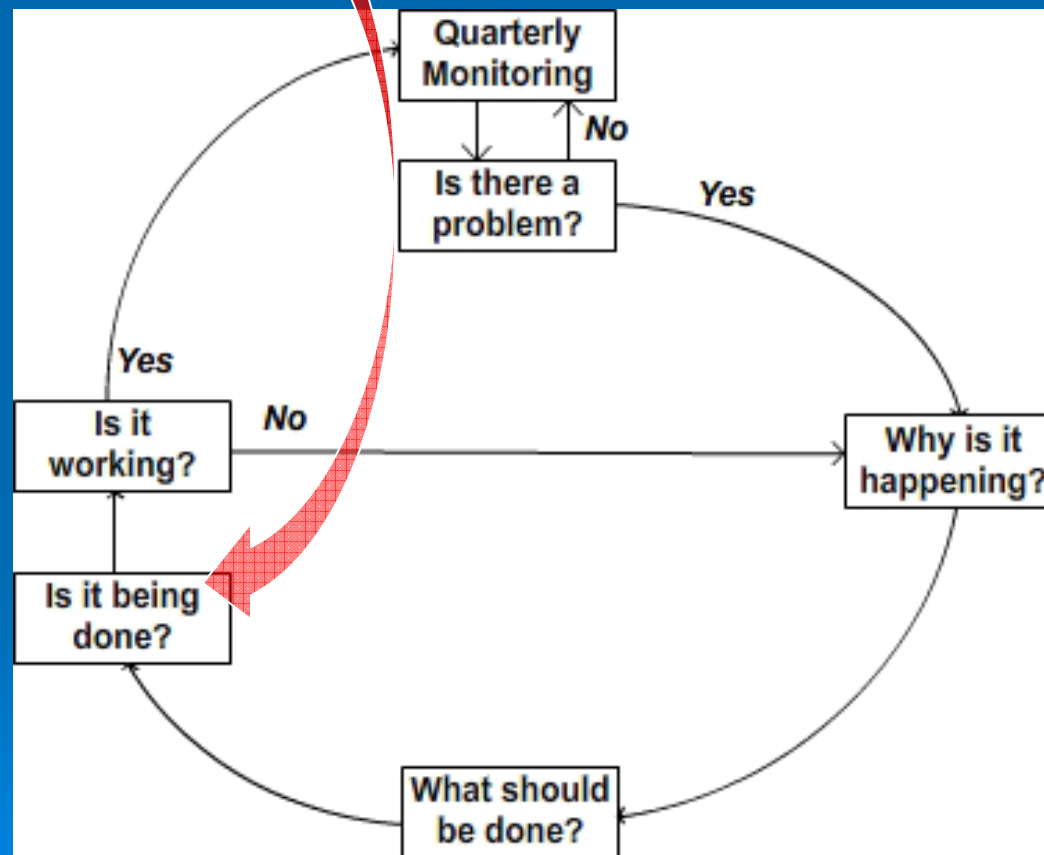


What Should Be Done?



MOD Identifies Optional Intervention Strategies Based on Child's Proficiency on ECI and Feasible Routines for Families

Is It Being Done?



Fidelity Checklist provides some indication of quality of implementation

View MOD details for this child

Home Visitor's First Fidelity Checklist

After the ECI assessment indicates a need for more frequent monitoring, and you have selected a specific intervention strategy, please check either Yes or No to each step below to indicate whether or not it has been done.

Please only use this checklist the first time you go over the intervention materials. On each visit after this one, use the Home Visitor's Fidelity Follow-Up Checklist.

Child: Jenny Juniper
 *Assessor : Data Entry, Fake
 *Date of visit: Dec 01 2006

*These are the strategies and routines you selected. Please delete any that you did not discuss with the caregivers or that the caregivers said they will not use.

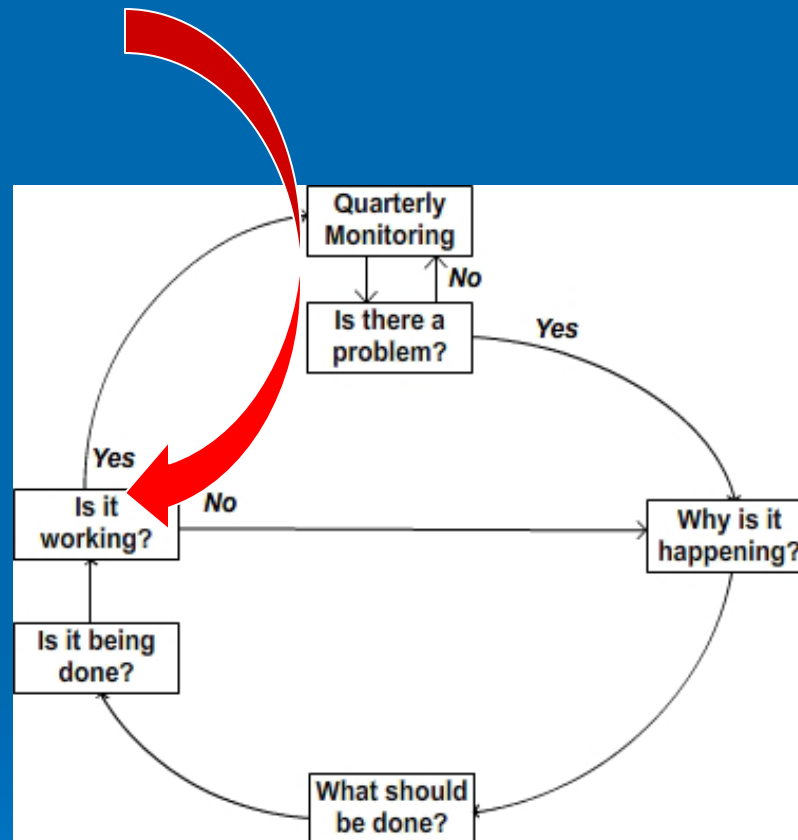
Following Child's Lead
 Diapering

| | |
|--|---|
| *1. Was the person with whom you reviewed the strategies the child's primary caregiver? (Select 'No' if unknown). | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| About how many hours does this person spend with the child a week? <input type="text"/> Hours <input checked="" type="checkbox"/> Unknown | |
| *2. I explained the concern to the parent/caregiver and showed them the ECI graph | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| *3. I talked to them about how they can help by using the strategy(s) across their daily routines. | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| *4. I helped them pick one (1) or two (2) routines in which they could do the strategies. | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| *5. I gave them the materials related to the strategies. | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| *6. I modeled/demonstrated how the parent/guardian should use the strategy(s). | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| *7. I role-played the strategies together with the parent/caregiver | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| *8. I observed the parent/caregiver perform the strategy(s). | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| *9. I showed them where to record their usage of the strategy(s) on the routines sheet. | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| *10. I asked the parent/guardian how they plan on using the strategy(s) across the routines. | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| *11. I suggested that they keep the routines sheet and intervention handout in a place they will see it every day. | <input checked="" type="radio"/> Yes <input type="radio"/> No |
| *12. I asked if they had any questions. | <input checked="" type="radio"/> Yes <input type="radio"/> No |

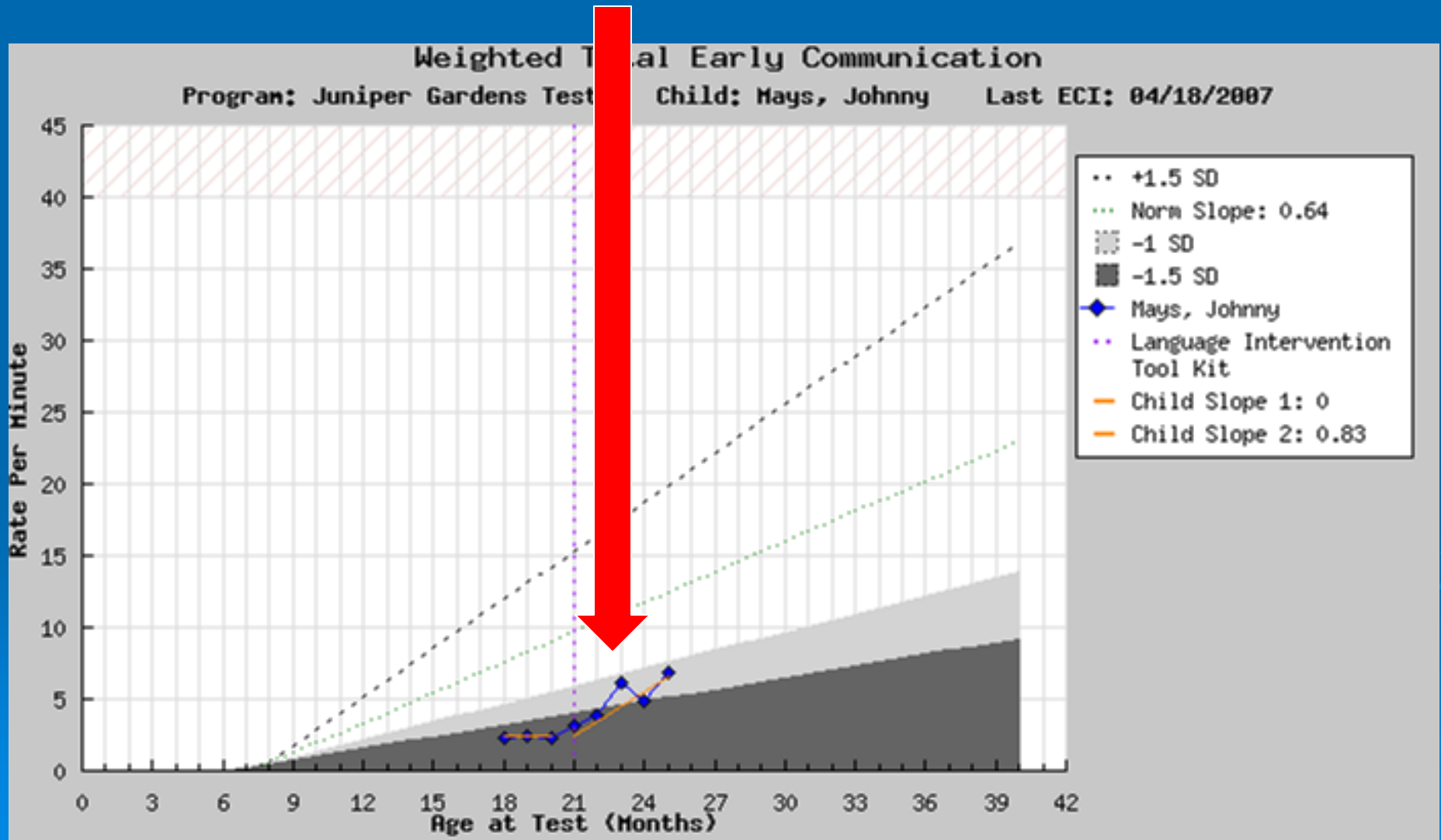
General Comments/Notes

Next >
Continue Later
Skip the Initial Checklist

Is It Working?



Progress Monitoring Using GOM shows change in trajectory.



Benefits/Strengths of GOM Approach

- GOMs not only show that children are acquiring skills, but they capture information about the *rate of growth*
- Rate of growth can be compared to normative rates as well as to child's own rate before or during an intervention or different phases or variations of intervention
- This makes GOMs a sensitive way of looking at effectiveness of interventions

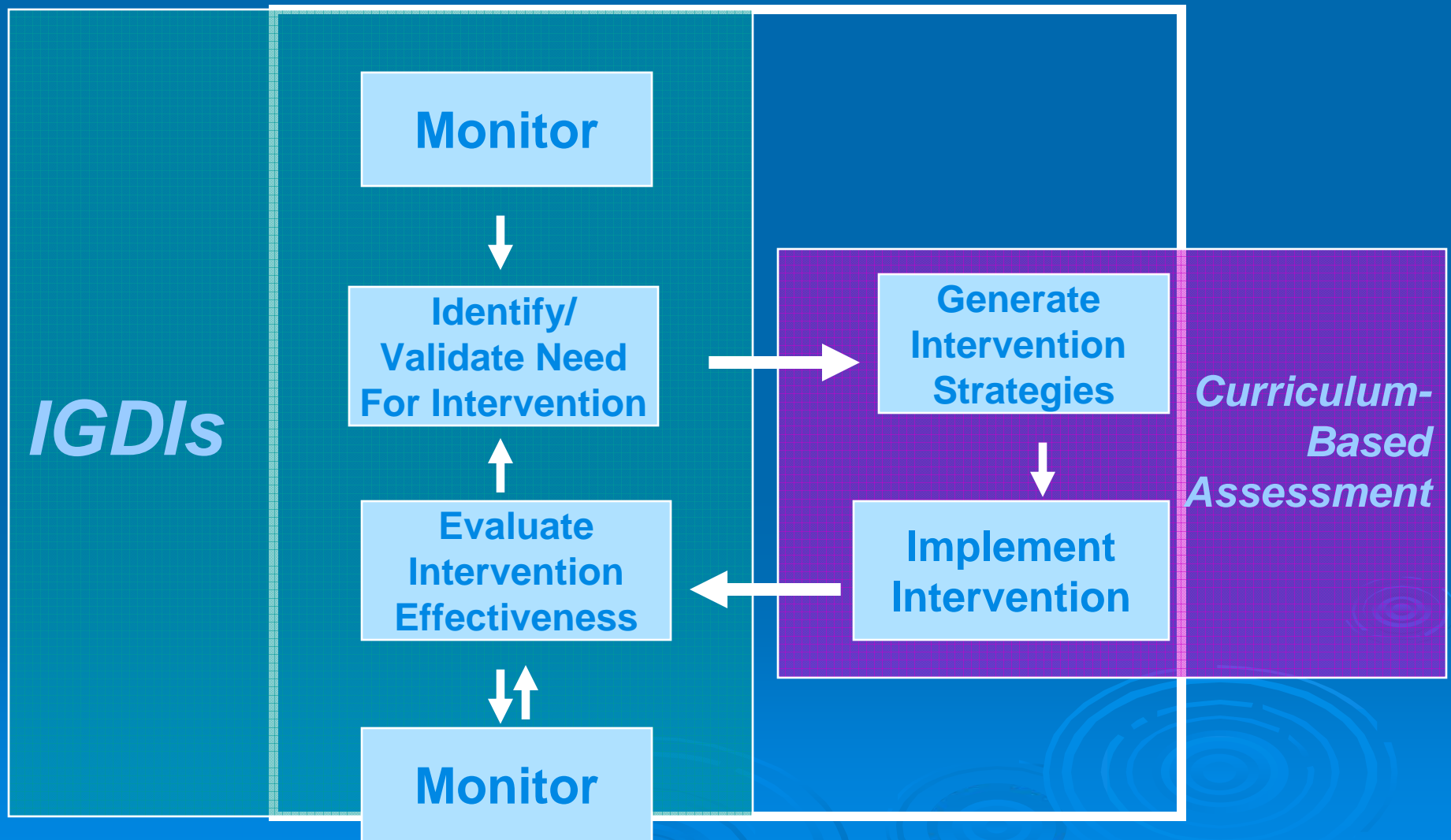
GOMS provide feedback about when intervention is on course

- Can help interventionists “see” when they’re making a difference
- Can help practitioners know more quickly when a change is necessary
- When trajectories of children in groups are aggregated, can help directors understand when programs need improvements and provide an index of accountability.

Some Differences in the Two Approaches to Progress Monitoring

- General Outcome Measurement
 - Specific, not comprehensive
 - Brief probes (several minutes)
 - Repeatability enables estimates of rate of growth
 - Rates of growth predict whether outcome will be achievable
 - Improvement indicates continue current intervention
- Mastery Monitoring Approaches
 - Comprehensive and sequential
 - Mastery indicates that a change in instruction is needed to address the next skill
 - Takes significant amounts of time to administer
 - Not usually repeated at frequent intervals
 - While they are used to show children are acquiring skills, not as easy to show rates of growth and whether eventual outcome will be achieved

IGDI Decision Making Model



Concluding Points

- GOM approach does offer reliable and valid tools for progress monitoring in early childhood.
- They can be used for many purposes in intervention decision-making.
- Their ease of use and illustration of growth make them excellent tools for communication about children's progress.
- Their sensitivity to growth allow for more frequent refinements and more effective interventions for individual children.

References

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- Greenwood, C. R., Carta, J. J., & Walker, D. (2004). Individual growth and development indicators (IGDIs): Tools for assessing intervention results for infants and toddlers. In B. Heward et al., (Eds.), *Focus on Behavior Analysis in Education: Achievements, Challenges, and Opportunities* (Chapter 6, pp. 103-124). Pearson/Prentice-Hall: Columbus, OH.
- Greenwood, C. R., Carta, Walker, D., Carta, J. J., & Hughes, K. (2006). Preliminary investigators of the application of the Early Communication Indicator (ECI) for infants and toddlers. *Journal of Early Intervention*, 28, 178-196.
- Greenwood, C. R., Carta, J. J., Baggett, K., Buzhardt, J., Walker, D., & Terry, B. (2008). Best practices integrating progress monitoring and response to intervention concepts into early childhood systems for infants and toddlers. In A. Thomas, J. Grimes & J. Gruba (Eds.), *Best practices in school psychology V*. Washington DC: National Association of School Psychology, Washington, DC.