## Clinical Guidelines for Early Language Milestones in Internationally Adopted Toddlers

<table>
<thead>
<tr>
<th>Age at Adoption</th>
<th># of English vocabulary words</th>
<th>MLU</th>
<th>Evidence of delays</th>
<th>Use of standardized tests</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>13-18 months</strong></td>
<td>By 18-21 months: 16&lt;br&gt;By 22-24 months: 50</td>
<td>2 word phrases by 22-24 months</td>
<td>Slow vocabulary growth: &lt;50 words or not producing 2 word phrases by 24 months</td>
<td>May use by 37-40 months or older; scores will slightly under-represent the child’s true ability (by 2-4 months)</td>
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<td><strong>19-24 months</strong></td>
<td>By 24-27 months: 21&lt;br&gt;By 28-30 months: 132</td>
<td>2 word phrases by 28-30 months; using them frequently by 31 months</td>
<td>No English words by 24 months; &lt;50 words by 28 months</td>
<td>May use by 37-40 months or older, except tests those sensitive to syntax and grammar—children adopted at 19-24 months still have delays in these areas.</td>
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<tr>
<td><strong>25-30 months</strong></td>
<td>By 26-27 months: 32&lt;br&gt;By 31-33 months: 79&lt;br&gt;By 37-40 months: 238</td>
<td>By 26-27 months, sequencing words, frequent 2 word phrases</td>
<td>Slow vocab growth, not adding English words within first few weeks home, &lt;50 words and/or no 2 word phrases by 31 months</td>
<td>English receptive and expressive delays continue through 40 months, cannot use tests in standardized manner at this age (3 ½)</td>
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Speech-Language Development Considerations for Parents Adopting Internationally

Language development is a life-long process that begins before birth as hearing develops and continues through adulthood. Infants are born with the ability to acquire any human language, but research has shown that in infancy babies learn to respond to the sounds of the language(s) they are exposed to and to “tune out” sounds that are not meaningful in their language(s).

International adoption presents a unique language-learning situation where, in most cases, a child stops learning the birth language and takes on a new “first” (only) language. Speech-language research has begun to study the effects of this language “switch”. We know that children acquire English rapidly upon adoption, but lose functional use of the birth language even more rapidly. Therefore, there is a period of time when they do not have age-appropriate skills in either language. Also, children adopted internationally may have initially been raised in institutional settings where language experience and stimulation was not optimal, which has been shown to increase the risk of language and other developmental delays. The incidence of speech-language disorders among different groups of internationally adopted children cannot be accurately estimated at this time, but concerns about speech-language development are common. One survey of adoptive parents found that communication skills were the parent’s primary concern one-year post adoption. Two other studies found that over 50% of internationally adopted children saw a speech-language pathologist for evaluation and 35% for treatment.

The following comments and suggestions have been prepared by speech-language pathologists striving to understand the unique language-learning situation of internationally adopted children and how it impacts evaluation and treatment recommendations.

Gather information in the birth country:

While in your child’s birth country, gather/record as much information as possible on skills in the birth language. Of course this will depend on the child’s age, and the access you have to people who know your child. If available, this information can be
helpful in the event that you have a concern later about the child’s English language development. Ideas include:

- Take special note of any information given regarding hearing or ear infections
- Make a video or audio tape of your child interacting with a native speaker
- Ask a caretaker to write down words, phrases or sentences the child says
- Ask the caretaker or a native speaking observer if speech is clear and how much of the time (s)he is understood
- Observe your child’s reaction/responses to the birth language (e.g. Does (s)he follow direction, attend to people talking to her/him, look toward objects when named, use only single words? Short phrases? Long sentences?)

**Show your child that you value the birth language:**

In the United States, few internationally adopted children become functionally bilingual, although there are exceptions where the adoptive families are bilingual. Maintaining the birth language does not have to be the goal. By valuing the birth language, parents acknowledge that the child once understood and/or spoke another language and honor the child’s heritage. Suggestions include:

- Learn phrases/sentences in the birth language and use them with your child
- Bring music and books from the birth country to use at home
- Attend cultural events where the language may be used
- Seek opportunities to interact with native speakers

**While your child is in the process of learning English:**

Most children begin to understand and use English very quickly upon adoption. However, research in the area of second language acquisition has shown that basic conversational language and language used in the context of routine daily activities is distinct from the language of thinking, reasoning and academic learning. The latter takes much longer to acquire, and includes learning the language of literacy. Ideas for facilitating language learning include:

- Use simple signs during the first months home.
- Encourage imaginary play. The child hears and uses language in a non-threatening situation.
- Choose preschool or play groups with an age mix where the child will have older or same age language models, but will also have peers who are at lower levels of language learning.
Avoid using television as language learning time, since it is passive language exposure.

Read with your child. Books provide incredible opportunities for language-rich interactions.

Model and emphasize correct grammar, word order, etc. without “correcting”.

**What to expect:**

The body of formal research into “typical” language development among internationally adopted children remains small, but has grown substantially over the past five years. These studies help us determine which children are developing ‘typically’ given the situation of their adoption and language switch and which children will need speech-language intervention or other support. Based on the available research, we can expect that:

- Children adopted before age 12 months begin talking at the same age as non-adopted peers and are fully “caught-up” with non-adopted peers in English skills by 1 year post adoption.
- Children adopted between 1 and 2 years of age are likely to be “caught up” to peers in most areas of language by 3 to 3½ years of age, but may continue to have some grammar differences.
- Children adopted from 2 years of age on generally make rapid progress with English acquisition, and should be within expectations for non-adopted peers within 2 years of adoption.

**Where to go for help if you are concerned:**

If your child is not making rapid progress with acquisition of English (consistent growth and change), there may be cause for concern. For children who do have a language delay or disorder, early intervention is critical. Parents need to be aware that evaluation of internationally adopted children during the first two years after adoption is not as simple as administering and scoring a standardized test. Since the tests are standardized for children who have been exposed to English from birth, using the scores is not appropriate for a child who is beginning to learn English after months or years of learning another language. Professionals need to compare skills with expectations for internationally adopted children when appropriate data is available.

School districts provide speech-language evaluations at no cost to the family when a significant delay/disability is suspected. When children qualify for special education services in the area of speech or language, a variety of service options may exist,
including speech/language therapy being provided at home or in a regular preschool setting.

Health insurance programs fund medically based and private practice speech-language pathology services. Private or medically based programs are generally able to see children with more mild delays or disorders who may not qualify for school-based services. They also may be able to conduct evaluations for the purpose of obtaining a baseline or monitoring progress, which is not the function of school based speech-language evaluations. When treatment is recommended, services are almost always in a clinic setting.
Appendix 8C

References


Assessment & Intervention Strategies for Internationally Adopted Children

Deborah Hwa-Froelich, Ph.D., CCC-SLP
Kelly Harris, M.S., CCC-SLP
Saint Louis University
MSHA March 6, 2009

International Adoptions
- Increasing in numbers
- Approximately 20,000 children annually
- 15-16 states have greater numbers of IA children
- 6/10 have a personal connection to adoption
- Children are at risk for
  - Infectious diseases
  - Malnutrition and neglect
  - Developmental delay
  - Delays in relationship development

Factors
- Maternal Health
- Nutrition
- Medical care
- Genetics
- Duration in orphanage care
- Stimulation
- Bonding
- Family structure
- Communication
- Cognition
- Social-emotional development

Institutional Care
- IQ comparisons at adoption, 3 and 6 months post-adoption (PA)
  - Asian, Chinese, and Eastern European adoptees
  - Country of origin was not a predictor of post-adoption cognitive development
  - Height/age ratio, adoption age, absence of neurological symptoms were best predictors

Communication Experiences
- Lack of input
- Disrupted language acquisition
  - IA children lose birth language within 3-6 months
  - Different developmental trajectory than multilingual children

Foster Care
- Comparison of 18 month old Romanian children at 30 and 42 months
  - 10 in foster care
  - 10 remained in institutional care
  - 10 community children
  - Placement age in foster care positive effect on language and cognitive outcomes at 30 and 42 months
  - Length of institutional care did not affect outcomes for children in orphanages


Bilingual Development

- Simultaneous
- Sequential
  - BICS (Conversational)
    - 6 months-2 years
  - CALP (Academic)
    - 5-7 years
- Progressive minority language loss and decreased efficiency in home language

Cumulative Cognitive Deficit

- Pre-adoption
  - Lack of input
  - Disrupted education
  - Parent/caregiver illiteracy
- Post-adoption
  - Disrupted language
  - Disrupted cognitive academic linguistic proficiency
  - Disrupted relationship development
- Resulting in
  - Cumulative cognitive deficit
  - Sense of failure
  - Poor self-esteem, motivation
  - Externalizing behaviors


Post-adoption Growth

- Most children adopted before 18 months develop and catch up with their peers
  - 78% Height/weight catch-up by 9 mo. PA
  - 85% catch-up in head circumference 12 mo. PA
- Duration of institutionalization had enduring effects

Hearing and Vision

- Otitis media often untreated
- Hearing loss often undetected
- Not the same hearing experiences
  - Difficult to diagnose APD or ADHD
  - Unknown developmental profile
- Need to test hearing (English, 2000)

Motor & Sensory Issues

- Gross and fine motor skills
  - Quick recovery
  - Quality of movement reduced
  - When stressed, motor breakdown was observed (Johnson, 2000)
- Sensory and self-regulation
  - Impulse control and inability to delay gratification
  - Difficulty with transitions and change
  - Inattentive and over-active


Social-emotional Adjustment

- Increase in impulsive behaviors
- Increase in indiscriminate friendliness
- Decrease in inhibition (self-regulation)
- Correlates with inattention/overactivity
- Increased spontaneous communication
- Correlates with less close relationship development
- Related to institutional care duration not cognitive delay


Hwa-Froelich & Harris, MSHA 3/6/09
### Cognition
- Studies of domestically adopted children compared to non-adopted children show no differences in cognitive ability at later ages (11-18).
- Studies of Romanian children adopted at < 6 months of age comparable to peers at age 6.
- Children adopted at ages older than 6 mo. had lower IQ scores 15-25 point difference.


<table>
<thead>
<tr>
<th>Romanian Post-adoption development</th>
<th>2 months cognitive growth/ month for 1st year PA</th>
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<tr>
<td>After 3rd year less progress for older children</td>
<td></td>
</tr>
<tr>
<td>East Asian children</td>
<td></td>
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<tr>
<td>Indian children had increased deficits at preschool &amp; school years</td>
<td></td>
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<tr>
<td>6-13 yo Korean children had no cognitive differences</td>
<td></td>
</tr>
<tr>
<td>7-13 yo Chinese children were not academically different</td>
<td></td>
</tr>
<tr>
<td>No differences by country of origin at adoption, 6 or 12 months PA for East Asian, Chinese, or Eastern European children</td>
<td></td>
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<tr>
<td>Differences based on adoption age, quality of care variables, or neurological symptoms</td>
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### Attunement
- Maternal sensitivity and bonding predicts later social-emotional development.
- Cognitive development.
- Beyond temperament and gender.
- At preschool and middle childhood ages.


### Variables to Consider
- Age of adoption.
- Time post-adoption.
- Chronological age.
- Cross-linguistic variation.
- Number of languages child is expected to learn.
- Control group comparison.
- Non-adopted peers.
- Domestically adopted peers.
- Other internationally adopted peers.

### Communication
- Children adopted before 24 months.
  - <6 months PA development
  - 12 months PA development
  - School-age PA development
  - Older adopted children


### Younger than 12 mo. CA, 2-4 mo. PA
- Parent report measures of development for Eastern European children.
  - MacArthur-Bates Communication Development Inventory (MCDI).
  - Developmental Quotient (DQ): closest AE 50th percentile/CA X 100
  - Vocabulary comprehension >47 DQ
  - Expressive vocabulary >47 DQ
  - Language Development Survey (LDS) >15th percentile
  - Consonant/Vowel inventory comparable to native children
  - Comprehension most predictive for Eastern European children.
11-23 months CA
- 2-4 months Post-Adoption, Eastern European
- Initial assessment:
  - CSBS-DP
    - ≥ 6 for each subscale score
    - ≥ 80 for total score
  - MCDI Age <24 mo:
    - Comprehended 58.11-68.40 DQ > 47
    - Expresssed 16.94-19.42 DQ > 47
  - 85% Comparative to English speakers


23-37 mo. CA; 12-14 Mo. PA
- Assessment of Eastern European children adopted between 11-23 mo.
  - MCDI, Age >24 months
    - > 65 words expressed
    - MLU standard score equivalent >64
  - PLS-4 >80
    - Receptive M=103.85, sd=16.02
    - Expressive M=93.33, sd=15.96
  - -ing, -ed, plural and possessive -s similar acquisition but delayed approximately 9 months

2-3 years PA

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<tbody>
<tr>
<td>Receptive</td>
<td>96-92</td>
<td>79-105</td>
<td>92-101</td>
<td>88</td>
</tr>
<tr>
<td>Expressive</td>
<td>87-102</td>
<td>83-107</td>
<td>85-98</td>
<td>91</td>
</tr>
<tr>
<td>Total</td>
<td>86-92</td>
<td>77-108</td>
<td>90-104</td>
<td>83</td>
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Chinese Adopted Children
- Parent-report measures
- Vocabulary and behavior surveys
  - Fewer social emotional delays (Tan & Marfo, 2005)
  - Catch-up in expressive language by 16 mo. PA


- MCDI-WC >47 DQ
- MCDI-WE >47 DQ


- CSBS-DP 2-6 mo. PA
  - Speech ≥ 6
  - Social ≥ 6
  - Symbolic ≥ 6
  - Total ≥ 80

- PLS-4, 12-14 mo. PA
  - Receptive > 80
  - Expressive > 80
  - Chinese children have higher receptive than expressive scores
  - Eastern European children have higher expressive than receptive scores


- 80% Catch-up within 2-3 yrs PA
- At least 2 standardized English tests


- 7-8 yo children comparable to peers in oral and written language (AA negatively correlated)

Different Language Profiles

- Chinese children
  - Learned more different kinds of words
  - Followed more complex directions
- Eastern European children
  - Expressed more multi-word utterances
  - Expressed more inflectional morphemes
    - -ing
    - Plural -s
    - possessives

Clinical Implications

- Assess prior to 6-8 months PA
- Equivalent prelinguistic development prior to 6 mo. PA
- Eastern European children (AA < 24 mo.) receptive language within 2 SD by 1 yr. PA; expressive by 2 yrs. PA
- Chinese children (AA < 24 mo.) receptive language within 2 SD by 1 yr. PA, expressive may take 2-3 years PA
- Prelinguistic, receptive language, and total scores may predict later development
- Differences between birth & adopted language may affect language learning rate

Older Adopted Children’s Development and Academic and Social Communication Outcomes

- 15 children adopted between 2-4 years old (preliminary findings)
- At 3-4 months PA
  - 3-4 yo produced a M of 175 words
- At 9 months PA
  - 3-4 yo produced 513 words

GFTA-2 Preliminary findings

- 95.87 at 9 months
- 95.53 at 14 months

Recommendations

- 9 mo. PA +70SS Receptive on PLS-4 or CELF-P2
- 14 months PA ±90SS on receptive and expressive (n=10)


Language Scores

- 2 yo. Receptive PLS-4 & CELF-P2
  - 3-4 mo. PA
    - 80.00 (PLS-4)
    - 93.85 (CELF-P2)
- 9 mo. PA
  - 73.00 (PLS-4)
  - 87.28 (CELF-P2)
- 14 mo. PA
  - 93.28 (CELF-P2)

- 3-4 yo Receptive PLS-4 & CELF-P2
  - 3-4 mo. PA
    - 70.90 (PLS-4)
    - 88.80 (CELF-P2)
  - 9 mo. PA
    - 91.50 (CELF-P2)
  - 14 mo. PA
    - 86.37 (CELF-P2)

- Expressive PLS-4 & CELF-P2
  - 9 mo. PA
    - 70.50 (PLS-4)
    - 75.90 (CELF-P2)
  - 14 mo. PA
    - 86.37 (CELF-P2)
Academic
- Teacher surveys comparing adopted children with domestic peers have mixed results
- Differences in math and academic language between Columbian and Asian adoptees
- No differences between Chinese and domestic peers but variability related to inattention/overactivity
- No differences between domestically adopted children and peers


Literacy
- 45 (6-9 yo) children adopted from China <24 mo. CA
  - CELF-4
  - Comprehensive Test of Phonological Processing
  - Woodcock Diagnostic Reading Battery
  - Wide Range Achievement Test-4
  - Test of Word Reading Efficiency
  - Narrative retell task
- 91% performed at or above mean
- Variability related to age of adoption


Abstract Language
- Survey
  - Children’s Communication Checklist (CCC-2)
  - Adopted children scored below the mean on
    - Nonverbal communication (i.e. eye contact)
    - Social relations (i.e. appropriate engagement)
    - Use of context (i.e. abstract, inferential language)

Glennen & Bright, 2005

Social Language
- Study with 34 children (CA: 9;11-10;3)
  (AA: 2;8-3;5); (PA :6;11-7;6)
  - 15 IA children receiving special services
  - 12 IA children not receiving special services
  - 7 Control group
- Findings
  - IA children had poorer social language
    - Less assertive utterances
    - Less accuracy on social explanations
    - Poorer scores on Communication Checklist (social relations measure) (Hoyt, E. 2007)

Patterns of Development
- Exposure to adverse environments increases risk
- Early post-adoption behaviors indicating risk
  - Delayed prelinguistic communication & symbolic behaviors
  - Delayed comprehension
  - Inattention/overactivity
  - Rejecting behaviors

Early Intervention
- Need to assess
  - Adopted children earlier
  - Adoption history and family relationships
  - Nonverbal abilities
  - Integration of developmental areas
- Intervene
  - When children perform below evidence-based developmental norms
  - When observed behavior appears deviant
  - When family relationships are strained
### RDI Intervention

**Phases of Guided Intervention:**
- Education – explain the purpose of activity
- Demonstration - model with child and parent watches
- Coaching – therapist scaffolds for parents and gives strategies to try
- Independence – parent guides activity and structures play
- Generation – Parents develop own ideas related activity and new games
- Co-regulation – parent helps child be initiator

### Parent-Child Relationship

- To help the child
- Address parent needs
- Parent-parent relationship
- Parent-child relationship
- Sibling relationships with parents & new child
- Overall family relationship and functioning

### Fostering Components of TOM

- Episodic Memory
- Reflection on self & others
- Flexible Dynamic Thinking
- Coordination
- Referencing


### Emotional Sharing

- Amplify excitement in positive experiences
- Soothing facial gazing and vocal tones to calm when distressed
- Universal emotional sharing around: happy, sad, mad/angry, afraid, disgusted, surprised

*The Highlight of Interactions*

### Referencing

- Borrowing the perspective of another person
- Using other’s reactions as a reference point to resolve uncertainty
- Determining the emotional meaning of an unfamiliar person or object
- Making sure that your actions meet the approval of your partner
- Determining your behavior’s effect on others


Referencing
Coordination/Coregulation

- Taking regulatory actions to preserve coordination during parallel and complementary activities
- Referencing while engaged in ongoing activity
- Reward is the joy felt in the interaction

Don’t over-compensate for the child. Observe if the child acts to remain coordinated with you.

Dynamic, Flexible Thinking

- Improvising problem solutions when needed
- Hypothetical thinking to prepare for potential future situations
- Developing new problem solving strategies when old strategies are not working

Reflection on Self & Others is essential for understanding the meaning/moral of a story

- Awareness that others may feel differently than they do
- Awareness of how one’s behavior can influence emotions of others

Reflection on Self & Others

What children need for comprehension of text

- Decontextualized language
  - Language for reporting, reasoning, predicting, and projecting into thoughts of others
- Theory of Mind
  - Affect
  - Social Cognition
- Thematic content and organization of content
  - Episodic memory
    - For temporal and cause/effect physical and affective relationships
    - For telling your stories

All components develop through social interaction and play

Literacy Preparation in Play

- Theory of Mind
  - How do you feel when the bus goes fast?
  - What do you do or say to someone when you don’t like what they’re doing
- Decontextualized play
  - Chairs & boxes are bus seats
  - Toy police car
- Memory
  - Semantic/lexical memory for words
  - Procedural memory for going home
  - Episodic memory for cause-effect relations
Integrating Individual Differences

- E1, AA 9 mo., seen at 6 & 24 mo. PA
- 14-15 mo. CA
  - Oral motor delays
  - Tactile defensiveness
  - Overactivity
- 33 mo. CA
  - Tactile defensiveness related to aggressive behaviors and self-regulation
  - Increased parent stress
  - Used language and sensory input strategies paired with family counseling

- C3, AA: 3;8 evaluated 3 months PA
  - CELF-P: Receptive 69, Expressive 50, Total 61
  - Play skills < 24 months
  - High Stranger friendliness, attached to father not mother
  - Failed hearing screening, motor and visual problems

- Intervention
  - Focusing on emotional sharing with both parents
  - Developing play skills
  - Expanding vocabulary, increasing length of utterance, improving word imitation for speech intelligibility
  - Additional testing with OT and audiologist
  - Family counseling for parents

- E11 Adopted at 11 years, seen at 15;10
  - 5th grade reading level and some oral language skills
  - Lower performance in semantic knowledge, working memory, inferential and abstract language
  - Inability to regulate pitch, loudness, vowels in speech
  - Anxiety in social situations

- Intervention
  - Working memory strategies
  - Visual learning strategies
  - Improve spelling
  - Facilitate reading comprehension
  - Home vs. school issues

Mission

- Our role as speech-language pathologists is
- To support the communication and literacy needs of children and families
- To facilitate adopted children's communication development
- To collaborate with other professionals in meeting the child and family's needs holistically

SLU International Adoption Clinic

- IAC
  - (314) 977-4128
  - Website http://iac-stl.slu.edu
- Deborah Hwa-Froelich, Ph.D.
  - Associate Professor and IAC Coordinator
  - (314) 977-3380
  - hwafroda@slu.edu
- Kelly Harris, M.S., CCC/SLP
  - Clinical Instructor
  - (314) 977-3372
  - khari52@slu.edu