Using the ICF-CY for AAC Profile for Children Who Rely on AAC

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St. Louis, MO.
1. Rationale for using the ICF-CY
2. BRIEFLY, the development of the *ICF-CY for AAC Profile* (Study 1)
3. Since publication: Study 2a
4. Current research: Study 2b
My first patient who used AAC:
4 year old child with Down Syndrome and Metabolic Strokes

ICD 9 Codes?
Down Syndrome: 758.0
Metabolic Stroke: no appropriate code
ICD codes ≠ child’s functional communication

- Individuals with CCN have communication difficulties related to a variety of different health conditions
- Health condition alone → intervention methods? NO!
- Function in different environments + health condition = appropriate intervention methods
Solution: ICF and ICF-CY

- International Classification of Functioning, Disability and Health (Child & Youth version)
- Developed to complement the ICD (International Classification of Disease)
- Describe the functional status of individuals using a standardized, global language
Why ICF-CY?

- **Systematic** coding scheme
- **Function**, instead of etiology or diagnosis (unlike ICD)
- **Common language** for professionals, persons with disability, family members & the public worldwide that can be used across *education, medical and social services.*
The ICF-CY Model
My first patient who used AAC: 4 year old child with Down Syndrome and Metabolic Strokes

ICF-CY Codes?

- Participation: D7504.2--Informal relationships with peers: Moderate difficulty
  Participation D820.3--School education: Severe difficulty

- Body Function B320.4--Articulation: Complete impairment
  Body Function B7354.3—Tone of muscles of all limbs: Severe difficulty

- Body Structure S3203.3--Tongue: Severe impairment

- Activity D330.3 --Speaking: Severe difficulty
  Activity D3501.3 --Sustaining a conversation: Severe difficulty

- Environment E310.+4—Parents: Complete facilitator
The ICF-CY works especially well for AAC learners, because it separates speech functions from communication functions.
My first patient who used AAC: 4 year old child with Down Syndrome and Metabolic Strokes

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Granlund, M., and Pless, M. Implementation of the International Classification of Functioning, Disability and Health (ICF/ICF-CY) and how this relates to Augmentative and Alternative Communication.

Murphy, J. and Boa, S. Using the WHO-ICF with Talking Mats as a goal setting tool.

Simeonsson, R., Bjork-Akesson, E. and Lollar, D. Communication, disability and the ICF-CY.


Our research goals

• Develop an **AAC ICF-CY framework to profile communication strengths and needs** of children K-12 who use AAC

• Develop a **guide for communication intervention and educational goal development** using the framework

• Increase **exposure, understanding, and acceptance of the ICF-CY in the US**
From WHO document to ICF-CY for AAC Profile

Published manual of codes

On-line interactive ICF-CY for AAC Profile
ICF-CY: 1,786 items in 33 chapters

- 17 chapters from ICF-CY for consideration in the *ICF-CY for AAC Profile*
- Over 100 items from just 4 chapters
- Approximately 250 items total in first version!
- Study 1: Reliability, then revision
- Current version has 126 items
ICF-CY for AAC Profile

• **Profile Survey**: participation restrictions, identify communication limitations, functional reasons for them, and environmental barriers and facilitators

• **Profile Report**: use survey responses to identify prioritized list of potential IEP goals
The ICF-CY for AAC is a Code Set

Four categories:

1. Restrictions in Participation caused by communication limitations
2. Communication Limitations
3. Functional Impairments that limit communication
4. Environmental Factors that serve as barriers or facilitators for communication
Participation Restrictions: Rate the degree of participation restriction caused by communication limitations in...

**Restrictions in Participation Caused by Communication Limitations**

**Introduction for Participation Restrictions (2 sections, 21 items):** Remember, it's all about participation! So, first, you will consider whether communication limitations restrict the student’s participation in two areas:

- **School-related activities**
- **Interpersonal interaction and relationships**

You will code items in these sections with the following coding system:

- Code as "participation is greater than typical peer", if participation represents a real plus as compared to the participation of a typical age-matched peer (not just a relative strength for this student).
- Code as "no restriction" to "complete restriction", depending on the student's degree of participation restriction.
- Code as "not applicable", if none of the above are appropriate.
- Code as "don't know", if you are not sure about an item.

Feel free to go back to any answers in the survey at any time and change them.

**School Related Activities**

- **1. Playing with others as an educational activity**
  - Participation is greater than typical peer
  - No restriction
  - Moderate restriction
  - Severe restriction
  - Complete restriction
  - Not applicable
  - Don't know

**Interpersonal Interaction and Relationships**

- **15. Relating to teachers, and other adults at school.**
  - Participation is greater than typical peer
  - No restriction
  - Moderate restriction
  - Severe restriction
  - Complete restriction
  - Not applicable
  - Don't know

- **16. Relating to peers at school**
  - Participation is greater than typical peer
  - No restriction
  - Moderate restriction
  - Severe restriction
  - Complete restriction
  - Not applicable
  - Don't know

- **17. Making and maintaining friendships**
  - Participation is greater than typical peer
  - No restriction
  - Moderate restriction
  - Severe restriction
  - Complete restriction
  - Not applicable
  - Don't know
Communication Limitations: Rate limitations in...

- Receptive Language and Literacy
- Expressive Language and Literacy
- Functions of Communication
- Rules of Social Interaction in Conversation
- AAC: Receptive Communication
- AAC: Expressive Modes and Strategies
- AAC: Motor Access
### AUGMENTATIVE AND ALTERNATIVE COMMUNICATION: RECEPTIVE STRATEGIES

**65. Comprehending the meaning of body gestures (e.g., facial expressions, posture, hand gestures, movements)**

<table>
<thead>
<tr>
<th>Skills are above those of typical peer</th>
<th>No limitation</th>
<th>Mild limitation</th>
<th>Moderate limitation</th>
<th>Severe limitation</th>
<th>Complete limitation</th>
<th>Not applicable</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCP-CY Code:</strong> d 3150</td>
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</tbody>
</table>

**66. Comprehending 3-dimensional objects/representations used to communicate**

<table>
<thead>
<tr>
<th>Skills are above those of typical peer</th>
<th>No limitation</th>
<th>Mild limitation</th>
<th>Moderate limitation</th>
<th>Severe limitation</th>
<th>Complete limitation</th>
<th>Not applicable</th>
<th>Don’t know</th>
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</thead>
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</tr>
</tbody>
</table>

**67. Comprehending the meaning of drawings and photographs used to communicate**

<table>
<thead>
<tr>
<th>Skills are above those of typical peer</th>
<th>No limitation</th>
<th>Mild limitation</th>
<th>Moderate limitation</th>
<th>Severe limitation</th>
<th>Complete limitation</th>
<th>Not applicable</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCP-CY Code:</strong> d 5152</td>
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<td></td>
</tr>
</tbody>
</table>

**68. Comprehending the meaning of manual sign language (e.g., ASL, finger spelling, signed English, etc.)**

<table>
<thead>
<tr>
<th>Skills are above those of typical peer</th>
<th>No limitation</th>
<th>Mild limitation</th>
<th>Moderate limitation</th>
<th>Severe limitation</th>
<th>Complete limitation</th>
<th>Not applicable</th>
<th>Don’t know</th>
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<tbody>
<tr>
<td><strong>SCP-CY Code:</strong> d 5152</td>
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</tr>
</tbody>
</table>
**IMPAIRMENTS IN BODY FUNCTIONS THAT LIMIT COMMUNICATION**

**INTRODUCTION FOR IMPAIRMENTS IN BODY FUNCTION** (1 section, 6 items): Does the student have some functional impairment that limits communication? Make a note of that here.

Codes for this section are different. You will code items in this section with the following coding system:
- Code as "functions above typical peer" if the student's functional ability is a real talent, (not just a relative strength for this student).
- Code as "no impairment" to "complete impairment" depending on the student's level of functional impairment.
- Code as "not applicable" if none of the above is appropriate.
- Code as "don't know" if you are not sure about an item.

Feel free to go back to any answers in the survey at any time and change them.

### 91. Hearing function

<table>
<thead>
<tr>
<th>Functions above typical peer</th>
<th>No impairment</th>
<th>Mild impairment</th>
<th>Moderate impairment</th>
<th>Severe impairment</th>
<th>Complete impairment</th>
<th>Not applicable</th>
<th>Don't know</th>
</tr>
</thead>
</table>

**JOF-CY Code:** b220

### 92. Vision function

<table>
<thead>
<tr>
<th>Functions above typical peer</th>
<th>No impairment</th>
<th>Mild impairment</th>
<th>Moderate impairment</th>
<th>Severe impairment</th>
<th>Complete impairment</th>
<th>Not applicable</th>
<th>Don't know</th>
</tr>
</thead>
</table>

**JOF-CY Code:** b230

### 93. Touch functions (e.g., ability to sense surfaces, their texture or quality; includes numbness, anesthesia, or tingling)

<table>
<thead>
<tr>
<th>Functions above typical peer</th>
<th>No impairment</th>
<th>Mild impairment</th>
<th>Moderate impairment</th>
<th>Severe impairment</th>
<th>Complete impairment</th>
<th>Not applicable</th>
<th>Don't know</th>
</tr>
</thead>
</table>
Environmental Factors

- Physical Environment
- Assistive Technology
- People
- Services and Policies
Profile report: final output

ICF-CY for AAC, survey 1028

**Areas of Concern**

**Communication Limitations**

**Receptive Language and Literacy**

22. Intentionally attending to human touch, face, and/or voice

**Expressive Language and Literacy**

32. Using body language, facial expressions and gestures to communicate

**Functions of Communication**

45. Refusing or rejecting something

**Rules of Social Interaction in Conversation**

55. Orienting towards communication partner through eye contact or body positioning

**Augmentative and Alternative Communication: Receptive Strategies**

68. Comprehending the meaning of manual sign language (e.g., ASL, finger spelling, signed English, etc.)

58. Comprehending the meaning of body gestures (e.g., facial expressions, posture, hand gestures, movements)

69. Comprehending the meaning of AAC signs/symbols (e.g., MinSpeak icons, Bliss symbols)

**Augmentative and Alternative Communication: Expressive Modes and Strategies**

71. Using 3-dimensional objects/representations to communicate

**Impairments in Body Functions that Limit Communication**

01. Hearing function

**Environmental Factors that Serve as Barriers or Facilitators for Communication**

**Assistive Technology**

104. Adapted or specially designed HIGH tech products/technology developed for the purpose of improving communication (e.g., speech generating device, FM system, specialized writing device)

**People**

111. Providing physical support at school (e.g., supporting body posture appropriately, making glasses available, etc.)

112. Providing emotional support at school

114. Providing physical support at home
Download the **ICF-CY for AAC Code Set**:

www.icfcy.org/aac
Study 2a:
What is the relationship between items prioritized on *ICF-CY for AAC Profile* and goals on pre-existing IEPs?
Study 2a Methods

• N = 43 SLPs and Special Educators, from 17 states
• Work settings: Elementary (28%), Secondary (23%), Combined (35%), Other (14%)
• Knowledge of AAC: Expert/Great deal (33%), Moderate (58%), Little (7%)
• Task: Do the ICF-CY for AAC Profile, then send IEP
## Participation Items

<table>
<thead>
<tr>
<th>Section</th>
<th>Mean % of participants who gave <strong>High Priority</strong> score to these items</th>
<th>% IEP objectives that address these items</th>
</tr>
</thead>
<tbody>
<tr>
<td>School-related Activities</td>
<td>13%</td>
<td>7%</td>
</tr>
<tr>
<td>Interpersonal Interaction/Relationships</td>
<td>13%</td>
<td>1%</td>
</tr>
</tbody>
</table>
## Impairments in Body Functions Items

<table>
<thead>
<tr>
<th>Section</th>
<th>Mean % of participants who gave High Priority score to these items</th>
<th>% IEP objectives that address these items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Functions</td>
<td>9%</td>
<td>1%</td>
</tr>
</tbody>
</table>
## Environment Items

<table>
<thead>
<tr>
<th>Section</th>
<th>Mean % of participants who gave High Priority score to these items</th>
<th>% IEP objectives that address these items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Environment</td>
<td>6%</td>
<td>1%</td>
</tr>
<tr>
<td>Assistive Technology</td>
<td>13%</td>
<td>6%</td>
</tr>
<tr>
<td>People</td>
<td>11%</td>
<td>0%</td>
</tr>
<tr>
<td>Services + Policies</td>
<td>13%</td>
<td>9%</td>
</tr>
</tbody>
</table>
# Communication Limitations Items

<table>
<thead>
<tr>
<th>Section</th>
<th>Mean % of participants who gave <strong>High Priority</strong> score to these items</th>
<th>% IEP objectives that address these items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receptive Language + Literacy</td>
<td>11%</td>
<td>23%</td>
</tr>
<tr>
<td>Expressive Language + Literacy</td>
<td>13%</td>
<td>24%</td>
</tr>
<tr>
<td>Functions of Communication</td>
<td>12%</td>
<td>27%</td>
</tr>
<tr>
<td>AAC Expressive Modes + Strategies</td>
<td>16%</td>
<td>39%</td>
</tr>
<tr>
<td>Rules of Social Interaction/Conversation</td>
<td>14%</td>
<td>4%</td>
</tr>
<tr>
<td>AAC Receptive Strategies</td>
<td>12%</td>
<td>4%</td>
</tr>
<tr>
<td>AAC Motor Access</td>
<td>7%</td>
<td>0%</td>
</tr>
</tbody>
</table>
What Do These Tables Mean?

• 10/14 sections on *ICF-CY for AAC Profile*: participants *rated items* High Priority yet did *not address them in IEP goals*.

• 4 sections related to Communication Limitations, reversed: participants *address items in IEP goals* but did *not rate them* High Priority on *ICF-CY for AAC Profile*. 
Implications

Some Profile Survey items are:

• not normally considered for IEPs (e.g., Participation, Environment, ie., policies and services)
• not considered amenable to change (e.g., Body Functions)
• rarely addressed in IEPs (e.g., AAC Receptive)
• considered too sensitive to address (e.g., People)
• traditionally addressed, but worded differently (e.g., Expressive/Receptive Language/Literacy)

➤ One goal of the survey: guide the non-AAC SLP or teacher to adequately serve the occasional student who relies on AAC.
Study 2b: Can the *ICF-CY for AAC Profile* influence development of IEP goals?
Study 2b Methods

• 40 SLPs and 40 Special Educators
• *Experimental group*: complete the ICF-CY for AAC Profile before attending an IEP meeting
• *Control group*: ‘business as usual.’
• *All participants*: send the completed new IEP after meeting.
Currently Recruiting...

- SLPs and Special Educators needed!!
- $150 incentive gift card
- Recruitment is continuing through December, 2012.
- Contact: icfaac@ohsu.edu
Our team and our project

Code Set

Reference list

This presentation as pdf
Contact Us at icfaac@ohsu.edu

Funded by:
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Charity Rowland, PI
Give us your feedback now!

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- Use your cell phones or other web devices
- Text, tweet or submit via website
- Anonymous & privacy preserved!
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To vote via Twitter, tweet @poll and a KEYWORD

To vote via smartphone, enter a KEYWORD at PollEv.com

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