


**The CSI-CY: A New Tool to Aid in Communication Goal Development**

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## Goals today

1. Justify use of the ICF-CY for AAC
2. Present a description of the instrument
3. Go through a guided completion of the CSI-CY
3. Discuss research findings and the usefulness of the CSI-CY for AAC goal development

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## THE CHALLENGE

There is no standard developmental set of skills that can guide AAC goal development.

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## The Problem

- Don is a 4 year old child who relies on AAC with Down Syndrome and Metabolic Strokes
- The ICD-10 describes him as 758.0
- What does this say about Don's functional communication?




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*ICD codes ≠ child's functional communication*

- Individuals with CCN have communication difficulties related to a variety of different health conditions
- Health condition alone  $\Rightarrow$  intervention methods? NO!
- Function in different environments + health condition = appropriate intervention methods

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## A Solution: The ICF-CY

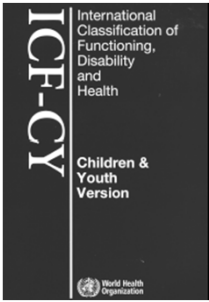


- ICF-CY: International Classification of Functioning, Disability and Health -Child & Youth version
- Developed by the World Health Organization (WHO) to complement the ICD
- Designed to describe the *functional status* of individuals in a standardized manner

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### 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
- Can be used across *education, medical and social services.*




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### The ICF and AAC

**The ICF works especially well for AAC learners, because it separates speech functions from communication functions**

Communication ≠ Speech




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### ICF-CY system

- Body Structures sometimes different or not present
- Body Functions may vary due to structure
- Activities and Participation may be limited and life situations restricted due to functions
- Environment: facilitators and barriers in every environment that affect participation

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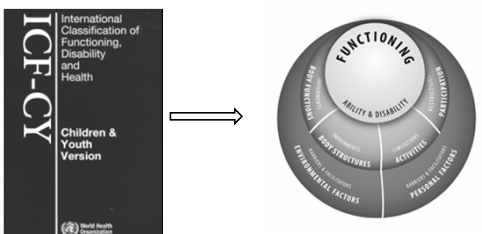
*“The ICF fits our international AAC community like an old shoe that we have been wearing for many years.”* Fried-Oken and Granlund (2012)



Volume 28, Number 1 (March 2012) Special Issue: AAC and ICF: A Good Fit to Emphasize Outcomes

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### From WHO document to CSI-CY Profile



Published manual of codes      On-line interactive CSI-CY Inventory

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### Using the ICF as an Organizational Framework to Improve Communication Goals for AAC Users

- Population: School-aged children (in U.S.) who use AAC or are candidates for AAC
- Goal 1: Develop and evaluate the CSI-CY to describe communication strengths and needs of children who use AAC
- Goal 2: Use the CSI-CY to guide communication goal development

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## Two-part CSI-CY

- Code Set surveys:**
  - participation restrictions,
  - communication limitations,
  - functional reasons for them,
  - environmental facilitators and barriers
- Report:** prioritizes identified items to facilitate IEP goal development process

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## Current Version

- 112 items in 14 sections
- Plus 1 open-ended text box for each of 14 sections
- Total items = 126
- The ICF-CY codes are listed next to each item

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## www.csi-cy.org



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Proposed Code Set for Augmentative and Alternative Communication Users  
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## Download the CSI-CY Code Set:

[www.icfcy.org/aac](http://www.icfcy.org/aac)  
(ISAAC handout)

| RESTRICTIONS IN PARTICIPATION CAUSED BY COMMUNICATION LIMITATIONS   |                                   |
|---|-----------------------------------|
| SCHOOL RELATED ACTIVITIES   |                                   |
| Play an educational activity  | 4 800                             |
| Complete activities (preparing classes and interacting appropriately to fulfill the duties of being a student)  | 4 801                             |
| Continue activities (classroom games, assemblies, eating in the cafeteria, field trips)                         | 4 802, 4 803, 4 804               |
| Recreation (physical education, recess, playground games)   | 4 805, 4 806, 4 807, 4 808, 4 809 |
| Creative activities (art classes, worksheets, hand, etc.)   | 4 810                             |
| Civic activities (school paper, student government, school clubs, serving as student aid, safety patrol member) | 4 811                             |
| Other academic activities (computer labs, science labs, library use, gifted/talented classes)                   | 4 812                             |
| Social activities (school dances, parties, hanging out with friends at school)                                  | 4 813, 4 814                      |
| Social independence activities (driver's ed., home economics, after school organized events)                    | 4 815, 4 816                      |
| Instructional training  | 4 817                             |
| Transition planning   | 4 818, 4 819                      |
| Leaving after and safety at school (avoiding risks that can lead to injury or harm)                             | 4 820                             |
| Monitoring one's health (going to school by being aware of and doing what is required for one's health)         | 4 821                             |
| INTERPERSONAL INTERACTION AND RELATIONSHIPS   |                                   |
| Relating to teachers and other adults at school   | 4 700                             |
| Relating with peers at school   | 4 701                             |
| Dating and romantic interests   | 4 702                             |
| Dating or romantic relationships  | 4 703                             |
| Relating to partners in the home (family or other caretakers)   | 4 704                             |
| Relating to a new person  | 4 705                             |
| COMMUNICATION LIMITATIONS   |                                   |
| RECEPTIVE Language and Literacy   |                                   |
| Consistently attending to human speech, text, and/or video  | 4 1000                            |

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## Participation Restrictions:

1. School-related Activities
2. Interpersonal Relationships

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## Communication Limitations: *Rate limitations in...*

1. Receptive Language and Literacy
2. Expressive Language and Literacy
3. Functions of Communication
4. Rules of Social Interaction in Conversation
5. AAC: Receptive Communication
6. AAC: Expressive Modes and Strategies
7. AAC: Motor Access

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### Body Functions:

*Rate impairments that limit communication...*

- Hearing
- Vision
- Touch
- Oral Motor
- Respiratory
- Intellectual
- Gross and Fine Motor

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### Environmental Barriers and Facilitators\*

1. Physical environment
2. Assistive technology
3. People
4. Services and policies

*\*This often corresponds to the special education and related services and supplementary aids and services sections of the IEP.*

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### SAMPLE OF CSI-CY INVENTORY

64. Other social interaction rules? Write in response.

Augmentative and Alternative Communication: Receptive Strategies

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

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

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

### Take a trip with us through the CSI-CY

Let's describe Nicole, a 6 year girl with Rett Syndrome...

### Meet: Nicole

**Age: 6 years**

**Medical Diagnosis: Rett Syndrome**

**CURRENT COMMUNICATION IMPAIRMENT**

- Profound expressive and receptive communication impairment

**BACKGROUND INFORMATION**

- **Personal/Social:** Nicole was born prematurely and was diagnosed with Rett Syndrome at the age of two years. Due to this neurodevelopmental condition, she has orthopedic impairments, constant hand wringing, inability to speak, and digestive issues. She has received speech therapy for three years and recently received a Tango speech generating device, which she brings to school. She is non-ambulatory and non-verbal, but definitely can get her needs met by vocalizing with laughter, protests, crying, smiles, and eye contact. She presents as a happy child who loves attention. She enjoys human contact and only complains when she is in discomfort.

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### Complete CSI-CY at [www.csi-cy.org](http://www.csi-cy.org)

CSI-CY

Communication Supports Inventory - Children & Youth (CSI-CY)

For children who rely on nonverbal and alternative communication (NAC)

Authors: Cheryl Kover, Ph.D., Melissa Crowl-Baker, Ph.D., D.D., M.Ed. and Sandra K. Becker, Ph.D., D.Ed.

The Communication Supports Inventory - Children & Youth (CSI-CY) is a tool to help professionals working with students with complex communication needs make educational plans that are comprehensive enough to capture their strengths and weaknesses. The CSI-CY is designed to make goal writing easier for teachers and speech-language pathologists who work with students who are nonverbal and alternative communication (NAC) users or potential users. By itself, it is not an assessment, but rather a guide to organize the professional's understanding of the impact of a student's communication strengths and limitations on their participation at school and home. The Inventory consists of a screen and a report. The World Health Organization developed the International Classification of Functioning, Disability and Health - Children and Youth Version (ICF-CY in 2002) to provide a global common language for describing the impact of health conditions and disabilities on human functioning. This Inventory uses that same global common language. It offers the broad perspective on function and disability of the ICF-CY to characterize students who use NAC.


[Use the CSI-CY Online Now!](#) | [Download a PDF of the CSI-CY](#)

## Finish Nicole's CSI-CY

To resume the survey where you left off,  
please go to


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## Final output: Profile Report



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## Research Studies



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### What is the relationship between items prioritized on CSI-CY and goals on pre-existing IEPs?

- Do IEPs include goals that relate to items in the CSI-CY subsections?
- Do the items prioritized in the CSI-CY also appear as IEP goals for the student?

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### Who participated?

- **N** = 35 SLPs and Special Educators (40% SE; 54% SLP; 6% other)
- From 15 states
- **Work settings:** Elementary (34%), Middle School (29%), Secondary (37%)
- **Knowledge of AAC:** Expert/Great deal (33%), Moderate (58%), Little (7%)
- **Disability of targeted students:** autism (31%), CP (20%), intellectual disability (17%), other (31%)

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### IEP data

- Great variety in the 35 IEPs
- **#Goals & objectives per IEP:**
  - Mean = 9.2; range= 1-20
- **#Accommodations/Services per IEP:**
  - M= 3.7; range= 1-11

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### What's missing from the current IEPs?

- These CSI-CY subsections were prioritized BUT had no or few IEP goals:
  - Rules for social interaction
  - AAC- Motor
  - Body functions\*
  - Environment: People
  - Environment: Services and policies\*

\* May be difficult to address in IEPs.

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### What overlaps are there in IEP goals and CSI-CY priorities?

| CSI-Subsection                     | % participants who prioritized subsection and included IEP goals |
|------------------------------------|--|
| School Activities                  | 31%  |
| Interpersonal Relationships        | 14%  |
| Receptive Language & Literacy      | 31%  |
| Expressive Language & Literacy     | 26%  |
| Functions of Language              | 40%  |
| AAC-Receptive Language & Literacy  | 11%  |
| AAC-Expressive Language & Literacy | 40%  |
| Environment/AT                     | 40%  |

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### Data Interpretation

- Some prioritized CSI-CY items do appear as goals in many IEPs.
- There are ICF constructs that do not appear in IEP goals.
- There is great variability in goal development for children who rely on AAC.

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### Does the CSI-CY Influence Development of Subsequent IEP goals?

- Does use of the CSI-CY affect goal development?
- Will we see a difference in goals if SE/SLPs complete the CSI-CY before an IEP meeting?
- Do SLPs and SEs report that using the CSI-CY helps with goal development?

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### Methods

- 61 SLPs and Special Educators (69% SE; 30% SLP)
- *Experimental group (N=36)*: Complete the CSI-CY **before** attending an IEP meeting
- *Control group (N=25)*: 'Business as usual.'
- *All participants* : Send the completed new IEP after meeting.
- Outcome: Ratings of IEP goals developed **with** vs **without** use of CSI-CY

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### Data Sources

- Coders were blinded to whether the IEP came from the experimental or control groups.
- From each IEP, all communication-related goals & objectives, accommodations, modifications and services were extracted.
- Each item was coded with the 14 CSI-CY subsections.
- The # of CSI-CY subsections addressed per IEP was calculated.

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### IEP data

- Great variety in the 35 IEPs
- #Goals & objectives per IEP:
  - Mean = 8.7; range= 1-22
- #Accommodations/Services per IEP:
  - M= 6.3; range= 1-15

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### IEP trends: Goals that appeared in IEPs more after CSI-CY completion

| Subsection                  | Control IEPs (no CSI-CY use) | Experimental IEPs (after CSI-CY use) |
|-----------------------------|------------------------------|--------------------------------------|
| School Activities           | 35%                          | 47%                                  |
| Interpersonal Relationships | 23%                          | 33%                                  |
| Receptive Lang & Literacy   | 65%                          | 75%                                  |
| Expressive Lang & Literacy  | 77%                          | 83%                                  |
| Functions of Language       | 77%                          | 94%                                  |
| AAC-Motor                   | 0%                           | 6%                                   |

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### Data Interpretation


- An attitude shift? It's reinforcing to see that the participation subsections increased in IEPs. We need to stress function and integration of AAC, not just learning to use the device.
- The neurotypical language and function subsections increased for AAC IEPs. Perhaps the IEPs are reflecting the importance of language foundation, and how to apply developmental language and literacy skills to device use for AAC implementation.

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### Future Options

- Codify the iterative PROCESS that we have developed for use by other groups to generate code sets for a specific health condition or functional problem
- Apply the AAC codes to electronic medical records
- Develop a parent version of Profile that could be used to mediate conflicts between home/school

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**A Good Fit to Emphasize Outcomes**

Rowland, C., Fried-Oken, M., Steiner, S.A.M., Lollar, D., Phelps, R., Simeonsson, R. and Granlund, M. *Developing the ICF-CY for AAC Profile and code set for children who rely on AAC.*

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### Our team



[www.icfcy.org/aac](http://www.icfcy.org/aac)

- Code Set
- Reference list
- Publications
- Presentations

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