

# The Use of Newly Introduced Codes of ICF-CY in Adult Population – Almost all the Codes can and should be used for Adults.

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**Abstract** The applicability and necessity of the newly introduced ICF-CY codes for adult population was examined by a Delphi study and from the results of the assessment of functioning in 70 adult inpatients of a general hospital. The results indicate that the items newly introduced in ICF-CY are applicable and even highly important for adult cases except for a small number of codes. Their reliability in the adult population was confirmed by high values of matching coefficient Kappa.

## Introduction

The International Classification of Functioning, Disability and Health: Children and Youth Version (ICF-CY) was welcomed to the WHO Family of International Classifications in 2007. It was designed "to record the characteristics of the developing child and the influence of its surrounding environment" (Preface, p vii). It has been felt, however, that many of the codes that were newly introduced in ICF-CY are applicable to and even highly important for adults and elderly people as well. We designed a series of study to examine the applicability and importance of the ICF-CY codes to the adult population.

## Methods & Materials

The study consisted of three phases.

**Phase 1:** A three-round Delphi method was employed to reach a consensus on the applicability and necessity of ICF-CY codes to the adult population. The participants were five rehabilitation specialists (two MDs, one PT and two OTs) with a long-time experience and expertise on the ICF coding.

**Phase 2:** Functioning of 70 inpatients of a general hospital in the fourth to ninth decade of age were coded by 32 physical and occupational therapists (16 each) using all the codes in the Two-Level Classification of ICF and ICF-CY. The qualifiers defined by "the Provisional Criteria for the Qualifiers of ICF Activity and Participation" adopted by governmental committee in 2007 were used. The results were discussed among them and with the participants of the phase 1. and clinical applicability of ICF-CY codes were evaluated.

**Phase 3:** The inter-rater reliability of ICF-CY codes for the adult cases was tested using a part of data in Phase 2; the results of ICF-CY activity and participation codes (in the Two-Level Classification), which were coded independently by a PT and an OT for the same patient, were analyzed for the matching coefficient Kappa using SPSS 14.0J.

## Results

**Phase 1:** The consensus of the participants was as follows:

- 1) Among the codes newly introduced in ICF-CY, only a very few are relevant solely to children and youth. Examples are s2000: Primary dentation, s71001: Fontanelle, a331:Pre-talking and few more.
- 2) On the other hand, there are many codes not only applicable but highly important for the adult people. Examples include s1107: Structure of white matter and its subdivision such as s11070: Corpus callosum which every human being has; a322: Singing, which many adults do for enjoyment and even as a job; a4107: Rolling over, which is important not only in babies but also in frail elderly; a571: Looking after one's safety, which is important for everybody, e57502: Child or adult care service center – profit and non-profit, which is, as shown in the code name itself, used by both children and adults; and many others.

**Phase 2:** The results of data-based discussion by both Phase 2 and 1 participants confirmed the conclusion of the Phase 1 study.

**Phase 3:** The results of Kappa coefficient analysis is shown in the Table below. Perfect match ( $\kappa = 1.00$ ) is in 14 of 47 codes (29.8%), very good match ( $\kappa > 0.75$ ) in 30 (63.8%), and relatively good match ( $0.75 = \text{or } > \kappa > 0.4$ ) in only 3 (6.4%). This means a very high grade of reliability.

## Conclusions

The applicability, necessity and reliability of the most of the newly introduced ICF-CY codes for adult and elderly population was confirmed by this study. It means that ICF-CY could (and should) be considered as a de facto update of ICF itself, as was already admitted by the ICF-CY Preface and Introduction that reads "...the addition of new codes and modification of existing codes ... may also be relevant to ICF" (footnote 4, 5). These new codes shall be incorporated into ICF as early as possible.

**Table Kappa Values in the Newly Introduced Activity and Participation Codes of ICF-CY**

Code	Activity as Performance or Capacity, and Participation	$\kappa$ value	Code	Activity as Performance or Capacity, and Participation	$\kappa$ value
a131: Learning through actions with objects	Performance	0.84	a332: Singing	Performance	0.89
	Cap. without As.	0.94		Cap. without As.	0.98
	Cap. with As.	0.80		Cap. with As.	0.89
a132: Acquiring information	Performance	0.89	a446: Fine foot use	Performance	0.89
	Cap. without As.	0.97		Cap. without As.	0.98
	Cap. with As.	0.86		Cap. with As.	0.82
a133: Acquiring language	Performance	0.93	a571: Looking after one's safety	Performance	0.69
	Cap. without As.	0.97		Cap. without As.	1.00
	Cap. with As.	0.89		Cap. with As.	0.73
a134: Acquiring additional language	Performance	0.87	p571: Looking after one's safety	Performance	0.95
	Cap. without As.	1.00		Capacity	0.95
	Cap. with As.	0.91	a816: Preschool life and related activities	Performance	1.00
a137: Acquiring concepts	Performance	0.91		Cap. without As.	1.00
	Cap. without As.	1.00		Cap. with As.	1.00
	Cap. with As.	0.91	p816: Preschool life and related activities	Performance	0.98
a161: Directing attention	Performance	0.82		Capacity	1.00
	Cap. without As.	0.98	a835: School life & related activities	Performance	1.00
	Cap. with As.	0.74		Cap. without As.	1.00
Cap. with As.	0.84	Cap. with As.		1.00	
a250: Managing one's own behaviour	Performance	0.83	p835: School life & related activities	Performance	1.00
	Cap. without As.	1.00		Capacity	1.00
	Cap. with As.	0.84	p880: Engagement in play	Performance	0.96
a331: Pre-talking	Performance	0.95		Capacity	0.95
	Cap. without As.	1.00			
	Cap. with As.	0.93			