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Aktuelles zur International Classification of Health Interventions (ICHI) der WHO

Albrecht Zaiß
Universitätsklinikum Freiburg

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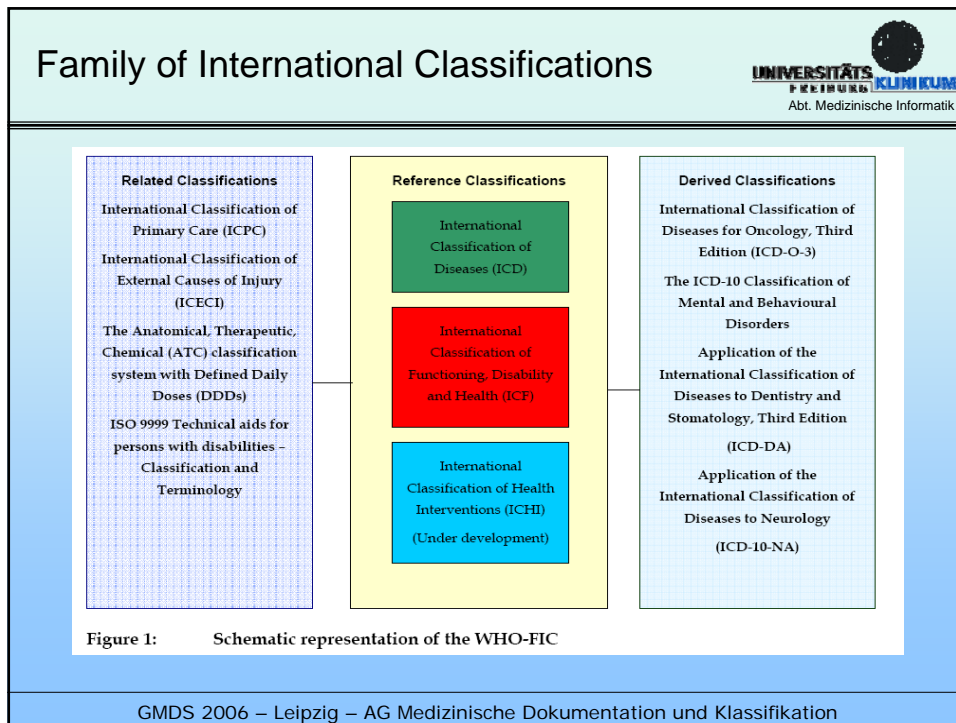

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Family of International Classifications




http://www.who.int/classifications

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Family of International Classifications



Schematic representation of the World Health Organization Family of International Classifications

Area of Application	Factors influence health and well being ¹		Health and well being		Interventions / Services	Resources
	Environmental	Personal	Health Condition / disease/ problem	Functioning and disability		
Mortality (cause of death)	ICD-10	The United Nations maintains classifications of a range of variables relevant to this, including Industry and Occupation.	ICD-10			The United Nations maintains classifications of a range of variables relevant to these, including Industry and Occupation. These standard classifications, or classifications which are compatible with them, are to be used in health data collection.
Self-report eg Population health survey and reason for encounter	ICF	These standard classifications, or classifications which are compatible with them, are to be used in health data collection.		ICF		
Population and Environmental Health	ICF		ICD-10	ICF	ISO9999	
Primary Care ²	ICF	Some personal factors have not been defined and classified e.g genetic profile or coping styles.		ICF		
- General practice	-		- ICPC-2	-	- ICPC-2	
- Emergency	- ICECI		-	-	-	
Acute hospital admissions	ICD-10 (Ch XX)		ICD-10	ICF	ICHI ATC/DDD ISO9999	
Specialised care ² (residential or non-residential)	ICF		ICD-O-3 ICD-DA ICD-NA ICD Mental health	ICF	ATC/DDD ISO9999	



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WHO-FIC Network Meeting Tokyo 2005

16 - 22 October 2005


WHO-FAMILY OF INTERNATIONAL CLASSIFICATIONS NETWORK MEETING 2005

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Teilnehmer

- 88 Teilnehmer
- 7 WHO Collaborating Centers
- 16 Countries



Das Deutsche Team


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Comparison of ICHI and CCAM Basic Coding System

Albrecht Zaiß, Susanne Hanser, Niklas Baerlecken
Department of Medical Informatics (IMBI)
University Hospital Freiburg - Germany



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Objectives

- Comparison of ICHI and
CCAM Basic Coding System
 - Mapping of ICHI to CCAM Basic Coding System
 - Differences in the architectures
 - medical aspects
 - classification aspects
- What can be a useful synthesis of both
classifications?

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Materials



- ICHI
 - Alpha-Version 2002
 - NCCH

- CCAM
 - Version V0bis 2002
 - ATIH, ANAES, CNAMTS

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ICHI (Alpha-Version 2002)




- ICHI
 - Alpha-Version 2002
 - Based on ACHI (ICD-10-AM)
 - Codes
 - Monohierarchy
 - Sequentially numbered
 - Code does not contain any semantic information
 - 1421 Classes
 - No controlled vocabulary
 - Hierarchy
 - Anatomical site/speciality
 - Anatomical site, detail
 - procedural type

Adapted Classification of Health Interventions – Adapted for International Use (ACHI)

PROCEDURES ON NERVOUS SYSTEM (BLOCKS 1–86)	REVISION
SKULL, MENINGES AND BRAIN	24 Revision of intracranial cerebrospinal fluid shunt
EXAMINATION	OTHER PROCEDURES
1 Examination of skull, meninges or brain	25 Procedures for skull fracture
APPLICATION, INSERTION, REMOVAL	27 Functional intracranial delectactic procedure
2 Cranial tap or puncture	28 Other procedures on skull, meninges or brain
3 Injection of intracranial cerebrospinal fluid devices	SPINAL CANAL AND SPINAL CORD STRUCTURES
4 Removal of intracranial cerebrospinal fluid devices	EXAMINATION
5 Irrigation, insertion or removal of intracranial cerebrospinal fluid shunt	29 Examination of spinal canal and spinal cord structures
Code also valid for perineural cerebroshunt (1)	APPLICATION, INSERTION, REMOVAL
6 Other application, insertion or removal procedures on skull, meninges or brain	30 Lumbar puncture
INCISION	31 Intracanal or vertebral injection
7 Intracranial exploration of meninges or brain	32 Epidural injection
8 Intracranial drainage	33 Epidural infusion
9 Intracranial decompression	34 Caudal injection
10 Postoperative reopening of craniotomy or craniectomy site	35 Caudal infusion
DESTRUCTION	36 Spinal injection
11 Destruction of intracranial aneurysm or other vascular lesion	37 Spinal infusion
EXCISION	38 Spinal blood patch
12 Biopsy of brain or meninges	39 Insertion of spinal catheter, infusion device or pump
13 Excision of skull for tumour or infection	40 Removal of spinal catheter, infusion device or pump
14 Removal of intracranial haematoma or abscess	41 Insertion and removal of spinal cerebrospinal fluid drain
15 Removal of intracranial tumour	42 Insertion and removal of spinal cerebrospinal fluid shunt
16 Other intracranial excision	43 Insertion of spinal electrodes and neurostimulation for pain relief
17 Skull base surgery for tumour	44 Removal of spinal electrodes or neurostimulator
18 Skull base surgery for vascular lesion	INCISION
	45 Craniotomy or myelotomy
	46 Decompression of cervical spinal cord

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ICHI: Example and Structure



Chapter

Anatomical site

Procedural type

Australian Classification of Health Interventions – Adapted for International Use (ACHI-0)

**CHAPTER 1
PROCEDURES ON
NERVOUS SYSTEM
(BLOCKS 1–36)**

SKULL, MENINGES AND BRAIN

EXAMINATION

1 Examination of skull, meninges or brain

APPLICATION, INSERTION, REMOVAL

2 Cranial tap or puncture

3 Insertion of intracranial cerebrospinal fluid devices

4 Removal of intracranial cerebrospinal fluid devices

5 Irrigation, insertion or removal of intracranial cerebrospinal fluid shunt
Code also when performed:
• stereotaxy (3)

6 Other application, insertion or removal procedures on skull, meninges or brain

INCISION

7 Intracranial exploration of meninges or brain

8 Intracranial drainage

9 Intracranial decompression

10 Postoperative reopening of craniotomy or craniectomy site

DESTRUCTION

11 Destruction of intracranial aneurysm or other vascular lesion

REVISION

24 Revision of intracranial cerebrospinal fluid shunt

OTHER PROCEDURES

25 Procedures for skull fracture

27 Functional intracranial stereotactic procedure

28 Other procedures on skull, meninges or brain

SPINAL CANAL AND SPINAL CORD STRUCTURES

EXAMINATION

29 Examination of spinal canal and spinal cord structures

APPLICATION, INSERTION, REMOVAL

30 Lumbar puncture

31 Intradiscal or vertebral injection

32 Epidural injection

33 Epidural infusion

34 Caudal injection

35 Caudal infusion

36 Spinal injection

37 Spinal infusion

38 Spinal blood patch

39 Insertion of spinal catheter, infusion device or pump


40 Removal of spinal catheter, infusion device or pump

41 Insertion and removal of spinal cerebrospinal fluid flow

**BLOCK
number, title**

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Materials and Methods



- CCAM
 - Version V0bis 2001
 - New developed
 - Starting 1998, Inpatients 2003, Outpatients 2005
 - Codes
 - Multiaxial framework (Basic Coding System)
 - Anatomical Site
 - Action
 - Approach
 - Enumeration
 - Classes
 - 1991 Basic Coding System
 - About 8.000 with enumeration
 - Controlled vocabulary
 - Hierarchy (in addition)
 - Anatomical site
 - Diagnostic/therapeutic
 - Anatomic site detail
 - Procedural type

09

ACTES CONCERNANT LA PROCRÉATION, LA GROSSESSE ET LE NOUVEAU-NÉ

09.01 ACTES DIAGNOSTIQUES CHEZ LA MÈRE ET LE FŒTUS

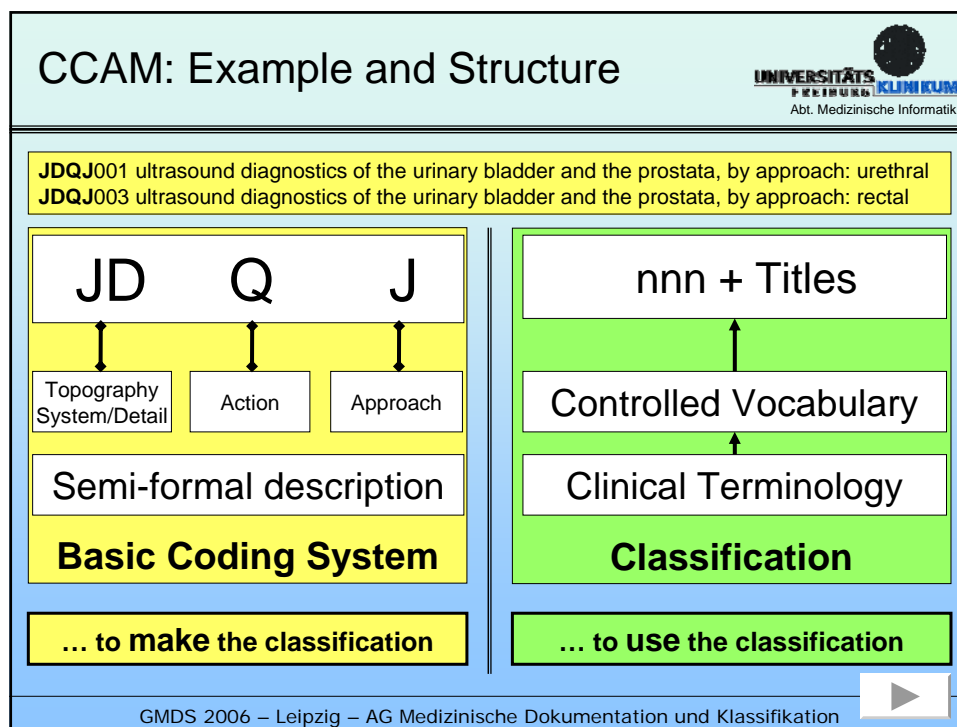
09.01.01 Explorations électrophysiologiques du fœtus

CODE CCAM	P	A	LIBELLE	MODIFICATEURS
JQQP001	0	1	Enregistrement du rythme cardiaque du fœtus d'une durée de plus de 20 minutes, en dehors du travail Avec ou sans : épreuve pharmacodynamique	


09.01.02 Echographie de l'utérus gravide

CODE CCAM	P	A	LIBELLE	MODIFICATEURS
ZCQM007	0	1	Echographie du petit bassin [pelvis] féminin pour surveillance de l'ovulation <i>Facturation</i> : 3 actes d'échographie maximum par cycle	
ZCQM008	0	1	Echographie-doppler du petit bassin [pelvis] féminin pour surveillance de l'ovulation	
JNQM001	0	1	Echographie non morphologique de la grossesse avant 11 semaines d'aménorrhée	


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CCAM Axis: Anatomical Site



UROGENITAL TRACT, PROCREATION	J
kidney	JA
renal pelvis and pelvi-ureteric junction	JB
ureter	JC
bladder	JD
uretra	JE
retroperitoneal space	JF
prostata und seminal vesicles	JG
...	...
miction	JR
fecundation	JS
sexuality – erection	JT
urogenital tract, procreation NOS	JZ


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CCAM Axis: Action




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Actions relating to the dimensions		
Enlarge the dimensions		A
Diminish the dimensions		B
Actions relating to the course		C
Actions relating to the position		
Fixing the position		D
Changing the position without removing		E
Removing	ACTION FOR OBSERVATION	
Removing	TO RECORD	Generation and analysing of a durable document, which reproduces an image of the body, the organs or which transmits the function of an organ, with the aid of an appropriate device ACQUISITION DE DONNÉES ENREGISTREMENT -GRAPHIE [ÉCHOGRAPHIE]
Hinzufüg	TO MEASURE	To determine the quantity or the quality of selected biological elements with an appropriate device or test BILAN DÉTERMINATION (d'une valeur) ÉVALUATION QUANTIFICATION MESURE -GRAMME MÈTRE
Activities r	TO GUIDE	support, to reach a deep part of the organism, when the blind access through all the layers would be too difficult or too dangerous, by navigating an instrument GUIDE (POSE DE) REPÈRE (POSE DE)
...		ANALYSE




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CCAM Axis: Approach




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OPEN ACCESS	A	
TRANSPARIETAL ACCESS	B	
ENDOSKOPIC TRANSPARIETAL ACCESS	C	
ACCESS VIA AN ORIFICE	D	
ENDOSKOPIC ACCESS VIA AN ORIFICE	E	
INTRALUMINAL TRANSPARIETAL ACCESS	F	
ENDOSKOPIC IN	Action with the aid of ultrasound, without access	
ACTION WITH T	Action with the aid of ultrasound, without access	Échographie (-doppler) transfontellaire
OPEN ACCESS		M
ACTION WITH T		Échographie (-doppler) transcrânienne
ACCESS THEN A		Échographie (-doppler) transcutanée
ACTION WITH T		Échographie (-doppler) transthoracique
ACTION WITH T		par échocardiographie transthoracique
ACTION WITH T		par doppler ... transcrânien
ACTION WITH T		par doppler ... transcutané



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Example OPS → PCS, CCAM



OPS-301
5-455.41 **Partielle Resektion des Dickdarmes,
Hemikolektomie rechts,
Offen chirurgisch mit Anastomose**

PCS-Axis (Nur multiaxial)

O Konservativ und Operativ
D Gastrointestinales System
B Exzision
F Dickdarm, rechts
O Offen
Z Ohne Hilfsmittel
Z Ohne nähere Beschreibung

CCAM-Axis

H Gastrointestinales System
H Kolon und Appendix
F Exzision
A Offen

CCAM-Title

HHFA009 Hemikolektomie rechts
mit Anastomose
durch Laparotomie


CCAM-Hierarchy

07.03.06.10
07 Verdauungssystem
.03 Therapeutische Maßnahmen
.06 Kolon
.10 Kolektomie

**Retranslating
code into text**

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Methods



- Mapping ICHI → CCAM Basic Coding System
- Comparing the architectures
 - Procedure description
 - Axes
 - Hierarchy
 - Coding structure
 - Vocabulary

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Mapping Results ICHI → CCAM Basic Coding System




Corresponding CCAM Basic Code						
Anatomy	Action	Approach	N		% of 1421	
+	+	+	1114		78,4%	

Partial or no CCAM Basic Code						
Anatomy	Action	Approach	N	% of 307	% of 1421	Total Failure
∅	∅	∅	3	1,0%	0,2%	No anatomy 0,7%
∅	+	+	7	2,3%	0,5%	
+	∅	∅	138	45,0%	9,7%	No action 14,9%
+	∅	+	74	24,1%	5,2%	
+	+	∅	85	27,7%	6,0%	No approach 6,0%
			307	100,0%	21,6%	

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Reasons for No or Partial Mapping



Overlapping anatomy

1887 Therapeutic interventions on eye, ear, nose, mouth and throat

No CCAM action

Approach not specified

Authoritative Classification of Health Interventions – Adapted for International Use (ICHI)

**CHAPTER I
PROCEDURES ON NERVOUS SYSTEM (BLOCKS 1-86)**

SKULL, MENINGES AND BRAIN

EXAMINATION

1 Examination of skull, meninges or brain

APPLICATION, INSERTION, REMOVAL

2 Cranial tap or puncture

3 Insertion of intracranial cerebrospinal fluid devices

4 Removal of intracranial cerebrospinal fluid devices

5 Irrigation, insertion or removal of intracranial cerebrospinal fluid shunt

Cisternal shunt procedure (1)

6 Other application, insertion or removal procedures on skull, meninges or brain

INCISION

7 Intracranial exploration of meninges or brain

8 Intracranial drainage

9 Intracranial decompression

10 Postoperative reopening of craniotomy or craniectomy site

DESTRUCTION

11 Destruction of intracranial aneurysms or other vascular lesions

EXCISION

12 Biopsy of brain or meninges

13 Excision of skull for tumour or infection

14 Removal of intracranial haematoma or abscess

15 Removal of intracranial tumour

16 Other intracranial excision

17 Skull base surgery for tumour

18 Skull base surgery for vascular lesion

REVISION

24 Revision of intracranial cerebrospinal fluid shunt

OTHER PROCEDURES

25 Procedures for skull fracture

27 Functional intracranial aneurysm procedure

28 Other procedures on skull, meninges or brain

SPINAL CANAL AND SPINAL CORD STRUCTURES

EXAMINATION

29 Examination of spinal canal and spinal cord structures

APPLICATION, INSERTION, REMOVAL

30 Lumbar puncture

31 Intrathecal or ventricular injection

32 Epidural injection

33 Epidural infusion

34 Caudal injection

35 Caudal infusion

36 Spinal injection

37 Spinal infusion

38 Spinal blood patch

39 Insertion of spinal catheter, infusion device or pump

40 Removal of spinal catheter, infusion device or pump

41 Insertion and removal of spinal cerebrospinal fluid drain

42 Insertion and removal of spinal cerebrospinal fluid shunt

43 Insertion of spinal electrodes and neurostimulator for pain relief

44 Removal of spinal electrodes or neurostimulator

INCISION

45 Craniotomy or myelotomy


46 Decompression of cervical spinal cord

Other and Unspecified actions

Overlapping actions

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Different Granularity



RECTUM, ANUS	LIVER
<p>EXAMINATION 928 Examination procedures on rectum or anus</p> <p>APPLICATION, INSERTION, REMOVAL 929 Application, insertion or removal procedures on rectum or anus</p> <p>INCISION 930 Incision procedures on rectum or anus</p> <p>DESTRUCTION 931 Destruction procedures on rectum or anus</p> <p>EXCISION 932 Rectal or anal biopsy 933 Excision of lesion or tissue of rectum or anus 934 Rectosigmoidectomy or proctectomy 935 Anterior resection of rectum 936 Total proctocolectomy 937 Other excision procedures on rectum or anus</p>	<p>APPLICATION, INSERTION, REMOVAL 951 Application, insertion or removal procedures on liver</p> <p>INCISION 952 Incision procedures on liver</p> <p>EXCISION 953 Excision procedures on liver</p> <p>REPAIR 954 Repair procedures on liver</p> <p>OTHER PROCEDURES 955 Procedures for hydatid cyst of liver 956 Other procedures on liver</p>

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Controlled Vocabulary




- What is „removal“?

RECTUM, ANUS	NOSE
<p>EXAMINATION 928 Examination procedures on rectum or anus</p> <p>APPLICATION, INSERTION, REMOVAL 929 Application, insertion or removal procedures on rectum or anus</p> <p>INCISION 930 Incision procedures on rectum or anus</p> <p>DESTRUCTION 931 Destruction procedures on rectum or anus</p> <p>EXCISION 932 Rectal or anal biopsy 933 Excision of lesion or tissue of rectum or anus 934 Rectosigmoidectomy or proctectomy 935 Anterior resection of rectum 936 Total proctocolectomy 937 Other excision procedures on rectum or anus</p>	<p>EXAMINATION 370 Examination procedures on nose</p> <p>APPLICATION, INSERTION, REMOVAL 371 Application, insertion or removal procedures on nose</p> <p>INCISION 372 Incision procedures on nose</p> <p>DESTRUCTION 373 Arrest of nasal haemorrhage 374 Other destruction procedures on nose</p> <p>EXCISION 375 Biopsy of nasal cavity 376 Excision procedures on nasal turbinates 377 Removal of intranasal lesion 378 Other excision procedures on nose</p>

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CCAM Basic Coding System




- “Semi-Formal” Description
 - Transplantation of liver
 - **HLEA** Liver - Shift – Open Clinical Term
Semiformal
 - Transplantation of lung
 - **GFEA** Lung – Shift - Open Clinical Term
Semiformal
 - Gastrectomy
 - **HFFA** Stomach – Excision - Open Clinical Term
Semiformal

Coarse, but constant granularity throughout the complete CCAM Basic Coding System

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Definition: Action Code „E“



To shift	Modifying the position of an organ or anatomical structure, in order to correct absence or failure of an identical organ or structure in the same or another organism	<i>Graft</i> <i>Transfer</i> <i>Transplantation</i> <i>Transposition</i>
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Controlled Vocabulary: well defined concepts used in the same manner throughout CCAM

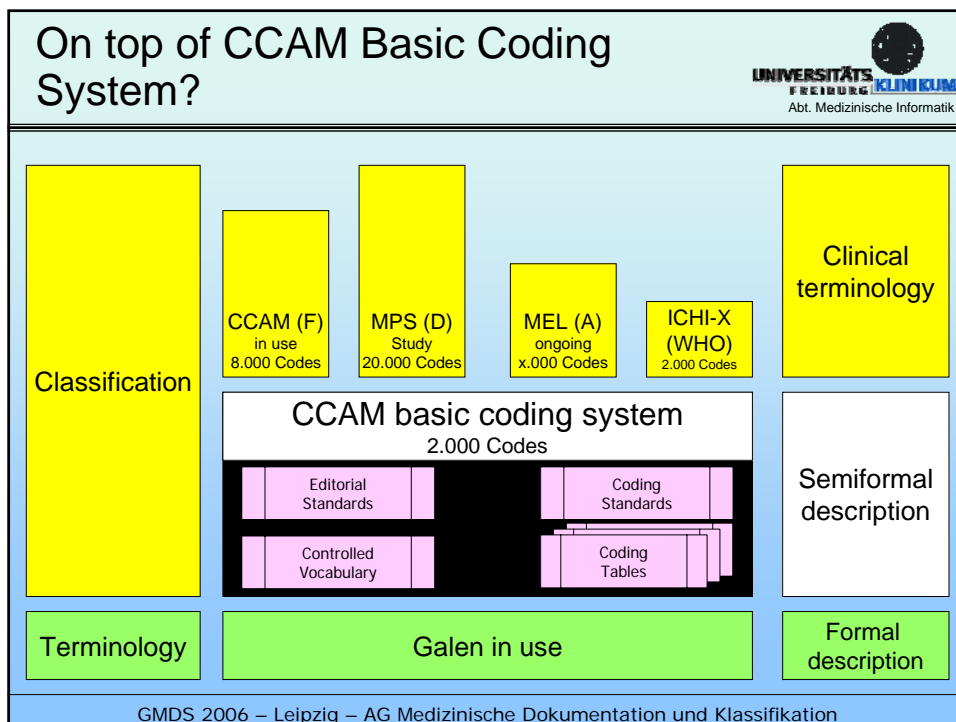
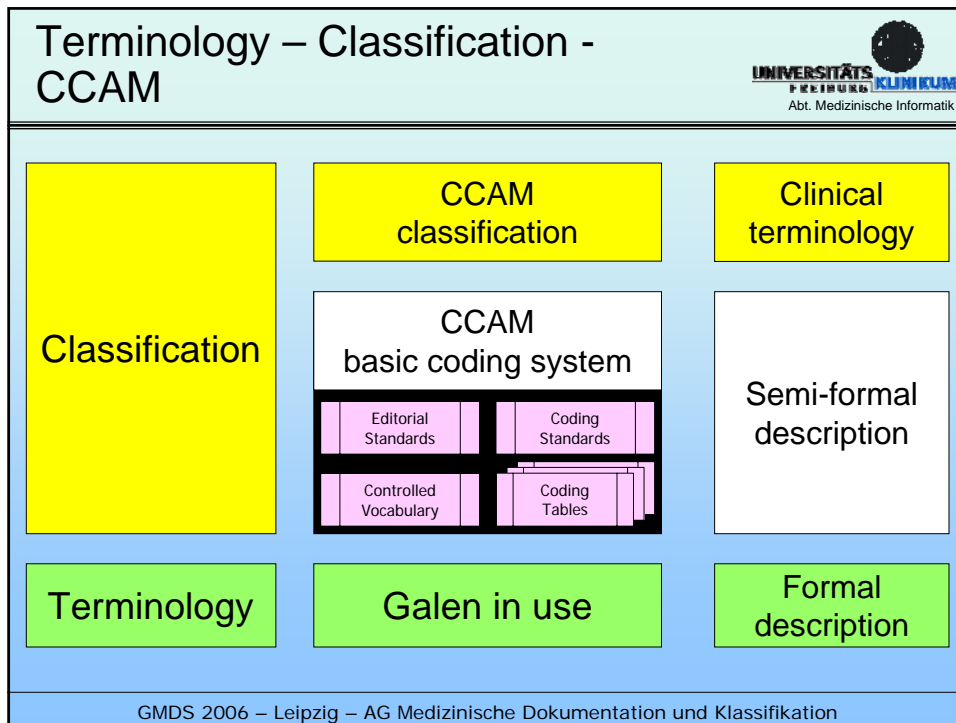
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Translation of Root Tables		
To shift	Modifying the position of an organ or anatomical structure, in order to correct absence or failure of an identical organ or structure in the same or another organism	Graft Transfer Transplantation Transposition
Umsetzen	Den Ort (die Lage) eines Organes oder einer anatomischen Struktur modifizieren, um die Abwesenheit oder das Versagen eines entsprechenden Organes oder einer entsprechenden Struktur im gleichen Organismus oder bei einem anderen Organismus zu beheben	Graft Lappen Transfer Translokation Transplantation Transposition -transplantat -transplantation

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Summary		
<ul style="list-style-type: none"> Architecture in comparison 		
Criterion	ICHI	CCAM Basic System
Terminology	± More clinical	± More formal
Type of classification	- Monoaxial	+ Multiaxial (and ...)
Hierarchy	- 2 Levels	+ 3 Levels
Codes	± Numeric - no semantic	± Alphanumeric - each axis
Expandability	- No space left	+ Each axes (but ...) + Enumeration
Vocabulary	- Not controlled	+ Controlled
Alphabetic Index	+ Yes	- Not for the Basic system

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Conclusion



- Considering the ongoing standardization of terminologies and classifications for health care telematics we strongly recommend to improve the structure of ICHI by the benefits of the CCAM architecture:
 - multiaxial coding system,
 - detailed definitions/coding guidelines,
 - controlled vocabulary,
 - accordance to European Standard EN 1828
- Thank you very much for your attention

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Ergebnis



- Erstellung einer Pilot-Version
 - ICHI auf Basis der CCAM
 - Genf - Freiburg – Lyon
 - Vorstellung der Ergebnisse auf dem nächsten Meeting in Tunesien im Oktober 2006



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Aktivitäten nach Tokio



• WHO-ICHI

- Pierre Lewalle, Robert Jakob, Marion Mendelsohn, Susanne Hanser, Albrecht Zaiß
- Treffen am 24. Februar und 14. Juni 2006
 - Definition der Randbedingungen:
 - DRG-System, Gebührenordnung
 - max. ca. 2.000 Kodes
 - Kodiersystem in der Struktur der CCAM
 - ACHI-Blockcodes als Grundlage

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Wo stehen wir heute?



- Weitere Analysen ... und Diskussionen:
- Ergebnisse:

- Internationale Abstimmung läuft
- Präsentation der Ergebnisse auf dem WHO-FIC Meeting im November 2006 in Tunis

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