



WORLD HEALTH ORGANIZATION

WHO/GPE/CAS/C/02.45

Distr.: LIMITED

ENGLISH ONLY

**MEETING OF HEADS OF WHO COLLABORATING CENTRES
FOR THE CLASSIFICATION OF DISEASES**

Brisbane, Queensland, Australia

14-19th October 2002

Title: ICD-10 Electronic Tools Committee: Annual Report 2002

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Purpose: for information

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ICD-10 Electronic Tools Committee: Annual Report 2002

Michael Schopen, DIMDI

Introduction

At the WHO Center Heads Meeting in Cardiff in October 1999 it was agreed to convene a committee to support WHO and the WHO Collaborating Centres for the Classification of Diseases in developing policies on electronic classification tools and their dissemination.

This is the third annual report of the Electronic Tools Committee (ETC) to summarize the work of the committee since then. As this report is cumulative, substantial changes have been marked by a vertical side bar.

Membership

Membership to the ETC is open to any individuals from collaborating organizations who wish to participate actively in the work and aims of the committee. They should submit their names to the Chair (Michael Schopen, schopen@dimdi.de) with copy to the secretariat.

Current Members of the ETC are:

Dr Michael Schopen (Germany) Chair	Sandra Mitchell (Canada)
Dr Roberto Becker (PAHO)	Gérard Pavillon (France)
Associate Professor Cassia Maria Buchalla (Brasil)	Donnamaria Picket (US)
Dr Carlos Castillo-Salgado (PAHO)	Dr Remigijus Prokhorskas (WHO)
Dr YC Chong (WHO)	Associate Professor Rosemary Roberts (Australia)
Celso Escobar (Brasil)	Dr Cleone Rooney (UK)
Donna Glenn (US)	Prof Björn Smedby (Sweden)
Karen Horne (Canada)	Denise Anderson (UK)
Kerry Innes (Australia)	Dr Bedirhan Üstün (WHO)
Lars Age Johannson (Sweden)	Dr Martti Virtanen (Finland)
Dr Mikko Mattila (Finland)	

The terms of reference of the ETC are printed in Appendix A.

Workplan 2001-2005

1. Establish and improve a communication platform
2. Establish personal links to other organizations and groups working in related areas
3. Survey collaborating centers for existing electronic tools and classify them according to their purpose, availability and dissemination
4. Identify gaps and current needs
5. Establish criteria for the evaluation and accreditation of electronic tools
6. Support WHO to establish an electronic version of ICD-10 in English

		2001	2002	2003	2004	2005
1.	Establish a communication platform					
	– step 1: e-mail	■	■	■	■	■
	– step 2: news group for discussions		■	■	■	■
2.	Establish personal links					
	- step 1: identify organizations and groups	■				
	- step 2: establish personal links		■	■	■	■
3.	Survey Collaborating Centers					
4.	Identify gaps and current needs		■			
5.	Establish criteria for evaluation				■	■
6.	Electronic version of ICD-10 in English					
	- collect material from Coll Centers		■			
	- draft concept		■			
	- feasibility study			■		
	- first version			■		

Meetings

An inaugural meeting was held during the Center Heads Meeting in Cardiff 1999. A second meeting was held during the Center Heads Meeting in Rio de Janeiro in 2000, and a third meeting in Bethesda in 2001. Between the annual meetings the committee has communicated via e-mail.

Achievements

During the first meeting ETC participants listed all tools known to them and grouped them into a framework (Appendix B). It was agreed to survey all Collaborating Centers to get more detailed information on the existing tools.

Establish a communication platform

The ETC mainly works by e-mail communication. However, alternative ways of communication improving interactivity are to be considered. As a first step towards

interactivity, DIMDI has implemented a news server with restricted access as a discussion platform for the ETC. A news server open to the general public has already been operational at DIMDI since 3 years. As this forum for discussion of coding questions has been very well accepted by the German users, it was considered to implement a version with restricted access for the ETC. However, due to network security restrictions access to this news server was not possible from the Collaborating Centers. As it will be easier to install a web based discussion forum than to convince system administrators in different organizations and institutions all over the world to allow the access to a news server, DIMDI will implement a web based discussion forum with restricted access for the members of the ETC.

Establish personal links

Members of the ETC have been asked to suggest organizations and institutions working in related areas and people as contact persons to exchange information on their work. A list of personal links is to be available at the 2002 Center Heads Meeting.

Survey

For the purpose of this survey the ETC agreed on the following definition of an ICD-10 related electronic tool:

"Software for production, maintenance, and application of ICD or for processing and evaluation of data coded with ICD. Electronic tools can be based on standard software, but need some extra functionality."

A questionnaire on ICD-10-related electronic tools was designed via electronic communication in 2001 and sent out to the Collaborating Centers and other institutions. The questionnaire is printed in Appendix C and the results of the survey are tabulated in Appendix D.

The tabulation of the results was mainly supported by Arialdi Minino from the North American Collaborating Center, who translated Spanish language answers into English. Furthermore, Dr Roberto Becker from PAHO was so kind to distribute the questionnaire to relevant institutions among PAHO members.

Electronic version of ICD-10

During the second meeting of the ETC in Rio de Janeiro in 2000 the discussion revealed that there is a strong need for an electronic version of ICD-10 which is also suitable for integration into database systems. The ETC discussed possibilities to disseminate such an electronic version, whether it should be in the public domain or whether it should be sold by WHO or a commercial company. Members of the ETC agreed to prepare a discussion paper for the meeting in Bethesda in 2001.

During this meeting the committee proposed two recommendations for consideration by the Heads of Centers:

Recommendation 1

There is an urgent need for an updated version of all three volumes of the ICD-10. Thus, the Heads of Centers recommend that WHO contact DIMDI in order to obtain necessary support to fulfil this need. DIMDI should collaborate with WHO and those centers that have an electronic version of all three volumes available.

Recommendation 2

The Heads of Centers recommend that WHO, DIMDI and Collaborating Centers work together on promoting the dissemination of updated versions of all volumes of ICD-10 through the Internet in downloadable and accessible form and by CD-ROM. Dissemination should take into account the periodicity recommended by the Update Reference Committee.

These two recommendations were adopted by the Center Heads.

Together with the relaunch of the DIMDI web-site in August 2002, pages with restricted access for WHO and Collaborating Centers have been implemented. At present these pages give online access to the Tabular List of ICD-10 in English (updates effective in 2002 have been incorporated) and in French (updates not yet incorporated). A password was sent to members of the ETC. Staff of WHO and Collaborating Centers can receive a password from DIMDI on request (schopen@dimdi.de).

From an e-mail exchange the chair of the ETC learned that at present no electronic version of ICD-10 is distributed by WHO. The diskettes are no longer available because the CD-ROM was imminent. Once work on the CD-ROM was discontinued, the diskettes (updated or otherwise) were not reinstated. To overcome this untenable situation, the chair has offered to prepare files of the Tabular List (English) in ASCII, HTML, RTF and CSV within a few days as an emergency solution. However, the approval of WHO will be needed because of copyright issues. Updates effective in 2002 will be incorporated, updates effective in 2003 could be added immediately after the 2002 Center Heads Meeting.

Dissemination policies for the ICD-10 electronic version

During the third meeting of the ETC in Bethesda in 2001 problems of dissemination policies for the ICD-10 electronic version had been identified. The aspects concerning the ETC are closely linked to the dissemination issues raised in the URC. The following three recommendations were approved:

Recommendation 3

All successive versions of ICD-10 and mappings should be made available on the Internet free of charge in a read-only format that cannot be edited or used for value-added products.

Recommendation 4

ICD-10 versions (in French and English) should be made available in electronic format suitable for data processing or integration into computer applications, enabling income generation for WHO.

Recommendation 5

Because WHO has the copyright for the ICD, and given the WHO mandate to maintain the classification and that ICD products produce substantial resources, WHO is called upon to provide sufficient resources to appropriately maintain and update the products. The secretariat advised that the issues related to this recommendation should also be taken up by the Centre Heads through the WHO Executive Board and their respective Ministers of Health.

ICD-10-XM

In spring 2002 WHO and the 2002 planning group for the Center Heads Meeting agreed on a new product called ICD-10-XM.

“It was felt that WHO should encourage a harmonizing of clinical modifications, leading potentially to an international clinical modification (e.g., ICD-10 XM) that could be used by countries without their own adaptation as well as encourage convergence among modifications. A first step in this direction would be development of a morbidity meta-database of existing clinical modifications, in conjunction with the Electronic Tools Committee. WHO puts its emphasis on this product to build a WHO database and maintain it. This will be done using XML versions of existing ICD modifications. This version will serve as a business application for reimbursement schemes.” (Meeting Summary)

Work on ICD-10-XM will be very much related to the electronic version of ICD-10. DIMDI has SGML files of the English, French and German versions of the Tabular List with identical structure and offers to merge them by ICD codes as a starting point both for an electronic version of ICD-10 and for ICD-10-XM. It is essential to agree on a data structure for ICD-10 to make sure that the Collaborating Centers can work with the files. The chair has contacted members of the ETC from the French, Nordic, UK and US centers to provide files for chapters II and XI as they are used to produce, maintain and publish ICD-10. This material will be analyzed and used for a discussion to agree on a common data structure for the Tabular List.

Papers

The following papers have been developed by Committee members so far:

1. Stahl C, Walker SM, Garrett C, Truran D, Roberts R, Schopen M: Electronic Maintenance of Clinical Classifications: Comparing Two Approaches. WHO/GPE/ICD/C/00.33

2. Rosenberg HM, Kochaenk KD Minino A: Update: International Collaborative Effort on Automating Mortality Statistics. WHO/GPE/ICD/00.70
3. Casey R, Hargreaves J: Mortality and Morbidity Data Dissemination Via Interactive Data Cubes – a new initiative. WHO/GPE/CAS/C/01.63
4. Berglund DJ, Fisher LJ: Developing a Database Version of the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Clinical Modifications (ICD-10-CM). WHO/GPE/CAS/C/01.65
5. Schopen M, Pavillon G, Pickett D: Dissemination Policies for ICD-10. WHO/GPE/CAS/C/01.23

Appendix A

Terms of reference

The purpose of the committee is to support WHO and the WHO Collaborating Centres for the Classification of Diseases in developing policies on electronic classification tools and their dissemination. This will include:

1. Agreement of the scope and definition of ‘electronic tools’
2. The committee should cover both tools which are only for morbidity or mortality as well as ones with a more general application
3. Working closely with other classification work groups, such as the Training group, on overlapping areas
4. Liaison with other organizations/groups working in electronic classification such as the ICE on automating mortality statistics and the Eurostat automated coding group
5. Establishing criteria for the evaluation and accreditation of electronic classification tools
6. In some circumstances, evaluating such tools on behalf of WHO, or overseeing such evaluation
7. Surveying existing tools and identifying gaps and pressing needs for tools

Appendix B

A Framework for ICD-Related Electronic Tools

Electronic Versions of ICD-10

- Electronic Index
- ICD-10 Metadatabase System
- Web-Version of ICD-10
- WHO Multilingual CD-ROM

Automated Cause Coding Systems (Mortality)

- ACME – MICAR100 – MICAR200 – SuperMICAR – Transax
- Styx
- SCB
- DECES
- Mikado

Other Applications

- PesqCID
- Hospital Encoding Systems
- WHO Multilingual CD-ROM
- Crosswalks
- Relation/Mappings to other vocabularies (UMLS, Galen, Read-Codes etc.)
- Software for validation, aggregation, tabulation, retrieval

Electronic Training Tools

- TENDON (several languages) and other
- INTERCOD
- Training material in electronic form (NCHS)
- Need for representation format for training cases as basis for a knowledge base

Data Capture Tools

- Electronic Death Registration and Certificate
- Cancer Registration
- Data Entry Systems for Hospitals
- Data Entry Systems for Primary Care

Analytic Tools

- Geographical Information Systems
- Statistical Data Dissemination Systems

Dissemination and Communication Tools

- Web-Sites
- Majordomos
- Literature on the ICD

Other Tools

- Assembly in Health Record
- Optical Character Recognition and Vocal Capture

Appendix C*Questionnaire on ICD-10 Related Electronic Tools*

The Electronic Tools Committee requests that each Collaborating Centre please complete the following questionnaire on the availability of electronic tools related to ICD-10. The results of this inventory will be presented at the annual meeting of the Heads of the WHO Collaborating Centres for the Family of International Health Classifications in October 2001. Thank you.

For the purpose of this questionnaire the Electronic Tools Committee agreed on the following definition of an electronic tool:

"Software for production, maintenance, and application of ICD or for processing and evaluation of data coded with ICD. Electronic tools can be based on standard software, but need some extra functionality."

Please complete one copy of this questionnaire for **each** ICD-10 related electronic tool (including those for National versions or clinical modifications of ICD) known to, or used by, your Collaborating Centre and return it by e-mail, mail or fax no later than August 17, 2001 to

Dr. Michael Schopen
DIMDI
Waisenhausgasse 36-38A
50676 Koeln
Germany
Telephone No: +49 221 4724 325
Fax No: +49 221 4724-444
E-mail address: schopen@dimdi.de

Name of Collaborating Centre _____

Person/people completing the questionnaire:

Name/s: _____

Organization: _____

Post/Job Position: _____

Mailing Address: _____

Telephone no: _____

Fax no: _____

E-mail address: _____

Signature (if not sent electronically)

Date (dd/mm/yy)

Part I – please fill in for each tool –

Name of electronic tool (if available) (use separate sheets for each product):

Who owns the tool? (name and contact details) _____

Who is the author/developer of the tool? (if different from owner) (name and contact details)

1. Purpose of tool (please tick all that apply):

_____ Electronic version of ICD-10 (please specify if for national version (NV) or clinical modification (CM) where indicated)

_____ Tabular List _____ NV _____ CM

_____ Index _____ NV _____ CM

_____ Automated coding

_____ Mortality

_____ Morbidity _____ NV _____ CM

_____ Electronic training tool _____ NV _____ CM

_____ Production of ICD-10

_____ Tabular List _____ NV _____ CM

_____ Index _____ NV _____ CM

_____ Maintenance of classification consistency

_____ Crosswalks (please specify between which classifications)

_____ Mapping to other vocabularies (please specify these vocabularies)

_____ Data validation, aggregation, tabulation, or retrieval

_____ Dissemination and communication

_____ Other (please specify) _____

2. Brief description of functionality (fill in if necessary to understand purpose)

Part II – please fill in only for tools that are owned by your institution –**3. Target audience** (please tick all that apply)

- Coders
- Clinicians/doctors
- Medical students
- Paramedical students
- Statisticians/epidemiologists
- Health information analysts
- Health planners and managers
- High-level decision makers
- Software developer
- Others (please specify) _____
- _____

4. What language/s is the user interface available in (e.g. English, French)? _____

5. Which language(s) data does the tool process (e.g. a coding tool might process only input in English)?

- Language independent (e.g. tools, which process ICD codes)

(Please specify languages)

6. Is there a copyright on the tool?

- No
- Yes

7. Is it possible to obtain translation rights?

- No
- Yes (please describe the procedure involved, cost, etc.) _____

8. Are there any pre-requisites (e.g. for minimum educational level, experience in data processing, etc.) required for using this tool?

No

Yes (please describe) _____

9. Hardware requirements for the installation of this tool?

10. Software requirements for using this tool (e.g. operating system, standard software or other off-the-shelf packages)?

11. Is this tool available to the public?

No

Yes (please tick all that apply)

public domain

through a distribution centre

on the internet

from the author/producer

from the Collaborating Centre

other (please specify) _____

12. Is it necessary to obtain a licence to use the tool?

Not at all

Not for Collaborating Centres

Yes (please specify amount and currency) _____

13. Are there provisions/mechanisms for updating the tool to reflect changes in ICD-10?

_____ No

_____ Yes (please describe provisions/mechanisms as completely as possible)

Appendix D - Results of the Survey on ICD-10-Related Electronic Tools

No	Center/ Institution	Country	Name of Product	Owner	Developer/Author	Purpose	Brief Description
1	French Coll Centre	France	STYX	Centre of Epidemiology on Medical Causes of Death	G�rard Pavillon	Automated mortality coding	Styx allows to code the diagnosis reported on the death certificate and to select the underlying cause of death. This system uses the ACME decision tables to select the underlying cause.
2	North American Coll Centre	Canada	CCICD-10	Canadian Institute for Health Information	Canadian Institute for Health Information	Electronic national version of ICD-10 Tabular List and Index; automated morbidity coding; electronic training; production of ICD-10; maintenance of consistency; crosswalks to ICD-9; data validation, aggregation, tabulation and retrieval; dissemination and communication; moving towards replacing the paper product	Searching for codes through the use of query templates; personalization of the infobase through the use of the shadow file; summarize code searches and retain the references
3	Nordic Coll Centre	Sweden	Mikado	Center for Epidemiology Swedish National Board of Health and Welfare	Lars Age Johansson, Statistics Sweden	Automated mortality coding	Assigns multiple cause codes to conditions reported on death certificates (multiple cause coding), performs code modifications according to the ACME input specifications, validates assigned codes against age, sex, and other information on the death certificate (e.g. other condition codes, statement of intent)
4	Office of the ICD	Japan	CD-ROM versions of ICD-DA 3 rd ed. ICD-NA 2 nd ed. ICD-10-ICD-9- translator	Office of the ICD	WHO (?)	Electronic version of Tabular List; dissemination and communication	Japanese versions of specialty based adaptations and translator for facilitating use of ICD-10 (especially for management of medical information in each medical facility)
5	Via PAHO/ Direcci�n Xeral de Saude P�blica, Galicia	Spain	INFOSAUDE	Direcci�n Xeral de Saude P�blica, Galicia [General Direction of Public Health]	LRc Sistemas	Electronic version of Tabular List and Alphabetical Index; data validation, aggregation, tabulation or retrieval; dissemination and communication	Data entry, quality control, analysis, information output

No	Center/ Institution	Country	Name of Product	Owner	Developer/Author	Purpose	Brief Description
6	Via PAHO/ Centro Cubano de la Clasificación de Enfermedades	Cuba	Sistema Automatizado de Mortalidad [Automated Mortality System]	Centro de Desarrollo de la Informática de Salud Pública [Center for Development of Public Health Informatics]	Center for Development of Public Health Informatics	Data validation, aggregation, tabulation or retrieval; dissemination and communication	The program is designed to capture each certificate of death (at the Province level), registering the variables pertinent to the decedent. Data checks/validation start at entry-level, checking for probable and absolute errors as determined on a list, by combining variables. Files registered are submitted monthly to the national level, where a version of the program collects the most useful variables (at the national level) to form a national database. The system allows table production, either by prior design or customized according to the user's needs.
7	Via PAHO/ Ministerio de Salud	Chile	No specific name	Ministerio de Salud [Ministry of Health]	Dra Danuta Rajs	Electronic national version of Tabular List; production of Tabular List; maintenance of consistency; data validation, aggregation, tabulation or retrieval; dissemination and communication	Data entry, checking and validation; production of tables by cause of death; validation of record consistency
8	Via PAHO/ Instituto Nacional de Estadística Geografía e Informática	Mexico	IMPS/Version 3.1	Buro de Censos de los E.E.U.N. [Bureau of the Census]	Bureau of the Census	Electronic national version of Tabular List; production of national version of Tabular List; maintenance of consistency; data validation, aggregation, tabulation or retrieval; dissemination and communication	Entry and validation, generation of tables and frequencies

No	Center/ Institution	Country	Name of Product	Owner	Developer/Author	Purpose	Brief Description
9	Via PAHO/ Instituto Mexicano del Seguro Social (IMSS)	Mexico	Sistema de Información Médico Operativo (SIMO) [Medical Operating Information System]	IMSS, División de Informática Médica y Desarrollo de la Coordinación de Atención Médica [Division of Medical Informatics and Development of Medical Attention Coordination]	Technical: Informatics Normative: Div of Medical Informatics and Development of Medical Attention Coordination	Data validation, aggregation, tabulation or retrieval	Through data entry screens it is possible to collect diagnosis information from external consultations and hospitalizations, coding the diagnoses or reasons for request of services to ICD-10. The system has validation checks for the codes according to age and gender, as necessary. The system enables for collection of information through all (100%) medical units of the institute.
10	Via PAHO/ Instituto Mexicano del Seguro Social (IMSS)	Mexico	Subsystem 13 of SIMO, Hospital discharges	IMSS, División de Desarrollo Institucional en Sistemas de la Coordinación de Presupuesto, Contabilidad y Evaluación Financiera [Div for Institutional Development for systems of Budget, Accounting and Financial Evaluation Coordination]	Technical: Informatics Normative: Div of Medical Informatics and Div for Institutional Development for systems of Budget, Accounting and Financial Evaluation Coordination	Data validation, aggregation, tabulation or retrieval	Subsystem 13 of the "Unique information System" (SUJ) allows for national and district level collection of hospital discharges, discharges due to deaths, and surgical procedures. Original data is obtained from the Medical Operating Information System (SIMO) and through a process of district integration, files are generated that are transmitted to a central level where the final collection is done. Electronic or hardcopy reports are generated relating ICD-10 codes to different age groups. The subsystem is of national scope.

No	Center/ Institution	Country	Name of Product	Owner	Developer/Author	Purpose	Brief Description
11	Via PAHO/ Instituto Mexicano del Seguro Social (IMSS)	Mexico	Subsystem 27 of SIMO, Reasons for request of external consultation	IMSS, División de Desarrollo Institucional en Sistemas de la Coordinación de Presupuesto, Contabilidad y Evaluación Financiera [Div for Institutional Development for systems of Budget, Accounting and Financial Evaluation Coordination]	Technical: Informatics Normative: Div of Medical Informatics and Div for Institutional Development for systems of Budget, Accounting and Financial Evaluation Coordination	Data validation, aggregation, tabulation or retrieval	Subsystem 27 of the "Unique information System" (SUJ) allows for national and district level collection of the reasons for requesting external consultations per service. Original data is obtained from the Medical Operating Information System (SIMO) and through a process of district integration, files are generated that are transmitted to a central level where the final collection is done. Electronic or hardcopy reports are generated relating ICD-10 codes to different age groups. The subsystem is of national scope.
12	Via PAHO/ Instituto Mexicano del Seguro Social (IMSS)	Mexico	Sistema de Medicina Familiar Siglo XXI [21 st Century Family Medicine System]	IMSS, División de Informatica Médica y Desarrollo de la Coordinación de Atención Médica [Division of Medical Informatics and Development of Medical Attention Coordination]	Technical: SoftTek S.A. Normative: Div of Medical Informatics and Development of Medical Attention Coordination	Data validation, aggregation, tabulation or retrieval; electronic filing	The physician can enter diagnosis information corresponding to services provided to the patient. Through a screen, the physician may choose from a menu the services that were provided (thus automatically coding to ICD-10), or he/she may narrate the diagnoses/reasons for visit (which implies a posterior process of coding and data entry into the system). This system is available in 6 primary care facilities.

No	Center/ Institution	Country	Name of Product	Owner	Developer/Author	Purpose	Brief Description
13	Via PAHO/ Instituto Mexicano del Seguro Social (IMSS)	Mexico	Sistema de Administración Hospitalaria Siglo XXI [21 st Century Hospital Management System]	IMSS, División de Informática Médica y Desarrollo de la Coordinación de Atención Médica [Division of Medical Informatics and Development of Medical Attention Coordination]	Technical: Intecomp S.A. Normative: Div of Medical Informatics and Development of Medical Attention Coordination	Data validation, aggregation, tabulation or retrieval; medical record	The physician can enter diagnoses information corresponding to services provided to the patient. Through a screen, the physician may choose from a menu the services that were provided (thus automatically coding to ICD-10), or he/she may narrate the diagnoses/reasons for visit (which implies a posterior process of coding and data entry into the system). This system operates in 3 hospitals.
14	DIMDI	Germany	SGML based Production System for Medical Classifications	German Institute for Medical Documentation and Information (DIMDI)	Michael Schopen	Production of both national version and clinical modification of ICD-10 Tabular List and Alphabetical Index; Electronic version of Tabular List and Index; maintenance of consistency	The system consists of an SGML based editor and a suite of programs for the maintenance of classification consistency and for transformation from SGML into several target formats (ASCII text, RTF, HTML).
15	Australian Coll Centre/ National Centre for Classification in Health	Australia	Australian Coding Benchmark Audit ACBA TM ₂₀₀₀	National Centre for Classification in Health (NCCH)	NCCH	Data validation, aggregation, tabulation or retrieval	ACBA TM ₂₀₀₀ provides a mechanism to assess quality of coded morbidity data. ACBA TM ₂₀₀₀ is a coding audit method that involves re-coding a sample of hospital-admitted patient episodes and uniformly recording results. ACBA TM ₂₀₀₀ <ul style="list-style-type: none"> identifies errors in coding practice identifies the causes as system or coder errors compares results across facilities and time extrapolates results to casemix environments identifies improvement strategies using coder feedback mechanisms automates results reporting

No	Center/ Institution	Country	Name of Product	Owner	Developer/Author	Purpose	Brief Description
16	Australian Coll Centre/ National Centre for Classification in Health	Australia	ICD-10-AM Browser	National Centre for Classification in Health (NCCH)	NCCH	Electronic version of Tabular List and Index for national version and clinical modification	Presents the classification in a compact electronic format. All data is searchable and linked.
17	Australian Coll Centre/ National Centre for Classification in Health	Australia	Performance Indicators for Coding Quality (PICQ) TM ₂₀₀₀	National Centre for Classification in Health (NCCH)	NCCH	Data validation, aggregation, tabulation or retrieval	PICQ TM ₂₀₀₀ is a set of predetermined performance indicators which identify coding variation in a defined dataset. When coding variations are identified the causes may be investigated and corrective action taken. The indicators are designed to serve as measures of aspects of coding quality. They are expressed in a standard format so outcomes can be compared across facilities and time.

No	Country	Name of Product	Target Audience	Language of User Interface	Language of Data	Copyright	Translation Rights	Pre-requisite for Use
1	France	STYX	Coders	French	French	No	Yes	To know ICD-10 mortality coding
2	Canada	CCICD-10	Coders; clinicians; statisticians; health information analysts; health planners and managers; software developer	French; English	French; English; part of system is language independent	Yes	No, provision in place at this time	Training in navigation and functionality of the infobase is required
3	Sweden	Mikado	Coders	Swedish	Swedish; Latin	No	Yes; as decided by the National Board of Health and Welfare	Intended for experienced mortality coders
4	Japan	CD-ROM versions of ICD-DA 3 rd ed. ICD-NA 2 nd ed. ICD-10-ICD-9-translator	Coders; clinicians; statisticians; health information analysts	Japanese	N/A	Yes	No	Basic knowledge and experience in ICD
5	Spain	INFOSAÚDE	Coders; statisticians	Gallician	Gallician, part of system is language independent	Yes	Possibly	Technical skills, public health background
6	Cuba	Sistema Automatizado de Mortalidad	Clinicians; medical and paramedical students; statisticians; health information analysts; health planners; high-level decision makers; collaboration with international organizations	Spanish	Language independent	Yes	Yes, request must be made to producer; cost represent 10 % of the products price	Basic computing knowledge plus knowledge of the mortality statistical system
7	Chile	No specific name	Statisticians	Spanish	Spanish	No	No	Basic electronic data processing knowledge, experience with Epi-Info 604c, ICD-10, other spreadsheet or database management systems
8	Mexico	IMPS/Version 3.1	N/A	English	N/A	Yes	N/A	Programming knowledge
9	Mexico	Sistema de Información Médico Operativo (SIMO)	Coders, clinicians, statisticians, health planners	Spanish	N/A	Yes	No	Basic PC knowledge plus user manual

No	Country	Name of Product	Target Audience	Language of User Interface	Language of Data	Copyright	Translation Rights	Pre-requisite for Use
10	Mexico	Subsystem 13 of SIMO, Hospital discharges	Statisticians, health information analysts, health planners, high-level decision makers	Spanish	N/A	Yes	N/A	Knowledge of TSO (Time Sharing Operation) and JCL (Job Control Language)
11	Mexico	Subsystem 27 of SIMO, Reasons for Request of External consultation	Statisticians, health information analysts, health planners, high-level decision makers	Spanish	N/A	Yes	N/A	Knowledge of TSO (Time Sharing Operation) and JCL (Job Control Language)
12	Mexico	Sistema de Medicina Familiar Siglo XXI	Coders, clinicians, statisticians, health planners	Spanish	N/A	Yes	No	Basic PC knowledge plus user manual
13	Mexico	Sistema de Administración Hospitalaria Siglo XXI	Coders, clinicians, medical students, statisticians, health planners	Spanish	N/A	Yes	N/A	Basic PC knowledge plus user manual
14	Germany	SGML based Production System for Medical Classifications	Others: classification development and maintenance staff	No user interface	Part of the system is language independent, part depends on German language	Yes	Yes, request to DIMDI	Thorough knowledge of the SGML standard and of the Balise programming language, programming experience
15	Australia	Australian Coding Benchmark Audit ACBA TM ₂₀₀₀	Coders; clinicians; statisticians; health information analysts; health planners; health insurers; health services funding bodies	English	English	Yes	Expressions of interest are welcome	User guide. Customised training courses are available from the NCCH, is required. There are no pre-requisites, but familiarity with health data and auditing practices would be helpful.
16	Australia	ICD-10-AM Browser	Coders; clinicians; statisticians; health information analysts; health planners	English	English	Yes	Applications can be made to NCCH	Yes, target audience or those with prior knowledge of health classification systems
17	Australia	Performance Indicators for Coding Quality (PICQ) TM ₂₀₀₀	Coders; clinicians; health information analysts; health planners	English	English	Yes	Expressions of interest are welcome	Yes, see target audience

No	Country	Name of Product	Hardware Requirements	Software Requirements	Availability to public	Licence
1	France	STYX	PC 64MB Ram 1 GB Hard Disk	Windows 9x or NT MS Access	From author or Coll Center	Not at all
2	Canada	CCICD-10	Pentium PC or compatible; 32 MB RAM; VGA or higher (SVGA 256 recommended); 40 MB hard disk	Windows 95/98 NT 3.51 or later Novell Netware 3.0 or later	From author	Yes \$375 Canadian
3	Sweden	Mikado	Pentium PC or higher; 120 MB hard disk	DOS or Windows with DOS window; Paradox v4.5 database system for DOS	No	Not at all
4	Japan	CD-ROM versions of ICD-DA 3 rd ed. ICD-NA 2 nd ed. ICD-10-ICD-9- translator	None	Windows 98 or higher	From Office of the ICD or by a company	Yes, about \$40
5	Spain	INFOSAUDE	Server: PC with Pentium 500, 128 MB Ram, 10 GB hard disk Client: PC with Pentium 100 or higher, 16 MB Ram, Windows 95 or higher	Windows 2000 Server, MS SQL Server 7.0 with SP 2, Seagate Crystal Report 7	No	Not for Coll Centers
6	Cuba	Sistema Automatizado de Mortalidad	PC, 16 MB Ram, printer, mouse, modem	Windows 95 or higher, FoxPro 2.6 for Windows, e-mail software	From the author	Yes, USD 7000
7	Chile	No specific name	IBM-compatible PC, 486 or higher, 32 MB RAM	MS-DOS 6.2 or Windows 3.11	From the author	Not at all
8	Mexico	IMPS/Version 3.1	PC 386 or higher	Cobol	On the Internet	Not at all
9	Mexico	Sistema de Información Médico Operativo (SIMO)	Pentium I PC with 1 MB expanded memory	MS-DOS 6.0, FoxBase 2.10, FoxPRUN	No	Yes
10	Mexico	Subsystem 13 of SIMO, Hospital discharges	IBM 9672 mainframe and terminals	OS90	No	N/A
11	Mexico	Subsystem 27 of SIMO, Reasons for Request of External consultation	IBM 9672 mainframe and terminals	OS90	No	N/A
12	Mexico	Sistema de Medicina Familiar Siglo XXI	Server, clients, network	Novell, Microstep	No	Yes
13	Mexico	Sistema de Administración Hospitalaria Siglo XXI	HP server, clients, network	Unix, TCP/IP, Informix	No	Yes
14	Germany	SGML based Production System for Medical Classifications	IBM PC 256 MB RAM, 4 GB hard disk	Windows 95 or higher, Windows NT, Unix instead of Windows should be possible	From the author, only for collaboration	Not necessary

No	Country	Name of Product	Hardware Requirements	Software Requirements	Availability to public	Licence
15	Australia	Australian Coding Benchmark Audit ACBA TM ₂₀₀₀	486 PC or better	None	Through distribution centre and from the author	Single user \$AUD200 5-10 users \$AUD900 11-20 users \$AUD1,800 21+ users \$AUD4,000
16	Australia	ICD-10-AM Browser	CD-ROM or e-mail or network version	None	Through distribution centre and from the author	Yes, \$AUD110
17	Australia	Performance Indicators for Coding Quality (PICQ) TM ₂₀₀₀	PC, 166 MHz, 32 MB RAM, CD-ROM	MS-Access 97 or 2000	Through distribution centre and from the author	Single user \$AUD660 5-10 users \$AUD3,080 11-20 users \$AUD6,600 21+ users \$AUD13,200

No	Country	Name of Product	Updates	Update Mechanism	Person completing questionnaire	Contact
1	France	STYX	Yes	New version is sent by the producer	G�rard Pavillon	pavillon@vesinet.inserm.fr
2	Canada	CCICD-10	Yes	Revisions of the tool every 2 years will include WHO updates	Helen Whittome	hwhittome@cihi.ca
3	Sweden	Mikado	Yes	The dictionary tables are updated at regular intervals. The records must be updated interactively by someone who is familiar with the Mikado dictionary syntax.	Lars Age Johansson	lars.age@scb.se or westwood@swipnet.se
4	Japan	CD-ROM versions of ICD-DA 3 rd ed. ICD-NA 2 nd ed. ICD-10-ICD-9-translator	No	There is no plan to upgrade 3 and 4 character categories. We will use tools based on ICD-10-1990 for a while because frequent updates disturb comparability of statistics	Tsuyoshi Saito	saito-tsuyoshigo@mhlw.go.jp
5	Spain	INFOSAÚDE	Yes	Updates to code lists, listings of warnings and errors	Sara Cerdeira Caram�s	sara.cerdeira.carames@sergas.es
6	Cuba	Sistema Automatizado de Mortalidad	Yes	Modifications to cause-coding given national or international decisions	Dra Maria Esther Alvarez Lauzarique	mesther@mspdne.sld.cu
7	Chile	No specific name	No	List of ICD-10 codes is updated if necessary	Dra Danuta Rajs Grzebien	drajs@minsal.gov.cl
8	Mexico	IMPS/Version 3.1	No		Act. Antonio Escobedo Aguirre	aescobed@dge.inegi.gob.mx
9	Mexico	Sistema de Informaci�n M�dico Operativo (SIMO)	Yes	Changes to ICD-10 imply updates of catalogues and dictionaries	Dr Hilario Fierro Hern�ndez	dpmcooam@imssgob.mx
10	Mexico	Subsystem 13 of SIMO, Hospital discharges	Yes	Changes to ICD-10 imply updates of catalogues and dictionaries	Dr Hilario Fierro Hern�ndez	dpmcooam@imssgob.mx
11	Mexico	Subsystem 27 of SIMO, Reasons for Request of External consultation	Yes	Changes to ICD-10 imply updates of catalogues and dictionaries	Dr Hilario Fierro Hern�ndez	dpmcooam@imssgob.mx
12	Mexico	Sistema de Medicina Familiar Siglo XXI	Yes	Changes to ICD-10 imply updates of catalogues and dictionaries	Dr Hilario Fierro Hern�ndez	dpmcooam@imssgob.mx
13	Mexico	Sistema de Administraci�n Hospitalaria Siglo XXI	Yes	Changes to ICD-10 imply updates of catalogues and dictionaries	Dr Hilario Fierro Hern�ndez	dpmcooam@imssgob.mx
14	Germany	SGML based Production System for Medical Classifications	Yes	The system is under constant development and updates to the programs can be requested from the author.	Dr Michael Schopen	schopen@dimdi.de
15	Australia	Australian Coding Benchmark Audit ACBA TM ₂₀₀₀	Yes	Notification of ACBA results to NCCH is optional but will provide the basis of national benchmark data. Hospital identity will not be disclosed in the benchmarking process.	Ann Jones Donna Truran	ann.jones@cchs.usyd.edu.au d.truran@cchs.usyd.edu.au

No	Country	Name of Product	Updates	Update Mechanism	Person completing questionnaire	Contact
16	Australia	ICD-10-AM Browser	Yes	Errata are incorporated for new subscribers. Subscribers receive electronic files errata for incorporation as they are produced. The tool will be revised and released as new editions of ICD-10-AM are produced biennially.	Ann Jones Donna Truran	ann.jones@cchs.usyd.edu.au d.truran@cchs.usyd.edu.au
17	Australia	Performance Indicators for Coding Quality (PICQ)	Yes	New indicators will be added to reflect enhancements in the classification	Ann Jones Donna Truran	ann.jones@cchs.usyd.edu.au d.truran@cchs.usyd.edu.au