WHO-FIC NETWORK MEETING

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Electronic Tools Committee: Annual Report 2005

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Abstract

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

This is the sixth annual report of the Electronic Tools Committee (ETC) to summarize the work of the committee in 2005.

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Introduction

At the WHO Centre Heads Meeting in Cardiff in October 1999 it was agreed to convene a committee to support WHO and the WHO Collaborating Centres for the Family of International Classifications in developing policies on electronic classification tools and their dissemination. This is the sixth annual report of the Electronic Tools Committee (ETC) to summarize the work of the committee in 2005.

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

Work plan derived from previous meetings

1. Establish and improve a communication platform
2. Establish personal links to other organizations and groups working in related areas
3. Survey collaborating centres 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

As many of these topics were fulfilled by 2004 a new list was derived from the results of the 2004 Meeting in Reykjavik that names the most prioritizes items to succeed in 2005.

The prioritized action list for 2005

1. Proceed with new maintenance tool: Feedback from other countries using an electronic version is needed to help identify problems and needs for the new tool
2. Then design of new interface will be started and target formats need to be identified.
3. Get ICF into working program
4. ICD-10: establish production cycle for 2006
5. Prepare electronic version in French including all updates
6. Get ICD-10-XM working group operational
7. Multilingual CD ROM with versioning

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 Centres to get more detailed information on the existing tools.

Establish a communication platform

One of the main goals for establishing better communication was to develop a platform. This goal was achieved in October 2004 by getting the ETC discussion forum operational at http://www.dimdi.de/dynamic/en/klassi/koop/who/forumlogin.html.

To access the forum a user code is necessary. It can be obtained by an informal email to weber@dimdi.de.

Establish personal links

Members of the ETC have suggested organizations and institutions working in related areas and people as contact persons to exchange information on their work.

Web Site

A web site has been set up to distribute information about the Electronic Tools Committee and results of its work. It is accessible at http://www.dimdi.de/en/klassi/koop/who/etc/index.html

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."

Electronic version of ICD-10

Together with the relaunch of the DIMDI web site in August 2002, web pages with restricted access for WHO and Collaborating Centres have been implemented. Staff of WHO and Collaborating Centres have received a password. These pages give online access to the three volumes of ICD-10 in English (updates effective up to 2006 have been incorporated) and in French.

During the 2003 WHO-FIC Network Annual Meeting it was decided that the online version of the Tabular List should become accessible to everybody. Thus it was moved to the public access area of the web server.

Meanwhile, the following parts of the electronic version are available:
Volumes I, II and III are available in pdf format for printing by WHO.
Furthermore, the pdf files have been linked together via ICD codes by Dr. Albrecht Zaiß (Department of Medical Informatics, University of Freiburg) in an ICD-10 browser.
The Tabular List is available in HTML format to everybody on the DIMDI web server and on the WHO web server at http://www3.who.int/icd/vol1htm2003/fr-icd.htm.
Codes and titles with links to the ICD-10 blocks and chapters and links to the Special Tabulation Lists are available to a closed group (so-called metadata). They can easily be imported into a relational database.
Plain ASCII files with the text of volumes I and III are also available to a closed group.

All files are available from the web pages with restricted access for WHO and Collaborating Centres mentioned above.

As the search facilities of the pdf browser are only limited the Australian Collaborating Centre has developed another browser based on the technology used for ICD-10-AM. The Australian Centre was provided with SGML files for integration into the browser software. This browser was presented at the 2004 Meeting in Reykjavik.

Maintenance Environment for WHO-FIC Classifications

At the 2003 meeting in Cologne high priority was given to the implementation of a maintenance environment that can be used to update and publish the WHO-FIC classifications. It should be suitable to deliver the classifications on paper, on electronic media and via the Internet and should be capable to generate crosswalks between the different versions of a classification.

Via email communication between WHO and DIMDI and in a face-to-face meeting between WHO and DIMDI on June 22, 2004 in Cologne the basic functionalities of such a tool were defined. It was decided to use XML as the format for data storage. Meanwhile, work on this definition is moving forward successfully. A present version based on the Classification Markup Language ClaML is being discussed in the ETC forum and will be presented in the ETC Meeting in Tokyo. More information can be obtained from paper WHOFIC/04.039 that was presented during the ETC sessions in Reykjavik.
Work on a maintenance and publication tool was started by the German CC and the specification of the functionalities for both tools could be completed. By now the technical realisation of the two tools was started. A paper on the functionalities will be presented during the ETC sessions as well.
As these new tools will hopefully be able to handle all WHO-FIC classifications the prioritized item of getting ICF in the work plan could be achieved.

ICD-10-XM

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 Centres can work with the files. The chair has contacted members of the ETC from the French, Nordic, UK and US centres 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.

With the development of the XML schema mentioned above a platform for unified data was developed and comparisons of different language versions enabled in electronic form. Each CC will need to implement an electronic form of its language version of ICD-10 into the new XML data structure. With the development of the maintenance tool comparisons will be enabled in an easy way. These topics will be discussed in the ETC Meetings.

Conclusions

With the ongoing work of the ETC during the year nearly all topics of the prioritized list were

tackled or finalized. As discussions will proceed in this year's meeting the ETC and therefore WHO and the WHO-FIC network are moving forward to unified data exchange models and better maintenance and publication standards.

Annex

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
6. Caulfeild D, Renahan M: Development of ICD-10-CA and CCI in Database Format. WHO/GPE/CAS/C/02.36
7. Jakob R: Data restructuring for the German translation and the maintenance of ICD-O-3 WHO/GPE/CAS/C/02.42
8. Schopen M: Consistency Checks for the Maintenance of ICD-10. WHO/GPE/CAS/C/02.43
9. Schopen M, Nelson SJ: ICD-10 and the Unified Medical Language System (UMLS), WHO/GPE/CAS/C/02.44
10. Innes K, Saad P, Roberts R: Modelling ICD-10-AM. WHO/GPE/CAS/C/02.65
11. Caulfeild D, Renahan M: Lessons Learned throughout the Development of Electronic Databases for ICD-10-CA and CCI in Two Languages. WHO/HFS/CAS/C/03.65
12. Ten Napel H, van der Haring EJ: Dutch ICD-10 and ICF in a CEN Technical Standard Format for version control and maintenance. WHO/HFS/CAS/C/03.35
13. Ten Napel H: Applicability of Dutch ICD-10 Electronic tool for publication of ICD-10 updates and control of derived and related classifications. WHO/HFS/CAS/C/03.36
14. Schopen M: Report on the XML Version of ICD-10. WHO/HFS/CAS/C/03.108
15. Hoelzer S, Schweiger RK, Liu R, Rudolf D, Rieger J, Dudeck J: XML Representation of Hierarchical Classification Systems. WHO/HFS/CAS/C/03.95
16. Anderson RN, Notzon FC, Kochanek KD, Miniño AM: International Collaborative Effort on Automating Mortality Statistics: Report of the Third Plenary Meeting. WHO/HFS/CAS/C/03.27
17. Schopen M: Towards an Electronic Version of ICD-10 - A Status Report. WHO/HFS/CAS/C/03.27
18. Schopen M, Weber S, Bröenhorst S, Üstün TB, Celik C: Maintenance and Publication Tool for WHO-FIC Classifications WHOFIC/04.039

19. Schopen M, Krause B: Nomenclatures and Thesauri - Alternatives to the ICD-10 Alphabetical Index? WHOFIC/04.040
20. Ten Napel H, Zanstra P: The on-line Response Centre for WHO-FIC Classifications - structured information gathering and sharing for maintenance, revision, updating, version control and needs assessment - WHOFIC/04.041
21. Schopen M, Roberts R, Üstün TB: ICD-10-XM WHOFIC/04.073

Terms of reference

Purpose

Support WHO and the WHO-FIC Network in developing policies on electronic classification-related tools and their dissemination.

Functions

1. Agree on the scope and definition of 'electronic tools'
2. Cover tools which are only for morbidity, mortality or functioning as well as ones with a more general application or for joint use
3. Work closely with other WHO-FIC Committees, such as the Education Committee, on overlapping areas
4. Establish liaison with other organizations/groups working in electronic classification such as the ICE on Automating Mortality Statistics, the Eurostat automated coding group or the UN Expert Group on International Economic and Social Classifications
5. Establish criteria for the evaluation and accreditation of electronic classification-related tools
6. Survey existing tools and identify gaps
7. Evaluate such tools on behalf of WHO or oversee such evaluation in some circumstances
8. Needs assessment.

Structure and working methods

The committee should have an integrated mandate of WHO-FIC electronic tools although the nature and phase of different members of WHO-FIC may differ in different countries. The Committee should be responsible to develop generic, overall principles that will apply to all members of the WHO-FIC. If necessary different subcommittees may be formed on ICD, ICF and other WHO-FIC classifications so as to address different issues.

The structure of the Electronic Tools Committee should involve 10-12 permanent members that will primarily devote their time in actually developing methods and application of the tasks in the field.

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 with copy to the WHO-FIC secretariat.

The chair should preferably be a single person to emphasize the integration of WHO- FIC implementation.

The committee shall draw up a workplan, which lists in detail aims, activities, deliverables, timelines and responsibilities.

Working methods should include e-mail and more interactive ways of electronic communication, conference calls and meetings, including an annual meeting during the WHO-FIC Network Annual Meeting. Official meetings of the committee must be held in conjunction with international WHO-FIC meetings.

Electronic Tools Subcommittees

Within the structure and mandate of the WHO-FIC Electronic Tools Committee, sub-committees for individual classifications can be established as the need arises. Sub-Committees assist and advise WHO on electronic tools matters which are specific and unique to the individual classifications.

The sub-committees shall specify the WHO-FIC Electronic Tools Committee functions for the respective classification in detailed workplans. The workplans shall list in detail aims, activities, deliverables, timelines and responsibilities

Working methods should include e-mail and more interactive ways of electronic communication, conference calls and meetings, including an annual meeting during the WHO-FIC Network Annual Meeting. Official meetings of the sub-committee must be held in conjunction with international WHO-FIC meetings.

Committee members should give a commitment to work on both, committee and sub-committee tasks.

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