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<th><strong>Author(s)</strong></th>
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Abstract
A key work area of the Family Development Committee (FDC) is to support the development of the WHO-FIC as an integrated suite of classifications for use in multiple settings, including Primary Care. This poster summarises FDC discussions on the Primary Care use case. Initial proposals are made for principles for primary care classifications.

Introduction
The Family Development Committee (FDC) has identified Primary Care as an important use case for the WHO-FIC classifications, as a component of the Committee work item 'Integration of the Family'. Primary Care classification was discussed at both the WHO-FIC 2015 annual meeting and the FDC mid-year meeting held in Conegliano in May 2016.

2016 Mid-year meeting discussions
Overview of the activities of the ICD-11 Primary Care Task Team (PCTT):
The PCTT has been focusing on producing a standard mapping between the International Classification of Primary Care (ICPC) and ICD-11 Primary Care (ICD-11-PC) in both directions. A similar agreed mapping exists between ICPC-2 and ICD-10. In addition, the PCTT is considering the requirements for primary care classification, to ensure that the requisite primary care concepts are available in ICD-11.
• The PCTT has to date focussed on the high-resource setting in its analyses. It was noted that there is a risk of too much detail in the high-resource setting version, but not enough detail in a low-resource setting version.
• The Committee agreed to maintain a watching brief over this work.

The Primary Care use case and options for classification:
The example of diagnosis coding was presented. Options for diagnosis coding could include:
- ICPC only,
- ICD-11-PC (ICD-11 primary care linearization) only,
- ICD-11-MMS (ICD-11 mortality and morbidity statistics linearization) only
- or combinations of ICPC and/or ICD-11-PC and/or ICD-11-MMS, depending on local requirements and available resources.
• It was noted that the use of linearization/s of ICD-11 would facilitate interoperability of primary care classification with classification at other levels of health care.

Primary care in the Family:
Background was provided on the importance of primary care having its own classification, and how the FDC could support development of a primary care classification.
Further work on guidance for primary care classification, and the role of the FDC in such work, was proposed.
• It was noted that ICPC is a related classification in the WHO-FIC for ‘reason for encounter’. Whether or not a future classification should include ‘reason for encounter’ needs to be answered by defining the primary care use case.
• General principles for primary care classification are required. Since no information on general principles for a Primary Care classification were identified, it was agreed that some principles for a primary care classification should be drafted.
• There were examples in some countries where ICD-10 is being used for primary care. In order to capture ‘reason for encounter’, a concept not included in ICD-10, a free-text field was utilised for this information instead. The German, Nordic and Thai collaborating centres confirmed their use of ICD-10 for primary care.
• It is necessary to ensure that core family members, including ICD-11, reflect primary care concepts adequately.
The role of the FDC in such a process requires clarification.
Members in the meeting were in favour of the FDC maintaining a watching brief over this aspect of work on WHO-FIC classifications.
• It was proposed that a poster on guidance for primary care classification, and the role of the FDC in such a development, should be prepared for the WHO-FIC 2016 annual meeting in Tokyo.
• The co-chairs of the PCTT should be consulted on the poster.

Principles for classifications
Initial proposals for discussion: Principles/guidelines for Health Classifications to support Primary Care:
• Ensure that the limited scope of primary care services can be accurately recorded. Aim for a limited range of high quality data.
• Define the scope clearly.
• Consider which aspects of primary care should be included (e.g. diagnoses/symptoms, functioning, interventions).
• Consider interoperability between primary care classification/s and the related classification/s used at other levels in a health system, to ensure integrated recording and reporting of health conditions and related services.
• Take account of classifications in use or planned for use at other levels of a health service.
• Ensure that the classification is suited to manual or electronic implementation.
• Ensure that the classification is suited for use by health service personnel other than specialist coders.
• Take account of the cost of acquisition and implementation of the classification/s on a large scale.
• Learn from national and international experiences of using health classifications, including ICD-10, to support primary care.
• Learn from national and international experiences of developing and/or using classifications in low-resource settings, since primary care services are often low-resource settings.

Conclusions
FDC work on primary care classifications within the WHO-FIC is ongoing. It is complementary to the activities of the ICD-11 Primary Care Task Team. An FDC working group on primary care classification has been identified to facilitate progress.

Acknowledgements
The inputs of members of the FDC to the work on primary care classification are gratefully acknowledged.
Abstract: In 2016 generic testing of the ICD-11 MMS is focused on line coding pilot testing of approx. 420 diagnostic terms (representing 5% of current ICD-11 MMS Chapter categories). The poster provides an overview of the test design, procedure and instruments. Furthermore the poster outlines key features of the envisaged data analysis and gives a summary of the current implementation status.

**Objectives and approach**

The pilot testing objective is to assess selected ICD-11 MMS components in terms of reliability (consistency), goodness of fit (accuracy) and feasibility (usability) for basic morbidity coding as well as ascertain the comparability between ICD-10 and ICD-11.

Furthermore, the pilot testing aims to examine the testing process and instruments in order to determine where improvements are needed before starting with more comprehensive testing envisaged for 2017.

Finally, the pilot testing intends to gradually build-up ICD-11 knowledge and coding skills among participating coders. This will ensure that testing of the full ICD-11 MMS as envisaged for 2017 is done by ICD-11 trained coders. In turn this will help to reduce the bias of having well trained ICD-10 coders assessing the new ICD-11.

**Procedure and instruments**

**Step 1: Identification and preparation of diagnostic term set for morbidity coding.** WHO has identified a diagnostic term set representing 5% of current ICD-11 MMS Chapter categories (approx. 420).

All diagnostic terms used in the pilot testing are pre-coded in ICD-11 and ICD-10 by an expert group consisting of FT Center Coordinators and members of the WHO Education and Implementation Committee. The expert consensus on the code assignment (gold standard) will serve as the reference against which the level of agreement between different coders will be measured.

The diagnostic term set is uploaded on the web-based platform (ICD-FIT) on which all testing activities will be conducted and managed.

**Step 2: Identification and registration of coders and coordinators on the ICD-FIT platform.** Each Field Test (FT) Center participating in the pilot testing will identify a min. of 5 experienced (morbidity) coders.

**Step 3: Training of coders.** The FT Center Coordinator will arrange for ICD-11 familiarization and training of coders using the ICD-11 Training Manual and corresponding slide sets as reference material.

The training will include familiarization with ICD-11 MMS, its tooling environment and coding rules base. Coder will undergo guided and unguided coding of case examples and will be familiarized with pilot test protocol and the ICD-FIT platform.

**Step 4: Coding of diagnostic terms on the ICD-FIT platform.**

**Assignment of coders.** The FT Center Coordinator will assign the diagnostic terms to each of the coders using the ICD-FIT platform.

For each of assigned diagnostics term coders will complete an electronic ICD-11 and ICD-10 Code Assignment Form. After completing the code assignments for all diagnostic terms coders will fill an Evaluation Form.

**Data analysis**

**Data set analysis:** For the compiled data set analysis will focus on:

- Percentage distribution of coders agreement with the gold standard of the ICD-11 and ICD-10 code assignment for each diagnostic term.
- The proposed algorithm for the distance calculator is using a five point scale:
  - If actual coding and gold standard are equal, the distance is 0
  - If actual coding and gold standard are siblings, the distance is 1
  - If actual coding and gold standard are cousins, or actual coding is a nephew of gold standard, or actual coding is an uncle of gold standard, the distance is 2
  - If actual coding and gold standard are siblings, the distance is 3
  - If actual coding and gold standard have a relationship greater than the second cousin, but they are in the same chapter, the distance is 4
  - If actual coding and gold standard are in a different chapter, the distance is 5
- Cross-tabulation of coders level of agreement in the ICD-11 and ICD-10 code assignment with appropriate covariates (e.g. age, years of coding experience, ICD-11 familiarization and training).
- Basic descriptive statistics including frequency distribution, measures of central tendency of encountered coding time, accuracy and usability disaggregated by appropriate covariates (e.g. age, years of coding experience, ICD-11 familiarization and training).

**Implementation status**

As of August 2016 line coding pilot testing of the ICD-11 MMS English version is conducted in 11 Countries. Preparation are also under way to pilot test the ICD-11 MMS Spanish version in 7 Spanish speaking countries. It is expected to complete the line coding pilot for the ICD-11 MMS English version by September 2016 in preparation for the ICD Revision Conference in Tokyo.
Recognising the merits of considering functioning information with ICD, WHO introduced functioning properties (FPs) as part of the ICD-11 content model.

FPs are selected categories derived from the ICF component of activities and participation (A&P) that can be used to describe the potential impact of a specific disease/disorder on a person’s functioning in daily life (such as toileting) and various life areas (such as work and employment).

To gain a more complete description of a person's functioning in interaction with the health condition and contextual factors, relevant items from the ICF, in addition to the ICD, would need to be recorded.

The functioning Topic Advisory Group (fTAG) developed instructions on how to code FPs using ICD-11. The option to code FPs using ICD-11 is a first step to familiarise the community of ICD users with functioning as a component of health. Since their presentation at the 2015 WHO-FIC Annual Meeting and in light of the invaluable collaboration with members of the Functioning Disability Reference Group (FDRG) the instructions for coding FPs have been revised.

After extensive review, the RSG-SEG made recommendations that were discussed with the Joint Task Force (JTF). This poster presents the results of fTAG’s joint effort with selected FDRG experts, the RSG-SEG recommendations, and JTF feedback during a July meeting in Queensland (Australia).

## Introduction

Recognising the merits of considering functioning information with ICD, WHO introduced functioning properties (FPs) as part of the ICD-11 content model.

**FPs are selected categories derived from the ICF component of activities and participation (A&P) that can be used to describe the potential impact of a specific disease/disorder on a person’s functioning in daily life (such as toileting) and various life areas (such as work and employment).**

## Instructions for Coding Functioning Properties (FPs) Reviewed by RSG-SEG

**Specification of FPs Three possibilities for specifying the FPs for a given disease/disorder:**

- **All ICF block codes from all the A&P chapters**
  
  Example: Chapter 7 – General interpersonal interactions (d710-d729), Particular interpersonal relationships (d730-d779)

- **Tailored set of FPs reflecting the Brief ICF Core Sets** for specific diseases/disorders which can also be combined for multi-morbid situations

- **23-item set** = 21 FPs based on the ICF Rehabilitation Set + d1 to cover the Understanding & Learning Impact and d3 to cover the Communication impact

**Binary Coding Rule**

*Osteoarthritis with No impact on moving around add .0 to FP e.g. GA00.d455.0*

*Osteoarthritis with an impact on moving around add .8 to FP e.g. GA00.d455.8*

## Coding FPs in ICD-11

### 1. FP should be used within the post-coordination mechanism as stem codes*

* Stems codes are included in the list of codes for international reporting, but coders are not required to use them in every encounter. In post-coordination, stems can be coded together with stem codes of diseases/disorders.

### 2. Rename chapter 21 to clearly reflect the inclusion of the FPs.

### 3. FPs should be represented with one sub-set of the full A&P list – the A&P sub-set, but did not address classification.

### 4. To align the coding of FP with existing ICD mechanisms the binary coding rule should be dropped. ICD only allows coding if a limitation/problem is present. Limitations that are not relevant are not coded, consistent with general ICD coding rules.

### 5. Do the optional use of the existing ICD severity coding in chapter 26 Extension Codes (none-mild-moderate-severe/profound/final-unspecified) if desirable as an add-on to the stem code of FP to identify the extent of impact/limitation.

### 6. Since ICF Core Sets have been established using a solid scientific process and are available for specific disease entities, they should be incorporated in sanctioning rules indicating when and which ICF Core Set-based FPs may be most appropriate for use with the respective health conditions.

### 7. Coding examples need to be redrafted to be consistent with other ICD coding examples.

### 8. Definitions and descriptions and fully specified names should be developed to be consistent with ICD wording/style. For example, it should be “limitation in walking” instead of just “walking” for d1.0 – adding “limitation” identifies a problem and this is what is being documented by coding the FP in ICD.

### 9. Remove all non-ICD-relevant information about ICF and FPs from the reference sets.

## Conclusion

Discussions about FPs have come a long way since their inception in 2010. There are still several issues to resolve in terms of coding, however, the inclusion of FPs in ICD-11, including in the Mortality/Morbidity release, has been legitimised by the significant work carried out by RSG-SEG and JTF. The true test of the FPs’ utility and feasibility in ICD-11 will be the field trials with ICD users.

---

1. ICF Research Branch, a cooperation partner within the WHO CC for the FIC in Germany (at DIMDI), Switzerland *Swiss Paraplegic Research, Switzerland Office of the Assistant Secretary for Planning and Evaluation, Dept. of Health and Human Services, USA *Swiss Paraplegic Medical College of Thomas Jefferson University, USA *World Confederation for Physical Therapy (WCPT), UK *The University of Sydney, Australia *Danish Health Data Authority, Denmark *Health Prevention and Promotion Area, Regional Central Health Directorate, Friuli Venezia Giulia, Italy *Boğaziçi University, Faculty of Education, Turkey *Ribeirão Preto Medical University, Univ. of São Paulo, Brazil *Silla University, South Korea *International Health Terminology Standards Development Organisation (HTSDO), UK *PE. Medea* Scientific Institute Conegliano Research Centre, Italy *Health Data Standards and Informatics Technical Unit (DSI), WHO *Dept. of Health Sciences and Health Policy, University of Lucerne, Switzerland.


3. Selb M1,2, Kennedy C1, Melvin J1, Sykes C5,6, Bang S7, Gongolo F8, Sart H9, Riberto M10, Lee H11, Millar J12, Martinuzzi A13, Robinson Nicol MM14, Stucki, G1,2,15

4. *Sanctioning rules dictate which combination of codes are allowed or not allowed. Users are not required to use ICF Core Sets, and users can choose an FP even if it is not included in the ICF Core Set.*
The Australian Institute of Health and Welfare (AIHW) as the Australian Collaborating Centre (ACC) for the World Health Organization Family of International Classifications (WHO-FIC) was invited to participate in the WHO’s ICD-11 pilot test during 2016. The Australian aims for participating in the test were to a) determine the usefulness of future field tests in Australia; b) evaluate educational and implementation needs of Australia for field tests; and c) inform decision making on the use of ICD-11 as a morbidity tool in Australia. The Australian testing was planned in four phases, including 1) Preparation; 2) Undertake testing; 3) Analysis of results; and 4) Reporting of Results.

**Introduction**

In March 2016, WHO invited the AIHW, as the ACC, to participate in a pilot test on ICD-11. The pilot test would involve the AIHW, as the ACC, conducting the pilot test in Australia on WHO’s behalf (as Field Trial Centre (FTC)), on the use of ICD-11 for basic morbidity coding. Other countries’ collaborating centres were similarly invited.

The pilot test methodology involves finding, from a pre-determined list of diagnostic terms (about 420 or 5% of ICD-11-MMS), the relevant code of interest in both ICD-11 for Mortality and Morbidity Statistics (ICD-11-MMS) (using the Coding Tool) and the ICD-10 (using the online browser).

WHO’s aims for the pilot test are to:

- Assess selected components of ICD-11 in terms of reliability (consistency), goodness of fit (accuracy) and feasibility (usability) for basic morbidity coding.
- Ascertain the comparability between ICD-10 and ICD-11.
- Examine the testing process and instruments in order to determine where improvements are needed before starting more comprehensive testing.

The AIHW received in-principle support to participate in the pilot test from the Australian Health Classification Advisory Committee (AHCAC) – a committee established to assist and advise the AIHW in relation to the WHO’s work to develop ICD-11 and other international health classifications.

In addition to the WHO’s aims, the following aims were identified as being additional outcomes from the pilot test for Australia:

- Determine the usefulness of the pilot test for future (more extensive) field testing of ICD-11 in Australia.
- Evaluate the educational and implementation needs of Australian participants for future field tests of ICD-11 in Australia.
- Inform decision making as to whether ICD-11 will be a suitable product for use for morbidity coding in Australia.

The AIHW undertook to complete the pilot test in four phases:

1. Preparation
2. Undertake testing
3. Analysis of results
4. Reporting of results

**Phase 1: Preparation**

During the preparation phase, discussions were held with WHO to understand the exact requirements for the pilot test and to confirm that these requirements were achievable by/in Australia.

Clarification was sought on the materials to be provided by WHO, such as the Field Testing Training Manual, and any other requirements that participants would need. The anticipated timing for the field test activities was also clarified with the WHO, although it was noted that this was subject to change.

The WHO provided access to, and a live demonstration of, ICD-FIT, the web-based platform through which all information for the pilot test is to be entered and analysed.

**Participants**

The AIHW recruited 9 health classification experts from Australia and sought permission from WHO to invite 2 health classification experts from New Zealand. New Zealand representatives are included in the ACC, and New Zealand uses ICD-10-AM (ICD-10 Australian modification) so it was considered appropriate to extend the pilot test invitation to New Zealand.

All participants had minimal (if any) prior exposure to ICD-11 and represented different sectors, including public and private hospitals and government.

**Pre-test coding exercise**

To enable participants to become familiar with the pilot test protocols, a pre-pilot test coding exercise was undertaken. Participants assigned ICD-10 and ICD-11-MMS codes to up to 23 test cases using all of the pilot test materials - ICD-FIT, the Coding Tool, ICD-11-MMS beta browser and ICD-10 browser.

The AIHW undertook this exercise in two parts. The first part was with a core group of participants with some, but limited knowledge of ICD-11, to enable the AIHW to assess educational needs of the participants on the pilot test materials. An information teleconference was held with this group, where a test case was coded and participants could ask questions. Outcomes from this process informed education delivery for the second group (with no prior knowledge of ICD-11) whom a similar teleconference was held. Teleconferences were also held upon completion of the pre-test coding exercise to ascertain feedback and learnings from the entire group.

**Participation in expert consensus**

All FTCs participating in the pilot test were asked to confirm the WHO’s selection of ICD-11-MMS and ICD-10 codes for the list of 420 diagnostic terms. Consensus on codes amongst FTCs provided the reference against which the level of agreement between participants was measured. The AIHW also participated in this exercise.

**Phase 2: Undertake testing**

This phase involved the participants assigning ICD-11-MMS and ICD-10 codes to the list of diagnostic terms, as provided by WHO.

Participants also indicated whether the codes found were optimal, that is, whether there was an exact match of code to diagnostic statement, or whether there was any ambiguity in the codes they found for selection.

**Phase 3: Analysis of results**

This phase will occur during October 2016 after testing is complete. Only the Australian results will be analysed as results from other FTCs will only be accessible by WHO.

Feedback will be sought via teleconference from the Australian participants to ascertain their experiences in undertaking the pilot field test.

The AIHW will discuss the Australian results with WHO and provide any feedback or lessons learnt through coordinating the pilot test in Australia.

**Acknowledgements**

The AIHW gratefully acknowledges the voluntary participation by the health classification experts in this pilot test.
Pretest for the ICD-11 Field Trial in Japan

Authors: Hiromitsu Ogata1, Yoko Sato1, Naoko Tomita1, Kei Mori2, Hiroshi Mizushima1

1National Institute of Public Health, Wako, Japan
2Ministry of Health, Labour and Welfare, Tokyo Japan

It needs to be systematically field tested in the world to assess the accuracy or the relevance of ICD-11. In previous ICD revisions, Field Trials were limited in scope and conducted to facilitate the transition between the old and the new classification system after the revision. Nevertheless, learning from these past experience, the Field Trial has been found to be very useful in the revision process. The purpose of this study is to carry out a pretest (preliminary investigation) as a simulation of the ICD-11 Field Trial, and to reveal the problems in the Field Trial implementation in Japan.

Methods & Materials

Based on the draft version of the WHO protocols, the pretest was conducted according to the following process; 1) submission of the protocol for review by ethical review committee, 2) translation of reference guide, 3) selection of case summaries, 4) translation of questions, 5) implementation of the pretest (basic questions, bridge coding and reliability), 3 coordinators and 7 raters (4 clinicians and 3 coders) participated in this pretest. Participants were selected from three national centers (National Center for Child Health and Development, National Center for Global Health and Medicine, National Hospital Organization Kyushu Medical Center). Case summaries were selected from three fields such as cancer, childhood diseases and lifestyle-related diseases.

Results

Some sections of the ICD-11 have changed largely their classification structure, therefore the reviewers pointed out that some parts of structures are too complicated and that some mistakes were found within the classification. There is a need for detailed lectures on the revised classification and its usage. Also, some terms and definitions used in the assessment form of the ICD-11 Field Trial protocol seem to be confusing.

This pretest was carried out using paper documents. For the ICD-11 draft version and the instructions of ICD-11 coding, the English versions were used. Therefore, there was some confusion for reviewers. These problems could be solved to some extent by developing web environment before the ICD-11 Field Trial starts.

Conclusions

The results of this pretest showed some of the detailed issues for the implementation of the actual Field Trial. In particular, it was found that the exact translation of the web and the protocol is important.

Acknowledgements

We gratefully acknowledge the collaboration of coordinators and raters of three national centers (National Center for Child Health and Development, National Center for Global Health and Medicine, National Hospital Organization Kyushu Medical Center). This work was supported by Health Labour Sciences Research Grant.

Table 1: An example of results

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**Internal Medicine TAG Coding Exercise of ICD-11**

**Toshio Ogawa¹, Emiko Oikawa², Masato Izutsu², Kaori Nakayama², Kei Mori², Naoko Tajima³ and Tomoaki Imamura⁴**

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2. Ministry of Health, Labour and Welfare, Japan
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4. Nara Medical University School of Medicine, Japan

**Abstract**

Internal Medicine Topic Advisory Group (IM-TAG) conducted a coding exercise for testing practicality of new structure of ICD-11 in September 2015. The participants of the exercise conducted coding of 61 sample cases and reported length of time and difficulties of the coding of each case. This exercise indicated that the new structure proposed by the IM-TAG could be considered to be practical use. However, it revealed that it is necessary to make further improvement of the structure for the everyday use of ICD-11.

**Introduction**

In the alpha phase of the ICD-11 revision process, the structural changes have been developed by the Topic Advisory Groups (TAGs) and working groups (WGs). In the Internal Medicine TAG (IM-TAG), the structural changes were developed by the WGs in collaboration with clinical experts and classification experts. As ICD-11 should be used for the everyday coding at the time of its launch, IM-TAG conducted a coding exercise using sample cases for testing practicality of new structure in the 7th IM-TAG Face-to-Face meeting held in Tokyo on 29th and 30th September 2015 (Figure 1).

**Methods & Materials**

During the Face-to-Face meeting, a coding exercise was conducted using 61 sample cases developed by WGs: 20 cases from Endocrine WG, 7 cases from Hepatology & Pancreatobiliary WG, 24 cases from Haematology WG, 3 cases from Gastroenterology WG, and 7 cases from Respiratory WG. Members of WGs who participated in the meeting were also participated in the coding exercise (Table 1). Using sample cases, the participants conducted coding exercise of the assigned cases and they reported the length of time for the coding of each case.

**Results**

All 61 cases were coded correctly by the participants, even though all participants were clinical experts rather than coding specialists. There were variations as for the length of time and difficulties of the coding. Sixteen out of 61 cases (26.2%) were assessed as the “difficult” for the coding by participants (Figure 2). The average time for coding was approximately 2.5 minutes per case whereas it took more than 15 minutes for the coding of some cases (Figure 3).

**Discussion**

This exercise indicated that the new structure proposed by the IM-TAG could be considered to be practical use. However, it revealed that it was necessary to make further improvement in some areas of structure for the everyday use of ICD-11. We also found that the Coding Tool was useful for seeking appropriate code efficiently. The Tool was well accepted by the participants. ICD-11 should achieve not only clinical validity but also practicality for the everyday coding. The coding exercise could achieve both validity and practicality of the ICD-11.
The collaboration of the Spanish-speaking countries in the 11th revision of ICD (ICD-11)

Background. The Collaborating Centers (CCs) for the WHO-FIC in Venezuela (CEVEC), Mexico (CEMECE) and Argentina (CACE), the National Reference Centers (CNRs) in Cuba (CEUCC) (under designation), Chile and Colombia, and the Collaborating Center in Barcelona (CC-BCN) (under designation) have formed the PAHO/WHO- FIC Network. They also are part of the RELACSIS (Latin American and Caribbean Network to Strengthen Health Information Systems).

ICD-11 revision. Since 2015, the PAHO/WHO-FIC Network has started a collaborative translation of the ICD-11 Beta draft to better contribute to the ICD revision and participate in the field testing. This work is coordinated by the Health Analysis & Information Unit (CHA/HA) at the Pan American Health Organization (PAHO/WHO).

This poster aims to share the progress made and challenges faced in this process.

Methods & Materials

Plan the work and work the plan.

1) Commitment. This activity has brought an overload of work to the CCs, so the solid commitment from their members with the improvement of health statistics was the key to carry it out in a successful way.

2) Regular virtual meetings: every two weeks, a virtual meeting was held to follow up the progress of the collaborative translation, exchange experiences, to reach a common understanding of the process and to discuss technical documents and be updated with the global advances and plan.

3) Experienced team of translators. Members of the CCs were responsible for the translation of the platform. Difficult terms were discussed by the group.

4) Development of technical materials

Other key elements were also translated and technical materials were developed such as platform (CEMECE), a Reference Guide and ICD-11 Field Testing Training Manual (PAHO), tutorial for collaborative translation (CACE), a tutorial for online coding (CEVEC), and scientific article (All).

The knowledge built in this experience will allow the PAHO/WHO-FIC Network to help other Spanish-speaking countries in the 2017 phase of the ICD-11 field testing and the process of transition from ICD-10 to ICD-11.

Lessons learned

Some strengths:

• Honoforic activity.
• Enable teamwork and sharing of knowledge and experiences.
• Commitment - one year of intense work together despite of thousands of kilometers distance and time zone difference.
• In the process of translation the CCs have made an effort to find a neutral language to be used in all Spanish-speaking countries.
• Have information on the ICD-11 features.

Some limitations:

• No funds assigned for this activity.
• Overload of work for CCs.
• Frequent changes in the ICD Beta draft after translation, platform and delays in the field testing.
• Vocabulary innovations with no correspondence in Spanish.

ICD-11 implementation. Looking to the future.

The ICD-11 will provide the users with more detailed and specific codes in addition to the inclusion of the new ones that can have a positive impact on health statistics. Alignment with other classifications is welcome. Its readiness to be used with electronic health records is a plus. On the other hand, some important issues have to be addressed in the implementation process:

• To adjust the current status of data collection and health statistics in the radical changes in the ICD-11 would determine a large period of time to train people, implement or review information technology, etc. The costs of these changes needs to be evaluated.
• The digital gap. ICD-11 is intended to be used in a digital environment. However, coders in many Spanish-speaking countries in the Americas use mostly the print version of the ICD-10. Will ICD-11 determine a change in the coders’ job profiles?

Acknowledgements: To all colleagues who collaborated voluntarily on this project. Special thanks to Nenad Kostanjsek and Can Celik (WHO).
Spanish version of the ICD-11 beta draft: the experience of the CC-BCN (Spain)

Authors: Estrada MD\textsuperscript{1,2} on behalf of the Spanish volunteers group of the CC-BCN (Spain)\textsuperscript{*}  
Agency for Health Quality and Assessment of Catalonia (AQuAS), Spain

\textbf{Abstract}

The WHO-FIC Network is developing the ICD-11 in response to align the demands of the classification with the latest scientific evidence and to meet user requirements. Among the different activities related to this developments, they offer a possibility of participation in field trials. It is in this context that the CC-BCN (Spain) is actively participating, especially on the Spanish translation of the ICD-11 beta draft (“Traducción solidaria”). With the aim of describing the specific characteristics of the Spanish volunteers and identifying possible barriers and facilitators, the CC-BCN (Spain) has conducted a cross-sectional study using an electronic survey.

\textbf{Main results}

\textbf{Results 1. Description of the participants}

- Place of the main professional activity: University hospital (n=9), Caritas Government (n=2), University (n=1), Research Institute (n=1) and Medical student (n=1).
- Autonomous Community of Spain: Catalonia (n=6), Andalusia (n=2), Galicia (n=1), Valencia (n=2) and Asturias (n=1).
- Sex: 9 women and 5 men.
- Age: 10 people were born before 1998.
- Education: University studies (n=7), PhD (n=4).
- The highest educational level reached: University studies (n=17), PhD (n=4).
- Time since the highest educational level has been reached: >10 years (n=10), 5-9 years (n=2), 1-4 years (n=2), <1 year (n=1).
- Level of English: low (n=1), middle (n=4), high (n=10).
- Level of IT proficiency: middle level (n=6), high level (n=6).

\textbf{Results 2. WHO FIC}

- Continued professional usage (n=1)
  - Non-existent (n=0)
  - Low (n=1)
  - Middle (n=1)
  - High (n=1)
- Continued professional usage (n=0)
  - Low (n=0)
  - Middle (n=0)
  - High (n=0)
- Continued professional usage (n=0)
  - Low (n=0)
  - Middle (n=0)
  - High (n=0)
- Continued professional usage (n=0)
  - Low (n=0)
  - Middle (n=0)
  - High (n=0)
- Knowledge and professional usage
  - ICD-10
    - Non-existent (n=0)
    - Low (n=0)
    - Middle (n=0)
    - High (n=0)
  - ICD-9-CM
    - Non-existent (n=0)
    - Low (n=0)
    - Middle (n=0)
    - High (n=0)
  - ICHI
    - Non-existent (n=0)
    - Low (n=0)
    - Middle (n=0)
    - High (n=0)
  - CIE-10
    - Non-existent (n=0)
    - Low (n=0)
    - Middle (n=0)
    - High (n=0)
  - Spain
    - Non-existent (n=0)
    - Low (n=0)
    - Middle (n=0)
    - High (n=0)

\textbf{Results 3. Topics related with the Spanish translation and IT translation platform}

- Have received training: yes (n=14)
- Training method: by Skype (n=2), face-to-face meetings (n=8), mix means (n=4).
- Type of training: individual (n=8), group (n=6), both (n=2).
- Training materials: video tutorials (n=5), power-point (n=3), informative emails (n=5).
- Difficulty in logging in: low (n=2), middle (n=4).
- Difficulty in handling translation platform: low (n=4), middle (n=6).
- Difficulty in translation tasks: low (n=1), middle (n=4).
- Real translation time vs. expected time: lower (n=4), equal (n=2), higher (n=6).
- Translation platform user-friendliness: low (n=4), middle (n=10), high (n=2).
- Utility of the agreed common terms provided: lightly helpful (n=3), helpful (n=4), very helpful (n=8).
- Usefulness of light icon: lightly helpful (n=1), helpful (n=11), very helpful (n=2).
- Troubles with internet connections: yes (n=1), sometimes (n=5), no (n=10).
- Translation out of platform due to connection troubles: sometimes (n=1), never (n=13).

\textbf{Results 4. Personal motivation and satisfaction}

- Participation motivation: 1) WHO project (n=13), international collaborative project (n=10), IT platform involved (n=4); others (n=4).
- Personal experience of the translation: positive (n=16), neutral (n=1), negative (n=2).
- Level of satisfaction after participating: middle (n=7), high (n=7), low (n=1).
- Interest in obtaining an accreditation certificate: yes (n=14).
- Would you recommend it? yes (n=14).

\textbf{Discussion}

- Limitations: recall bias, small sample, some redundant questions, limitations of using online surveys and non-anonymous survey.

- In conclusion, the good feed-back from our participants will encourage further contributions in the next steps of ICD-11 field trials.

\textbf{*Spanish volunteers group from the CC-BCN (Spain)}

Arnau Alonso, Jaume Canela, Carolina Conejo, Artur Conesa, José del Río, Maria-Dolors Estrada, Rosario Ferrer, Gemma Gelabert, Adelaida González, Anna Hernández-Cortés, Sara Laxe, Luis Linares, María José López , Alfonso Martínez, Mireia Miquel, Purificación Molina, Ramón Romero, María del Mar Salazar Pou, Rosa M Vivanco.
ICD-11: Road to linearization

Given the technological advances in the health-disease event the need to provide new vision to the family of international classifications, the creating the term linearization as a given every affection comprehensive approach by presenting the user in location devices and / or arises systems. The dynamic orientation and clinic ICD-11 according to our times is evident.

Abstract Given the technological advances in the health-disease event the need to provide new vision to the family of international classifications, the creating the term linearization as a given every affection comprehensive approach by presenting the user in location devices and / or arises systems. The dynamic orientation and clinic ICD-11 according to our times is evident.

Background

Since ancient times man has had the need to measure disease and death as indicators of the health of people and based on that public policies established in order to improve the quality of life of human beings; another need is to compare health and the phenomenon of disease in the population: born so the family of international classifications.

Bertillón list presented in Paris, 1900 during the First International Conference on the revision of the "International List of Causes of Death" its creator Jacques Bertillon, french statistician, with contributions from Marc D'Espine, swiss statistician and William Farr, english physician.

Therefore this list is assumed in consensus by the countries for the classification of diseases, with periodic updates that allowed its optimization as detailed below:

<table>
<thead>
<tr>
<th>REVISIONS</th>
<th>YEAR OF THE CONFERENCE THAT ADOPTED</th>
<th>YEARS OF USE</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1900</td>
<td>1900-1909</td>
</tr>
<tr>
<td>ICD-2</td>
<td>1909</td>
<td>1910-1920</td>
</tr>
<tr>
<td>ICD-3</td>
<td>1920</td>
<td>1921-1929</td>
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<tr>
<td>ICD-4</td>
<td>1929</td>
<td>1930-1938</td>
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<td>1965</td>
<td>1966-1978</td>
</tr>
<tr>
<td>ICD-9</td>
<td>1975</td>
<td>1979-1992</td>
</tr>
<tr>
<td>ICD-10</td>
<td>1989</td>
<td>1993-Present</td>
</tr>
</tbody>
</table>

Chart 1: Historical background of international classifications

The translation process of ICD-10 Spanish language was commissioned by WHO to CEVECE and started in 1983, culminating in 1989, when it is presented at the International Conference for the Tenth Revision of the International Classification of WHO diseases.

Chart 2: ICD-10 language version spanish

Chart 3: Linearization

The dynamic orientation and clinical ICD-11 according to our times is evident.

Present

Given the technological advances in the study of disease arises the need to provide a new vision to the family of international classifications, the epidemiological approach is strengthened by the clinical approach and a term that encompasses this integrative approach are created: the linearization.

The linearization born hand tracking systems terms automatically, regardless of the chapters which are the condition, this condition resembling a tree in which the leaves form the chapters where simultaneously is the condition.

Acknowledgements or Notes

A function to perform the translation of ICD-11 to spanish language, in early 2015 the network of collaborating centers meets and agrees to perform this task in the so-called Translation Solidarity, with participation of the CC and CNR of Argentina (CACE), Mexico (CEMECE), Chile (CNRChile), Cuba (CECUCE), Spain (AQuAS) and Venezuela (CEVECE), with contributions from Colombia and technical advice of PAHO and WHO. It also has a portal RELACSIS space in which are placed developed support materials and / or translated by centers throughout this process. CEVECE has participated in the solidarity translation and tutorials they have been created as support for the advancement of this joint task.

Acknowledgements or Notes

Edward Cordero
Author responsible for correspondence about the original Dra. Cordero, C., Masters in Epidemiology (UDO) and Demographer. (UCAB).
Structured Representation of Diagnostic Criteria and Compositional Expressions

Harold R. Solbrig, Hongfang Liu, Guoqian Jiang
Mayo Clinic, Rochester, MN, USA

Abstract
In this presentation, we will describe our efforts in developing and evaluating automated methods for converting textual clinical diagnostic criteria in a structured format based on the Quality Data Model (QDM). In addition, we collaborated with the IHTSDO development community to define the SNOMED CT Expression Constraint Language (ECL). We anticipate incorporating the ECL into the ICD-11 tooling when the SNOMED/ICD-11 mapping project resumes.

Structured Representation of Diagnostic Criteria

Diagnostic criteria are one of main parameters specified in the ICD-11 content model for describing an ICD-11 category. However, constructing standard and computable clinical diagnostic criteria is a challenging research field in the clinical informatics community. We at Mayo Clinic have previously explored the methods and tools converting the Quality Data Model (QDM)-based diagnostic criteria into Semantic Web Rule Language (SWRL). In this presentation, we will describe our efforts in developing and evaluating automated methods for converting textual clinical diagnostic criteria in a structured format based on QDM. We demonstrated that Our NLP-based computational framework is a feasible and useful solution in developing diagnostic criteria representation and computerization.

Methods & Materials

We used a clinical Natural Language Processing (NLP) tool known as cTAKES to detect sentences and annotate events in diagnostic criteria. We developed a rule-based approach for assigning the QDM datatype(s) to an individual criterion, whereas we invoked a machine learning algorithm based on the Conditional Random Fields (CRFs) for annotating attributes belonging to each particular QDM datatype. We manually developed an annotated corpus as the gold standard and used standard measures (precision, recall and f-measure) for the performance evaluation.

Data Collection: our diagnostic criteria were collected from a number of sources, including medical textbooks, journal papers, documents issued by professional organizations (such as the World Health Organization [WHO]), and the Internet. Table 1 shows an example of textual diagnostic criteria for diabetes mellitus.

Table 1: An example of textual diagnostic criteria for diabetes mellitus.

We used cTAKES to annotate diagnostic criteria under the UIMA framework. To extract an individual criterion that describes a different diagnosis event from full-text diagnostic criteria, we implemented two steps of processing: a) the sentence detection and b) the diagnosis event annotation. All individual sentences automatically extracted from the textual diagnostic criteria need to be further classified using the event annotations. Mapping rules are created between the cTAKES data annotation model (CAS, based on the type system) and the QDM model on the datatype-level to support the generation of QDM/HQMF representation (Figure 1).

Figure 1: An Integrated Framework for Representing Diagnostic Criteria in QDM.

From the implementation perspective, we chose the two most common types of diagnosis evidence, Symptom and Laboratory Test, to perform our experiment in this study. The evaluation results indicated that the framework and methods we designed and developed are feasible to represent diagnostic criteria in a standard and computable way.

Compositional Expressions

The SNOMED CT to ICD-11 mapping project required a formal language that could be used to select and perform logical operations on SNOMED CT concept identifiers. We collaborated with the IHTSDO development community to define this language, the SNOMED CT Expression Constraint Language (ECL), which is now an official IHTSDO standard. We created a formal specification of the in the Z notation which was used to verify the consistency and completeness of the language. We then implemented an ECL parser and interpreter based on ANTLR and Z that can be used to transform ECL into corresponding SQL queries against the IHTSDO Release Format 2 (RF2) tables. We anticipate incorporating the ECL into the ICD-11 tooling when the SNOMED/ICD-11 mapping project resumes.

Figure 3: A sample ECL query that selects all concept codes for clinical findings that either have a finding site of any type of pulmonary valve structure With an associated morphology of any type of stenosis OR a finding site of any type of right ventricular structure with an associated morphology of any type of hypertrophy.

Figure 4: Example query results

Acknowledgements
This work is supported in part by funding from the caCDE-QA (U01 CA180940), and PhEMA (R01 GM105688).
WHO in August.

Chapter. The proposals were discussed and decided upon in an editorial working group meeting in July, and processed by The peer review results were then compiled into proposals for enhancing content, structure and terminology of the TM Chapter. The proposals were discussed and decided upon in an editorial working group meeting in July, and processed by WHO in August.

Abstract

In preparation for the release of the Traditional Medicine (TM) Chapter as part of the overall ICD-11 MMS in Tokyo at the ICD Revision Conference, the TM Chapter has undergone a stringent quality analysis process. A major component of the analysis was a three-month international peer review of the whole chapter.

The peer review results were then compiled into proposals for enhancing content, structure and terminology of the TM Chapter. The proposals were discussed and decided upon in an editorial working group meeting in July, and processed by WHO in August.

Introduction

In 2010, WHO started the international classification of traditional medicine (ICTM) project. A major output developed for inclusion within ICTM has been the classification of the diagnostic categories used in the traditional medicine (TM) that originated in ancient China and are now commonly used in China, Japan, Korea and elsewhere around the world. This classification represents a unified set of harmonized traditional medicine disorders and patterns from national classifications from China, Japan and Korea, different in each country according to their specific diagnostic approaches.

The TM Chapter has undergone a stringent quality analysis process and in particular a three-month international peer review of the whole TM chapter. Between January and March of 2016, 142 TM experts from China, Japan, Korea, USA, Australia, and Europe - grouped in multinational teams of 5 to 10 experts interacting on the WHO Review Platform - reviewed 470 TM chapter entities with their respective title, definition, inclusion and exclusion terms. The TM chapter entities were reviewed in terms of their accuracy, clarity, uniqueness, level of specificity, consistency, correct placement, conciseness, clinical applicability, research utility as well as possible overlap between categories, out of scope entities, and any omissions.

The peer review results were then compiled into proposals for enhancing content, structure and terminology of the TM Chapter. The proposals were discussed and decided upon in an editorial working group meeting in July, and processed by WHO in August.

Review process

The WHO Review Platform enabled TM experts to carry out their review online at their convenience and importantly offered the possibility to interact within their multinational team for each assigned review item in order to discuss their inputs with the objective of reaching a consensus statement.

Conclusions

The international peer review of the ICD-11 MMS TM Chapter successfully enhanced its content, structure and terminology, despite the challenge of being a pioneering activity for the international TM community. Constructive technical and cross-cultural communication ensured a smooth process. Discussions among experts substantiated with rationale and references provided input of significant quality and quantity.

The importance of terminology harmonization as well as conceptual equivalence of key technical terms was highlighted. Also the need for continued communication within and beyond the TM community was shown to be of paramount importance in order to explain the classification requirements such as for instance including ‘system’ for organs in a TM context; ‘disorder (TM)’ or ‘pattern (TM)’ in each TM entity in order to identify them systematically.
Abstract
World Health Organization (WHO) commenced to develop International Classification of Traditional Medicine (ICTM) in 2010 and the development was focused on traditional medicine practice used in China, Japan and Korea (one of the Traditional Medicine practice in Japan is called as "Kampo Medicine"). In this poster, we show the tentative morbidity data which are classified by joint use of Western Medicine (WM) chapter and TM chapter in ICD-11 Beta Draft by using health insurance claims.

Introduction
Traditional medicine is an important form of health care for many people across many regions. The use of safe and effective traditional medicine practice and products can make an important contribution to national and individual health care and the promotion of health equity. However, there was no international platform that allows the harmonization of data for clinical, epidemiological and statistical use. In order to overcome such lacking, World Health Organization (WHO) commenced to develop International Classification of Traditional Medicine (ICTM) in 2010 and the development was focused on traditional medicine practice used in China, Japan and Korea (one of the Traditional Medicine practice in Japan is called as "Kampo Medicine"). Part of ICTM was evolved by integrating national standards in these countries and then is to be included into chapter 27 "Traditional Medicine Conditions – Module 1" in ICD-11.

The aim of this study is to create morbidity data in Japan, which are classified by joint use of Western Medicine (WM) chapter and TM chapter in ICD-11 Beta Draft.

Data source
Ministry of Health, Labour and Welfare (MHLW) performs "Survey of Medical Care Activities in Public Health Insurance" to obtain the basic data for health insurance policy by identifying the situation of recipient of health care including the contents of health intervention, the situation of diseases and injuries, the contents of prescription etc. In order to conduct this survey, MHLW gathered health care claims data.

In principle, there are 3 categories in health care claims (medical claim, dental claim and pharmaceutical claims). We use data from medical claim and pharmaceutical claims since there are data on age, sex, use of "Kampo" drug, diagnosis (according to ICD-10) and speciality of each medical institution (e.g. internal medicine, surgery, gynaecology etc.).

Mapping table between Pattern (TM) and "Kampo" drugs
One of the greatest features of "Kampo" medicine is that each "Kampo" drug is corresponds to "pattern" in traditional medicine. Japanese society of oriental medicine has completed the mapping table.

Morbidity data classified by joint use of ICD
We estimated the number of usage of "Kampo" drug by sex, age, diagnosis and speciality of medical institutions. And then, by using mapping table showing "kampo" drug-to-pattern (TM) correspondence, we created morbidity data in TM.

Methods & Materials

Data source
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Results

Table 1. 10 leading patterns (TM) by sex, in morbidity: Japan, 2016

<table>
<thead>
<tr>
<th>Rank</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TC59 Medium (Excess/Deficiency) pattern (TM)</td>
<td>TC59 Medium (Excess/Deficiency) pattern (TM)</td>
</tr>
<tr>
<td>2</td>
<td>TC52 Heat pattern (TM)</td>
<td>TC52 Heat pattern (TM)</td>
</tr>
<tr>
<td>3</td>
<td>TC55 Deficiency pattern (TM)</td>
<td>TC55 Deficiency pattern (TM)</td>
</tr>
<tr>
<td>4</td>
<td>TC53 Cold pattern (TM)</td>
<td>TC58 Moderate (Heat/Cold) pattern (TM)</td>
</tr>
<tr>
<td>5</td>
<td>TC58 Moderate (Heat/Cold) pattern (TM)</td>
<td>TC53 Cold pattern (TM)</td>
</tr>
<tr>
<td>6</td>
<td>TC81 Fluid disturbance pattern (TM)</td>
<td>TC81 Fluid disturbance pattern (TM)</td>
</tr>
<tr>
<td>7</td>
<td>TC61 Qi stagnation pattern (TM)</td>
<td>TC71 Blood stasis patterns (TM)</td>
</tr>
<tr>
<td>8</td>
<td>TC60 Qi deficiency pattern (TM)</td>
<td>TC62 Qi reverse flow patterns (TM)</td>
</tr>
<tr>
<td>9</td>
<td>TC54 Excess pattern (TM)</td>
<td>TC60 Qi deficiency pattern (TM)</td>
</tr>
<tr>
<td>10</td>
<td>TD60 Kidney qi deficiency pattern (TM)</td>
<td>TC61 Qi stagnation pattern (TM)</td>
</tr>
</tbody>
</table>

Table 2. 5 leading patterns (TM) by age-group, in morbidity: Japan, 2016

<table>
<thead>
<tr>
<th>Age Group</th>
<th>IM</th>
<th>P</th>
<th>PD</th>
<th>S</th>
<th>OR</th>
<th>D</th>
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Table 3. 5 leading patterns (TM) by speciality, in morbidity: Japan, 2016

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Table 4. 10 leading patterns (TM) by chapters in ICD-10, in morbidity: Japan, 2016

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Conclusions
We created the tentative morbidity data in TM. The feature of this study is to show the cross-tabulation table according to both of WM chapter and TM chapter in ICD. Although there were still some technical problems to create morbidity data in TM, this results could show the usefulness and possibility of practical use of TM chapter in ICD-11. We hope our study could help enhance understanding of TM widely.

Acknowledgements or Notes
The authors thank members of JLOM for their technical advise on creating mapping table and statistical table.
Abstract: As a new Chapter in ICD-11, the TM Chapter is subject to international field testing. A feasibility study has been conducted to pilot field test the clinical utility of TM ICD-11 codes. A mixed methods approach was adopted, including a survey of practitioner views on the TM ICD-11 codes; a coding process of case studies to establish inter-rater reliability; and a survey of coders experiences of using TM ICD-11 codes to explore conceptual and operational issues with the codes.

In 2010, WHO started a collaborative project to produce an international classification of traditional medicine (ICTM). As part of the ICTM project the diagnostic categories used in the traditional medicine (TM) that originated in ancient China and are now commonly used in China, Japan, Korea and elsewhere around the world have been classified for inclusion as a chapter within ICD. These classification rubrics represent a unified set of harmonized traditional medicine diagnoses from national classifications from China, Japan and Korea, different in each country according to their specific diagnostic approaches.

As a new Chapter in ICD-11, the TM Chapter will be subject to international field testing.

Primary objective:
To pilot field test the clinical utility of TM ICD-11 codes.

Methods & Materials
To achieve the aims of the study a mixed methods approach was adopted, including a survey of practitioner views on the TM ICD-11 codes ('Basic Questionnaire'); a coding process of case study vignettes to establish inter-rater reliability between the coding of TM ICD-11; and a survey of coders experiences of using the TM ICD-11 codes to explore practitioners perspectives on conceptual and operational issues related to the codes.

Four European Field Trial sites participated in the field testing. Led by the Royal London Hospital for Integrated Medicine (lead contact Dr Peter Fisher), field trial sites included the Charité University Hospital Berlin, Germany (lead contact Professor Benno Brinkhaus); Tromso University, Norway (lead contact Professor Vinjar Fonnebo); and the Hospital Campo di Marte, Italy (lead contact Dr Elio Rossi).

Survey of practitioner perspectives on draft TM ICD-11 codes:
Online 'Basic Questionnaire' developed focussing on practitioner familiarity with western medicine ICD codes; perceived value of TM ICD-11 codes; and conceptual and operational issues related to TM ICD-11 codes. Member organisations of European Traditional Chinese Medicine Association agreed to participate. 14 TM associations agreed to distribute the survey link, spanning 12 European countries.

127 TM practitioners completed the survey. 83 (65.4%) were female, 44 (34.6%) male, with the overwhelming majority being white/caucasian (n=117, 92.1%). Participants had a range of ages, lengths of time practicing TM, and knowledge and experience of using the current ICD system.

Key findings included:
- The theoretical backgrounds predominantly used to guide diagnosis in clinical practice included Traditional Chinese Medicine (89.0%); Five Element (41.7%); western medical (33.1%); and Japanese style (11.8%).
- 47.2% strongly agreed/agreed TM ICD codes provide a meaningful way to classify "traditional medicine (of ancient Chinese origin) disorders and patterns"; 38.0% neither agreed or disagreed; 14.8% disagreed/strongly disagreed.
- TM ICD codes perceived as being most useful for reporting and health statistics (79.6% very useful/useful); conducting TM research (71.2%); and communication with conventional practitioners (66.9%).
- 77.0% felt the distinction between the TM Disorders and Patterns was clear.
- 41.3% strongly agreed/agreed their patients’ diagnoses could be represented within the TM ICD codes; 43.3% neither agreed or disagreed; 15.4% disagreed/strongly disagreed.
- 93.1% felt that there were no categories in the ICD-TM Chapter which were misplaced and should therefore be moved to another section.
- 47.1% of participants felt TM practitioners could easily learn to use the TM ICD codes; 45.9% didn’t know; and 7.1% didn’t think they would be easy to learn.

Results
Survey of acupuncturists participating in coding of case study vignettes:
Acupuncturists participating coding phase additionally completed a questionnaire relating to the clinical utility of the TM ICD-11 codes. Analysis is ongoing.

Conclusions
Survey findings indicate European TM practitioners perceive the TM ICD-11 codes as valuable, conceptually accurate, and easy to learn. Analysis of inter-rater reliability and survey of acupuncturists participating in coding of case study vignettes will be completed late summer 2016. The findings will be published in peer reviewed medical/Complementary and Alternative Medicine academic journals.
Dual Diagnosis of Traditional Chinese Medicine and Western Medicine in China

Authors: Lianghua Zu, Danbo Dou*  
Center for International Classification Research on Traditional Medicine Clinical Conditions and Service Evaluation, SHUTCM, Shanghai, China

Abstract
The article aims to introduce the background, related policies, achievements and significance concerning the application of dual diagnosis by traditional Chinese medicine (TCM) and Western medicine (WM) in China. Based on this dual diagnosis mode, China has been actively involved in seeking for the best treatment scheme for patients, improved diagnostic and treatment capabilities of clinicians and provided more effective associated information and inspirations for researchers as well as greatly contributed to the mutual progress of traditional Chinese medicine and Western medicine.

2 Reimbursement
Some specific provinces and cities has insurance coverage standards in related to TCM diagnosis. For example, the “The Catalogue of Guangdong Province in regard to Routine Diagnosis and Treatment Covered by Basic Medical Insurance ” includes some TCM Diseases

3 Management and Education
In China, both TCM medical quality management and TCM institution management require the implementation of dual diagnosis, China’s TCM universities, the students have to learn both TCM and WM. And the curriculum is almost half and half on the amount.

4 Studies
In the field of TCM, a large number of researches are carried out based on dual diagnosis so that patients could exactly gain more benefits and it also provide reliable data support for establishing association between TCM and WM.

Conclusions
Clearly, through dual diagnosis, a mass of diagnosis and treatment associated data of traditional Chinese medicine and Western medicine have been accumulated which will exert tremendous impacts on the fields of health care, management, health economy, education, etc. China’s dual diagnosis has experienced several decades’ exploration, and China has made full training of dual diagnosis knowledge to traditional Chinese medicine doctors from the course setting of traditional Chinese medicine university education. In The Dual Diagnosis Mode is very meaningful in terms of whether patient safety, medical quality or management, but the efforts needed to make are obvious to all. At present, only hospitals of traditional Chinese medicine can strictly implement the Dual Diagnosis in China. Hopefully, after the launch of traditional medicine chapters of ICD-11, the Dual Diagnosis Mode can be extended to a wider range of medical institutions.

Methods & Materials
Since 2000, the SATCM has selected 100 TCM hospitals from more than 2,000 TCM hospitals throughout China based on the principle of stratified cluster random sampling to build a monitoring network focusing on all data from the first page of TCM inpatient medical records. From 2001 to 2010, the monitoring center has accumulated more than 2.4 million the first page records, which included TCM diagnoses (including TCM disease diagnoses and pattern diagnoses) and Western medicine diagnoses. The TCM diagnoses are according to the national classification standards of TCM diseases and patterns (GB95 and GB97). And as all the TCM hospitals in China have to use the dual diagnosis mode, a huge amount of data could be collected and used for health statistics, health decision-making, scientific research and other fields.

Figure 1: Dual Diagnosis, Overlap means a lot. For the greater the overlap parts, the more information and relationship should be obtained.

TCM Disease

Results

Applications

1 Health Statistic
The first pages of inpatient medical records of almost 2500 TCM hospitals all over the country are all required to use the standard of GB95/97, which is also part of China’s national health statistics.

And the monitoring data from the 100 collected hospitals often has been used to do more detailed analysis. For example, the statistic of commonly used diagnosis. The most commonly used TM and WM medicine diagnosis in 2401731 cases which have WM diagnosis, TCM disease diagnosis and TCM pattern diagnosis during 2001-2010 in 100 monitored hospitals are as follows.

<table>
<thead>
<tr>
<th>TCM disease</th>
<th>TCD(GB95/97)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind stroke diseases</td>
<td>BNG080</td>
<td>174278</td>
</tr>
<tr>
<td>Fracture diseases</td>
<td>BGG000</td>
<td>160435</td>
</tr>
<tr>
<td>Vertigo disease</td>
<td>BNG070</td>
<td>133777</td>
</tr>
<tr>
<td>Cough diseases</td>
<td>BNF010</td>
<td>102416</td>
</tr>
<tr>
<td>Heart pain with chest impediment disease</td>
<td>BNX020</td>
<td>88356</td>
</tr>
</tbody>
</table>

Chart 1: the top five most commonly used TCM disease diagnosis

<table>
<thead>
<tr>
<th>TCM pattern</th>
<th>TCD(GB95/97)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qi stagnation and blood stasis pattern</td>
<td>ZYVXX0</td>
<td>333416</td>
</tr>
<tr>
<td>Dampness-heat pouring downwards pattern</td>
<td>ZBMRD0</td>
<td>90731</td>
</tr>
<tr>
<td>Dual deficiency of qi and yin pattern</td>
<td>ZYVY30</td>
<td>73619</td>
</tr>
<tr>
<td>Liver and kidney yin deficiency pattern</td>
<td>ZZGS40</td>
<td>61097</td>
</tr>
<tr>
<td>Qi deficiency and blood stasis pattern</td>
<td>ZYVXM0</td>
<td>61087</td>
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Chart 2: the top five most commonly used TCM pattern diagnosis

<table>
<thead>
<tr>
<th>WM Diagnosis</th>
<th>ICD-10 Code</th>
<th>N</th>
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<tbody>
<tr>
<td>Cerebral Infarction</td>
<td>I63.902</td>
<td>112759</td>
</tr>
<tr>
<td>Lumbar intervertebral disc extrusion</td>
<td>M51.202</td>
<td>67529</td>
</tr>
<tr>
<td>Coronary Heart Disease</td>
<td>I25.101</td>
<td>59445</td>
</tr>
<tr>
<td>Mixed Hemorrhoids</td>
<td>I84.102</td>
<td>58971</td>
</tr>
<tr>
<td>non-insulin-dependent diabetes mellitus</td>
<td>E11.901</td>
<td>37876</td>
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Chart 3: the top five most commonly used WM diagnosis

Acknowledgements or Notes
*Corresponding author
US Experiences Smooth Transition to ICD-10-CM/PCS

Authors: Sue Bowman, Donnamarie Pickett
American Health Information Management Association, Centers for Disease Control and Prevention, USA

Abstract

After years of debate and multiple delays, the US finally implemented ICD-10-CM and ICD-10-PCS on October 1, 2015. Despite warnings of major financial losses, massive volumes of claims rejections, and huge drops in coding productivity, the transition was smooth and eventful. This poster will analyze the US implementation experience, explore the reasons for the successful transition, and offer lessons learned for adoption of new clinical code sets in the future.

Background

On October 1, 2015, ICD-10-CM (diagnoses) and ICD-10-PCS (procedures) were implemented in the US. ICD-10-CM was implemented by all healthcare providers in all settings and ICD-10-PCS was implemented for hospital reporting of inpatient procedures. The transition impacted all healthcare providers, payers, software vendors, and billing services.

Prior to that date, predictions of severe consequences included financial and business operation disruptions, cataclysmic financial losses, closures of physician practices, lack of access to care, and dramatic drops in productivity and accuracy.

ICD-10 Transition

The ICD-10-CM/PCS transition has gone very smoothly and has been widely characterized as a "non-event." All industry sectors invested significant time and resources in financing, training, and implementing changes to systems, workflow processes, and clinical documentation practices. Free or low-cost educational programs, tools, and resources, many designed specifically for small and rural providers, were widely available. The Centers for Medicare and Medicaid Services "Road to 10" initiative was specifically designed to address the needs of small physician practices.

Claims denial and rejection rates have been on track with pre-ICD-10 rates. In some cases, claims denial rates declined after implementation, possibly due to closer attention being paid to coding accuracy. There were even reports of a decline in the use of "unspecified" codes and increased coding accuracy as compared to ICD-9-CM. Systems vendors have also reported few problems.

Even physicians, the group expected to be most adversely affected, experienced a seamless transition, with only minor productivity declines or payment delays.

While some specialties have been hit harder with coding and documentation challenges than others, well-designed electronic health records (EHRs) have supported coding and documentation requirements through robust code search tools and documentation prompts.

ICD-10-CM/PCS training and clinical documentation improvement strategies paid off. There has been little or no impact on coding accuracy. While many saw an initial productivity decline, some did not. Productivity declines were less than 20% for many providers, with widespread reports of rapid improvement within just a few months after the transition. Organizations that took a strong approach to training, performed ample dual coding, and had robust clinical documentation improvement programs experienced less impact on productivity. The use of computer-assisted coding technology may have also mitigated productivity losses.

Some transition issues have occurred, but they have not been widespread and most have been minor or quickly resolved. Increased medical necessity denials for certain services have been reported, primarily due to incorrectly-translated patient policies. Other identified post-transition issues include:

- Systems errors
- Incorrect claim edits
- Clinical documentation deficiencies
- Increased physician queries
- Inadequate physician education
- EHR code look-up tools that led to incorrect codes.

Organizations that failed to prepare properly in advance experienced the most problems.

Impact of Delays

ICD-10-CM/PCS implementation was delayed twice, due to concerns about industry readiness, costs, and administrative burden. The cost of a one-year delay was estimated to be as high as $6.8 billion, or a 30% increase in implementation costs.1 Delays were disruptive and costly for all stakeholders, as well as to healthcare delivery innovation, payment reform, public health, and healthcare spending.

Many organizations that were behind in their preparations did not take advantage of the additional time offered by the delays.

Lessons Learned

Industry-wide collaboration was key to a successful transition, including close public-private partnerships to improve communication and expand the availability of education, tools, and resources.

Extensive outreach, education, resources, and technical assistance, tailored to different audiences, are essential to ensure a successful transition to a new code set. Simple tools that make the change easy and affordable for providers with scarce time and resources are needed.

Clear implementation milestones and metrics should be established in order to measure progress and assess readiness.

Organizations should take advantage of the additional time provided by a delay and not slow preparation efforts.

Conclusions

The smooth transition can be attributed to extensive planning, education, preparation, and systems testing, effective communication, and industry-wide collaboration.

While it’s still too early to judge the impact of ICD-10-CM/PCS on quality of care and healthcare costs, better data have already been seen in areas where major differences exist between ICD-9-CM and ICD-10-CM, such as obstetrics.

ICD-10-CM/PCS will modernize and expand the capacity of US healthcare organizations to keep pace with changes in medical practice and healthcare delivery by providing higher-quality information for measuring service quality, outcomes, safety, and efficiency. Better data produced by ICD-10-CM/PCS are critical to supporting new healthcare delivery and payment models designed to improve quality of care, increase efficiencies, lower costs, and reward value. It is hoped that the US experience will provide useful insight and pathways toward ICD-11 implementation.

The ‘Family’ paper revision and WHO-FIC in the ICD-11 era

Introduction

The 2007 World Health Organization Family of International Classifications: definition, scope and purpose paper (also known as the Family paper) describes the Family, principles of classification and the processes of adding, updating and maintaining classifications in the Family.

The Family is currently described as including the three reference classifications ICD, ICF and ICHI, as well as related classifications ICPC, ATC, IFC1, ISO 9999 and ICNP, and classifications derived from the ICD for oncology, mental and behavioural disorders, dentistry and stomatology and neurology.

The Family paper was authored in 2007 by Richard Madden, Catherine Sykes and Bedirhan Üstün, with inputs from the Family Development Committee (FDC): http://who.int/entity/classifications/en/FamilyDocument2007.pdf

It was agreed at the 2010 WHO-FIC Network meeting that the FDC should revisit the paper for redrafting. Since then, the FDC has discussed how the paper should be revised to reflect current approaches to classification development and, in particular, the work on the ICD-11 revision.

The initial suggested changes to the structure of the paper were reported via a poster at the Barcelona annual network meeting in 2014. A number of other issues have been discussed by the FDC since that time, including the purpose of the paper; its intended audience and whether its focus should be on the current or future WHO-FIC.

While these issues are still under discussion, the FDC have pursued the creation of a shorter document focused on the reference classifications in the ICD-11 era, to coincide with the ICD-11 Revision Conference in October 2016.

2015 WHO-FIC Network Annual Meeting Discussions

A number of issues and questions were presented to inform discussion at the FDC sessions in Manchester in 2015.

Purpose and audience for the paper?

The Committee considered that there are many purposes for which the Family Paper could be written, but multiple versions addressing each of these is not required. Instead, one version should be written and if required, other papers could be derived from it.

Reference and derived classifications

As ICD-11 is structured with a foundation layer from which a number of linearizations can be drawn, the FDC discussed whether such linearizations should be regarded as reference or derived classifications? The answer may be informed by whether there will be specific procedures by which a linearization is approved. If it is endorsed by the World Health Assembly, does this automatically give a linearization reference status?

This issue is still under discussion.

Related and neighbour classifications

The FDC considered whether the relationships of ‘related’ classifications to the Family are changing in the ICD-11 era. This may affect the criteria for inclusion of non-WHO classifications into the Family.

Whether to introduce the relationship ‘neighbour’ into the Family is still under discussion.

Focus of the paper – should it be on the current situation or the future?

The Committee considered it was important to reflect the current position of classifications, their issues and potential solutions, and also what the Family may look like in an ICD-11 era.

Acknowledgements

The FDC Co-Chairs thank Huib ten Napel for his contributions to the small working group on the short document and the FDC members for their contributions to the short document and the Family paper revision.

Author affiliations

1South African Medical Research and WHO-FIC South Africa Collaborating Centre, FDC Co-Chair.
2Australian Institute of Health and Welfare and Australian Collaborating Centre, FDC Co-Chair.
3Australian Institute of Health and Welfare and Australian Collaborating Centre, FDC Secretariat.

2016 Mid-year Meeting Discussions

In parallel with the revision of the Family paper, it was decided that the FDC would produce another shorter, more focused document on the reference classifications in the ICD-11 era, to complement the 2007 Family paper. This document will be presented for comment at the 2016 WHO-FIC Network meeting in Tokyo.

Discussions over the content and structure of the revised Family paper also continued. Small groups worked on assigned sections of the Family paper and made suggestions for updates to the order and wording of content. Unresolved issues were also discussed and new issues for consideration were reported.

The issues were grouped under the following headings:

Goverance: the Family paper should consider the respective responsibilities for the classifications between the WHO and the Network, and for those classifications not-governed by the WHO.

Use cases: they need to be clearly defined and described; some classifications focus on the person while others focus on care – this should be addressed in the paper. Use of the classifications together should also be covered.

Multi-professional: all of the reference classifications are provider-neutral. Should this be a criterion for all classifications within the Family?

Foundation: the role and nature of the foundation needs to be described, as does its maintenance and governance.

Linkages between linearizations and foundations also need to be clearly defined and described.

Content of the short document

Following the 2016 mid-year meeting, a small working group was formed to progress the short document.

Proposed content and structure:

1. Introduction
   a. What is the Family in the ICD-11 era?

2. Scope, conceptual framework and structure of the Family in the ICD-11 era
   a. Reference classifications
   b. Speciality classifications

3. Use of the WHO-FIC and other health-related classifications

4. Governance and management

5. Technical foundations of the Family
   a. ICD-10 era
   b. ICD-11 era
Abstract

Universal Health Coverage (UHC) is a global WHO initiative to ensure that everyone who needs health services is able to receive them, without experiencing financial hardship. The Family Development Committee (FDC) has been assessing the extent to which the WHO-FIC can potentially be used to support measuring progress towards UHC. In 2015, UHC was included as a target under the United Nations' Sustainable Development Goals (SDGs). The FDC undertook to assess the usefulness of the WHO-FIC in measuring progress towards the targets for the Health goal in the SDGs, as an extension to the work on universal health coverage.

Introduction

The Family Development Committee (FDC) has been assessing how the WHO-FIC can potentially be used to support measuring progress towards the WHO’s UHC initiative. UHC is the ability for all people to receive quality health services they need, without being exposed to financial hardship.

In June 2015, the World Health Organization and World Bank released Tracking Universal Health Coverage: First Global Monitoring Report. In this report, eight core tracer health service coverage indicators were chosen to report progress towards UHC; chosen as they involve health interventions from which every individual should benefit and because recent, comparable data are available.

Under their respective groups, the eight core tracer indicators are:

Reproductive and newborn health
1. Family planning
2. Antenatal care
3. Skilled birth attendance

Child immunization
4. Three doses of diphtheria, tetanus and pertussis (DTP)-containing vaccine

Infectious disease
5. Antiretroviral therapy (ART)
6. Tuberculosis (TB) treatment

Non-health sector determinants
7. Improved water sources
8. Improved sanitary facilities

Previous work by the FDC has involved the identification of codes in the WHO-FIC relevant to the indicators proposed to monitor progress towards UHC. The work also helped to identify potential areas of improvement for the WHO-FIC. As reported in poster C710 in Manchester, the results have shown that for many indicators, codes of potential relevance were able to be identified and in some cases, joint use of the classifications would be required.

In 2015, the UN General Assembly adopted the Sustainable Development Goals (SDGs) as the new development agenda, superseding the Millennium Development Goals. There are 17 SDGs including one for Health “to ensure healthy lives and promote well-being for all at all ages.” Each SDG is associated with a set of targets (169 overall); the SDG on Health has 13 targets, of which UHC is one.

The focus of the FDC’s work has shifted to begin to consider how the WHO-FIC could be used to support reporting against the Health goal of the SDGs, as an extension of the work related to UHC, and given the importance of the SDG initiative.

Targets for the Health goal of the Sustainable Development Goals

At the FDC mid-year meeting in May 2016, the Health targets in the SDG were explored in more detail, in relation to the potential usefulness of the WHO-FIC in tracking each target. Rather than assessing the individual codes required from each classification, the classifications as a whole were considered in terms of their potential usefulness. The results were as follows:

Discussion and Next Steps

The FDC agreed that ICHI and ICD could be useful in the monitoring of many of the Health targets. The ICM may also be useful, but only for selected targets.

The Committee suggested the following actions as potential next steps for this work plan item:

- To consider the Global Reference List of 100 Core Health Indicators as another WHO indicator initiative that could be supported by the WHO-FIC, or could inform WHO-FIC development. An initial assessment of the global reference list demonstrated some use of ICD codes in the indicators, but not codes from ICHI or ICF, suggesting there may be opportunities for use of these classifications for the indicators that could be considered.
- To recommend to Council to extend this Strategic Work Plan item to include the SDGs and other relevant WHO measurement initiatives (such as the Global Reference List of 100 Core Health Indicators).

References

Introduction

One of the achievements within the EIC Strategic Work Plan, is the establishment of the WHO-FIC Implementation Database which at the moment is up and running since 2014. Gradually the Implementation Database will be filled with information on the level of implementation of the WHO classifications, such as the ICD and the ICF. In future there will also be the possibility to inform the world-community about the International Classification of Health Interventions (ICHI) which is under development at the moment. The Implementation Database feeds into the Global Health Observatory, where the content of the Database can be browsed on the level of implementation of ICD and ICF on a country level.

Abstract

The WHO-FIC Implementation Database is of great importance to support the WHO-member states with information about the level of implementation of WHO Classifications and the availability of relevant material within each WHO-region or -country. The content of this posters explains the ins-and-outs of the Implementation Database.

What it is

The WHO FIC Implementation Database is a web-based platform for collection and dissemination of general information on the implementation of the WHO Family of International Classifications (WHO-FIC), including the International Classification of Diseases (ICD), the International Classification of Functioning, Disability and Health (ICF), the International Classification of Traditional Medicine (ICTM), and others in WHO Member States. The platform is a tool that is mainly meant to collect data within the database. This database is then used to generate data into information for the WHO Global Health Observatory (GHO). Although it is a data-entry tool, it can also be used by focal points to browse though the already available data by every person interested.

Where does data come from?

The data comes from the 194 WHO member states, where focal points are, or are in the process of being appointed by the ministries or comparable responsible institutes for the maintenance of WHO classifications or management of health care information. The process is coordinated by the six WHO Regional Offices and the WHO-FIC Education and Implementation Committee (EIC). The EIC has established an annual cycle and call for updates in June and August. All WHO-FIC Collaborating Centres are expected to update or check the content of the Database as part of their Centre’s Workplan. All six Regional Offices are striving to expand on the number of countries which do not have a WHO-FIC Collaborating Centre to inform the Database.

Where can information be found?

The information is presented in a similar structure as within the survey of the WHO FIC Implementation Database. In the GHO the content of the Implementation Database is visualized. This underlines the difference between the both; one for the input of data, the other as the output of information.

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