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REPORT FOR THE CONSULTATION MEETING ON THE WHO BUSINESS PLAN FOR CLASSIFICATIONS

Geneva, 1-2 November 2004

Final Report

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Executive Summary

The World Health Organization held the Consultation Meeting on the WHO Business Plan for Classifications in Geneva, 1-2 November 2004. This meeting brought experts on classifications and health information systems together with WHO-FIC Network representatives and WHO Staff to discuss the "Business Plan" and to advise on the strategic directions for the classifications work.

Classifications are one of the core functions and constitutional responsibilities of WHO. They are the building blocks of "Health Information Systems" by providing international standards and ensuring data comparability across and within countries. Their importance as a system for knowledge management is likely to increase further in the electronic era of the 21st century where information will be generated in much bigger quantities at lower costs.

The Business Plan outlined the use of WHO Classifications in reporting: Mortality; Morbidity; Disability and Health as well as Health Interventions; and projected future needs and possible lines of development. The meeting discussed the overall plan in terms of its priorities, relative importance of proposed solutions and made various recommendations for improvements and implementation.

Correcting the Information Paradox: Use ICD for mortality reporting
Using ICD for mortality purposes, 82 of the 192 Member States could not implement ICD regularly using vital registration or other means. This lack of implementation poses an "information paradox" because we have the greatest need for information in these countries which have the largest burden of mortality. Information paradox puts a major flag to attract attention of governments and allocate appropriate resources towards solutions. In terms of possible solutions the following ideas were put forward:

- "Information Paradox Countries" should be graded in terms of readiness to implement a strategy for improving mortality statistics. Country specific implementation strategies should consider the coverage and quality of mortality reporting within the country.

- Apart from supporting the creation of fully functional vital registration systems, alternative options like sample registration and verbal autopsy should be institutionalized. It was noted that these alternative options have proven to be sustainable and cost-effective.

- Use of a Short Mortality List (SML) should be targeted to facilitate mortality reporting rather than a data collection tool. Use of proper death certification and automated coding tools for selection of underlying causes of death needs to be supported.

- Vital registration also has to be understood and presented as a human rights issue. Each human life counts, and registration by governments are at the least to demonstrate this value.

Harnessing Diversity: ICD XM for international disease statistics

Although there is only one international classification scheme of ICD, various countries have felt the need to make national modifications in response to their practice needs. The creation of a possible unified system (i.e. *ICD XM*, here X to designate all country modifications) that compares and links the existing national clinical modifications of the ICD can be useful for: harmonization and international comparisons; as a model for creating adaptations by other countries; and as a guide towards the update and revision of ICD because it indicates user needs. WHO can play a central role in ICD XM in terms of identifying the commonalities and knowledge representation across modifications ensuring international comparability for "morbidity reporting". This utility presents a potential business case of ICD XM. For example, a complete system could be provided that yields Diagnosis Related Groupings or other similar utilities for countries that do not have a system of their own. If this work could be done documenting the terminological/ontological basis of ICD, it can serve as a development platform for ICD 10 Third edition and ICD 11.

Revising the ICD to meet the needs of users: ICD-11

Given the advances in health sciences and e-health applications, there is a need for a revision and update process for the ICD. The next ICD should not only be an evidence based synthesis of best available knowledge in different fields of health care to code diagnoses through practical e-health applications but also it should become an ontology-based-classification (i.e. third generation classification) that can link the terms used in the electronic health records to the classification categories using proper knowledge representation schemes. ICD 11 will aim to be consistent with the existing ICD 10 architecture, and the extensibility of ICD 11 will be an important feature to build in from the beginning, e.g., incorporation of diagnostic descriptions or criteria, management guidelines and when available genetic markers via use of terminologies and other ontologies. The user needs for a classification system such as ICD 11 range from a statistical tool for population health to a clinical decision support tool in health care delivery that could be used by professionals and consumers. The evaluation of ICD 10 implementation and of the updating of ICD 10, as well as the development of a systematic knowledge management platform including "human ware" and communities of practice, are important work-streams in the development of ICD 11.

Using a multi-purpose tool for measuring outcomes in health and disability: ICF

Management of health care requires a multi-dimensional tool for monitoring and evaluation of outcomes. ICF presents a great potential to evaluate health outcomes. ICF can demonstrate the linkage between health interventions and productivity gains. Furthermore, ICF can serve as coding system for capturing functional status information in case mix groupings and refine and increase explanatory power of the disease related groupings. As a common framework for health and disability surveys ICF could lead to substantial savings and more comparable and meaningful data. Disability certification and pension systems are also potential business cases for ICF. The following areas were identified as priorities: ICF short form for use in surveys and summary measures of population health, knowledge sharing mechanism on ICF implementation, mapping of existing assessment instruments into ICF framework and developing new applications based on ICF; implementing demonstration projects.

The need for capturing information on health interventions: ICHI

There is a need to capture the health interventions in health systems in a systematic way through the use of meaningful classification schemes. Given the heterogeneity of health interventions and the variation in contexts that the interventions are delivered, it is extremely difficult to generate international schemes. However, WHO Family of Classifications has included a proposed ICHI Beta Draft to serve three sets of countries: (a) those who do not have their own interventions classification, (b) those considering new interventions classifications and (c) those countries which already have their own intervention classification as a useful template for international comparisons. It should, however, be noted that the latter aim also could be achieved through a common list, provided it doesn't generate a duplication of efforts for users at country level. ICHI as a possible multi-axial classification has a number of important development potentials: First, it may serve as a useful starting point for creating an ontology-based third generation classification that could serve as a common template to which other classifications could relate. Secondly, the ICHI development process would allow to harvest and share the knowledge embedded in the existing national classifications.

Linking Classifications to Terminologies: key to e-health records

The advance of information technology allows sophisticated ontology-based terminology systems to get linked to classifications. This linkage is based on knowledge representation schemes in health sciences and allows automated coding and decision support systems for health care delivery. The future developments of WHO Family of Classifications should therefore be undertaken integrating classifications with appropriate terminology support. The following goals were identified for work in this area: (i) to ensure that clinical terminologies commonly used in health care systems properly support WHO-FIC classifications; (ii) WHO should engage with international terminology efforts, for example the internationalization of SNOMED CT; (iii) WHO to use its credibility and position to play a lead role in ensuring that international standard terminologies and classifications are mutually respectful and mutually dependent; (iv) consistent with WHO principles, WHO's goal for an international terminology standards should be open, consensual, democratic and use proven state of the art computer science principles.

Strategic directions for WHO's Classifications work area:

For moving the classification work agenda forward in the 21st century, the following strategic directions were recommended:

- Emphasis on the normative dimension of classification work as part of WHO's core functions (i.e. WHO is the initiator and promoter of international health standards, and health classifications are the building blocks of health information systems) and raise international recognition of classification work through a new WHA resolution and by including classifications in the agenda of Member States and WHO (e.g. enforcement of use of classifications in health reporting as per International Health Regulations and as a basis for global e-health applications).

- Ensure adequate and sustainable resources for classification work through various measures such as: use of WHO Regular budget resources to secure the international public goods nature of WHO Classifications; external resource mobilization for further research and development involving major stakeholders and establishing public-private partnerships; sharing of revenues from WHO-FIC book sales and licensing.

- First priority for WHO has to be the support of existing reference classifications, namely ICD and ICF. Their utility has to be maintained in view of emerging e-health needs, and WHO should provide the necessary development platform to users to promote international comparisons and steward the use of sound health information systems.

- Adapting WHO's rules of engagement with private sector to the realities of information technology industries. Public-private partnerships are essential to move the health care agenda further especially in the developing e-health field. Complex intellectual property rights schemes and trade practices need to be handled with creative partnership solutions. WHO should lead the scene by providing developing countries an equal chance to develop their health information systems using modern standards.

1. Opening and Introduction

The World Health Organization, held a consultation meeting on the WHO Business Plan for Classifications at the WHO headquarters in Geneva, 1-2 November 2004. This meeting brought experts on classifications and health information systems together with WHO-FIC Network representatives and WHO Staff to discuss the "Business Plan" and to advise on the strategic directions for the classifications work. The Business Plan outlined the use of WHO Classifications in reporting: Mortality; Morbidity; Disability and Health as well as Health Interventions; and outlined future needs and possible lines of development. The meeting discussed the overall plan in terms of its priorities, relative importance of proposed solutions and made various recommendations for improvements and implementation.

Dr Timothy Evans, Assistant Director General of the Evidence for Health Policy cluster opened the meeting, stressing that classifications are one of the core normative functions of WHO and they have traditionally been provided by the Organization as international public goods with relatively small cost and massive returns. He noted that the classification work is often taken for granted and not given the corresponding resources. In view of this resource scarcity, we need to be realistic in dimensions of the work space and also be proactive in terms of mobilizing additional resources. A compelling business plan for classifications will be of critical importance to address these challenges effectively when shared with member state governments. He urged all to promote the work.

Dr Ties Boerma, Director of the Department of Measurement and Health Information Systems (MHI) noted that classifications are the foundation for MHI work by providing standards and ensuring data comparability at international, national and sub-national level. Therefore, classifications work has a central role in achieving MHI's goal to enhance the availability and use of health information as well as contributing to international initiatives like the Health Matrix Network or 3 by 5.

Dr Pablo-Mendez, Director of the Knowledge Management Department, highlighted the knowledge assets of WHOs classifications. He stressed that ICD is one - or perhaps the most successful product in WHO's history, in terms of generated income and public health impact. He emphasized that in the future the importance of classifications is likely to increase further. In the electronic information era of the 21st century, information will be generated in much bigger quantities at lower costs. As a result, systems such as classifications, which allow to filter, structure, harmonize and standardize information, will become more important.

2. Objectives of the Meeting

This meeting's main objective was to bring experts on classifications and health information systems together with WHO-Family of International Classifications (WHO-FIC) Network representatives and WHO Staff to discuss the "WHO Business Plan for Classifications" and advise on the strategic directions. The Business Plan will be done for five years, and yearly evaluations and repositioning will be made based on the progress made.

3. Election of Officers and Adoption of Agenda

The meeting was chaired by Dr. R. Madden (Australia). The agenda (Appendix 1) was approved by the participants (Appendix 2). Rapporteurs were Mr N. Kostanjsek and Ms J. Miller.

4. Introduction of the WHO-FIC Business Plan

Dr Üstün presented the current status of the business plan development (Appendix 3) which articulates a vision for 21st century both for current and future stakeholders. The Classification Assessment and Terminology (CAT) Team in collaboration with the Network of Collaborating Centers and in consultation with Regional Offices developed a draft plan. The Business Plan outlined the use of WHO Classifications as building blocks for health information systems. It was based on the WHO-FIC Network's workplan taking into account WHO structure and public and private sectors' requirements in reporting Mortality, Morbidity, Disability and Health as well as Health Interventions. The business plan put all streams of work in context within the possible lines of development and projected future needs.

The meeting discussed the overall plan in terms of its priorities, relative importance of proposed solutions and made various recommendations for improvements and implementation. In response to the general business plan introduction the following comments and suggestion were made:

- The existing "Health Information Systems" (HIS) are usually a non-systematic compilation of available data collection efforts without any in-depth consideration of the overall architecture as to what information should be obtained, which methods and tools be used, how data be analyzed in terms of meaningful reports. WHO-FIC provides these dimensions of the health information system in a useful way. This information model could successfully be used to build up new HIS or improve the existing HIS at differing levels of complexity. Most important issue will be to capture information on various dimensions such as mortality, morbidity, disability and health, health interventions and other health system parameters in a systematic fashion.

- Given the importance of primary care in the WHO Regions the business plan should dwell more on efforts to make classifications useable in primary care settings. Recommendations were made to work on the primary care versions of the classifications and add a section in the plan on this issue. Similarly the WHO work on the Health Systems should be linked in terms of their HIS needs and appropriate classification infrastructure.

- One of the basic difficulties in the implementation of WHO Classifications is the lack of practical tools (e.g. coding instruments, computerized systems and associated training materials). This lack should be addressed by a coherent strategy to create tools as needed. Furthermore the private sector should be incorporated both in the development and dissemination strategy of these materials and tools.

- The business plan should clearly indicate priorities between different classifications (e.g. mortality vs. interventions), between various countries (e.g. rich vs. poor) and between different information needs (e.g. population health or bio-medical perspective). The focus on common knowledge assets across various countries was identified as another criterion for priority setting. While the broad and farsighted view of the business plan is appreciated there is need to elaborate on realistic objectives.

5. Basic Questions: Presentation and Discussion

The meeting discussed the selected six basic questions out of twelve that were generated before the consultation meeting in line with the basic headings of the Business Plan. These questions were elaborated with meeting participants and other consultants in e-mail, telephone conferences. They were also discussed with WHO technical programmes and WHO Regional Offices through meetings and video-conferences.

5.1. The Information Paradox

Using ICD for mortality purposes 82 of the 192 Member States could not implement ICD regularly using vital registration or other means - this poses an "information paradox" as we have the greatest need for information on mortality in these countries which have the largest burden of mortality. Further to the introduction of the topic in the Business Plan, the Short Mortality List was presented (SML) as one possible way to address the challenge of implementing ICD in information paradox countries. The idea of developing a SML emerged while analyzing data from the WHO Mortality Database for the purposes of harmonizing the aggregation of leading causes of death across different countries. The analysis showed that a very small number of codes (100 ICD codes) explain a very large number of deaths (over 90%). In discussion the following comments and suggestion were made:

- Overall the business case for WHO in death certification needs to be specified. Success indicators have to be developed. Counting death is a crucial piece of outcomes information, which should be regarded as the priority piece of health information in all health systems by 2010. In short ‘Death counts!’

- The fact that the number of countries included in the WHO mortality database increased by 15 within three years (85 countries in 2001 100 countries in 2004) shows that progress is made. However, this is still outside of acceptable levels.

- Vital registration has to be understood and presented as a human rights issue: each human life counts and registration by governments is at the least to demonstrate this value. Experience from the PAHO region shows that this value gives a lot of leverage to vital registration. Furthermore there is need to collaborate with other institutions which work with population based structures (e.g. electoral registration systems) and use these structure for health purposes.

- "Information Paradox Countries" should be graded in terms of readiness to implement a strategy for improving mortality statistics. Country specific implementation strategies should consider the coverage and quality of mortality reporting within the country.

- Apart from exploring the use of verbal autopsy and sample registration systems, efforts should be made to find and capture existing mortality information at country level. Automatic selection of underlying causes of death needs to be supported. It was noted that these alternative options have proven to be sustainable and cost-effective. In Tanzania for example, the sample registration system has been up and running for over 14 years with total cost of 700.000 USD. The same amount is currently spent per year by the Government of Tanzania for setting up its vital registration system.

- The approval and certification of intervention addressable tabulation lists that relate to MDGs or other population health aspects was identified as one of the important business opportunities. It would put WHO and the WHO-FIC network in a position to be a custodian of evaluation practice for huge amounts of resources used in HIV/AIDS, Stop TB, Roll Back Malaria and others.

- Use of a Short Mortality List (SML) should be targeted to facilitate mortality reporting rather than a data collection tool. Use of proper death certification and automated coding tools for selection of underlying causes of death needs to be supported. The development of a SML should be based on criteria like data collection ability, data comparability and research and policy use. Regarding the latter point a distinction should be made between what is needed for international comparison and what is required for internal purposes.

- In many information paradox countries the majority of deaths occur at home. For example in the worst off areas in Tanzania 9 out of 10 deaths happen at home and in best off areas still 6 out of 10 people die at home. In view of this, alternative ways of mortality reporting have to be explored making use of the best available evidence. One approach which so far has been successfully used in countries without vital registration systems (e.g. Tanzania) is to apply a verbal autopsy to a representative sample of the population which is annually updated. The verbal autopsy interview is conducted by a trained interviewer 8-12 weeks after the death to the caretakers or family members of the deceased. The three page reporting form allows to record any documentary evidence which could lend support to the diagnosis of the cause of death (e.g. contact with health facility). The completed reporting form is tabulated to an ICD Short list of 57 codes using ICD coding rules. Within the context of the Health Metrics Network this approach will be moved forward by the taskforce on measuring and monitoring vital events as well as through available resources on monitoring impact of HIV/AIDS interventions. It is planed to implement this approach in collaboration with Ministries of Health and National Statistical Offices (NSOs) in Indonesia, Thailand, Vietnam, Rwanda, Zambia, Ethiopia, Tanzania and South Africa. It was noted that a manageable interest of WHO-FIC in this endeavor is looking at the quality and quality assurance of the causal death attribution.

- Resourcing and partnership building with bi- and multilateral agencies is critical. One possible way to strengthen the linkage with these agencies is to demonstrate how health and death information is attributable to the work of these institutions.

WHO Secretariat provided the following feedback on the points raised by the participants:

- WHO can use the knowledge, skills and resources of the WHO-FIC Network to help and facilitate development of the collection and the comparability of death information, within and between countries

- In some developing countries efforts to implement vital registration and mortality reporting have failed despite having applied various technical solutions and despite having created a high level political commitment and legislative framework (e.g. through WHO International Health Regulations which oblige Member States to report mortality data). The challenge is therefore twofold. First, establishing mechanism for ensuring sustainability, ownership and recognition of the need at country level. Secondly, to identify key drivers and strategic partnerships, which can make the difference for creating a common health information platform. For example, collaboration with the Health Metrics Network and other global health initiatives as well as vertical programs and bi or multilateral agencies. In terms of resourcing, new avenues should be explored such as using revenues of WHO-FIC products and licenses and taxing programs for support of strengthening information systems.

- Grading the "Information Paradox Countries" in terms of readiness to implement a strategy for improving mortality statistics is the next crucial step (e.g. No collection; Sample verbal autopsy or other sample method; Full populations coverage; Biomedical death certification; Autopsy supported death certification) and there needs to be coverage milestones

- The implementation strategy itself has to include migration paths and should consider the coverage and quality of mortality reporting within the country. Vital registration systems need to be encouraged, with partners such as UNSD, UNICEF, World Bank

The report of the Working Group elaborates further on objectives, activities, cost and benefits of mortality reporting in information paradox countries:
To offer appropriately stratified high quality cause of death information; to offer universal high quality cause of death information; to offer partner countries/health economies a migration path towards universal high quality death certification

5.2. Generation of International Disease Statistics: ICD XM

WHO introduced the topic by highlighting the need and business case for developing ICD XM as common platform for linking existing and producing new country specific ICD adaptations for morbidity reporting. Although there is only one international classification scheme of ICD, various countries have felt the need to make national modifications to it in response to their practice needs. The creation of a possible

unified system (i.e. ICD XM, here X to designate all country modifications) that compares and links the existing national clinical modifications of the ICD was discussed in terms of its potential use for: harmonization and international comparisons; utility as an international product to be used by other countries; and as a guide towards the update and revision of ICD. WHO can play a central role in ICD XM in terms of identifying the commonalities and knowledge representation across modifications ensuring international comparability for "morbidity reporting". This utility presents a potential business case of ICD XM as providing a Diagnosis Related Grouping development for countries that do not have a system of their own. If this work could be done underlying the terminological basis of ICD and demonstrate how to map terminologies to diagnostic classifications it can serve as a development platform for ICD 10 Third edition and ICD 11. It was noted that in addition to the already existing large number of country modifications currently over 20 countries have expressed their interest to WHO to create their clinical modification.

In response to the introduction the following comments and suggestions were made:

- The need for ICD XM as a "global health information standard" was highlighted. XM could be instrumental in terms of having a common understanding of an important dimension of ICD (i.e., disease manifestation and severity) which is used in morbidity coding systems such as DRGs or clinical risk groups.

- Harnessing the experience from different clinical modifications through ICD XM will give important guidance for the next revision of ICD as well as provide an opportunity for making the connection between clinical terminologies and classifications.

- To decide how to proceed with the notion of ICD XM we need to make a distinction between what is common across countries and what is country specific (this may be both in terms of disease entities and specific terms used in a given country). This approach requires a good metadata structure underlying the similarities and differences. In addition, WHO's international property rights (IPR) in the ICD and those of the countries' on national modifications should all be sorted out legally. The issue for royalties from this system should also be determined beforehand.

- The idea of a business plan for classification raises the fundamental question of what is the perceived value ascertained by different users and the society as a whole. For assessing this value one needs to take into consideration two paradigm shifts which are currently taking place. The emergence of genomics and the human genome project will provide a much better and deeper driven understanding of what constitutes a disease. Without incorporating this new biological and etiology driven understanding of disease, classifications like ICD will lose value dramatically. Science should dictate what constitutes a disease rather than arbitrary administrative decisions. The second paradigm shift comes with knowledge representation, integration and description logic infrastructure in computer science. This new technology allowed creation of sophisticated ontologies that may make classification obsolete if classifications are not tightly integrated with this infrastructure. Hence

creation of ICD XM should be based on integration to terminologies through knowledge representation schemes which indicate the scientifically-known underpinning disease process.

- Can a mortality coding system like ICD be the basis for a morbidity classification? What is a clinical modification? To what degree can WHO engage as a leader in the common aggregation of morbidity issues as they pertain to health systems? A possible way to achieve that is to look at the existing clinical public health characterization at a more detailed level, examine the purposes for which these aggregations would be put and then define ways (e.g. by using aggregation logic) that would compile larger order classification use of this information. However in order to do that we need to decide which approach to use. Top down by starting with a high level classification and unroll it for morbidity purposes or bottom up by examining how to roll up clinical information into higher aggregation that can be generalized.

- WHO can play a central role in ICD XM in terms of identifying the commonalities, ensuring international comparability for morbidity reporting and providing a taxonomic base for countries do not have their own modifications. On the other hand, the responsibility for ICD XM might be better placed with organization like OECD, given that the need for clinical modifications is mainly felt in developed countries. Furthermore if the aim is the international comparability for morbidity reporting, this might be better achieved through surveys than through classifications as it is presently attempted.

- If there is a need for classifications like ICD XM over and above terminologies, clarity of purpose is essential. The clinical modification may have very different specific purpose, e.g. reimbursement for individuals, payment for organization, payment for performance of individuals or organizations, decision support, implementation of guidelines in addition to the DRGs.

- To make ICD XM fit for purpose several options need to be examined including adding granularity, grouping up of categories, creating concept definitions as in a dictionary, representing the ICD clinical modifications in a different way. Furthermore, there is need to decide at what level international standardization should start.

- It was emphasized that mortality and morbidity are placed on a continuum rather than being distinct categories that need to be classified separately (people can get sick and or can die from the same disease). Functioning is an important aspect within the morbidity experience, which is classified by ICF. Subsequently terminologies like SNOMED or clinical modifications should not be compared with one classification (e.g.) but with a system of classifications namely WHO-FIC.

- The open source nature of ICD XM will be an asset.

- The interpretation of the user demand for clinical modification should be done with caution. For example, the great interest for information on health outcomes expressed in Canada does refer to ICF, not to an extended version of the ICD Canadian Modification

In response to the questions raised by the participants WHO gave the following feedback:

- Overall comments show the complexity and inter-connectedness of the issues. Specifically, they indicate that ICD XM can serve two main purposes. First, the knowledge representation used in the development of ICD XM can be useful to demonstrate how to map terminologies to diagnostic classifications. Secondly, ICD XM can serve as a development platform for example for ICD 10 third edition and also for ICD 11.

- It was noted the ICD is used for classifying disease without defining what the disease is and without any declared taxonomic principles. The lack of such definitions raises many discussions. Instead of defining severity by the spread or stage of disease, it is often defined by its consequences (which are classified in ICF). Some of these issues regarding the definition of categories (disease, disorder, reason for encounter) are planned to be addressed within the ICD revision.

The report of the Working Group on ICD XM acknowledged the need for ICD XM given the problems with morbidity reporting and clinical modifications in many countries. The following options for ICD XM development were identified: (i) select one of the existing Clinical Modification variants as the XM and map all others to it; (ii) integration of common elements and consensus on some differences in a new XM; (iii) as complement to 1 or 2, exists the possibility to have an electronic version that integrates an index and tabular format independent of language; (iv) wait till ICD-11; (v) wait for construction of a new conceptual based ontological space.

5.3. Revision activities for ICD 11

The topic was introduced by WHO with a presentation which outlined the reasons, work content, strategy, procedure and structure of the proposed ICD revision. Revision of ICD was foreseen by the WHO governing bodies as a 10 yearly task. Given the advances in health sciences and e-health applications, there is a need for a new ICD. The next ICD should aim to present an evidence-based synthesis of best available knowledge in different fields of health and health care to code diagnoses through practical e-health applications. To be really useful and address the needs for growing IT demands, it should become an ontology-based classification that can link the terms used in the electronic health records to the classification categories using proper knowledge representation schemes. ICD 11 will aim to be consistent with the existing ICD 10 architecture and the extensibility of ICD 11 will be an important feature to build in from the beginning e.g. incorporation of diagnostic descriptions or criteria, management guidelines and when available genetic markers via use of terminologies and other ontologies. This information will be gleaned from different streams of work. Clinical stream will review the evidence in terms of clinical utility,

treatment response and management strategies. Epidemiological stream will review the case definitions, operational characteristics and thresholds. Public Health stream will review the implications at population level for health promotion, disease prevention, resource allocation and other statistical and administrative impact. The user needs for a classification system such as ICD 11 range from a statistical tool for population health to a clinical decision support tool in health care delivery that could be used by professionals and consumers. All this information has to be openly shared with all stakeholders using a knowledge management and sharing platform within a network of communities of practice.

In response to the introduction the following comments and suggestion were made:

- The agreement within the WHO-FIC network regarding revision of ICD 10 is on starting a two step approach which involves pilot revision studies for selected disease areas and evaluation of ICD 10 implementation and updating.

- XML should be considered as the base technology for the creation of on which ICD 11. WHO-FIC Network has explored the basic requirements for the standards of a development and maintenance platform. A classification mark-up language schema will be developed jointly.

- The scope of the revision needs to specified with respect to the integration of terminologies and the extent to which ICD 11 should became an ontology based 3rd generation classification. Accordingly strategic partnerships should be formed with terminology owners. Another possibility is WHO integrating various possible links between terminologies and classifications or creating a new terminology based on WHO-FIC anew.

- To start the preparations for developing ICD 11 will be useful. However, the emphasis should be on evaluation of implementation and updating of ICD 10 as well as how to develop the "human ware" in addition to the soft- and hardware for ICD 11. Experience from the migration from ICD 9 to ICD 10 showed that the human resources were one of the critical factors.

- Will ICD 11 mainly run on computer or also be used from a book? Projection from developed countries like Germany indicates that although computerization is taking off, book printing will continue for at least 5-10 years.

- If ICD 11 is intended to have a use range which spans from being a statistical tool for population health to being a instrument for clinical decision support between one patient and a health care professional the linkages and implications have to be clearly spelled out. Producing the guidelines at the global level for such multi-purpose tool will be a tremendous challenge.

- Extensibility of ICD 11 will be an important feature to build in from the beginning e.g. incorporation of diagnostic descriptions or criteria, management guidelines and when available genetic markers via use of terminologies and other ontologies. This would allow us to incorporate at a later stage aspects

(e.g. results from human genome project) which are for the time being too complex or difficult.

- The issue of ICD revision can be approached from a conservative viewpoint where the focus is to maintain consistency with the existing architecture. On the other hand the revision can be managed with an aggressive approach which would include various ontology elements. Both approaches have their merits and good reasons for being applied. The most difficult and perhaps least effective and desirable strategy is to do something in between these two models.

WHO Secretariat provided the following feedback on the points raised by the participants:

- Moving towards ICD 11 is a balancing act between existing and future challenges. The development work on ICD 11 should not undermine the implementation of ICD 10. On the other hand we have to recognize and respond to future challenges like the electronic health record or merging the power of classifications with the utility of terminologies.

- The development of ICD 11 will have multiple dimensions and streams of work, one of which will be the evaluation of ICD 10 implementation. We should capitalize the knowledge we have in the different areas and subsequently draw up a desired classification workspace and decide which elements are useful and feasible for creating the actual ICD 11. WHO will work towards having a consilience of knowledge and reaching an international consensus in the process.

5.4. ICF: Health and Disability Statistics

ICF has untapped business potentials. There is an information gap generally on functional status. As health outcome measure ICF can demonstrate the link between health interventions and productivity gains. The utility of ICF as a common language for health IT applications was also stressed. Most importantly it can provide a common measurement framework for a range of different health interventions. As a common framework for health and disability surveys ICF could lead to substantial savings if these traditionally separate fields were to be merged. This will also yield more comparable and meaningful data.

In response to the introduction the following comments and suggestion were made:

- ICF should be the coding system for capturing functional status information in case mix groupings (CMGs) and in the further development of diagnosis related groupings (DRGs). It may be necessary to create such frameworks and demonstrate the case of added value of ICF in increasing the explanatory power of CMGs and DRGs.

- The need and prospective utility of functional status information is unquestionable. Some participants noted that ICF needs further operationalization to serve as a common outcome measure. Referring to concrete implementation experience (e.g. Australia, Indonesia, Netherlands, UK, etc) other participants stressed, however, that ICF has already proved to be an effective tool for measuring health and disability at population and clinical level and this work has to be carried further. In acute and post-acute settings a combination of diagnosis and functional status would be major improvement in the ability to measure severity and how it relates to resource use

- The following work priorities were identified: ICF short form for use in surveys and summary measures of population health, knowledge sharing mechanism on ICF implementation, mapping of existing assessment instruments into ICF framework, developing new ICF demonstration projects.

- The need for applied research on ICF was emphasized. The North American Collaborating Center (NACC) research agenda was presented as an example. A research agenda can also serve as vehicle to attract resources for ICF work.

- In the terminology community ICF is regarded as a second generation classification. With further work on mapping the definitions to terms it could serve as a case study on ontology based knowledge representation. The linkages between ICF and SNOMED (and other commonly used micro classifications and terminologies) should be developed. The technical and practical challenge is how to link micro classifications which are fit for a specific purpose at micro level to a terminology like SNOMED at the meso-level and subsequently to the ICF classification at macro level. Studies in the US and work in the UK on the National Care record are examples where these linkages are explored.

- The utility of ICF in the following areas was highlighted: outcome evaluation of interventions at the community and public health level, identifying people at risk to develop disabling conditions, developing education for all policies which incorporate children with disability, assessment of life domains and their accessibility for people with disabilities and guiding interventions.

- ICF should be considered in the ongoing NIH work on patient reported outcomes (PROs)

- Disability certification and pension system should be considered as a business case for ICF

In response to the issues raised the WHO Secretariat noted that ICF offers a large business potential which so far has been little utilized. Lack of awareness, knowledge and evidence on the ground might be possible reasons. In order to overcome this gap between the potential and actual use, the business opportunities in the following areas should be pursued as priority: (i) Measure of case mix: What is the added value of functioning information over and above diagnosis? (ii) Outcome evaluation: What difference does an intervention make in terms of functioning (iii) Mapping of

terminologies (e.g. SNOMED) and micro classifications to ICF (iv) using ICF as platform for health and disability surveys as a single unified system.

The report of the Working Group on ICF elaborates in further detail on what has been achieved and what needs to be done in the above areas.

5.5. Classifying Interventions: Is an International Classification of Health Interventions (ICHI) possible?

WHO introduced the topic by stressing the importance for a comprehensive assessment of the need for an international interventions classification through field testing of the ICHI Beta version. It was noted that most developed countries have their own intervention classifications, however, many developing countries lack such classification. If field test results show a strong need for ICHI and WHO decides to go ahead with its development ICHI could possibly serve a model case for creating a meaningful classification with all requirements linked to IT demands and terminology.

In response to the introduction the following comments and suggestion were made:

- ICHI has a number of important development potentials: First, it can serve as a model case for creating a third generation classification; this is an intriguing possibility and should be supported. It would provide a unique opportunity to undergo the exercise of evaluating how well terminological components can be brought to bear in underpinning the definition of classification elements. Secondly, the ICHI development process would allow to harvest and share the knowledge embedded in the existing national classification. Thirdly, ICHI should be used for testing the feasibility and utility of merging the index with the tabular list.

- The use of the current ICHI Beta version was intended for countries who can not afford their own classification, for countries which are considering to develop an interventions classification and countries in need of cross-border comparison. For countries which already have their own intervention classification ICHI could be useful for international comparisons. However, this could be also achieved through mapping of national classifications into a common list.

- A major constraint of an international intervention classification is the difficulty to respond on one hand to very specific information needs at sub-national level while trying to establish comparability across countries by looking at common interventions.

- The overall purpose of ICHI as well as the term health intervention needs to be clarified given the broad meaning of interventions and the challenge to convey the same meaning in other languages.

- ICHI should be multi-axial - given the complexity and heterogeneity of health interventions and how they are delivered it is essential to capture this information in a parsimonious fashion.

- A classification has to be "fit for purpose". In the UK, for example, is the need for an interventions classification for reimbursement. From a users' perspective the notion of international comparison should also be linked to a specific purpose (e.g. costing).

- In many countries ongoing health system reforms create a window of opportunity for ICHI. Primary care interventions and issues around packaging of interventions should also be considered in the development of ICHI.

- An area for potential addition is one for patient safety. WHO's efforts on patient safety taxonomy should be merged with ICHI.

In response to the points raised, WHO gave the following feedback:

The complexity of the needs indicate one option as creating an advanced third generation classification. On the other end of the spectrum, we can develop a core list for international comparisons, and the current ICHI Beta version could serve countries which need an interventions classifications. Both options have their merits and good reasons to be implemented. The key challenge, however, is to find the adequate resources for making it happen. Looking for synergies between the national developments and our international initiative is one opportunity which should be explored further in the business plan.

The report of the Working Group on classifying health interventions highlighted among other issues the missing areas in the ICHI Beta version, such as community and primary care interventions as well as procedures carried out by allied health professionals.

5.6. Putting Terminologies in context: relations to WHO Family

Terminologies should cover the universe of specific terms used in health care provision and population health. Their standardization is essential for health transactions being captured in the electronic world. The knowledge represented in the classifications presents a good framework for their organization and representation and provides additional value for automatic coding, decision support and monitoring the key indicators. The critical question is the adequate establishment of this linkage. In addition to the challenges of use of appropriate technology in this matter, there are complex developmental issues about the business case in terms of sorting out property rights and international governance issues.

In response to the introduction the following comments and suggestion were made:

- An ontology mechanism should definitely become the basis for WHO classifications. Classification work without terminologies will be irrelevant in the 21st century. Putting classifications and terminologies as alternatives is a

misconception. The knowledge organization from lower level constructs to higher order classification entities is essential to make sense of data and create meaningful summary mechanisms.

- In the English speaking countries other than USA and UK there is substantial concern that SNOMED-CT[1] could establish a de facto monopoly without ensuring participation by all English speaking countries.

- The intellectual property right issues around SNOMED need to be sorted out before linking them with WHO-FIC products. The current IP model of SNOMED is not conducive to a global adoption. An appropriate model as a basis for a WHO sponsored terminology should be sought that should be acceptable by all countries and the scientific community.

- Mapping work in the US has focused on mapping SNOMED CT to ICD 9 CM. Preliminary maps have been produced but are not yet verified. There are plans to map SNOMED CT to ICD 10 CM, and there are recommendations to map it to ICF. Regarding the ICD 10 mapping, US-National Library of Medicine (NLM) is still trying to get access to the respective map produced in the UK (which UK is prepared to share with WHO). A validation of these maps is a need, and for such exercise rules must be developed working with experts on classification and terminology. WHO Secretariat stated that if the maps were given to them WHO would convene a consultation with all parties concerned and arrange for a validation exercise with appropriate guidelines, criteria and decision rules.

- In non-English speaking countries, SNOMED is currently perceived as a "language-specific" tool. Experience in these countries showed translation problems which create resistance to its adoption. The translatability of SNOMED has to be improved. At international level a common denominator of terms should be found to which the different language-specific concepts relate. Such language-specific or country specific terms (e.g. as in the case of US or UK English) could be a further layer on top of the international common terms.

- The UK representative of the SNOMED International Authority shared his personal views on the proposed internationalization of SNOMED and the related business and governance issues which included:

  - The NHS is investor, developer and user of SNOMED. All three roles have to be clearly separated given their different nature.

  - Maps from SNOMED to ICD or other classifications are branded as SNOMED aligned standard. Unlike classifications, terminologies like

[1] *SNOMED-CT: **S**ystemized **No**menclature of **Med**icine - **C**linical **T**erms is the largest clinical terminology which has been adopted as a US. National Standard and working platform for the National Program for IT in the UK.* (see http://www.snomed.org)

SNOMED are dynamic and have to respond constantly to new consumer needs.

- SNOMED could become a global monopoly provider, and this raises a number of business issues: How to avoid overpricing? How to ensure ongoing improvement of the product and service?

- Using SNOMED implies implementation of e-health record.

- Financial viability and sustainability is essential to maintain SNOMED. The proposed business model for internationalization of SNOMED has the following elements: (i) the model should be based on country membership contributions, the end user should not be charged nor deal with licensing issues; (ii) the system separates factory functions (production & service) with fixed costs from research and development functions with (variable cost), (iii) the business model is based on cooperative investment, collaboration and shared risk.

- The proposed business structure for internationalization of SNOMED has the following components: A International Terminology Standard Organization (ITSO) should be established with an international Management Board composed of 12 members plus chairman. Each of the four SNOMED regions (Africa/Middle East, Americas, Europe and AustralAsia) will be represented by 3 members (1 clinician, 1 Government or Business representative, 1 terminologist). The board would oversee production processes, which could be commissioned outside. As a separate body a Content Board will be established with 12 members out of whom 4 are members of the Management Board.

- The ITSO would be funded by its members. The funding model should be based on the following principles: the higher the financial contribution the more decision making power and access to technical infrastructure will given, low barrier for new members (e.g. free of charge for poor countries). The membership fee should be calculated based on a metric including GDP per capita, population size and other factors. The income must cover the fixed costs of the overall structure so that more members would reduce the price of the product.

WHO's potential collaboration with SNOMED was discussed in depth by the meeting participants who suggested that WHO should definitely pursue the path of linking classifications and terminologies and utilize the models for developing public goods. These issues have to be discussed and negotiated further with stakeholders and alternative scenarios have to be worked out as business models. WHO should establish a fair playing field for all stakeholders.

The report of the Working Group on terminologies identified the following goals for work in this area: (i) to ensure that clinical terminologies commonly used in health care systems properly support WHO-FIC classifications; (ii) WHO should engage with international terminology efforts, for example the internationalisation of

SNOMED CT; (iii) WHO to use its credibility and position to play a lead role in ensuring that international standard terminologies and classifications are mutually respectful and mutually dependent; (iv) consistent with WHO principles, WHO's goal for an international terminology standards organisation should be open, consensual, democratic and use proven state of the art computer science principles.

6. Discussion of Strategic Directions

6.1. Resource mobilization

Resource mobilization has been the key motive of the development of the business plan to move the classification work agenda forward. For the last 22 years WHO has been on a zero-growth regular budget, and currently plans are made to spend 70% of the budget at country level. In view of these facts we need to think of innovative approaches that could be used to ensure adequate and sustainable income for classification work. The Business plan was a response to this need and to identify priorities. On this issue, the participants provided the following comments and suggestions:

- WHO should consider establishing a "Foundation" which could manage the international public goods by generating income from their sales and licensing and consequently funding the future developments in this area. PAHO has done this with PAHEF (Pan American Health and Education Foundation) and a similar approach could be adopted. This approach should be explored more systematically.

- First priority for WHO has to be the support of existing reference classifications, namely ICD and ICF. If this work is not done by WHO, no one else could do it and WHO would not be fulfilling one of its core functions. Measures should be taken to sustain the core work at an optimal level.

- WHO can house the International Standard Terminology Organization that would serve for the internationalization of SNOMED and linking WHO-FIC with terminologies. If ISTO is placed within WHO it is of fundamental importance that the earmarking of financial contribution is guarantied.

- WHO should create a revenue sharing mechanism which will allow a certain percentage of income generated from ICD and ICF book sales and licensing to go back to support classification work. Currently all revenues generated from classifications remain in the revolving sales fund.

- It was suggested to bring the current status and prospects of classification work to the attention of the WHO Executive Board and the World Health Assembly. Participating countries would bring this up in the agenda discussions.

In response to the comments WHO gave the following feedback:

- Mobilizing extra budgetary sources will be important. WHO Secretariat has been active in establishing contacts and exploring possibilities with donor agencies and formulating project activities that are consonant with the overall classification workplan.

- If a global foundation or international health standards governance is placed within WHO, the organization can ensure the earmarking of funds for specific purposes.

- In the context of the upcoming financial decentralization within WHO, the question of how to use regional budgets for classification work has to be addressed

- Classifications work needs more international recognition. One way to achieve this recognition is generation of a WHA resolution. A group of Member States could draw up a resolution to emphasize the importance, and that would help to allocate adequate resources to this area of work. Getting classification work onto the agenda of bilateral meetings between individual Member States and WHO would be another possibility to raise international recognition

- WHO is planning to create a "WHO Press" which eventually will pave the way for a more coherent publication policy. In this context, the issue of revenue sharing between the publication department and technical units is currently reviewed. WHO expects that in the proceedings of the policy review a revenue sharing mechanism will be identified. On the other hand it is important to note that the free dissemination of WHO publications is constitutionally mandated and that revenues from the 18% of priced publication in WHO are used to subsidize the 82% of free publication in WHO.

6.2. Desiderata and targets

The wide spectrum of work provides a huge challenge: on the one hand making classifications fit for purpose in e-health systems of developed countries; on the other hand implementing them in elementary health information systems of information paradox countries. How can WHO and its network address this broad and diverse spectrum of tasks? What desiderata and targets should be set? The following comments were made:

- The normative dimension of classification work could serve as the common denominator which applies to both developed and information paradox countries equally. In the context of information technology, the normative dimension of classification work could be presented in multiple overlays that can represent a gradient from simple to complex systems.

- There is need for adapting WHO's rules of engagement with private sector to the realities of information technology industries. The current set of rules is mainly focused on the pharmaceutical industry.

7. Closure

Dr Üstün thanked participants for their attendance and for providing valuable input for the work on Business Plan for classifications. The meeting provided an excellent think-tank and touched all major lines of development. The scope of the meeting was that of a business plan --not a workplan, therefore it focused basically on the strategic directions and not on the implementation steps of each possible proposal. Now that there is a consensus emerging on the strategic directions, there is a need to carry out further discussions and negotiations with potential partners to review possible projects and analyze their implications. WHO Secretariat will carry out these further steps to advance the business plan. Also the plan is seen as a dynamic evolving document in view of opportunities and challenges. It will be kept short and simple . As necessary, special projects will be developed in depth as appendices. For example, "Information Paradox" issue could be further developed as a Health Metrics Application. WHO CAT is already planning a separate meeting regarding the revision of ICD. In addition separate meetings are planned with CEN, ISO and the opinion leaders of the ontology/terminology community.

Dr. Pablos Mendes suggested that work on the classifications should be brought to the attention of the WHO Governing Bodies without further delay to get attention as well as resources. There are choices about where the resources come from: WHO, extra budgetary route or external sources. Apart from resource generation, WHO should take lead role in this area as the intellectual leader and broker.

WHO Secretariat announced that the meeting report and the updated version of the business plan will be sent to all participants. It is anticipated to hold the consultation meetings on WHO Business Plan for classifications on a regular (annual) basis and the progress of work be evaluated accordingly.

WORLD HEALTH ORGANIZATION

ORGANISATION MONDIALE DE LA SANTE

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CONSULTATION MEETING
ON THE WHO BUSINESS PLAN FOR
THE FAMILY OF INTERNATIONAL CLASSIFICATIONS

Geneva, 1-2 November 2004

APPENDICES

Appendix 1: Meeting Agenda

Appendix 2: List of Participants

Appendix 3: WHO Presentation: Business Plan for Classifications

Appendix 1: Meeting Agenda

Consultation Meeting on WHO Business Plan for Classifications

1 - 2 November 2004
WHO Headquarters, Salle A, Geneva Switzerland

Agenda

1. Opening and Introduction:

1.1. Participants
1.2. Adoption of Agenda
1.3. Purposes of the consultation

2. Basic Questions:

These are key questions for which a brief introduction by WHO will be made to pose the question and an hour will be devoted to discuss the matter to consolidate the advise to WHO.

1. Information Paradox
2. Health Information Systems -business ware
3. Health and Disability Statistics
4. Classifying Interventions: Is an ICHI possible ?
5. Interoperability of WHO-FIC elements and other entities
6. Generation of ICD XM
7. Revision activities for ICD-11
8. Update and Revision Platform
9. Classifications and HIS for Primary Care
10. Global standards for multi-cultural and multi-lingual applications
11. Quality Assurance/ Accreditation for Coding Systems

3. Discussion of Strategic Directions:

Following the discussion of the Basic Questions Day 2 afternoon will be devoted to the formulation of the business plan.

3.1. Ideal targets
3.2. Current Resources
3.3. Partnerships and networking
3.4 Future plan and activities

Appendix 2: List of Participants

Consultation Meeting on WHO Business Plan for Classifications

1 - 2 November 2004
WHO Headquarters, Salle A, Geneva Switzerland

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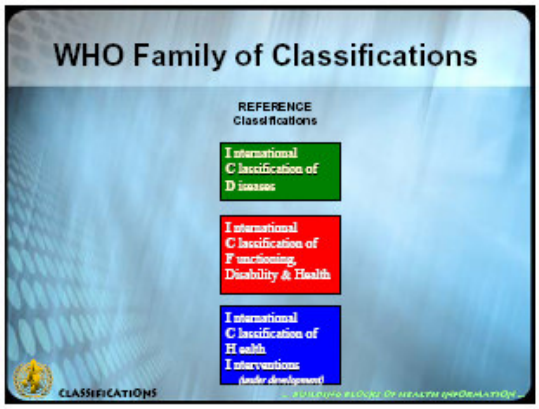
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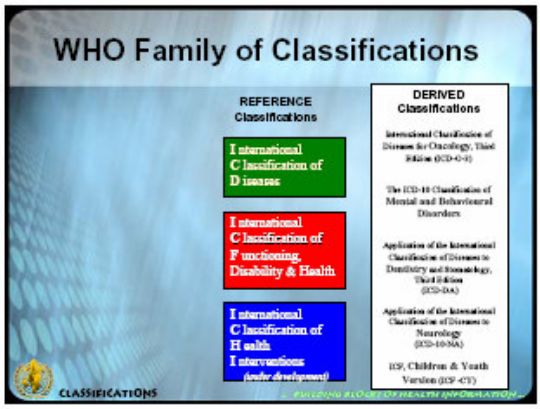
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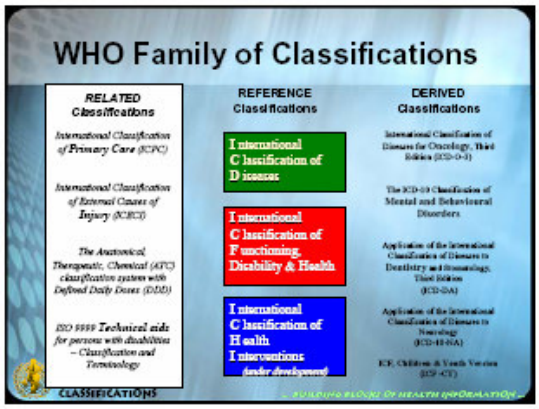
Appendix 3: WHO Presentation: Business Plan for Classifications

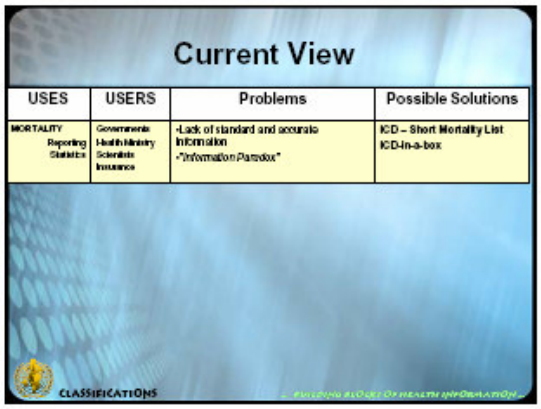










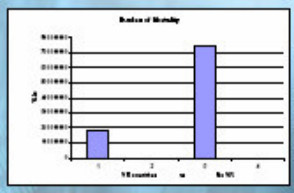


An Information Paradox:
Reporting of Mortality in the World



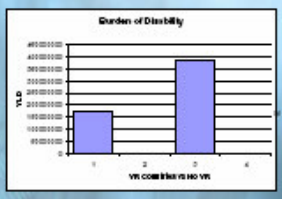
CLASSIFICATIONS

Information Paradox



CLASSIFICATIONS

Information Paradox



CLASSIFICATIONS



Address to WHO staff
Geneva, Switzerland, 21 July 2003

Health information is the glue that holds a health system together.
In most countries stronger, more integrated information systems are required.
One example is vital registration systems
- the ability to count births and deaths.
These systems are still missing for most of the countries' population,
especially in countries with high disease burdens.
To make people count, we first need to be able to count people.

J. W. Lee - WHO Director General

CLASSIFICATIONS

Current View

USES	USERS	Problems	Possible Solutions
MORTALITY Reporting Statistics	Governments Health Ministry Scientists Insurance	•Lack of standard and accurate information •"Information Paradox"	ICD – Short Mortality List ICD-in-a-box

CLASSIFICATIONS

Current View

USES	USERS	Problems	Possible Solutions
MORTALITY Reporting Statistics	Governments Health Ministry Scientists Insurance	•Lack of standard and accurate information •"Information Paradox"	ICD – Short Mortality List ICD-in-a-box
MORBIDITY Statistics Clinical Financial	Governments Health Ministry Clinicians Administration	•Many Clinical Modifications •Use in financial reimbursement	ICD- XM International DRGs e-Health Record HIS Businessware

CLASSIFICATIONS

Harnessing the diversity

- USA ICD-9 CM and ICD 10 CM
- Australia ICD-10 AM
- Canada ICD-10 CA
- Germany ICD-10 GM
- …
- Combined ICD *XM*

CLASSIFICATIONS

"ICD-10-XM"

- harmonization of existing clinical modifications
- enabling correspondence and convergence
- a **"Lego system"** to build your own clinical modification
- can be used to compile international disease statistics
- drives the ICD updates as modifications indicate user needs
- a business application for reimbursement schemes

CLASSIFICATIONS

Current View

USES	USERS	Problems	Possible Solutions
MORTALITY Reporting Statistics	Governments Health Ministry Scientists Insurance	•Lack of standard and accurate Information •"*Information Paradox*"	ICD – Short Mortality List ICD-in-a-box
MORBIDITY Statistics Clinical Financial	Governments Health Ministry Clinicians Administration	•Many Clinical Modifications •Use in financial reimbursement	ICD- *XM* International DRGs e-Health Record HIS Businessware
DISABILITY Statistics Clinical Financial Legal & Policy	Governments Health Ministry Labor PWD Clinicians Administration	•Lack of standard application •Initiation for legislation and clinical use	•Link of Health & Disability Statistics •Census and Survey Questions •Clinical Applications

CLASSIFICATIONS

ICF Implementation

information gap on functional status

- Additional Value of Functional Status data
  - Explanation of need, utilization, outcome, costs
  - Assessment of lost productivity,
  - health gains due to effectiveness of interventions
- Linking Health Statistics and Disability Statistics
- Integration of ICF into e-health records

CLASSIFICATIONS

Current View

USES	USERS	Problems	Possible Solutions
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MORBIDITY Statistics Clinical Financial	Governments Health Ministry Clinicians Administration	•Many Clinical Modifications •Use in financial reimbursement	ICD- *XM* International DRGs e-Health Record HIS Businessware
DISABILITY Statistics Clinical Financial Legal & Policy	Governments Health Ministry Labor PWD Clinicians Administration	•Lack of standard application •Initiation for legislation and clinical use	•Link of Health & Disability Statistics •Census and Survey Questions •Clinical Applications
INTERVENTIONS Statistics Clinical Financial	Administration Clinicians	•Lack of Standard application •Inpatient, medical & surgical emphasis	ICHI: International Classification of Health Interventions

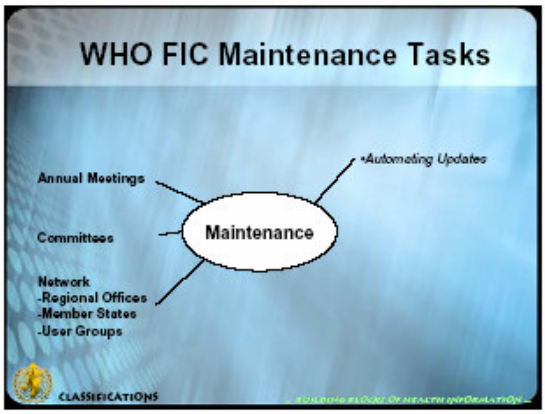
CLASSIFICATIONS

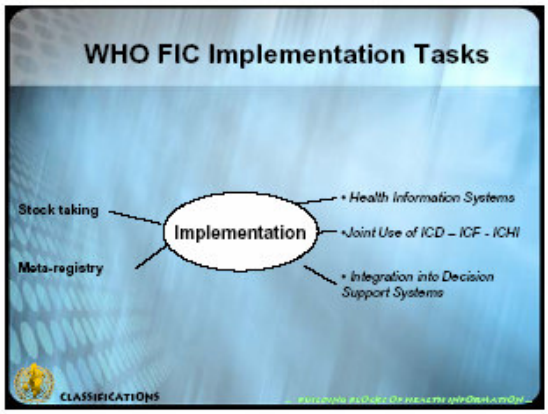
Mission Possible: Classifying Health Interventions?

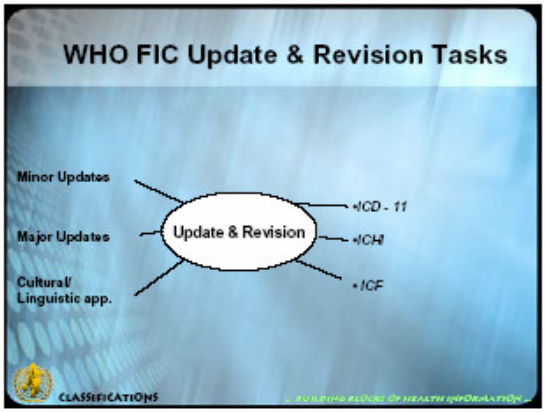
- WHO: International Classification of Procedures in Medicine
- NOMESCO Classification of Surgical Procedures (NCSP)
- UK classification of Interventions (OPCS4)
- Canadian Classification of Interventions (CCI)
- Classification des Actes Médicaux (CCAM)
- Australian Classification of Health Interventions (ACHI)
- ICD-10 Procedure Classification System (ICD-10 PCS)

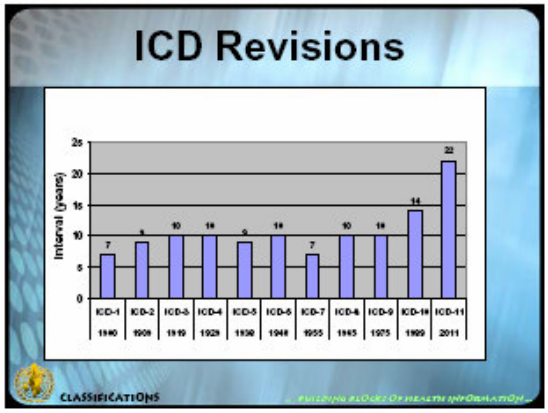
ICHI a standard for international comparisons.
Provide to countries (without a procedure classification) a framework

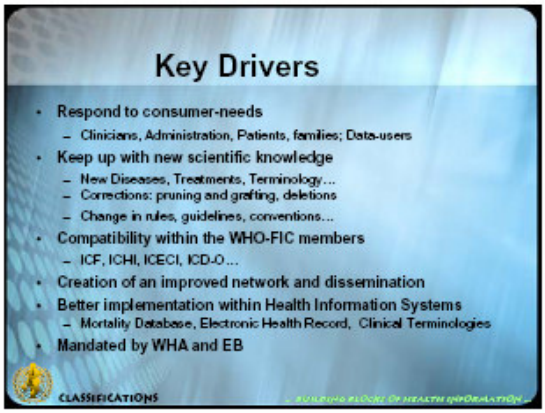
CLASSIFICATIONS

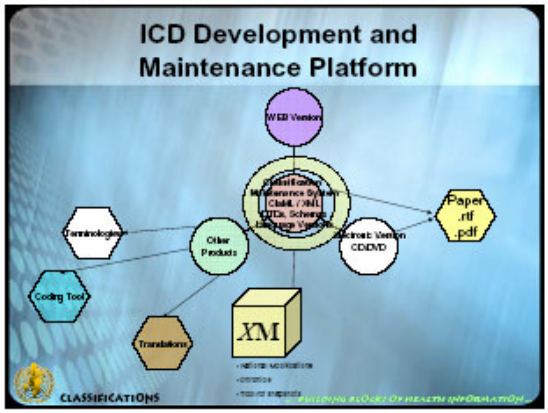

WHO FIC Maintenance Tasks
Annual Meetings
Committees
Network
-Regional Offices
-Member States
-User Groups
Maintenance
•Automating Updates
CLASSIFICATIONS

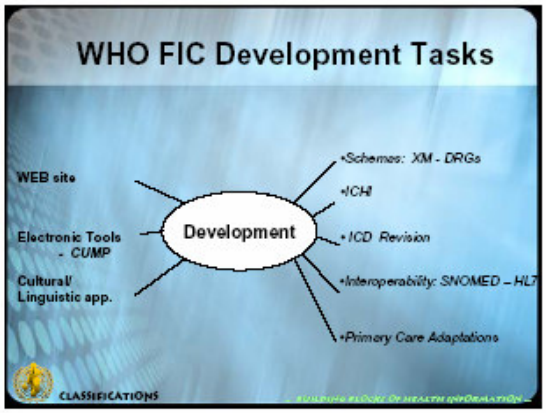

WHO FIC Implementation Tasks
Stock taking
Meta-registry
Implementation
• Health Information Systems
•Joint Use of ICD – ICF - ICHI
• Integration into Decision Support Systems
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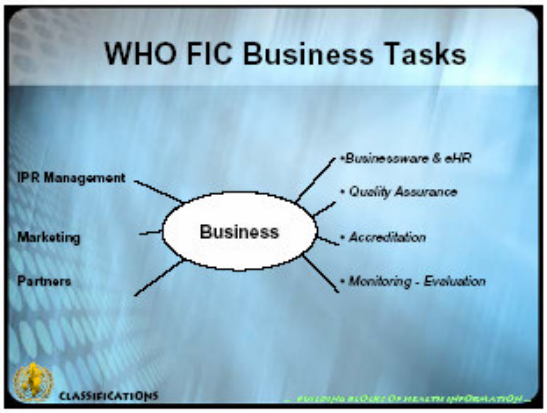

WHO FIC Update & Revision Tasks
Minor Updates
Major Updates
Cultural/
Linguistic app.
Update & Revision
•ICD - 11
•ICHI
• ICF
CLASSIFICATIONS

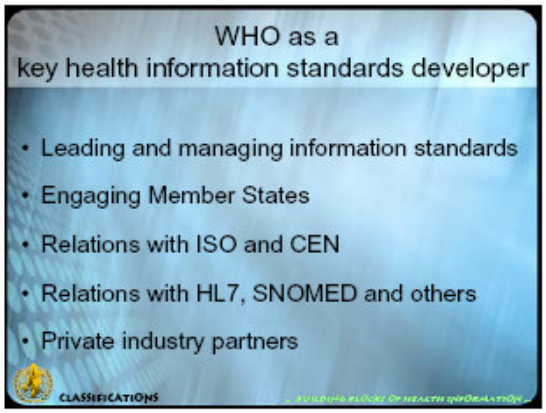

ICD Revisions
Interval (years)
25
20
15
10
5
0
7
8
10
10
9
10
7
10
10
14
22
ICD-1
1940
ICD-2
1909
ICD-3
1919
ICD-4
1929
ICD-5
1938
ICD-6
1948
ICD-7
1955
ICD-8
1965
ICD-9
1975
ICD-10
1989
ICD-11
2011
CLASSIFICATIONS


Key Drivers
• Respond to consumer-needs
– Clinicians, Administration, Patients, families; Data-users
• Keep up with new scientific knowledge
– New Diseases, Treatments, Terminology…
– Corrections: pruning and grafting, deletions
– Change in rules, guidelines, conventions…
• Compatibility within the WHO-FIC members
– ICF, ICHI, ICECI, ICD-O…
• Creation of an improved network and dissemination
• Better implementation within Health Information Systems
– Mortality Database, Electronic Health Record, Clinical Terminologies
• Mandated by WHA and EB
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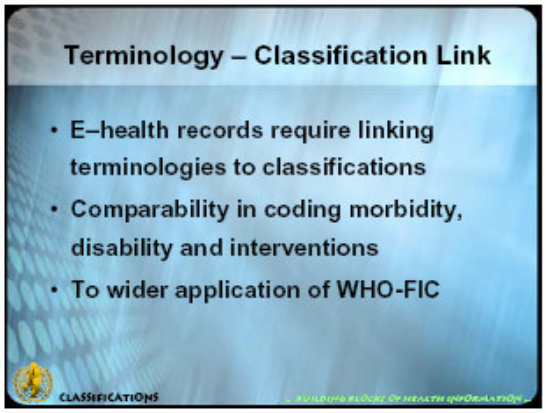

ICD Development and Maintenance Platform
WEB Version
Terminologies
Other Products
Coding Tool
Translations
XML
Paper
.rtf
.pdf
CLASSIFICATIONS


WHO FIC Development Tasks
WEB site
Electronic Tools - CUMP
Cultural/ Linguistic app.
Development
•Schemes: XM - DRGs
•ICHI
• ICD Revision
•Interoperability: SNOMED – HL7
•Primary Care Adaptations
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WHO FIC Business Tasks
IPR Management
Marketing
Partners
Business
•Businessware & eHR
• Quality Assurance
• Accreditation
• Monitoring - Evaluation
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WHO as a
key health information standards developer
• Leading and managing information standards
• Engaging Member States
• Relations with ISO and CEN
• Relations with HL7, SNOMED and others
• Private industry partners
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Challenges
• Boundaries of use
• Design fit for purpose
• Application tools
• Global Contrasts
• Revisions, Updates
• Primary Care Versions
• Harmony & Synchrony with e-health applications
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Terminology – Classification Link
• E–health records require linking terminologies to classifications
• Comparability in coding morbidity, disability and interventions
• To wider application of WHO-FIC
CLASSIFICATIONS


WHO's Assets
• Intellectual Property Rights
• Knowledge Networks
• Position
CLASSIFICATIONS