

Folder eCC\_00013847 is in stage Annual\_Report\_Review

**Name of the University, Hospital, Research Institute, Academy or Ministry**

Regional Central Health Directorate

**Name of the Division, Department, Unit, Section or Area**

Classification Area, General Directorate

**City** Udine **Reference Number** ITA-85

**Title** WHO Collaborating Centre for Family of International Classifications

**Report Year** 07-2018 to 07-2019

**1. Annual report on the agreed workplan**

**Describe progress made on the agreed workplan. For each activity, detail (1) the actions taken, (2) the outputs delivered, as well as (3) any difficulties that may have been encountered. Three responses are expected. [maximum 200 words per activity]. Indicate, if an activity has been completed previously, has not yet started or has been placed on hold.**

**Activity 1**

Title: Revision of International Classification of Diseases (ICD-11)

Description: Provision of technical expertise and implementation of the following ICD-11 revision related activities:

1. Review and enhancement of ICD-11 Beta draft, ICD-11 Reference Guide and ICD-11 Index
  - a. To work on the mortality and morbidity review of the Beta draft through participation in the MTAG and MbTAG
  - b. To work on the coding rules for morbidity and mortality
  - c. To support the population of the ICD-11 content model and the development of IT tools for ICD-11
2. Prepare and implement field tests of ICD-11 Beta draft in Italy
  - a. Italian translation of ICD-11 Beta draft on WHO Translation platform
  - b. Italian translation of FT material (including FT manual, FT instrument, case summaries and training material)
  - c. Preparation and piloting of Italian ICD FIT version (web-based platform for data entry)
  - d. Conduct FT familiarization and training
  - e. Implementation of FT protocols as part of the Beta testing phase in 2015/2016 and usage validation phase in 2016/2017
3. Work on the transition from ICD-10 to ICD-11 in Italy
  - a. Identify and analyze transition requirements in Italy
  - b. Prepare and guide the transition process in Italy

Status: ongoing

1b) The team of the Italian CC (Carlo Zavaroni, Lucilla Frattura, Giovanni Bassi, Caterina Morassutto and Elia Nardo) worked in order to test and suggest improvements at the ICD-11 postcoordination considering international standards of medical care in systemic nosological entities (diabetes, amyloidosis, lymphomas, etc.). For example, in most cases the ICD-11 postcoordination allows the complications of diabetes to be coded using strings that combine clinical manifestations with the type of diabetes. However the current ICD-11 does not orient coders in the selection of the type of diabetes most associated with single complications, as described at epidemiological level. While the current ICD-11 postcoordination allows a classification of diabetes in line with the state of the art, it does not allow to select the specific clinical manifestations of

different kinds of diabetes. The postcoordination could improve the correct coding of clinical complications, in line with scientific knowledge, by using IT constraints and alerts. A poster was submitted at the 2019 WHO-FIC Annual meeting.

1b) The team of the Italian CC (Carlo Zavaroni, Lucilla Frattura, Caterina Morassutto, Elia Nardo) worked on the Italian clinical modification of ICD-10 taking into account the classification currently used in Italy (ICD-9-CM) and looking at ICD-11 as well. This work revealed some limitations of ICD-11 that were submitted at the 2019 WHO-FIC Network Annual Meeting for discussion. For some nosological entities, the current version of ICD-11 does not include the necessary details for their appropriate classification. In particular, ICD-11 postcoordination does not always allow to fully break up some nosological entities according to different classification axes (for example, by anatomical site) and thus to describe them appropriately. For example, the analysis made on the classification of gouty tophi in ICD-9-CM, ICD-10 and ICD-11 showed that while granularity of ICD-9 CM and ICD-10 allows to classify gouty tophi according to the main anatomical sites, ICD-11 postcoordination does not allow to classify extra-joint gouty tophi, despite the fact that ICD-11 takes them into consideration and points out their importance as can be seen from the Description of FA25.20 Tophaceous gout: "They present particularly in the skin and subcutaneous tissue. One of the more common sites for them is the helix of the ear". Postcoordination only allows the description of joints tophi according to two axes: anatomical site and number (XA4BF0 Monoarticular or XA4EJ6 Multiple Joints); it does not allow the classification of precipitates of monosodium urate in the helix of the ear, in the tendons and in the heart. The group aims at submitting ICD-11 update proposals.

1c. Andrea Martinuzzi, Vincenzo Della Mea and Lucilla Frattura took part in the new 2019 WHO-FIC Network working group that supports a harmonized WHO-FIC Classification Content Model. The group analyzed the descriptions of ICD, ICHI, and ICF entities to develop a spreadsheet that enumerates and compares all of the properties used in the three classifications. Among the three classifications, ICD and ICHI can easily be formulated in terms of the new conceptualization. To cast ICF in the same terms requires to analyze how ICF domains are used in conjunction with qualifiers and environmental factors to code health states and components of health state. The new formulation allows to formalize some of the ICF coding conventions as logical constraints and to derive ICF's original publication format. The group submitted a poster on this work at the 2019 WHO-FIC Network Annual meeting.

3b. Carlo Zavaroni and Lucilla Frattura started to test how to use ICD-11 in health care fields. In Italy, First Level Emergency Departments do not have to code diagnoses, but have to report service performance using clinical data. In order to standardize the diagnoses coding, they supported a regional group of professionals of Level Emergency Departments from the Friuli-Venezia Giulia region in coding a short list of the most frequent emergency health conditions. Coding in ICD-11 resulted more flexible than coding in previous versions of ICD: the versatility of ICD-11 provides classification categories at the highest level of specification (leaf codes) consistent with the first level diagnostic potentialities. At the same time, through the postcoordination, ICD-11 browser allows the classification refinement of the different nosological entities adding more detail according to different axes. ICD-11 postcoordination has been studied and developed to build a code string. These details are necessary for the coding of specialized nosological entities. A poster on this activity was submitted at the 2019 WHO-FIC Network Annual meeting.

#### DISSEMINATION OF RESULTS:

Zavaroni C, Bassi G, Morassutto C, Nardo E, Frattura L. ICD-11 and the state of the art of systemic nosological entities: an adequate benchmark for ICD-10 national classifications - the case of diabetes. Submitted at the 2019 WHO FIC Network Annual Meeting

Zavaroni C, Morassutto C, Nardo E, Bassi G, Frattura L. Current limit of ICD-11 post-coordination: the case of gouty tophi. Submitted at the 2019 WHO FIC Network Annual Meeting

Zavaroni C, Nardo E., Calci M, Morassutto C, Frattura L. Towards using ICD-11 browser and coding tool for coding a short list of emergency nosological entities in Italy. Submitted at the 2019 WHO FIC Network Annual Meeting

Martinuzzi A, Della Mea V, Tu S, ten Napel H, Hardiker N, Frattura L, Madden R, Sive W, Whitelaw L, Sykes

C, Chute C, Maart S, Van Gool C. Alignment of WHO-FIC Content within a unifying model: preliminary steps. Submitted at the 2019 WHO FIC Network Annual Meeting

**Activity 2**

Title: Development of a case mix application for ICD-11

Description: The activity aims to develop and validate a case mix application of ICD-11, starting from the analysis of the current Italian ICD-9CM DRG system and its possible translation to other case mix systems, and load the corresponding groupings into iCAT also considering ICF for continuity of care applications. Those groupings should be then validated in suitable field trials. This activity not only leads to the development of a case mix use case of ICD-11 but potentially leads to the development of ICHI in case of a strong request coming from interested Countries.

Status: ongoing

#### 2a) ICD-11 FOR CASE-MIX

DRGs are secondary patient classification systems based on primary classified medical data, in which single events of care are grouped into larger, economically and medically consistent groups. The main primary classified medical data are diagnoses and interventions. The current lists of health conditions that guide the DRG assignment in Italy are composed of single ICD-9-CM codes. The conversion of these lists to ICD-10 -WHO poses the issue of combined codes for the «primary (and secondary) diagnosis», suggesting some solutions useful in defining coding rules. In particular, the Italian CC in the Italian clinical modification of ICD-10 (ICD-10-IM) proposes the dagger-asterisk pairs in a characteristic and innovative way. Daga-asterisk strings were created, i.e. codes formed by the sequence of characters of the daga code and of the asterisk code, marked with the related symbols and proposed with the pre-established hierarchical order (first daga code and then asterisk code). For each dagger-asterisk string an appropriate immediate and compact label was identified, which adequately describes the nosological entity, i.e. the clinical manifestation of a specific underlying disease. Each string was attributed to the relevant MDCs (according to the clinical manifestation). 2916 strings have been identified till today. This activity carried out for the It.DRG Project (see Activity 5 in this report) is preparatory for quickly and correctly attributing to the relevant MDCs the corresponding ICD-11 strings, built using ICD-11 postcoordination.

#### 2A) RULES FOR MORBIDITY CODING.

The poster on a decision tree to support the morbidity coders decision-making process was accepted at the 2018 WHOFIC Network annual meeting. The goal of the work was focused on the organisation of the available WHO rules for morbidity coding in computer algorithms. The CC team considered:

- a) ICD-10 rules and guidelines for morbidity coding, while waiting for others;
- b) definition of the main condition “as the condition, diagnosed at the end of the episode of health care, primarily responsible for the patient’s need for treatment or investigation”;
- c) grouping of interventions and procedures in three sets:
  - “relevant surgery”, i.e. interventions or procedures that typically involve the use of an operating room or a hybrid operating room, or interventions or procedures that, while not normally requiring the use of the operating room, present an estimated level of resources consumption comparable to operating room costs;
  - “selected non-relevant surgical interventions”, i.e. interventions or procedures, other than relevant surgery, that require significant absorption of resources, mostly superior to the non-surgical treatment of a condition;
  - “residual non-relevant surgical interventions”, i.e. interventions or procedures, other than relevant surgery and selected non-relevant surgical intervention, that require an absorption of resources usually lower than that of the non-surgical treatment of a condition.

Health Information Technology rules were developed. The problem-solving steps concerned the identification of the main condition treated or investigated during the relevant episode of care, taking into account the procedures and interventions. The decision tree identified the main condition, i.e. a disease or an injury or, if no diagnosis was made, the main symptom, abnormal finding or problem. The diagnostic groupings were made taking into account ICD-9-CM, ICD-10 and ICD-11; the surgical groupings were made taking into account ICD-9-CM and ICHI. The decision tree can be used whatever the versions of the classification of diseases and interventions.

**CONCRETE OUTCOMES:** a decision tree to code the main condition.

#### DISSEMINATION OF RESULTS:

Frattura L., Zavaroni C., Fanzutto A. Suggestions on how to update ICD-11 considering morbidity coding: the case of pericarditis, myocarditis, endocarditis and heart valve disorders in diseases classified elsewhere. WHO-FIC Network Annual Meeting 2018 booklet

Zavaroni C, Fanzutto A, Nardo E, Della Mea V, Frattura L. Morbidity coding in ICD-11 (and ICHI): a decision tree to identify the main condition. WHO-FIC Network Annual Meeting 2018 booklet

#### **Activity 3**

Title: Management of the ICD-10 and ICF update process.

Description: Provision of URC secretariat functions for 2015-2019. To ensure, with cross sectional competence both in ICD and ICF, an integrated approach to the update of the WHO-FIC members. More in detail this activity consists of the overall coordination of the update process done by the co-chair together with the secretariat and in other activities such as refinement of the workflow, clarification of membership and further elaboration of the user guide for the update platform, production of documentation such as desiderata and practical guidance for submission of updated proposal, and in the development and maintenance of policies of update in the perspective of the transition from ICD-10 to ICD-11.

Status: ongoing

Lucilla Frattura was elected for a second term as CSAC Co-Chair for ICF at the Seoul meeting (Oct. 2018 -Oct.2020). During the last year Paula Tonel served as CSAC Secretariat. Lucilla Frattura and Francesco Grippo worked as voting members.

The purpose of CSAC is to provide strategic and technical advice to WHO in keeping its Family of International Classifications up to date in line with current knowledge and relevant to the purpose for which they were designed. The functions of the CSAC include maintenance policy and maintenance work of CSAC. The CSAC work is mainly conducted through the update platform for ICF and the maintenance platform for ICD-11, which are workflow engines designed to facilitate communication within expert workgroups and ensure transparency of the processes. Work and communications are also carried out via e-mail, conference calls and meetings, including an annual meeting during the WHO-FIC annual meeting. Activities of CSAC are carried out according to the WHO-FIC Strategic Work Plan.

ICD-11 UPDATES 2018: Paula Tonel, together with WHO, worked on ICD-11 update process and update proposals via several teleconferences from August to October. A first group of update proposals were considered and 'triaged' (sent back to the author, referred to Medical and Scientific Advisory Committee - MSAC- sent to CSAC). At the 2018 WHO-FIC Network annual meeting held in Seoul on 22-27 October, the CSAC considered and took decisions on 3 proposals for finalising the ICD-11 for presentation to the World Health Assembly in May 2019.

ICD-11 UPDATE PROCESS FOR 2019: Paula Tonel, together with WHO and a small CSAC subgroup, worked during a face-to-face meeting in Geneva in February 2019 and via teleconferences on update process and update proposals on the maintenance platform. Update proposals were considered and if necessary referred to the MSAC or other committees/reference groups or back to the author before being considered and voted by CSAC. Approximately 103 ICD-11 update proposals were put to vote for 2019.

ICF UPDATES 2018: Paula Tonel and Lucilla Frattura defined the dates of the voting rounds, opened the voting rounds for 2018 ICF updates in August and closed them in September. Votes were collected and documents with results of voting and with proposals for discussion were prepared for the annual meeting held in Seoul in 22-27 October. At the 2018 WHO-FIC Network annual meeting the CSAC ratified 47 recommendations for updating the ICF. Minutes of the CSAC ICF session were prepared and circulated among the CSAC members and WHO. A short report of the CSAC activities at the Annual meeting was also written on WHO request.

ICF ANNUAL UPDATES DOCUMENTS 2018: Paula Tonel and Lucilla Frattura prepared and delivered to WHO the annual update documents for ICF.

ICF UPDATE PROCESS FOR 2019:

a) In the period 2018-2019, the work on updating ICF was mainly done keeping in mind the release of a new ICF version. The aim is to have a version as much complete and correct as possible. A great number of new ICF update proposals were submitted and just as many were already present in the update platform. The update proposals to be discussed and voted in 2019 voting rounds include: 1) proposals submitted in order to include codes coming from ICF-CY into ICF, after a joint work of CSAC Co-Chair and Secretariat with Functioning and Disability Reference Group; 2) proposals re-submitted by Lucilla Frattura in order to remove impairments from the inclusions of the Body Functions categories and to add a remark aimed at introducing examples of health conditions in which impairments listed in the inclusions may occur. The proposals affect more than 100 ICF BF categories; 3) several proposals submitted by Lucilla Frattura concerning more than 50



Activity and Participation (A&P) categories in order to have titles in a verbal form in categories of chapters 7, 8, and 9; and 4) proposals on Environmental Factors, some of them submitted by Lucilla Frattura. In addition to the changes proposed with the proposals, a general review of ICF was also suggested in order to have uniformity in the classification (tabular list as well as the other parts of ICF). Lucilla Frattura and Paula Tonel identified further A&P categories in chapters 1-6 interested by the introduction of a verb in the title, with the aim to submit new update proposals or one new cumulative proposal for discussing in FDRG layer, without IRG phase, considering that this issue is already known and is present in several proposals concerning d7, d8, d9 to be voted during summer 2019. The proposals coming from ICF-CY were prepared by a group of FDRG members, supported by the CSAC Co-Chair for ICF (Lucilla Frattura), CSAC Secretariat (Paula Tonel) and IRG moderator (Thomas Maribo), who reviewed another 9 "old" CY proposals and 10 issues where ICF-CY differs from ICF and decided that no proposals had to be made of these.

a) Maintenance of the ICF update process: A first check on new 39 update proposals was performed by the CSAC secretariat. After a review by IRG and FDRG members, these were discussed together with other 32 update proposals that had been held over from last year. Of all update proposals for 2019, 67 have been put to vote by CSAC members.

b) Joint work with FDRG: A close collaboration with FDRG was carried out. In 4-5 April 2019, the CSAC Co-Chair for ICF and CSAC secretariat participated via teleconference in the 2019 FDRG mid-year meeting in Kuwait City. A presentation was given on 2019 ICF update process focusing in particular on re-submission of codes coming from ICF-CY, deletion of impairments in BF categories, and use of verbal form in the titles of A&P categories. Modernizing ICF update environment and need to update other parts of ICF other than the tabular list were also discuss

#### CONCRETE OUTCOMES:

- The annual update documents regarding the ICF updates accepted in 2018 with implementation year 2019.
- ICF update proposals on ICF Update Platform for voting in 2019 are available at <https://extranet.who.int/icfrevision/nr/loginICF.aspx>
- A presentation by Lucilla Frattura and Paula Tonel on "The 2019 ICF update process: contents, process, steps towards a new (2021?) release" at the FDRG mid-year meeting, 4-5 April 2019, Kuwait City, Kuwait
- A file excel on ICF updates on A&P made by the Italian CC, for 2019 discussion during the ICF update process
- A document written by Lucilla Frattura and Paula Tonel on changes to be made in Activities and Participation, titled "Activities and Participation: Remaining nouns to be changed with verbs: one new cumulative proposal to be submitted for discussing in FDRG layer (without IRG phase, considering that this issue is already known and in ODL for d7, d8, d9)?"

#### DISSEMINATION OF RESULTS:

Frattura L., Hargreaves J., Tonel P., Forrester A. Classification and Statistics Advisory Committee (CSAC) annual report. Submitted at 2019 WHO-FIC Network Annual Meeting

Frattura L., Tonel P. Maribo T. The 2019 ICF update process: steps towards a new ICF release. Submitted at 2019 WHO-FIC Network Annual Meeting

Frattura L., Hargreaves J., Tonel P., Katte J. Classification and Statistics Advisory Committee (CSAC) annual report. 2018 WHO-FIC Network Annual Meeting Booklet

Frattura L. Support and relationships as environmental factors: proposals to improve the ICF. 2018 WHO FIC Network Annual Meeting Booklet

Frattura L., Tonel P., Zavaroni C., Morassutto C. Suggestions for updating WHODAS 2.0 2018 WHO FIC Network Annual Meeting Booklet

#### **Activity 4**

Title: IT and Ontological developments for WHO-FIC.

Description: Provision of technical expertise and implementation of the following WHO-FIC IT and ontology related activities:

1. ICD-11 ontology development;
  - a. Harmonization between ICD-11 and SNOMED-CT, with development of methods and tools for enabling harmonization and gap analysis; common ontology study implication on relationships in the foundation layer
  - b. Development of IT tools related to ICD-11 quality assurance, enhancement, and usage, and experimentation of prototypes developed by WHO;
  - c. Participation in the joint WHO/IHTSDO table for the development of a common ontology.
  
2. Contribute to ICHI related ontology work
  - a. Maintenance of the provisional ICHI browser, and eventually participation in the development of the ICHI content model
  - b. development and enrichment of the functioning ICHI rubric
  
3. Explore ICF related ontology work
  - a. Updating of the analysis of the current status of ICF and discover underlying ontological principles on which is founded, starting from use-cases and term beating;
  - b. Continuity of the Mapping of ICF to other knowledge bases and terminologies (SNOMED CT, FMA, upper ontologies) and represent mappings in formal languages like OWL;
  - c. Representation, by using formal languages, of the links between measurement scales and ICF;
  - d. Exploration of new ways of ICF usage by means of knowledge based software.

The actions will be carried out in close cooperation with the Ontology Working Group of the WHO-FIC Informatics & Terminology Committee and the domain experts group provided by the WHO-FIC Functioning and Disability Reference Group.

Status: ongoing

4a) The Italian CC continued to work on the ICHI Platform, with the support and collaboration of the Australian Collaborating Center. The current version allows maintenance of the classification, including creation and modification of codes, and also management of multiple versions (including transition from one version to the other). The platform was used at the 2109 mid-year meeting of FDC for working on the ICHI classification. To better follow ICHI advancements, Vincenzo Della Mea joined the ICHI Task Force. During the last months, the ICHI platform received a major upgrade to be able to better deal with its evolution, including provision of URI-based identifiers like ICD-11.

Concrete outcomes: The ICHI platform is available at the address <http://mitel.dimi.uniud.it/ichi/>.

4b) Vincenzo Della Mea, Andrea Martinuzzi and Lucilla Frattura participated in the new WHOFIC Network working group that supports a harmonized WHO-FIC Classification Content Model, with particular attention to ICF and ICHI.

The vision of a harmonized WHO-FIC Classification Content Model is that such a content model will support one single Foundation from which all variants of WHO-FIC core classifications are derived as linearizations. To realize this vision, a new conceptualization of a WHO classification has been proposed that allows us to model ICD, ICHI, and ICF in a consistent framework. In this framework a WHO classification consists of (1) codable categories (e.g., ICD's diseases, injuries, factors influencing health, etc.; health interventions in ICHI; and health state and health state components in ICF) that represent phenomena that a classification is designed to encode and about which the classification is designed to collect information, (2) structural components (action, target, and method in ICHI and body function, body structure, and activities and participations in ICF) in terms of which codable categories are defined, (3) extension codes that can be used to refine the codable entities, (4) the informational properties of the classification entities, such as title and definition, as well as post-coordination properties like severity of diseases or impairment, (5) a post-coordination model that specifies how the structural components and extension codes can be used, in conjunction with post-coordination properties, to define and refine the codable categories, and (6) a linearization model that specifies what entities and relationships are necessary to describe any linearization in the Foundation.

#### CONCRETE OUTCOMES:

In 2019 a working paper was drafted, leaded by Samson Tu, Stanford University and a collaborative poster was submitted at the 2019 WHO-FIC Network Annual Meeting.

#### DISSEMINATION OF RESULTS:

Tu S, Nyulus C, Musen M, Martinuzzi A, Van Gool C, Della Mea V, Chute C, Frattura L, et al. Toward a Harmonized WHO-FIC Classification Content Model. Submitted at 2019 WHO FIC Network Annual Meeting

Cozzi S., Della Mea V., Ten Napel H., Frattura L.. Towards the ICF ontology: preliminary formalization of Activity & Participation and Environmental Factors. 2018 WHO FIC Network annual Meeting Booklet

Martinuzzi A., Della Mea V., Ten Napel H., Linton C., Noyaka J., Kraus de Camargo O., Macpherson B., Hanmer L., Almborg AH., Lee H., Leonardi M. Personal factors: a response to the call for action. 2018 WHO-FIC Network Annual Meeting booklet

#### Activity 5



Title: National work on WHO-FIC.

Description: Translation of WHO-FIC materials into Italian. The Italian WHO-FIC Centre serves as a focal point for translation and publication of WHO classifications and related documents in Italy. It promotes the adoption, on the basis of the work plan agreed with the Italian Ministry of Health, of the translated versions of the WHO-FIC materials of national relevance. The translation of the ICD-10 updates, especially those having an impact on mortality, is carried out in collaboration with ISTAT, institution responsible for cause-of-death official statistics in Italy.

Design and diffusion of WHO-FIC training tools and guidelines to use the WHO-FIC. The Italian WHO-FIC Centre serves as a focal point for translation, publication and training of WHO-FIC training tools. The Italian Centre is also specifically committed to WHO and national and local institutions for the development of training tools and guidelines on how to use ICF in disability assessment and eligibility according to ICF disability/functioning definition. It acts as a national reference point for training on WHO-FIC use.

Software applications for using WHO-FIC in national data collection and analysis. Design and develop software that implement new ways of interacting with FIC-based data, including collection, usage, visualization, decision support. These softwares serve to:

- support social networking-based update of WHO classifications, starting from already available classifications, terminologies and ontologies (e.g. ICD-11 as support for updating ICD-10);
- collect coded data in health and social information systems;
- deliver codes from local information systems to general repositories;
- transcode from one classification to another.

In the design process, exploitation of current standards might be involved, as well as development of specifications for communication standards.

ICD implementation strategy in Italy. On behalf of the Italian Ministry of Health, the Friuli Venezia Giulia Region, acting as Italian WHO-FIC CC, is responsible for the coordination and implementation of a national work plan aimed to introduce ICD-10 in Italy, considering the possibility to develop an Italian Modification. (Government-funded four-year project "Progetto di un nuovo sistema di misurazione e valorizzazione dei prodotti delle strutture ospedaliere. New measurement and paying systems for hospital products." IT.DRG). The overall process for updating the Italian version of ICD-10 will be carried out using the web environment for collaborative translation and collaborative update on the Italian Portal of Health Classification, jointly with the web tool developed for considering candidates for updating the current version from some of the available clinical modifications. Together with the Ministry of Health and two other Italian regions, responsible for the set up of the Italian classification of procedures and interventions and the revision of the DRG grouper, an analysis of the current Italian DRG system is being carried out, new case mix applications are under developed, and, upon WHO approval, groupings will be loaded into iCAT. Training programs will be realized focused on the use of the new classifications by clinicians and statisticians starting from field trials to routine.

Implementation of the Italian Portal of Health Classifications and of the web environment supporting collaborative authoring of the electronic Italian version of WHO-FIC, according to the agreement between the Italian Ministry of Health and the Friuli Venezia Giulia Ministry of Health.

National database on the ICF Implementation in Italian regional policies. According to a specific agreement between the Italian Ministry of Health and the Friuli Venezia Giulia Ministry of Health, an implementation database will be set up in order to show the multiple initiatives realized and under realization for ICF implementation. The database has been designed in order

Status: ongoing

#### IMPLEMENTING ICD-10 IN ITALIAN CASE-MIX SYSTEM

On behalf of the Italian Ministry of Health, since 2010 Lucilla Frattura is responsible for the coordination of a work group in order to develop an Italian modification of ICD-10 for case-mix purposes (The government funded a four-year project "Progetto di un nuovo sistema di misurazione e valorizzazione dei prodotti delle strutture ospedaliere. New measurement and paying systems for hospital products." IT.DRG). By means of the It.DRG Project, the Italian Ministry of Health is going to move from the current DRG system, based on ICD-9-CM, to a new Italian system based on an Italian modification of ICD-10 and an improved procedures classification. The Italian WHO-FIC CC worked on a first draft of ICD-10 Italian modification (IM), for which an

innovative approach was chosen. Extensions coming from ICD-11 were considered to modify ICD-10. In June 2018 Lucilla Frattura was nominated in the Project's Steering committee as expert of the Ministry of Health. In December 2018 a new project agreement was signed between Italian WHOFIC CC and Istituto Superiore di Sanità, in order to realize the activities needed to complete the Italian DRGs system. The deadline is scheduled at June 2020.

#### CONCRETE OUTCOMES:

As of July 2019 a provisional version of ICD-10-IM was set up. New lists of ICD-10-IM health conditions for case mix were created useful to create new Italian DRGs. The new IT-DRG will be characterized by: 1) new classification of the groups (starting from v.24 of the CMS DRG), with a modular weighing system improving the predictive capacity of the Italian costs, which foresees 373 final groups compared to the 538 currently used (-30,67%); 2) classification of the diagnosis ICD-10-IM (Italian Modification), which integrates the 2016 version of the ICD-10 OMS and which consists of 19.030 codes, compared to 12.432 of the ICD9CM-2007 currently in use (+ 53,07%); 3) Italian Classification of Procedures and Interventions (CIPI), which integrates and modifies the previous one, with about 5.400 codes compared to 3.700 used up to now (+ 54,51%); 4) a system of relative weights associated with It-DRG and the respective 'correction factors', defined on the basis of data collected on a sample of hospitals, according to the mixed approach to the case-mix costing, created ad hoc. Five chapters of a book were written and the whole book was co-edited.

#### DISSEMINATION OF RESULTS:

L. Arcangeli F. Banchelli, L. Bertinato, F. Carle, A. Del Favero, L. Frattura, L. Lispi, C. Marchetti, L. Merlino, M. Nonis, A. Palinuro E. Verdini, C. Zavaroni (Editors), Rapporto ISTISAN. Il Progetto It.DRG: stato dell'arte, 2019, <https://www.reteclassificazioni.it/upload/news/1544450686.pdf>

L. Frattura, C. Zavaroni, V. Della Mea. Capitolo 2. Messa a punto della modifica clinica italiana di ICD-10 ai fini della classificazione delle diagnosi, In: Rapporto ISTISAN. Il Progetto It.DRG: stato dell'arte, 2019, pp 27-65

L. Arcangeli F. Banchelli, L. Bertinato, F. Carle, A. Del Favero, L. Frattura, L. Lispi, C. Marchetti, L. Merlino, M. Nonis, A. Palinuro E. Verdini, C. Zavaroni. Introduzione. In: Rapporto ISTISAN. Il Progetto It.DRG: stato dell'arte, 2019, pp 1-3

L. Arcangeli F. Banchelli, L. Bertinato, F. Carle, A. Del Favero, L. Frattura, L. Lispi, C. Marchetti, L. Merlino, M. Nonis, A. Palinuro E. Verdini, C. Zavaroni. Capitolo 1. Progetto It.DRG: contesto di riferimento. In: Rapporto ISTISAN. Il Progetto It.DRG: stato dell'arte, 2019, pp 4-26

L. Arcangeli F. Banchelli, L. Bertinato, F. Carle, A. Del Favero, L. Frattura, L. Lispi, C. Marchetti, L. Merlino, M. Nonis, A. Palinuro E. Verdini, C. Zavaroni. Capitolo 6. Attività in corso e sviluppi futuri: implementazione, gestione e manutenzione degli It.DRG. In: Rapporto ISTISAN. Il Progetto It.DRG: stato dell'arte, 2019, pp150-160

M Nonis, L Bertinato, L Arcangeli, C Cadeddu, A Palinuro, L Frattura, GL Merlino, E Verdini, L Lispi, W Ricciardi. The evolution of drg system in italy: the it-drg project. European Journal of Public Health, Volume 28, Issue suppl\_4, November 2018, cky218.095, <https://doi.org/10.1093/eurpub/cky218.095>

#### WEB SUPPORT SYSTEM FOR CHOOSING and CODING MAIN CONDITIONS IN HOSPITAL DISCHARGE SUMMARY

The three-year project 2017-2020 named SISCO.web (SYstem to Support COding) aims at developing a support system to code morbidity at hospital discharge using ICD-10. Lucilla Frattura was the project coordinator. Project partners were the National Research Council (CNR) and Bruno Kessler Foundation. The activities were carried out according to the workplan. The practice of coding morbidity data using international standard diagnostic classifications has become increasingly important and recognized as a difficult and time-consuming task. Clinical coders/physicians assign codes to each patient episode based on their interpretation of the available case notes or the electronic patient record systems. Therefore, accurate coding depends on the legibility of the case notes and on the coders' understanding of medical terminology. Several studies have indicated poor reproducibility of clinical coding. To support physicians, in the coding of diagnoses and

procedures using ICD 9th revision, Clinical Modifications (ICD-9-CM), and in identifying the main condition to be filled in Hospital Discharge Records, the SISCO.web service is proposed. The service aims at improving the accuracy of coding by using the combination of Natural Language Processing algorithms, controlled vocabularies mapped to ICD-9-CM, as well as coding-rules and a decision trees for the identification of the main condition. With respect to existing systems, SISCO.web provides a double support. In fact, it is not only useful for searching the proper code of a diagnosis or procedure, but also for making easy the process of identifying the main diagnosis among multiple ones, which is, the most serious and/or resource-intensive during the hospitalization or the inpatient encounter. Advantages of the proposed approach is also the integration of Natural Language Processing and decision tree algorithms, extending the functionalities of the system.

#### DISSEMINATION OF RESULTS:

Cardillo E, Frattura L, Ciambri S, Zavaroni C., Nardo E, Eccher C., Della Mea V. Towards the Development of a Web Support System for Improving Accuracy in Coding Discharge Diagnosis, paper and oral presentation at the IEEE Symposium on Computers and Communications JUNE 30 - JULY 3RD, 2019 – BARCELONA, SPAIN

#### ICD-10 FOR MORTALITY STATISTICS

Official mortality statistics are produced in Italy by the National Institute of Statistics (Istat). In December 2018 Istat disseminated cause-of-death data for the reference data year 2016 using the 2016 version (fifth edition) of the ICD-10. As a reference, Istat produced a manual in Italian including instructions derived from ICD-10 volume 2 as well as more detailed guideline for multiple and underlying cause of death coding; examples and exercises. In order to evaluate the impact of ICD-10 updates 2016, a bridge coding study was carried out on a sample of Italian death certificates. Such documentation is useful for measuring the cause-specific shifting in mortality trends due to ICD-10 updates. Compared to the ICD-10 2008, the fifth edition presents several changes in the classification of some diseases and in the guidelines for the selection of the underlying causes of death.

#### CONCRETE OUTCOMES AND DISSEMINATION OF RESULTS:

A coding manual, integrating ICD-10 volume 2, was prepared. The manual is available on Istat website <https://www.istat.it/it/files/2011/01/codifica-delle-cause-di-morte-ICD10-2016.pdf>

The results of the bridge coding were published in: Chiara Orsi, Simone Navarra, Luisa Frova, Enrico Grande, Stefano Marchetti, Marilena Pappagallo, Francesco Grippo. Impatto dell'implementazione della versione 2016 dell'ICD-10 e del software Iris sulle statistiche di mortalità in Italia. *Epidemiologia e Prevenzione* 2019, 43(2-3)

#### ICF IMPLEMENTATION

On July 2018 Lucilla Frattura, as representative of the Italian WHOFIC CC, was nominated as a member of a national working group on disability certification and functioning profiles in children and young. The Italian Ministry of Health, which leads the working group, aims to introduce ICF and ICD in a new process to assess disability and to define individualized plan based on an ICF functioning profile.

In Italy, educational inclusion was generalised at the end of the 1970s and the separation between mainstream and special needs classes (established in 1962) was abolished. Through widespread educational inclusion, classrooms and schools were made accessible to all.

In 2017, law n. 66 introduced new requirements for ascertaining disability status in children for educational inclusion purposes, by modifying two specific articles of the reference law n. 104/1992 "Framework Law for the Assistance, Social Inclusion and Rights of handicapped people". The changes were about who has to ascertain a disability status in children for educational inclusion purposes; what has to be ascertained, when and why. The medical model of disability (which is at the basis of the current disability status ascertainment) was integrated with the bio-psycho-social model of disability and the jointly use of the ICD and the ICF was requested. The Italian Ministry of Health has the responsibility to define and introduce guidelines in the National Health System (NHS) for ascertaining disability status of «handicapped pupils» and setting up an ICF-based Functioning Profile of pupils with a disability status. This is necessary for allowing education institutions to write individualized education plans.

In Italy, the assessment of medical requirements and their consequences for eligibility to disability benefits is a health matter. In July 2018, the Italian Minister of Health established a national work group that started its activities in November 2018 with a scheduled deadline in June 2019. The work group was formed by

representatives of Council of Ministers, five Ministries (Health, Labour, Family and Disability, Education-Research and University, Finances), State-Regions Conference, National Association of Italian Municipalities, Union of Italian Provinces, three Italian scientific societies, and the Italian WHO FIC Collaborating Centre. b) A national network of regional representatives focusing on disability issues was also established, in order to collect regional regulations and materials useful to harmonize national and regional policies. c) In January 2019, the Italian WHO FIC Collaborating centre was charged by the Ministry of Health to prepare a new translation into Italian of the updated ICF (considering the updates for 2020) and to set up a web tool for supporting the health teams in the ICF-based assessment of disability. d) In March 2019, a national accompanying measure was also designed aimed at providing educational support measures to the involved health professionals in adopting the national guidelines and managing the new ICF-based assessment tools (Online Training courses; Internet ELearning tools).

#### CONCRETE OUTCOMES:

The guidelines were written as a draft, in order to be reviewed by different national bodies before the approval and the official publication. ICF was used as a general framework to assess disability and as a guide to collect information on Activities & Participation and Environmental Factors, but without coding them.

The following issues were considered:

(i) aims, scope, target of the new eligibility process and implementation roadmap; (ii) definition of disability and functioning according to the ICF and taking into account the UN Convention on Rights of Persons with Disabilities (Italian law n. 18/2009); (iii) the previous way to assess disability according to the medical model of disability and ICDH 2;

(iv) the need for an updated ICF and national requirements for using it uniformly across the country;

(v) reasons and ways for introducing ICF in NHS, without training professionals in ICF coding.

Specific tools and educational materials were designed: a glossary, a web tool aimed at collecting and analysing ICF-based information; templates for collecting information according to the ICF.

#### DISSEMINATION OF RESULTS:

Frattura L, Bassi G, Morassutto C, Nardo E. Disability/functioning assessment framework for school inclusion: the Italian perspective. Submitted at 2019 WHO-FIC Annual Network Meeting

Frattura L., Tamburini C., Battilomo S., Rizzo G., D'Amaro C..Implementing ICF in Italian policies for disability assessment of children: national guidelines and accompanying measures, Oral presentation and poster at the 4th International Symposium: ICF Education – 6 & 7 April 2019, Kuwait City, Kuwait

Frattura L., Morassutto C. Improvement in functioning at one-year follow-up assessment: the advantage of the Family of Functioning Indicators (FaFI). 2018 WHO-FIC Network Annual Meeting Booklet

#### THE ITALIAN PORTAL OF HEALTH CLASSIFICATIONS

The Italian Portal of Health Classifications ([www.reteclassificazioni.it](http://www.reteclassificazioni.it)) was implemented to support the collaborative authoring of the updated electronic Italian versions of WHO-FIC, according to the agreement between the Italian Ministry of Health and the Friuli Venezia Giulia Region ([www.reteclassificazioni.it](http://www.reteclassificazioni.it)).

#### SOFTWARE APPLICATION FOR USING WHO-FIC IN DATA COLLECTION AND ANALYSIS

In 2017, Italian law n. 66 introduced new requirements based on the ICF for ascertaining disability status in children for educational inclusion, and it modified the reference law n. 104 approved in 1992. Under this law, the Italian Ministry of Health has the responsibility to implement the ICF in disability assessment in the National Health System, taking into account the need to be simple, transparent, and uniform across the country. The need to be consistent with the UN Convention of the Rights of Persons with Disabilities (CRPD), ratified in 2009, was also considered. The team of the Italian CC (Lucilla Frattura, Elia Nardo, Giovanni Bassi, Caterina Morassutto) designed and developed a web tool in order to support the ascertainment of the disability status in children for educational inclusion. The tool aims to describe participation restrictions and facilitators and barriers in three specific domains: learning; relationships; self-care/autonomy/self-sufficiency. The UN CRPD definition of “persons with disabilities” was considered. The ICF was used as conceptual framework and standard language. A selection of Activities and Environmental Factors (EFs) was identified. A mapping table was defined to map the three domains to eight subdomains and 61 ICF A&P categories. The



web system was called ACCEDI (Ascertainment and Certification of Disability). In Italian, ACCEDI is a verbal form that means you access or you enter). In 2019 the first release was set up. Case vignettes were used to test the web environment. Algorithms for automatically coding into ICF information filled in the tool are to be developed. ACCEDI 1.0 has to be considered the first national tool to implement the ICF in the National Health System (NHS) and to practically use the bio-psyco-social model of health and disability. This work was presented at the 4th ICF Education Symposium, 6-7 April Kuwait City, Kuwait.

#### DISSEMINATION OF RESULTS:

Frattura L, Nardo E, Bassi G, Morassutto C, ACCEDI v1.0: an ICF-based tool for assessing barriers and risks for participation restriction in children, Oral presentation and poster at the 4th International Symposium: ICF Education – 6 & 7 April 2019, Kuwait City, Kuwait

ICF IN CLINICAL RESEARCH: The team of the Besta Foundation led by Matilde Leonardi was active on the implementation of ICF and WHODAS 2.0-based assessment tools in neurosurgical and neurological patients as well as in patients with chronic conditions and ageing.

a) The use of WHO DAS 2.0 has been continuing also in 2018/19 in Idiopathic intracranial hypertension (IIH) patients. IIH is characterised by raised intracranial pressure (ICP) with no established pathogenesis. The disorder is strongly associated with obesity, and most of patients are female of reproductive age. Symptoms of IIH include headaches, often chronic and with associated overuse of symptomatic medications, transient visual obscuration, papilledema and eventually optic nerve atrophy. To address the predictors of disability, a linear regression analysis was run with target the WHODAS-12 total score. To select predictors, we ran correlations between WHODAS-12 and continuous variables, namely BDI- II total score, headache frequency and severity, BMI and ICP, presence of Binge Eating Disorder (BED), episodic headache, chronic headache, visual impairment, papilledema, optic neuropathy. Those variables that were significantly correlated to the WHODAS-12 were retained for the linear regression analysis. A total of 51 patients, 45 females, mean age 37.4 (SD 12.8) were diagnosed with IIH. The average WHODAS-12 score ( $22.8 \pm 15.2$ ) is suggestive of a relevant disability level, and the average BDI-II ( $11.2 \pm 7.7$ ) is suggestive of low to mild symptoms of depression.

b) The Besta team is the coordinator of an EU Joint Action CHRODIS Plus. In Joint Action “Chrodis Plus: Implementing good practices for Chrodis Disease”, a work package dedicated on employment and chronic diseases has been developing an ICF based training tool for managers, a toolkit for workplace adaptation all for the benefit of employees, employers, and society. The tools are based on a biopsychosocial approach to health, thus is not disease specific but based on and targeting human functioning, person’s capabilities and chronic diseases commonalities.

c) Disability Manager University course. An ICF based course for Disability managers (DM) in the employment sector is ongoing in collaboration between FINCB and Catholic University. More than 80 DM have been trained in using ICF, WHO DAS 2.0 and on matching workers’ functioning profile with the work sector needs.

#### DISSEMINATION OF RESULTS:

Raggi A, Giovannetti AM, Schiavolin S, Brambilla L, Brenna G, Confalonieri P, Cortese F, Frangiamore R, Leonardi M, Mantegazza R, Moscatelli M, Ponzio M, Torri Clerici V, Zaratini P, De Torres L (2019) Older age, higher perceived disability and depressive symptoms predict the amount and severity of work-related difficulties in persons with multiple sclerosis. *Disabil Rehabil* 41(19) 2255-2263

Leonardi M, Raggi A, Bianchi Marzoli S, et al. Predictors of WHODAS-defined disability in patients with idiopathic intracranial hypertension. 2018 WHO-FIC Network Annual Meeting Booklet

Covelli V, Schiavolin S, Guastafierro E, Leonardi M. Narrative research in the care process in neurology and neurosurgery: the biopsychological methodological approach based on the ICF classification of OMS. 2018 WHO-FIC Network Annual Meeting Booklet

Silvaggi F, Scaratti C, Guastafierro E, Leonardi M. Employment and chronic diseases: Implementation of practices in the employment sector based on human functioning and person’s capabilities. 2018 WHO-FIC Network Annual Meeting Booklet

Raggi A, Leonardi M, et al. WHODAS 2.0 defined predictors of disability in patients with idiopathic intracranial

hypertension. 2018 WHO-FIC Network Annual Meeting Booklet

Guastafierro E, Covelli V, Leonardi M. Employment and disability: assessing working capacities with WHO DAS 2.0 and ICF checklist dedicated to labour policies. 2018 WHO-FIC Network Annual Meeting Booklet

Sattin D, Guastafierro E, Minicuci N, Roco I, Corso B, Quintas R, Caputo M, Vittadello F, Andreotti A, Leonardi M. The IDAGIT study on aging in Italian population: preliminary results. 2018 WHO-FIC Network Annual Meeting Booklet

### **Activity 6**

Title: Support WHO-FIC implementation in EURO and other WHO regions

Description: Plan and implement technical assistance projects in support of WHO-FIC implementation

- Support Euro WHO region in introducing ICD-10 in the health national service and in the health information system. (Albania, Russia)
- Provide resource of persons for WHO-FIC related training and capacity building activities as requested by WHO HQ or Regional Offices.

Status: completed

No actions were carried out in the last year

### **Activity 7**

Title: Contribution to WHO-FIC network activities.

Description: According to the roles of the WHO-FIC Network to promote the implementation, use, maintenance and updating of WHO reference health classifications and to assist WHO in the revision and development of the reference classifications, the Italian WHO-FIC CC assures contribution to the key products of the WHO-FIC Network Committees and Reference Groups, providing technical expertise, participating actively in the annual and mid-year meetings, chairing working groups and committees, being involved in key projects inside the network.

It currently provides:

Advisory Council: Head, and three Co-Chairs

Small Executive Group: one co-chair

URC: Secretariat (ICF since 2010 – third mandate; ICD-10 since 2014 – first mandate), and two voting members

ITC: Co-Chair (until 2016, second mandate) and one voting member

FIC: one voting member and one observer

EIC: one voting member and one observer

MRG: Co-Chair (until 2016, first mandate)

FDRG: Co-Chair (until 2016, second mandate), one voting member

Status: ongoing

The Italian CC currently provides:

CSAC: ICF Co-Chair (Oct 2018-Oct 2020: second mandate, Secretariat (ICF since 2010; ICD since 2014), and two voting members

FDC:Co-Chair (Oct 2018-Oct 2020: second mandate), one voting member and one observer

ITC: one voting member

EIC: one voting member and one observer

MRG: Co-Chair (ended in Oct 2018, second mandate)

FDRG: Co-Chair (Oct 2018 to Oct 2020, second mandate), one voting member

MbRG: one voting member, since 2017

The Italian CC has actively participated in leading positions to the WHO-FIC management assuring the progress of the Strategic Work Plan and the participation in the WHO-FIC Network activities (vis-a-vis



meetings, teleconferences, annual meeting in Oct 2018 and in upcoming meeting in Oct 2019).

Specifically:

Advisory Council (CC Head and other Co-Chairs: scheduled teleconferences);

URC/CSAC:

Lucilla Frattura was elected for the second term in October 2018 as Co-Chair of the Classification and Statistics Advisory Committee (CSAC) for the ICF side. Paula Tonel continued to support the CSAC (for ICD-11 and ICF) as Secretariat in the steps before and after the 2018 WHO-FIC Network meeting, and worked with the CSAC Co-Chair, Lucilla Frattura, to accompany the ICF update process in 2018 and 2019 and the CSAC Co-Chair for ICD-11, Jenny Heargraves, and participated to the WHO-FIC Council scheduled teleconferences. See the Activity 3 of this report.

FDC:

Andrea Martinuzzi (Italian WHO-FIC CC) was elected as Co-Chair for the second term at the Seoul Meeting, October 2018). The other FDC Co-Chair was Coen Van Gool (Dutch CC) and the secretariat function was provided by Soraya Maart (South African CC). The Family Development Committee (FDC) was established in 1999 to ensure that the WHO-FIC has a logical structure so that health classifications needed for each health parameter and setting within the health system can be identified. The Committee assesses potential new member classifications that could fill a gap in the WHO-FIC. During the last year, the FDC met two times in person plus 2 times by teleconference.

FDC MID-YEAR MEETING: The mid-year meeting was hosted in Conegliano (Italy) by the Italian WHO-FIC CC on April 9-10 2019.

THE WHO-FIC FAMILY PAPER: The year has seen the finalization and delivery to WHO of the revised and updated "WHO-FIC family paper", which describes the Family, principles of classification and the processes for adding, updating and maintaining classifications in the Family.

UNIVERSAL HEALTH COVERAGE INDICATORS: Previous mapping exercises by the FDC have assessed which reference classifications could be useful to monitor the UHC indicators and the 13 targets of the Health SDG. This year the FDC expanded the mapping to include the updated 100 Core Health Indicators identified by WHO in 2018, which contain indicators for health status, risk factors, service coverage and health systems – all seen as vital elements that contribute to UHC. Each reference classification has a role to play in assisting the monitoring of these indicators.

PRIMARY CARE: The finalization of ICD-11 and the final development of ICHI revived the interest and the need for a primary care linearization inclusive of all the three reference classifications and fitting the needs not only of GPs but of all health workers delivering primary care. The FDC will continue to pursue this topic at the 2019 annual meeting.

ICHI DEVELOPMENT: The FDC acts as the focal point for the WHO-FIC Network for the ICHI development work. In order to facilitate communication and coordination, FDC and ICHI development meetings have been co-located for several years, this work culminated in 2019 with a specially arranged ICHI workshop held in Cologne on February 18-22. The workshop finalized the beta version of ICHI and set the stage for the official field tests to be conducted during the summer.

ALIGNMENT OF THE MAIN CLASSIFICATIONS: A major endeavour was launched during the FDC 2019 mid-year meeting: the alignment of the three reference classifications both at the level of their content model and at the level of foundation components. This work is preliminary and long ranging and has the scope of facilitating the joint use of the three classification assuring a full and unambiguous representation of health in every aspect. The project will be led by FDC but will have ramifications in ITC and FDRG. DISSEMINATION OF RESULTS: five posters will be presented by FDC at the forth coming Banff 2019 WHO-FIC Network annual meeting.

ITC:

In 2018 Vincenzo Della Mea became member of the newly founded Mapping Working Group, aimed at establishing guidelines for mapping to and from WHO classifications. The Working Group meets in teleconference twice a month.

FDRG:

Matilde Leonardi (Italian CC) has been re-elected for a second term as FDRG co-chair in Seoul, October

2018, together with Hae-Jung Lee (Korean CC), and Olaf Kraus de Camargo as Secretariat (North American CC). Several teleconferences were set up along the year 2018/2019. Every month a Secretariat conference including WHO, DR Nenad Kostanjsek, is held to discuss the items arising by the intense work on ICF and other relevant WHO FIC Classifications. The full FDRG Conferences provide a clear insight of the progresses of the work and all CC actively contribute to the advancement of FDRG as well as of WHO FIC classifications. Matilde Leonardi participates also to the WHO FIC Council teleconferences. ICD-11 reference guide: With regards to the Reference Guide for the use of ICD 11, following the 2018 suggestions for corrections and clarifications related to harmonize the definitions of functioning in the ICF and ICD, contacts are ongoing with EIC to harmonize use of ICD11 and ICF.

**ICHI DEVELOPMENT.** As FDRG Co-Chair Matilde Leonardi went to the ICHI meeting in Cologne in February 2019 so as to contribute to the development of functioning as well as health interventions on functioning that are spanning along the whole ICHI classification.

**ICF UPDATES:** During this period Matilde Leonardi has been coordinating the FDRG work together with FDRG Secretariat and CSAC ICF Co-Chair and CSAC Secretariat. The update process of ICF underwent major work with the goal to have a complete integration of the ICF-CY into a lifespan-covering ICF second version. Over 60 ICF-CY items were reviewed, discussed and some of them were submitted on the ICF update platform as proposals to be discussed by all people registered on the platform and voted by the CSAC ICF voting members. A close collaboration with CSAC, is ongoing. See Activity 3 in this report.

**DEVELOPMENT OF A VERSION FOR CHILDREN AND YOUTH OF WHODAS.** Following the adoption of ICD-11 and of its novelty in the functioning chapter WHO has been requesting FDRG members and ICF experts to develop an assessment of disability and functioning in children and youth that could complement WHO DAS 2.0 and MDS into the ICD-11 so as to cover the full age range. An ICF based assessment instrument able to capture functioning is worldwide requested and needed and those that are around do not cover the full spectrum that is required for education, rehabilitation, as well as responding to children and caregivers' need.

**ICF EDUCATION:** The ICF Education website and teaching repository continues to grow. It can be accessed at <http://icfeducation.org>. FDRG members and other ICF experts have been invited to share their materials on the platform. The website also has an online Forum to discuss questions related to the use of ICF and WHODAS .

**ICF GLOBAL IMPLEMENTATION:** Implementation of ICF at national level is a complex task as countries where it has to be implemented are very different. Uniform approach cannot be recommended as ICF is used for different purposes and every implementation needs to be tailored taking into account local, best practices. FDRG annual zooming on ICF use however shows in 2018/2019 an increase on ICF use. **DISSEMINATION:** Matilde Leonardi was invited to speech on FDRG at the Rehabilitation International Asia and Pacific Regional Conference 2019, Macau, 24-28/6/2019.

#### **MRG:**

Francesco Grippo ended his mandate as Co-Chair of the Mortality Reference Group (MRG) in the Seoul meeting (October 2018), but continued to act as a voting member for the Italian WHOFIC CC in MRG and CSAC - ICD. As MRG Co-Chair, until October 2018, Francesco Grippo participated as observer in teleconferences and the Seoul 2018 WHOFIC Network meeting of the task force on ICD11 (JTF). Some members of the Istat team participated in the joint meeting Iris-MRG held in London in March 2019 in order to inform the MRG about the progress in the multiple cause analysis and other activities finalized to the programming of the implementation of ICD11 in Iris. An abstract for poster has also been submitted for the WHO-FIC Annual WHOFIC meeting 2019 in order to inform the network on such activities.

#### **EIC:**

On 6-7 April 2019, the 4rd International Symposium on ICF education took place in Kuwait City, Kuwait. Lucilla Frattura and Matilde Leonardi contributed with three poster and oral presentations.

#### **DISSEMINATION OF RESULTS:**

Note: The specific posters presented or submitted at the 2018 and 2019 WHO-FIC Network meeting are distributed in this report in relation to specific activities. In this section, the posters related to the Network activities are listed.

Frattura L., Italian WHO-FIC CC annual report: July 2018-July 2019. Submitted at 2019 WHO-FIC Network

Annual Meeting

Frattura L., Hargreaves J., Tonel P., Forrester A. Classification and Statistics Advisory Committee (CSAC) annual report. Submitted at 2019 WHO-FIC Network Annual Meeting

Frattura L., Tonel P. Maribo T. The 2019 ICF update process: steps towards a new ICF release. Submitted at 2019 WHO-FIC Network Annual Meeting

Martinuzzi A, Van Gool C, Maart S. Family Development Committee Annual report 2019, Submitted at 2019 WHO-FIC Network Annual Meeting

Leonardi M, Hae-Jung L, Kraus De Camargo O. Functioning and Disability Reference Group Annual Report, Submitted at 2019 WHO-FIC Network Annual Meeting

Martinuzzi A, Maart S, Whitelaw L, Sive W, Frattura L, Coen Van Gool. Detailed mapping of the 100 global reference list of core health indicators on the 3 reference WHO classifications. Submitted at 2019 WHO-FIC Network Annual Meeting

De Rocchi D, Orsi C, Grippo F. Transition of automated coding systems for mortality to ICD-11: analysing multiple cause data for refinement of decision tables and addressing priorities. Submitted at the 2019 WHO-FIC Network Annual Meeting

Frattura L, Tamburini C, Battilomo S, Rizzo G, D'Amario C. Implementing ICF in Italian policies for disability assessment of children: national guidelines and accompanying measures. 4th International Symposium: ICF Education – 6 & 7 April, Kuwait City, Kuwait, poster and oral presentation

Frattura L, Nardo E, Bassi G, Morassutto C. AcCEDI 1.0: An ICF based tool for assessing barriers and risks for participation restriction in children. 4th International Symposium: ICF Education – 6 & 7 April, Kuwait City, Kuwait, poster and oral presentation

Frattura L., Hargreaves J., Tonel P., Katte J. Classification and Statistics Advisory Committee (CSAC) annual report. 2018 WHO-FIC Network Annual Meeting Booklet

Frattura L., Italian WHO-FIC CC annual report. 2018 WHO-FIC Network Annual Meeting Booklet

Hanmer L, Martinuzzi A, Macpherson B. Family Development Committee Annual report 2018, 2018 WHO-FIC Network Annual Meeting Booklet

Leonardi M, Hae-Jung L, Kraus de Camargo O. Functioning and Disability Reference Group Annual Report, 2018 WHO-FIC Network Annual Meeting Booklet

Nakayama K, Hoyert DL, Grippo F. Mortality reference Group Annual Report, 2017-2018, 2018 WHO-FIC Network Annual Meeting Booklet

Frattura L. Support and relationships as environmental factors: proposals to improve the ICF. 2018 WHO FIC Network Annual Meeting Booklet

Frattura L, Tonel P, Zavaroni C, Morassutto C. Suggestions for updating WHODAS 2.0 2018 WHO FIC Network Annual Meeting Booklet

Simon L, Selb M, Leonardi M., Martinuzzi A., Ten Napel H., Snyman S., Sykes C., Yokobori Y., Coen M. 3rd International Symposium on ICF education 2018. 2018 WHO-FIC Network Annual Meeting Booklet

**2. Annual report on other activities requested**

Should WHO have requested activities in addition to the agreed workplan, please describe related actions taken by your institution [maximum 200 words]. Please do not include in this report any activity done by your institution that was not requested by and agreed with WHO.

No additional activities were requested

### 3. Resources

Indicate staff time spent on the implementation of activities agreed with WHO (i.e. those mentioned in questions no. 1 and no. 2 above). Do not include any data related to other activities done by your institution without the agreement of WHO. Please indicate staff time using the number of “full-day equivalents” – a day of work comprising 8 hours (e.g. 4 hours work per day for 7 days should be recorded as 3.5 full-day equivalents).

Number of staff involved (either partially or fully)

Senior staff	Mid-career staff	Junior staff, PhD students
2	2	2

Number of full-day equivalents, total for all staff involved

Senior staff	Mid-career staff	Junior staff, PhD students
100	80	80

Implementation of the agreed workplan activities (i.e. those mentioned in questions no. 1 and no. 2 above) normally require resources beyond staff-time, such as the use of laboratory facilities, purchasing of materials, travel, etc. Please estimate the costs of these other resources as a percentage of the total costs incurred (e.g. if you incurred costs of USD 100 and the value of your staff time was USD 50 which makes the total of USD 150, please report 33.3% and 66.7%).

Percentage of costs associated with staff time	Percentage of costs associated with other resources	Total
90.00	10.00	100.00

### 4. Networking

Describe any interactions or collaboration with other WHO Collaborating Centres in the context of the implementation of the agreed activities. If you are part of a network of WHO Collaborating Centres, please also mention the name of the network and describe your involvement in that network [maximum 200 words].

The Italian WHO-FIC CC is part of the WHO-FIC Network and the specific activities carried out inside the network are described under Activity 7 of this report.