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Kristina Stig
kristina.stig@socialstyrelsen.se
Ingalill Paulsson Lütz
Ingalill.lutz@socialstyrelsen.se

Final report MV

Evaluation on the Joint Questionnaire on Non-Monetary Health Care statistic, Eurostat project ESSnet Public statistics.

(Agreement under European Statistical System Network Project on Public Health Statistics, 10501.2009.003-2009.405)

In January 2010 Eurostat, WHO and OECD sent the first Joint Questionnaire on Non-Monetary Health Care statistics (JQNMHC) to all focal points for completion. The overall objective of the Joint questionnaire is to provide internationally comparable data on key non-monetary aspects of health care systems.

For the European Statistical System's network on Public Health, ESSnet PH, the Core Group Health Care Statistics was asked to analyse the results of that joint effort with the aim to produce recommendations for improving data comparability and for extending metadata information in view of a future Implementing Regulation (IR) on care for Regulation 1338/2008[1]

The Swedish National Board of Health and Welfare as a sub-contractor with Bundesanstalt Statistik Österreich on behalf of the Eurostat ESSnet project on public health statistics, the Core Group Health Care, has the task to analyse and review the results of the first Joint Questionnaire on Non-Monetary Health Care statistics sent out by Eurostat, OECD and WHO. The goal of that exercise is to produce a report including recommendations for improving data comparability and for extending metadata information. The objective is to achieve more comparable, timely, and consistent reporting of all variables by all Member States. That analysis will, amongst others, be based upon the ESS Handbook for Quality Reports. According to the agreement European Statistical System Network Project on Public Health Statistics, Kristina Stig of the Swedish National Board of Health and Welfare will do the work as sub-contractor for the ESSnet PH in accordance with the objectives of the project as set out in the agreement.

[1] This work/task comes under the Agreement European Statistical System Network Project on Public Health Statistics, 10501.2009.003-2009.405 concluded between the Contractor and the European Commission.

The analysis and review will cover the four items:

- Accuracy
- Accessibility and clarity
- Timeliness and punctuality
- Coherence and comparability

These items described in the ESS Handbook for Quality Reports, are fully or partially relevant for this subject. However, not all mentioned points there are equally relevant. Only those that are relevant on the level of European Statistics System will be analysed. Any other points that seem to fit the subcontractor may also be included.

Eurostat provided the results of the first Joint data collection and an inventory on current data in view of response by Member States. The Eurostat additional questionnaire related to procedures used in hospitals, discharges at hospitals, patient migration and surgical procedures is not included in the task.

This task includes a deeper evaluation of the JQNMHC to complement the Eurostat inventory of the first Joint data collection. Therefore a special questionnaire for evaluating the quality of national data was sent to the focal points in 27 EU Member States, 4 candidate countries and 2 EFTA countries.

The timetable for the task is:

- A first draft to be presented in October 2010 at the Core Group Health Care meeting in November 2010
- The Core Group on Health Care Statistics meeting on the 9-10 of November 2010
- A draft report on Analysis of the quality of the non-monetary data. End of February 2011.
- The Core Group on Health Care Statistics meeting on 8-9 March 2011.
- Delivering the interim report March 2011
- The Technical Group on Health Care Statistics meeting on the 7-8 April 2011
- The deadline for the report is April 2011
- The Working Group of Public Health statistics (WGPH) meeting June 2011.

2. Summarising report on analysis of the quality of the non-monetary data

The following is an analysis of the results of the questionnaire on the quality based on the four items in the ESS handbook for quality reports, accuracy, accessibility and clarity, timeliness and punctuality and coherence and

comparability and sent out to 33 focal points in February 2011.The aim of the questionnaire was to analyse and review the quality and result of the Joint Questionnaire on Non-Monetary Health Care statistics (JQNMHC). 27 countries have answered the quality questionnaire. Four EU Member States, two candidate countries have not answered the questionnaire. The results of this evaluation are based on 82 per cent of the 33 countries. (The questions in the questionnaire of quality are described in the appendix. Details per variable on health employment and graduates are presented in the attached Excel sheet).

2.1 Results of the questionnaire on quality

Accuracy

Health employment and graduates

Variables related to health employment e.g. physicians, midwives, nurses, dentists, pharmacists, etc. are requested according to three concepts:

- "*practising*" i.e. health care professionals directly providing services to patients
- "*professionally active"* i.e. the "practising" category plus other health professionals working in administration and research who are not directly providing services to patients but for whom their medical education is a prerequisite for the execution of the job
- "*licensed to practice*" i.e. entitled to practice as health professionals.

Of 63 variables for health employment and graduates in the JQNMHC there were 28 variables (44 per cent) with a few answers. Most of these missing answers refer to *professionally active* or *licensed to practice* categories for all health care personnel. Only a handful of countries reported on all the three dimensions (practising professional, professionally active personnel, and professionals licensed to practice) defining the health workforce. In the field of practising professions, associate professional nurses and caring personnel are outliers. There are 14 respective 9 countries where data for these variables are not available or does not exist or no answer. For professionally active professions the outliers are associate professional nurses, professional nurses and also caring personnel. There are 20 respective 15 countries where data are not available or do not exist or no answer were delivered. Even professionally active midwives and pharmacist are difficult to report. For licensed to practice professions the outliers are associate professional nurses, professional nurses, and also midwives. There are 22, 18 respective 15 countries where data are not available or do not exist or no answer were delivered.

For hospital employment there are five variables where data are difficult to report: associate professional nurses employed by hospital, both head count

and Full Time Equivalent (FTE), health care assistants employed by hospital, both head count and FTE, and other staff employed by hospital, FTE. Physicians, midwives and professional nurses employed in hospital with a service-contract are variables where the response rates are very low. Only a few countries can report data on these variables.

The answers in the questionnaire on quality on health employment and graduates per variable show also that almost all countries have data including both public and private providers. Only five countries have data only on public provider. 15 countries can separate public providers from private providers while 11 cannot. Some countries can only separate some variables but not all. Table 1 (Sources for compiling data on health employment and graduates by professional concepts), shows which sources countries are using when compiling data for the JQNMHC on health employment and graduates and also response rate to Eurostat on each variable in the JQNMHC. The sources are sample survey, census, statistical process using administrative sources, statistical process involving multiple data sources and estimates. In the table 1 the information for physicians, dentists, midwives, nurses, associate nurses, caring personnel, and pharmacists is grouped into the three categories: practising professions, professionally active professions and professions licensed to practice. For hospital employment data are grouped in head count respective Full Time Equivalent (FTE). The answers if a variable is not available (N.A.) or does not exist (N.E.) or no answer on the question at all are separately indicated in the tables to get more information on the question why countries cannot deliver data. For the question on sources there were more than one option to answer, so therefore the sum of the answers can be bigger than 26. The most common source to compile health employment and graduates is Statistical Process Using Administrative Sources. Many countries also use census for compiling data on employment and graduates. Only two countries estimate the numbers for a few variables. If the data are based on a sample from national data all countries have data which covers the whole country.

Table 1 Sources for compiling data on health employment and graduates divided in professionally categories (groups), Numbers of countries (26 One country is missing)

	Sample survey	Census	Administrative sources	Multiple data Sources	Estimates	N.A *	N.E **	No answer	Countries responding to the JQNMHC
Practising									
Physicians – practising	3	7	13	2	0	0	0	4	24
Dentists – practising	3	6	13	2	0	2	0	3	25
Midwives – practising	1	7	9	3	0	2	1	3	23
Nurses – practising	4	6	9	3	2	1	0	3	25
Professional nurses – practising	4	5	7	3	1	3	0	4	22
Associate professional nurses – practising	2	2	8	1	1	3	5	6	22
Caring personnel – practising	2	5	7	2	1	2	1	6	17
Pharmacists – practising	3	3	12	1	1	3	0	3	25
Professionally active									
Physicians - professionally active	3	3	8	2	0	3	2	5	19
Dentists - professionally active	3	1	8	2	0	5	2	6	15
Midwives - professionally active	1	1	7	3	0	5	3	6	14
Nurses - professionally active	2	1	8	3	0	5	2	6	16
Professional nurses - professionally active	2	1	7	1	0	6	2	7	10
Associate professional nurses - professionally active	1	0	4	1	0	5	7	8	12
Caring personnel - professionally active	5	1	4	1	0	7	2	6	9
Pharmacists - professionally active	4	0	8	2	0	5	3	5	20
Licensed to practice									
Physicians - licensed to practice	0	0	15	0	0	5	2	4	18
Dentists - licensed to practice	0	0	15	0	0	4	2	5	17

	Sample survey	Census	Administrative sources	Multiple data Sources	Estimates	N.A *	N.E **	No answer	Countries responding to the JQNMHC
Midwives - licensed to practice	0	0	11	0	0	4	3	8	12
Nurses - licensed to practice	0	0	13	0	0	5	2	6	13
Professional nurses - licensed to practice	0	0	8	0	0	7	2	9	9
Associate professional nurses - licensed to practice	1	0	3	0	0	5	7	10	6
Pharmacists - licensed to practice	0	0	14	0	0	5	2	5	15
Physicians by age and gender	3	6	14	3	0	1	0	1	31
Physicians by categories	2	8	13	2	0	1	0	0	26-32
Physiotherapists	2	6	13	3	0	2	0	0	29
Hospital employment, Head Count	1	11*	7	3	1	2	1	1	16-29
Hospital employment (FTE)	1	7**	5	2	1	4	3	4	10-18
Service- contract Physicians/ Midwives and professional nurses - employed in hospital	0	1	3	1	0	6	4	11	4-6
Graduates	1	8	14	1	0	1	2	2	12-31
Physicians by specialty	1	7	14	2	0	1	0	2	27
Physicians training specialty	0	2	8	1	1	4	1	9	8
Employed by NUTS 2	2	4	13	2	0	3	1	3	25-32

Source: Eurostat/National Board of Health and Welfare Sweden, Questionnaire on quality on non-monetary health care statistics.
* N.A. (not available) to identify variables for which they are not able to send specific data although they exist in the statistics.
** N.E. (does not exist) to identify variables for which they are not able to send data because the professional does not exist in the country.
*** Only 2 respective 6 countries compile associate professional nurses - employed by hospital respective health care assistants - employed by hospital collected with census, special case of sample survey, where all frame units are covered census.
**** Only 1 respective 4 countries compile associate professional nurses - employed by hospital (FTE) respective health care assistants - employed by hospital (FTE) collected with census, special case of sample survey, where all frame units are covered census.

Accessibility and clarity

On the question if data are available according to the definitions in the JQNMHC over 60 per cent of the countries have data on health employment and graduates according to the definitions, while 27 per cent have indicated partly. Variables which 7 to 8 countries can report only partly according to the definitions are practising physicians, professionally active nurses, physicians by categories and employees at NUTS 2 level. Other variables vary around 3 to 4 countries which can provide only partly data according to the definitions. Most countries have data on practising employees. Professionally active nurses, professionally active caring personnel, associate professional nurses licensed to practice and physicians, midwives and professional nurses employed in hospital with a service-contract are variables that 6 to 7 countries do not have data available (Table 3).

Table 3 Data available according to the definitions in the JQNMHC for variables for health employment and graduates. Partly or data not available or no answer. Numbers of countries (27).

	Partly	Data are not available	No answer on this question
Practising			
Physicians – practising	7	2	2
Dentists – practising	4	2	6
Midwives – practising	3	2	7
Nurses – practising	3	2	5
Professional nurses – practising	3	4	5
Associate professional nurses – practising	2	5	12
Caring personnel – practising	5	5	6
Pharmacists – practising	4	2	4
Professionally active			
Physicians - professionally active	4	4	7
Dentists - professionally active	4	4	10
Midwives - professionally active	4	5	11
Nurses - professionally active	7	6	9
Professional nurses - professionally active	3	7	12

	Partly	Data are not available	No answer on this question
Caring personnel - professionally active	2	6	11
Pharmacists - professionally active	4	3	10
Licensed to practice			
Physicians - licensed to practice	2	5	7
Dentists - licensed to practice	2	4	8
Midwives - licensed to practice	2	4	12
Nurses - licensed to practice	3	5	10
Professional nurses - licensed to practice	1	6	13
Associate professional nurses - licensed to practice	0	9	15
Pharmacists - licensed to practice	1	6	7
Physicians by age and gender	5	0	6
Physicians by categories	8	2	3
Physiotherapists	5	1	5
Hospital employment, Head Count	2	3	5
Hospital employment (FTE)	3	6	6
Service- contract Physicians/ Midwives and professional nurses - employed in hospital	1	7	13
Graduates	2	3	5
Physicians by specialty	5	1	5
Physicians training specialty	4	5	9
Employed by NUTS 2	7	3	8

Source: Eurostat/National Board of Health and Welfare Sweden, Questionnaire on quality on non-monetary health care statistics

For 'Sources and Methods' not all dimensions are specifically completed by the countries. Information is lacking on *reference period* (employments). The structure for Sources and Methods is defined as below.

Dimensions in sources and methods are:

Source of data	1.Indicate the data source, i.e. the name of the agency

	and/or the complete citation of the publication 2. Indicate the full title of the original survey collection, administrative source database or publication 3. Indicate if different sources were used for different years 4.Indicate the reference period (e.g. annual average, data as of December 31, etc 5. Add URL for website where more information can be found
Coverage	Indicate the data coverage if it is less than complete (geographical, population institutions, etc)
Deviation from the definition	Indicate if the data supplied does not match the proposed Joint definition
Estimation method	Explain if data is an estimation, interpolation or any other relevant information
Break in time series	Indicate if there is a break in the time series (due to changing definition, source or calculation method

The result of the question on how often countries update their data and metadata shows that most countries update both data and metadata once a year independently on which methods they use for compiling the data (Table 5).

Table 5 How often countries update their data and metadata. First figure is for data second figure is for metadata. (data/metadata). Numbers of countries (27)

	Sample survey	Census	Administrative sources	Multiple data Sources	Estimates
Health employment					
-Yes, once a year	5 /5	12 /11	20 /18	3 /3	2 /2
-Yes, several times a year			1 /0	1 /1	
-Yes, but less frequent than once a year		1 /1	1 /2	0 /1	

Source: Eurostat/National Board of Health and Welfare Sweden, Questionnaire on quality on non-monetary health care statistics.

Timeliness and punctuality

The period when data are available in countries varies a lot. For health employment and graduates the most popular source is the administrative sources. For administrative sources there are two groups when data are available: in January to July and in November to December. For sample surveys data are available mostly in August to September. When countries use census data are available for health employment mostly in May to August and December (Table 6).

Table 6. The month when data are available on a yearly basis for health employment and education per group of variables. (January=1 and December=12)

	Sample survey	Census	Administrative sources	Multiple data Sources	Estimates
Health employment					
Physicians	1/4 8–9	5-7 12	1-7 11-12	1/4 8-9	
Dentists	4 8–9	5-7 12	1-7 11-12	1/4 8-9	
Midwives	8-9/	5-8 12	1-7 11-12	1/4 8-9	
Nurses	1 8-9	5-8 12	1-7 11-12	1/4 8-9	
Caring personnel	1/4 8–9	5-8 12	1-6 12	1 9	3
Pharmacists	1/4 8–9	5-7 12	1-7 11-12	1/4 8-9	3
Physiotherapists	4 8–9	5-8 12	1-7 11-12	1/4/8 12	
Hospital employment	8-9	5 9-12	1-7 11-12	1/3/8/ 9 12	12
Graduates	6	2/5-6 12	5-7 12	8/11	

Source: Eurostat/National Board of Health and Welfare Sweden, Questionnaire on quality on non-monetary health care statistics.

Coherence and comparability;

More than half of the countries use the ISCO code for the respective health employment. However, eight to nine countries do not use the ISCO code. Some of these countries use data on personnel by education and industry (NACE) instead or the Labour Force Survey (LFS) data. The LFS provides the possibility to combine profession and industry – ISCO and NACE. Only a few countries use partly the ISCO code (Table 7).

Table 7. The use of the recommended ISCO code. Numbers of countries (27)

Health employment	Yes	No *	Partly	Another
Physicians	15	8	3	
Dentists	14	8	3	
Midwives	14	9	2	
Nurses	12	9	5	
Caring personnel	9	6	5	
Pharmacists	16	9	1	
Physiotherapists	13	8	4	1

Source: Eurostat/National Board of Health and Welfare Sweden, Questionnaire on quality on non-monetary health care statistics.

3. Conclusions and proposals

In view of the preparation of the Implementing Regulation (IR) on care non-monetary data there is a need to further improve comparable, timely, and consistent reporting of all variables in the JQNMHC by all Member States and to further investigate development of metadata information.

An overall reflection is that if variables from the Joint Questionnaire on Non-Monetary Health Care statistics should be part of an Implementing Regulation on health care at EU level the variables must be policy relevant, reliable and valid and also be possible to collect from a majority of the Member States. There must be an aim and objective for collecting the variables that is useful for comparison, analyses and evaluation of the health care systems between countries. It is also important for countries to know why different variables are to be collected. It would also be an advantage if the Member States themselves have a benefit of the variables collected for national analyses. In view of budget restriction in Member States further improvements and developments of the JQNMHC must be in tune with the possibility for the Member States to provide data. A step way approach is to prefer.

This report lays the groundwork for Eurostat in coming up with proposals for improvement of the JQNMHC in view of the future implementing regulation on health care.

Proposals

The following proposals are based on the results of the questionnaire on the quality on the Joint Questionnaire on Non-Monetary Health Care statistics sent out to 33 countries and also on discussions in the Core Group Health Care.

Main proposals

More explanations and examples in Sources and Methods

Over 60 per cent of the countries have data according to the definitions. Nevertheless it is important to improve the statistical definition. More clear examples are needed with detailed explanations, for example for long-term care. Long-term care applies specifically to the class of Caring personnel. In the definition two ISCO codes are given. However, as such, these codes do not cover always the whole range of possibilities. Especially if for the nurses an extra requirement of having a license to practice is asked. In that case several professions that could also be grouped under the ISCO code for associate professional nurses could be headed under the group of caring personnel, e.g. personnel specifically trained for help with ADL.

In the guidelines of the JQNMHC for health employment the ISCO code must be more strictly specified in all categories. It will be even clearer if in the spread sheet (Excel worksheets) the ISCO code is shown for each employment variable. Countries must also in the Sources and Methods fill in more explanations with details on what is included and what is excluded in respective variable.

Report all three dimensions: Practising professions, professionally active professions, professions licensed to practice.

The recommendation from the Core Group Health Care is to keep the concept for the health employment variables since the three variables are a complement to each other. Thou several professionally active professions are for some countries difficult to measure. But the number of professionally active professions could be used as an estimate together with some kind of template for the number of practising professions. Another possibility to count the practising professionals is to use the number of professions licensed to practice together with the NACE code for health care sector. A problem is the mapping of the breakdown between professional nurses and associate professional nurses, as well as the distinction between nurses and midwives. Given the possibilities of the countries in data collection, these variables should be asked.

Indicate the level of education

Countries should be stimulated to supply ample metadata and also indicating the level of education needed for the health employment variables especially for nurses and midwives.

Minor proposals

Update the figures in the data base and on the Website twice a year

The point in time when data are available in countries varies a lot. That indicates that it could be an improvement on the data quality and timeliness if it is possible to update the figures at least twice a year: one updating in the data base and on the Website in springtime (as now) and one in the autumn. Of course that is time consuming but also an improvement of data quality while data then are more up-to-date. Countries sending in data after the stipulated time could then have the possibility to have their data submitted on the Website the same year. Today the JQNMHC is sent out in December for data on t-1.

Reporting data

To clarify and make it more distinct what kind of data different countries submit to the JQNMHC the proposal is to show data with a s*plit into public providers - private providers - total providers*.

For nurses it must be clear that the three variables nurses practising, nurses professionally active and nurses licensed to practice are *a total* of professional nurses and associate professional nurses. Professional nurses and associate professional nurses are on different education level. Countries should be stimulated to supply metadata indicating the level of education needed for these variables.

Proposals on work shops

ISCO -08 work shop

The ISCO code for respective health employment staff is used for more than half of the countries. An area of improvement to increase the comparability is to support and encourage countries in "translating" what the new ISCO-08 codes mean in their own country (national label), e.g. for allocating categories of nurses to professional nurses and associate professionals nurses and also for caring personnel. Preferentially this support should take place in a workshop after the implementation of ISCO-08.

It is for instance possible in the practice of applying the ISCO in the Labour Force Survey to subsume e.g. ambulance personnel under the heading of nurses. The workshop should make clear what is now the practice in the member states. That means that also people from the departments that deal with the LFS and with the ISCO and ISCED classifications will be involved in such a workshop.

Work shop on relevance of variables in the JQNMHC

The analyses of the result of the questionnaire on quality indicate that some variables in the JQNMHC are more relevant than others and some variables may be removed from the Joint Questionnaire. In table 8 and 9 below there is a thinkable list on variables for health employments and graduates, that indicates which variables are relevant, less relevant and variables that are not relevant and could be dropped.

The proposal is to discuss this list and the definitions of the variables at a workshop with Member States as a preparation before the Implementing Regulation (IR) on health care statistics for non-monetary data.

Table 8. Relevance of health employments and graduates variables

Relevant	Not so relevant	Not relevant at all - could be dropped
Practising Physicians - practising	**Professionally active** Physicians - professionally active	Physicians/ employed in hospital with a service-contract
Dentists - practising	Dentists - professionally active	Midwives and professional nurses employed in hospital with a service- contract
Midwives - practising	Midwives - professionally active	
Nurses - practising	Nurses - professionally active	
Professional nurses - practising	Professional nurses - professionally active	
Associate professional nurses - practising	Associate professional nurses - professionally active	
Caring personnel - practising	Caring personnel - professionally active	
Pharmacists - practising	Pharmacists - professionally active	
Physicians by age and gender	**Licensed to practice**	
Physicians by categories of specialty	Physicians - licensed to practice	
Physiotherapists	Dentists - licensed to practice	
Graduates all kind	Midwives - licensed to practice	
	Nurses - licensed to practice	
Physicians - by NUTS2	Professional nurses - licensed to practice	
Dentists - by NUTS2	Associate professional nurses - licensed to practice	
Nursing professionals - by NUTS2	Pharmacists - licensed to practice	
Pharmacists - by NUTS2		
Physiotherapists - by NUTS2	Hospital employment, Head Count	
	Hospital employment (FT**E)**	
	Physicians training specialty	

Appendix

Description of the task

Objectives

The Core Group CARE will provide assistance and scientific support to Eurostat in monitoring the need for new or revised health care statistics and in the transition from development to implementation of the new or revised statistics.

Work description Task 1_1 Analysis of the quality of the non-expenditure data.

This task will be executed by Core Group member Kristina Stig as a subcontractor. She will submit her report to the Core Group CARE for revision and elaboration of conclusions/recommendations to be provided to Eurostat. A total of 19 days is available for completion of this task.

The first joint questionnaire on non-monetary health care statistics has been sent out by Eurostat, OECD and WHO at the end of January 2010. The deadline for submission of the data was March 26. The results of this data collection will be investigated and their quality will be assessed.
The assessment of the quality will be based upon the ESS Handbook for Quality Reports. The assessment will cover the items:

- Accuracy;
- Timeliness and punctuality;
- Coherence and comparability;
- Accessibility and clarity.

These items are described in the Handbook, and are fully or partially relevant for this subject. However, not all mentioned points there are equally relevant. Only those that are relevant on the ESS level will be analysed. Any other points that seem fit to the subcontractor may also be included. These items are based upon four (of the fifteen) principles from the ESS Code of Practice with the same name. These are included as an annex.

Eurostat provided the results of the first Joint data collection by mid 2010. Eurostat also provided an inventory on current data in view of response by Member States (MS), quality of data and mapping to national possibilities.

The subcontractor will make a table for each (set of) variable(s) of the joint questionnaire, with scores on the aforementioned items for all EU countries. Based on these data the subcontractor will make a report summarising the results. This report will be discussed in the Core Group Health Care.

Based on the report the Core Group CARE will draw conclusions for the publication of results as well as for the second wave of the joint questionnaire.

The first timetable indicated that a draft report would be prepared by mid September 2010 and discussed by the Core Group CARE during the meeting of the Core Group CARE in October 2010. The report will then in October 2010 be made into an interim report by the subcontractor and Core Group leader and submitted for the Technical Group meeting in November 2010. After that meeting the report will be finalised for the end of the ESSnet.

This timetable has been revised.

New timetable is:

- A first draft to be presented in October 2010 at the Core Group Health Care meeting in November 2010
- The Core Group on Health Care Statistics meeting on the 9-10 of November 2010
- A draft report on Analysis of the quality of the non-monetary data. End of February 2011.
- The Core Group on Health Care Statistics meeting on 8-9 March 2011.
- Delivering the interim report March 2011
- Technical Group Health on Care Statistics meeting on the 7-8 April 2011
- The deadline for the report is April 2011
- Working Group of Public Health statistics (WGPH) meeting June 2011.

The first observations on the quality of the JQNMHC were presented to the Core Group on Health Care Statistics on the 9-10 of November 2010.

Method of further work

To carry out the task from Eurostat ESSnet project at the Swedish National board of Health and Welfare the subcontractor works closely through the whole process in a working group together with the Swedish focal point for non monetary data.

Questionnaire to focal points on quality of non-monetary data

In the task from the ESSnet project on public health statistics, there was also a question of making deeper evaluation on the JQNMHC of future plans or developments. Since the information is not enough in the Eurostat inventory on the results of the first Joint data collection a special questionnaire on quality of non-monetary variables was constructed with more detailed questions, according to the four principles in the ESS Handbook for Quality

Reports. The special questionnaire on quality was sent to the focal points in 27 EU Member States, 4 Candidate Countries and 2 EFTA countries on non-monetary health care statistics for evaluating the quality of national data. The questionnaire for the quality assessment of the results of the Eurostat/OECD/WHO Joint Questionnaire on Non-Monetary Health Care statistics contains both questions which should be answered by every variable and questions which are more general. This questionnaire on quality only addresses the items of the JQNMHC, not the items of the separate Eurostat additional questionnaire.

A first draft version of the ad hoc questionnaire on quality of non-monetary variables was presented and modifications were discussed one by one at the Core Group on Health Care Statistics meeting the 9-10 of November 2010. In this first version of the questionnaire on quality the item of *relevance*[2] had been added to the assessment. The question related to relevance was which variables in the present data set in JQNMHC could be improved and developed. The discussion at the Core Group Health Care meeting highlighted that if relevance would be kept, it should be viewed from a national perspective, not an EU one. During the discussion the Core Group Health Care confirmed that issues on relevance should be dropped and also that some other questions need to be reshuffled.

Eurostat highlighted that a step-wise approach would be used for this questionnaire on quality. First agreement with OECD/WHO would be needed; then the questionnaire would be circulated to Eurostat and the Core Group Health Care members and their respective focal points to verify its practicability before its finalisation. The questionnaire on quality to the members of Core Group Health Care was sent out on the 19 of January to be answered at the latest on the 27 January 2011. Then the focal points of the 27 EU Member States, 4 candidate countries and 2 EFTA countries should be involved. The planned date for sending out the questionnaire to 33 focal points was at the end of January 2011, coinciding with the JQNMHC itself. It may then be easier for the focal points to answer the questions. Focal points should answer the questionnaire on quality at the latest on the 25 February 2011.

Timetable for the questionnaire on quality:

- Eurostat consults WHO and OECD as regards the agreed questionnaire for the EU Member States on the quality of the data in the JQNMHC; 18 January 2011

[2] *Relevance is the degree to which statistical outputs meet current and potential user needs. It depends on whether all the statistics that are needed are produced and the extent to which concepts used (definitions, classifications etc.,) reflect user needs.*

- The sub-contractor sends to all Core Group Health Care members the revised version of the questionnaire on quality of the data in the JQNMHC. 19 January 2011.
- Eurostat/Core Group Health Care members give comments on the feasibility of the questionnaire on quality based on their experience. 27 January 2011.
- Eurostat send out the questionnaire on quality on data for the JQNMHC to all 33 focal points. 1 February 2011
- Focal points (EU) should answer the questionnaire on quality at the latest on the 25 February 2011.

Questions following the structure of the ESS Handbook for Quality Reports

The structure of the questionnaire on quality follows the structure in the ESS Handbook for Quality Reports. After discussion at the Core Group Health Care meeting in November 2010 and further email conversations the questionnaire on quality to focal points was finalised as follows:

Questions per variable, part one (1)

Accuracy

The accuracy of statistical outputs in the general statistical sense is the degree of closeness of estimates to the true values.

- What kind of data source do you use when compiling data for the Joint Questionnaire on non-monetary health care statistics (JQNMHC)?
- If you use estimates for which years are the estimates?
- If the data are based on a sample from national data does it cover the whole country or a part of the country?
- Does your data include both public and private providers?
- Can you separate public providers from private providers?

It is important to know more about the data sources and especially which methods are used because of its importance for the result of the quality in the JQNMHC. Many Member States have problems to collect data from private sector. Another problem is to separate public from private sector. In evaluation of the health care sector it is important to compare either only public or only private figures or all together. Another dimension in the quality of data is if data covers a sample from a part of the country or from the whole country. If the data source is a sample from a part of the country you must have clear and simple estimating rules.

Accessibility and Clarity
Accessibility and clarity refer to the simplicity and ease with which users can access statistics, with the appropriate supporting information and assistance.

- Are data available according to the definitions in the Joint Questionnaire on non-monetary health care statistics?

Questions in general part one (1)

- Do you update the data for health employment and education and physical and technical resources?
- Do you update the metadata (source and methods) to the Joint Questionnaire for health employment and education and physical and technical resources?

Some definitions are not clear enough. More examples are needed to avoid misunderstanding, especially for non-spoken English countries. Without clear and obvious definitions the analyses will not show a correct result.

Timeliness and Punctuality
The timeliness of statistical outputs is the length of time between the event or phenomenon they describe and their availability.
Punctuality is the time lag between the release date of data and the target date on which they were scheduled for release as announced in an official release calendar, laid down by Regulations or previously agreed among partners.

- When are the data for health employment and education and physical and technical resources available in your country on a yearly basis?

This question is relevant for the three international organisations' (EU/OECD/WHO) planning for the JQNMHC. The timing when the countries' can deliver their data at the earliest needs to be taken into consideration for the planning and implementation of the regulation on Community statistics on public health and health and safety at work.

Coherence and Comparability
The coherence of two or more statistical outputs refers to the degree to which the generating processes for those outputs used the same concepts - classifications, definitions, and target populations – and harmonised methods.
Comparability is a special case of coherence where the statistical outputs refer to the same data. Both of them are most important for comparisons over time, or across regions, or across other domains.

- Do you use the recommended ISCO code for the respective health employment staff?

Comments from countries

Part one (1)

Accuracy

Question A/. What kind of data source do you use when compiling data for the Joint questionnaire on non-monetary health care statistics (JQNMHC)?
Options:

1 Sample Survey
2 Census
3 Statistical Process Using Administrative Sources
4 Statistical Process Involving Multiple Data Sources
5 Estimates
5.1 If you use estimates for which years are the estimates?

Comments: NL/ Basically for the employment according to profession we use the central register of health occupations (BIG register) which we get from an agency of the Ministry of Health and link to inter alia the municipal register, several tax registers and social security registers, plus our business register. Data on practising physicians originate from external organisations like NIVEL; e.g. NIVEL keeps registers of certain professions like GP's and midwives and surveys them every year, or every 2 years (therefore answer: source is census). Practising dentists originate from the biggest organisation of dentists, and are basically an estimate based on their members. It obviously is sometimes too high, as for some years it is higher than the number of economically active dentists, which we can calculate quite good. For the class of caring personnel we rely on the LFS, as sole source. Hospital employment originates from the obligatory annual survey for societal responsibility (including financial statements and some data for Statistics Netherlands). This is considered a census, although the response is not 100%, and certainly not for parts of the survey. However, the categories asked for in the JQ are not completely available in this survey/census. Specific professions like physicians and nurses are not asked for as such, but are encompassed in broader classes like medical and scientific personnel, other personnel direct in contact with patients. So, for these professions we use estimates, for which the total number of employed persons originates from the census/survey, and the distribution among professions originates from the combined register data. This is so, because the business register does not cover correctly the industry of hospitals, plus that self employed persons, like many specialists, are misallocated to a large extent by the combined business and tax registers.
MT/ Estimates are used only for estimation of caring staff at National level and number of daycare beds/places at National level.

BG/ The statistical activity in the field of public health in Bulgaria is performed by the National Statistical Institute, the National Centre for Health Information (NCHI) at the Ministry of Health and the Regional Health Centres which are Bodies of Statistics. The activity is performed through conducting statistical surveys by the two administrations as well as by their regional offices. Through the system of statistical surveys which are included in the National Statistical Programme and carried out by the NSI and NCHI, annually statistical information on health network by type of health establishments is provided.
Data source concerning the national and regional data about health network by type of health establishments as well as the medical personnel by specialty and categories is an exhaustive survey carried out annually by NSI. All in-patient, out-patient, other health establishments and senatorial establishments are covered.
Data source for the individual and group practices for primary and specialised medical and dental care is the National Health Insurance Fund.
Data source for classifying the hospital beds according to the Eurostat statistical grouping are the surveys carried out by the NCHI. These surveys are exhaustive as well.
In addition, statistical surveys carried out by the NCHI provide information on medical activities of health establishments, surgical operations, hospital discharges, medical technology, etc.
LT/ We use direct estimation for physicians by age and sex data as we have data for public health institutions only (but they cover about 90 % of the physicians).
PT/ Physical resources data are based on an annual census of hospitals and official clinics. Employment and graduates data are generally based on administrative sources (professional associations and Ministry of Science, Technology and Higher Education), except for physiotherapists. Hospital employment source is based on the annual census of hospitals.
RO/ Question A and B: The data on the health care system in Romania is collected annually through an exhaustive statistics survey (SAN- Activity of the sanitary units) from all public and private health units, performed by National Institute of Statistics (NIS).
Some other indicators yearly required by Eurostat through health routine, are collected from administrative sources and they mainly refer to morbidity data: number of hospital discharges by ISHMT, number of proceedings by types of procedures, number of discharges by age.
The total number of graduates is obtained from the annual survey conducted by the NIS in education field, covering all schools from public and private sector.
Regarding medical specialties of pediatricians, data will be collected starting with 2010. Also, there are no data regarding residents by medical categories (data will be collected starting with 2010). In other cases data are under evaluated because in present no data are available for each medical specialty

(e.g. genetics, reproductive medicine which are included in obstetrics and gynecology or gynecologic oncology which are included in oncology). The new variables requested by Eurostat, OECD and WHO will be included in the health survey questionnaire, performed annually by NIS.
In Romania, "laboratory medicine" is included among specialties. Physicians having this specialization may follow courses for professional competence and obtain a competence for virology, bacteriology.
The "Nursing professionals" include: nurses, pharmacy assistants, infant care personnel, sanitary technicians, medical officiants, midwives, laboratory assistants, registering clerks, masseur, autopsy assistant, statistician specialized in health statistics, medical physical trainer, ergo therapy trainer and other categories of medical staff with equivalent upper secondary level of education. Nurses will be registered separately starting with 2010. Also, the data on total hospital employment will be available for 2010
IT/ Data on health employment (except hospital staff and general practitioners) are provided by ISTAT (Italian Institute of Statistics); data on hospital staff, general practitioners and physical/technical resources is provided by the Italian Ministry of Health.
EE/ Generally estimates are not used in data delivery.
HR/ Data source on employment is Health Manpower Register, set up in 1990/91 in CNIPH. The entry of a health worker's name into the data base coincides with the date of his taking job with a health institution, respectively the date a private practice has received a decision from the Ministry of health. Health institutional and private practices responsibilities include the monthly reporting of any change in manpower characteristics, as well as the current reporting of any change in the technical or scientific level of their staff. Immediately on learning of these and for the updating purposes, Health Manpower Unit informs pertinent institutions of the registration (identification) numbers of the newly employed work force and of modified parts of its data base.
CH/ We mostly use census data, collected from health providers, or from professional associations for health professionals. We use additional administrative data for technical resources.

Question B/ If the data are based on (a sample) from national data does it cover the whole country or a part of the country?

Comments
MT/ Question B is not relevant for Malta. Data supplied is not based on a sample. It is National data
LT/ Data cover health system. Some health personnel working in social system are not covered.
CH/ When available, our data cover the whole country.

Question C/. Does your data include both public and private providers?

Comments: PT/ Concerning the census of hospitals, both public and private hospitals are included, while all official clinics are public. Data on the administrative data sources concerns registers of professionals, independently of the juridical nature of the employer entity.
RO/ From 1994 - 2004, data refer only to the public sector
From 1999, the data cover all physicians, dentists, pharmacists, nurses and health care from public and private sector.
NL/ Hospitals are publicly funded but private hospitals. Truly private - for market hospitals are not included yet.
IS/Sometimes both - it depends on the data
EE/99% of all health services providers are covered.
CZ/ In health care statistics the coverage of health and social care providers with data would be also important to monitor. Data for the Czech Republic reported to Eurostat covers generally (not always) only practising health care workers in health care establishments (and not in social care establishments)
/HR Collection of data concerning hospitals and hospital beds from private providers started in 2010. Collection of data on employment concerning private providers started since 1993.
CH/ When available, our data include all providers.

Question D/. Can you separate public providers from private providers?

Comments: PT/ Yes for census of hospitals. No for administrative sources.
RO/ Currently in the health routine separate data for both private and private providers are required only from the hospitals. In the future it would be better to collect data also from all health providers not only from hospitals.
ES/ In some cases, data could not be separated between public or private due to strong sampling errors in the Labour Force Survey
IT/ The answer to this question is difficult because I can answer NO both because the data source doesn't provide information on public/private providers and because even providing this information the same physician or dentist can work both for public and for private providers and then it is not possible to attribute to one or to the other sector if you consider heads. You should consider jobs to split between public and private.
NL/Basically yes, because we only have until now publicly funded providers.
IS/Sometimes
EE/ First privately owned hospitals appeared in 1992. During the nineties state owned hospitals were reorganised to private entities operating under private law (companies, foundations and non-profit associations). During the period 1992-1998 ownership was not always correctly considered and for that reason data for private hospitals could be a little overestimated, for years 1999-2001 estimates are provided.

CZ/ Could you please specify who is public and who is private provider? Should the delimitation follow the National Accounts institutional sectors classification?
CH/ The distinction public/private by ownership is mostly not relevant. The relevant information is whether public finances are used and whether services are provided in the public interest.

Accessibility and Clarity

Question E/ Are data available according to the definitions in the Joint questionnaire on non-monetary health care statistics?

Comments: NO/It is not clear from the definitions what is regarded as a hospital.
RO/ The data on "Physicians by categories" refers to physicians - professionally active
NL/ Partly, data from NIVEL are considered to be on practising classes of (para)medical professions.
LT/ Mostly yes. Some small differencies could be found in physicians by categories data.
IS/ Yes sometimes, partly sometimes
LT/ Data for operational theatres are not collected. Day care places need additional explanations and definitions as it is not clear what kind of places we have in mind.
UK/ Answers given for England, as this makes up the bulk of the return. Other countries included in the UK return may not fully meet the definition or may be omitted from each indicator due to n inability to provide the required data.
CH/ As a whole, yes. Important exceptions are:
- Hospitals: the definition is not clear;
- Beds: for now, we use a measure of bed use instead of capacity
- Physicians in training: these are excluded from physicians, and we have no reliable data on the distinction by specialty.

Comments from countries part 2

Question F/ Do you update the *data* for *health employment and education* and *physical and technical resources*?

Question G/ Do you update the *metadata (source and methods) to the Joint questionnaire* for *health employment and education* and *physical and technical resources*?

Comments: NO/ We expect data on medical technology to be available in the 2012-report.

CYP/ Data are not revised on a regular base. Once a year the latest data are added
LV/ Medical Persons' Register is updated continuously but at the end of year the data from Register are sent to the Health Information Centre and the process of validation is continued.
RO/ The data on the health care system in Romania are collected annually through an exhaustive statistics survey from all public and private health units, performed by NIS.
IE/ We can in reality update the health employment data several times a year, but for the purposes of the JQ, this is done once a year only.
IS/ Where data are available then once a year.
EE/ What is meant by 'updating'? Collecting new information or publishing, or for JQ? Generally health employment and resources statistics is collected from health care providers and registries once a year, hospital bed utilization data - monthly.

Timeliness and Punctuality

Question H/. When are the data for *health employment and education* and *physical and technical resources* on a yearly basis available in your country?

Comments: FI/ Health employment data has a lag of one year. Information on operation theatres and day care places are not collected.
CYP/ The data are made available in March of year n for reference year n-2.
ES/ National Data are available more than one year after the period refers to.
SK/ Please note that the number of month indicates month in which last year ´s data are available in the current year (e.g. data from 2009 is available in September 2010).
IE/ For some of the above, e.g. hospital employment, data are available on a monthly basis.
NL/Employment by profession using multiple sources: t + 16 months (data on self employed are the latest available); licensed to practice are t+ 3 months. Graduates: graduated in July of year t, data one year later.
IS/ Data on health employment usually available within first quarter of the year. Data on graduates second half of the year after graduation. Data on medical technology is available end of year. Data are missing on other technical resources.
PL/ Caring personnel - N.E. (does not exist)
EE/ available next year in month indicated. Health professionals' statistics according to our release calendar will be annually published in December health care professionals registries data are not included to official national statistics
CZ/ The figures express the month when the data usually are ready for publishing (it is usually published a bit later).

UK/ Hospitals and Caring Personnel data not available. Medical Technology comes from multiple organisations and so data is available at different times. Hospital beds, operation theatres and day care places are all financial year data. Availability date for Day Care places is an estimate and it may not be the earliest point data available.
/HR Data on employment are available at any time as the changes in manpower characteristics are entered in the data base of Health Manpower Register on daily base, it means continiously. But usually, they are processed and analyzed and were sheduled for release as official in July for the previous calendar year.
CH/ Availability in the sense of data collection, not of release. Release of data (and subsequent availability for data users) is month 11.

Coherence and Comparability

Question I/. Do you use the recommended ISCO code for the respective *health employment* staff?
(*) Please comment why you are not using ISCO.

Comments: NO/ The quality of occupational data in the administrative data sources is not sufficient. Data on personnel is compiled by education and industry (NACE).
AU/ So far we didn't use ISCO because we used register data provided by the resp. professional association for physicians, dentists, midwives and pharmacists. These data are of a fairly good quality. If requested we could provide LFS-data (anyway, LFS-data are reported to Eurostat by the Statistics Austria Department for Labour statistics).
DE/ Comments: Physiotherapists in terms of the Health personnel accounts of the Federal Statistical Office: Physiotherapists develop treatment plans customised for their patients on the basis of medical prescription and carry out the corresponding physiotherapeutical measures (for example exercise therapy with and without equipments, breath control, electric therapy, heat therapy, massages).
BG/ Data on physiotherapists will be updated according to the final version of ISCO-08.
SK/ Coding is based on statistical finding of the Ministry of Health of the SR which is based on the Act No. 578 / 2004 on health providers, health workers and professional organizations in health, who acquired their professional skills in accordance with the Government Regulation No. 296 / 2010 on professional skills in the medical profession and on further education of health workers, system of training courses and certified system of work activities.
IT/ The ISCO classification used in the Labour Force Survey doesn't allow to split midwives and nurses.
IE/ Generally, data on employment comes from professional registers where national legal definitions are used

NL/ Data from the combined medical professions register and other registers are much more precise than from the LFS with ISCO codes.
MT/ Caring personnel do not need a license to work in Malta. They are not registered with any Council. The concepts of practising and professionally active caring personnel do not apply in Malta. All working caring personnel (whether in employment or self employed) can be considered as "practising".
LT/ Data on health personnel are collected not according to ISCO codes but using list of professions and specialties having in mind education and work actually done in the institution.
IS/ ISCO codes are not used in the registries of health professionals which are maintained by the Directorate of Health in Iceland. The use of ISCO codes is in progress within the Ministry of Finance where data on state personnel is conducted e.g. hospital staff.
PL/ Caring personnel - n.e. (does not exist)
ES/ A combination of ISCO and NACE codes would be required or desirable in some definitions, especially practicing and professionally active items.
EE/ The recommended ISCO-88 code are used since 2005. Until 1994 in Estonia the education of nurses was provided through 2 channels: 1) after secondary stage of basic education (level 2a by ISCED97) they acquired vocational training together with upper level of secondary education (level 3B); 2) after graduating upper secondary education (3A) they acquired level 4A education. As they have been working for a long time their skills and knowledge are comparable to those who have since 1994 graduating from different type, length and quality of level 5B education (1y programme until 2000, 2y programmes of diploma for nurses already licensed). The same secondary specialised schools were reformed into first level tertiary education institutions. Since 2004 there are a 2-year B.A. programmes + 1 M.A. programmes for licensed nurses, since 2005 there also academic B.A. of 3 years + M.A. 2-years programmes who acquire level 5A and 6 education. For that reason professional nurses and associate professional nurses on the basis of education are not distinguished in licensing and in statistics. Both are categorised as qualified nurses, but in statistics there is used a category nurses with higher education. ISCO-08 implementation process has been started in Estonia from 2011.
CZ/ We do not use ISCO directly in our data collections; only a convertor between health care professions defined by law and the Czech version of ISCO is used. There may be a difference in national adaptations of ISCO in different countries (for example delimitation and classification of professional and associate professional nurses). We would appreciate some more discussions concerning the experience with implementation of ISCO-08 in other countries. It seems that data may not be comparable so far and that some kind of more specific common rules is further needed. EU legislation - DIRECTIVE 2005/36/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the recognition of professional qualifications - could be used as another benchmark.

To give an example from the Czech Republic: There is a problem in determination of associate professional nurses which seems to persist even after implementation of ISCO-08. The Czech Republic classifies “registered nurses with specialization” as 2221 Nursing professionals, “registered nurses without specialization” as 3221 Nursing associate professionals and “medical assistants/health care assistants” (who may be considered as a lower level of nurse) as 3256 Medical assistants.
UK/ We do not use ISCO codes as a rule as our data is based from the NHS payments system for which ISCO codes are not required. However we endeavour to ensure the data we provide matches the ISCO definitions as much as possible. Caring Personnel data is not available.
/HR New and last ISCO in Croatia were published at the end of 2010. So was not implemented yet for the respective data on employment staff.
CH/ We do not explicitly use ISCO, but our definitions and delimitations are fully ISCO-compatible.

Comments in general: UK/ The questionnaire has been completed based only on England data. This is because it would be highly resource intensive to collect this data from the 4 countries that make up the UK and additionally would be very difficult to aggregate the responses together. Therefore the responses were completed for England, as England represents approximately 84% of the UK population. The responses for the Health Employment section are based from the submission and metadata from last year's collection as the England Workforce data is not available until the end of March at the earliest.