

# PERFORMANCE ASSESSMENT & QUALITY IMPROVEMENT

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## INITIATING THE SECOND WAVE OF DATA COLLECTION FOR THE PATH PROJECT

With the publication of this newsletter, the 2<sup>nd</sup> wave of data collection for the PATH project will have started and I would like to take the opportunity to share some important updates with you.

First, I would like to thank all those that have contributed in the preparation phase to make this happen, in particular the country coordinators, technical advisors and staff from the centres in Cracow, Ancona and Rome, and of course also the staff that will coordinate the work within the hospitals.

Many tasks were carried out in preparation for the new phase of this project: the indicator descriptions were reviewed, the data collection forms were harmonized, a marketing brochure and a poster was prepared and distributed, a demo version for the online tool was developed and the path web pages were updated. As part of our communication strategy, we also developed a logo for PATH:



**WHO Performance Assessment Tool for Quality Improvement in Hospitals.**

**A project of the WHO Regional Office for Europe.**

All hospitals registered to participate in the second wave of

data collection will be allowed to use this logo (complying with the criteria as specified in the letter of understanding).

Please note that we changed the domain of the PATH web pages, which can now be found under the following domain [www.pathqualityproject.eu](http://www.pathqualityproject.eu). All PATH documentation will be available shortly for download on these web pages (including the PATH brochure, the PATH Demo version of the online tool, as well as indicator descriptions and data collection forms). Registered users will be able to enter on this page to view their details, fill in the electronic questionnaire, upload indicators and download their performance reports. Codes will be distributed in the coming weeks to allow access.

Data collection will finish on 30th June 2007 and hospitals are expected to submit their data directly via this online platform from where we will build the data base for further analysis and produce the performance reports by November 2007.

We also established a new section on the web pages of the WHO Regional Office for Europe and all background materials of the PATH project are now more easily accessible under the following link:

[www.euro.who.int/path](http://www.euro.who.int/path)

In this newsletter we will present some of the work that went into the preparation of PATH II and

also highlight some of the developments for data collection and analysis.

### *Edited by:*



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This includes, for example, the adaptation of the questionnaire on the maturity of quality management systems developed by the EC financed project on Methods of Assessing Response

to Quality Improvement ([www.marquis.be](http://www.marquis.be)), the review of indicators and data collection forms, some considerations on collecting data at case level vs. using aggregated data, development of the PATH online system, and other issues.

With the data collection in process we anticipate many logistical and methodological questions and I would like to invite all involved in the project to forward these either to me or to the centre in Cracow, as we intent to summarize these questions and their answers in a updated version of the Frequently Asked Questions section on the PATH web pages.

All this work will be a joint effort of WHO in collaboration with the WHO Collaborating Centres in Cracow and Ancona and the National Council of Research in Rome.

Obviously, a lot of work still needs to be done and we may experience some challenges in the coming months. However, I am confident that with your support PATH will grow further and it would be a major achievement to have a fully functioning hospital performance assessment system in place by the end of this year, which would then allow its roll out based on a solid business plan in 2008.

Again, thanks to all for the constructive feedback and support, this project would not be possible without it.

Happy Easter!

*Oliver Groene, WHO Regional Office for Europe.*

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## THE PATH QUESTIONNAIRE

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During the PATH pilot test in 2005 a questionnaire was distributed in order to construct peer groups of hospitals. A completely revised questionnaire will now be used which incorporates elements allowing further research as well as a more systematic evaluation of the experience with data collection and performance reports. It has four section that can be described as follows:

1. *Hospital structural characteristics:* This information will be used to define peer groups of hospitals for the comparative assessment of hospital performance. It stems from the previous version; however, it focuses on the key variables required by the Cluster analysis for the allocation of hospitals to peer groups.

2. *Maturity of the quality management system:* This section is taken from the EC supported research project “Methods of Assessing Response to Quality

Improvement (MARQUiS)” using a set of items to construct a score on the maturity of the hospitals’ quality management systems. Preliminary validation from the MARQUiS study shows that the score is useful to discriminate between hospitals. In PATH, this information will be used to test associations between the development of quality management systems and hospital performance.

3. *Resource use:* This section will address the amount of staff time and money dedicated to the PATH project.

4. *User expectations:* This information will be used to identify expectations and experiences with participating in PATH.

Section one and two only need to be filled in once. The brief sections three and four need to be filled in at baseline and after data collection to assess actual resource use and experience with the 2nd phase of data collection for the PATH project.

The scientific advisory group supported the distribution of the questionnaire for the 2nd wave of data collection of the PATH project. Although the questionnaire appears to be long (in particular section 2), its items can be ticked off by a person knowledgeable on the quality management system of the hospital and thus the time required to fill in the questionnaire should be less than that required for the previous one.

The questionnaire will be embedded electronically in the PATH web page. Hospitals will be able to log on with their user

name and fill in the questionnaire online.

## REVIEW OF INDICATOR DESCRIPTIONS AND DATA COLLECTION FORMS

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Since the last meeting in Barcelona a number of activities were carried out to finalize the descriptive sheets and prepare data collection forms. Following the workshop recommendations, indicators were revised and refined tracer and procedure codes were added. A team from the WHO Collaborating Centre in Poland visited the research group in Amsterdam for training on developing data collection forms. As a result, several forms that integrated the previously isolated forms for mortality, readmission, length of stay and various tailored indicators were developed.

In order to assess potential overlaps with other indicator initiatives, we carried out a mapping exercise comparing the PATH indicators to those included in the AHRQ and ORYX datasets and assessed the conversion of ICD codes between different data sets. Out of the 17 core indicators in PATH only four similar indicators were found in ORYX and/or AHRQ, all of which refer to indicators in the clinical effectiveness & safety domain. Of the four, only two had similar definitions to those of the PATH indicators. Where possible, we tried to adjust the PATH definitions to reflect at operational level those definitions supported by both AHRQ and the ORYX initiative.

A substantial question is still whether data can be collected at

patient level (anonymized, allowing for a flexible analytical strategy) or at aggregated patient level (may induce additional errors and less flexible in terms of analytical strategy). The question was raised to national coordinators and in general it seems to be possible to report data at case level.

So far, data collection forms were developed for both approaches and it was suggested that PATH could support a two-tier approach for data collection. Since discussions regarding the use of case vs. aggregated level are controversial, PATH could possibly contribute by analysing differences in these two reporting procedures. However, with the integration of different indicators in single data collection forms this did not seem to be feasible without substantial additional work. Thus, before a two-tier reporting system can be put in place a proper research strategy needs to be developed.

## POLISH STUDY VISIT TO THE NETHERLANDS

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In order to speed up the development of PATH implementation tool, staff of the WHO CC in Krakow went on a 2 days study visit to Bilthoven, last December to work with the Dutch experts (Johan de Koning and Ronald Gijzen) on the revision of the core indicators and based on it, revised the data collection sheets to be used for the project. Data collection forms were revised for 4 indicators, following the changes in the descriptive sheets introduced during the last meeting in Barcelona.

The 4 indicators were: C3. Mortality caused by stroke; C9.

Surgical theatre use; C13. Needle injuries; C14. Staff smoking prevalence.

The study visit resulted in regrouping the indicators and joining together several sheets into one, which seemed more functional and user friendly for the hospitals responsible for data collection.

It was also decided to provide hospitals with an optional form (the Data Element Source and Collection Matrix) in which locally relevant information on data collection can be summarized. Using this form, hospitals should identify for each indicator the following information and summarize it in a table for easy reference and communication:

- data element, potential data source, actual data source, responsibilities for data collection, collection method, storage/retention system, most efficient collection method.

*Ewa Dudzik & Ewa Wojtowicz,  
WHO CC Cracow*

## CASE-LEVEL VS. AGGREGATED DATA COLLECTION FORMS

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For some indicators collection sheets were developed requiring hospitals to prepare data at case – level. Access to case-level data will allow monitoring data quality more effectively and efficiently. It also provides an opportunity to identify missing data elements and determine whether sample populations were correctly captured. Process of aggregation would require the use of derived data elements, which could mask serious data quality problems.

Access to case-level data will be very useful for risk adjustment of different underlying patient populations. The differences in socio-demographic status (e.g. age, sex) and patients' clinical status (case severity, co-morbidities) affect clinical outcomes, but are beyond the control of the hospital. Contemporary risk adjustment models account for these differences but are increasingly based on case-level data. While severity and co-morbidities are not yet used for adjustments in PATH, it is likely that these factors will be added for selected indicators in the future.

At this stage, it was decided to integrate 3 core indicators (and also some tailored indicators) in one data collection form. These 3 indicators are: mortality (C3), readmission (C4) and length of stay (C8 - LOS). As for LOS we shall calculate medians, which are better measures of central tendency than means in case of the skewed distributions; arranging data on the case-level will, in a way, make life easier for hospitals as they won't be required to deal with such calculations. This aspect seems very crucial as it has been decided to use risk-adjusted measures, which would require the hospital to perform calculations for each age group with separate distinctions regarding sex groups.

Moreover, considering the slightly modified inclusion/exclusion criteria for the above indicators (C3; C4; C8), providing individual-case data enables to select adequate subgroups for calculation on the analysis level. In case of the remaining indicators, hospitals

would retain their responsibility for respecting those criteria, just as they did in the pilot.

Preparation of case-level data does not require revealing sensitive patient identifiers (name / address / ID number) – these can be replaced with a unique ID case. Based on this, hospitals would be able to identify patients, which would be important in case of the necessity to follow up with respect to data validation when doubts, faults or errors occur.

Enhanced data quality will be helpful in assuring hospitals about the value of data they provide - sufficiently accurate to enable fair comparisons.

*Ewa Dudzik & Ewa Wojtowicz,  
WHO CC Cracow*

## EVALUATION AND EXPERIENCES FROM OTHER INDICATOR PROJECTS

Many projects and programs to measure the quality in health performance have been developed on a national and international level in the last 10 to 15 years. However there is little literature published on the impact of these projects. This is of particular importance as the PATH project embarks on its second wave of data collection which will be accompanied by a systematic evaluation. The question however is "How to evaluate such a Project?"

Today the field of evaluation in health care is characterized by a large number of evaluation theories and approaches, which is a positive sign for the field in a period of exciting intellectual development. But the growing

field also adds confusion to the work of evaluation.

In the brainstorming phase of an evaluation framework for PATH, I contacted leaders of 11 different indicator projects (Australian Council on Health Standards, Joint Commission USA, Quality Indicator Project USA, NHS Quality improvement Scotland, NHS England, The National Indicator Project Denmark, Bundesgeschäftsstelle Qualitätssicherung (BQS), Verein Outcome Switzerland, Ontario Hospital Association Canada, COMPAQH France, The Netherlands: Reporting of performance in hospitals).

In a brief interview they were asked about their experiences of developing an evaluation framework for the specific indicator project.

There was a general opinion that the users' (hospital management, patients, health professionals, governments) experiences are important to take into consideration in the development and adjustment of new indicators, as well as in the modification of the structure of the indicator project.

One interviewee pointed out the following: *"I think you should start to strengthen the information and then try to get a dialogue with the people who send in the information from the beginning (...), feasibility is very important because otherwise people from the medical professions will not accept the data."*

Related to this, a second issue mentioned was that one of the biggest challenges was the motivation of the users and to translate the provided information into action. One

interviewee said: *“It is not all about publishing figures, because if none of them are using them – then it is pointless. So this is about to take it to the next step – to actually using the data to improve quality care”*.

This quote points out that the indicator projects not only have a role as an analysing and information centre. They have an important educational role and all contacted projects in fact had developed educational programs as workshops, conferences, newsletters etc.

Linking these two issues a) evaluation of the indicator project and b) educational support, indicates that the dialogue with the users is very important. The users are dealing with the data collection in their daily work and applying it in a practical way to improve the quality of health care performance.

If we take into account the experience from other projects, PATH is heading the right direction when it comes to evaluation and educational support. The users’ experiences have been taken into consideration after the first wave of data collection, and the development of a learning network between the hospitals is one of the priorities in PATH. Future evaluation should include an assessment of effectiveness of the dialogue and the educational support, assessed against the expectations of users.

*Jutta Skau, BSc Public Health, Intern, WHO Regional Office for Europe*

## THE PATH INTERNET PLATFORM

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During the last weeks, Oliver Groene and Andrea Gardini discussed with Angelo Rossi Mori the development of the Internet platform for data collection, analysis and reporting. Following the discussions, Angelo Rossi Mori met at the beginning of February with a software house that is developing the platform and suggested the following stepwise approach:

1. Preparing a *still version* of the Internet platform to demonstrate the functionalities of the Internet platform for selected indicators (not interactive).
2. Developing a version allowing *limited functionalities* for a set of indicators, but without direct input yet by hospitals,
3. Setting up the *full system*, with login of the hospitals, either direct input by each hospital with immediate feedback or upload of an excel file, general statistics on the public web site and possibility to download a customized report for each hospital.

The still version can be downloaded from the PATH web pages and hospital coordinators are encouraged to use it as it demonstrates how PATH II will work.

## UPDATE ON COUNTRIES

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Preparations to participate in PATH are in progress in the following countries: Austria, Belgium, Estonia, Germany, Hungary, Italy, Poland and Slovakia. Additional countries had expressed a strong interest to join, but due to timing or

financial issues participation was not possible at this stage.

The exact number of hospitals participating can not be reported yet as not all have registered formally, but compared to the pilot test, the number of hospitals will be at least double and possibly triple (meaning between 100 and 150 hospitals).

Reports on the number of hospitals participating will be made publicly once the letters of understanding are signed.

## FREQUENTLY ASKED QUESTIONS

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No doubt, PATH hospitals will have many queries regarding the project related aspects.

Thus, the initiative to develop the FAQs section on the PATH website seems more than useful. As knowledge on statistics among healthcare professionals is very different and varies considerably, the FAQs need to tackle not only the very sophisticated issues but also some very basic ones, like e.g. the difference between median and average, the one we came into recently.

It would be very helpful if the PATH coordinators, especially from the pilot phase countries, could provide the queries they had experienced so far and email these to WHO CC Krakow on [who.krakow@cmj.org.pl](mailto:who.krakow@cmj.org.pl)

The input from the Steering Committee in this area would be also very valuable

*Basia Kutryba, Ewa Dudzik & Ewa Wojtowicz, WHO CC Cracow*

## LINKS & DATES

The PATH brochure is now available in electronic format on the WHO web pages and national coordinators should link their web pages with the following link to ensure distribution:

<http://www.euro.who.int/document/E89742.pdf>. Print versions of the brochure were sent out to national coordinators.

**The PATH project at the WHO Regional Office for Europe:**

<http://www.euro.who.int/path>

**The new domain of the PATH web page:**

[www.pathqualityproject.eu](http://www.pathqualityproject.eu)

**BMJ Quality Forum, 18 – 20 April, Barcelona:**

<https://forum.eventsinteractive.com/bmj/cm.asp?id=11006&pageid=1UV192GQJ>

**Patient Safety Research Conference, 24-26 September 2007**

<http://www.patientsafetyresearch.org/>

**ISQUA, Boston, 30 September – 3 October 2007**

<http://www.isqua.org/isquaPages/boston07.html>

## DISTRIBUTION OF INDICATORS OVER PERFORMANCE DIMENSIONS

The following figure shows the distribution of indicators over the six performance dimensions. You are welcome to use this figure in presentations on the PATH project.

	Clinical effectiveness	Efficiency	Staff orientation	Responsive governance
		C8 C9		C15
Safety	C1 C2 C3 C4 C5 C6 C7 T1 T2 T3 T4 T5 T6 T7		C10 C11 C12 C13 C14 T13 T14 T15 T16 T17	
Patient centeredness	C5			C16 C17 T21 T23 T24
		T8 T9 T10 T11 T12		T18 T19 T20 T22

## OTHER RESOURCES

- Agency for Health Care Research and Quality (AHRQ), Quality Indicators: <http://www.qualityindicators.ahrq.gov/>
- Agency for Health Care Research and Quality (AHRQ), National Quality Measures Clearing House: <http://www.qualitymeasures.ahrq.gov/>
- Organization for Economic Development and Cooperation (OECD), Health Care Quality Indicator Project: <http://www.oecd.org/health/hcqi>
- Methods of Assessing Response to Quality Improvement (MARQuIS): [www.marquis.be](http://www.marquis.be)
- Safety Improvement for Patients in Europe (SIMPATIE), <http://www.simpatie.org/Main>
- Public Health Portal of the European Union (EU), Health Care (including safety and patient mobility): [http://ec.europa.eu/health-eu/care\\_for\\_me/index\\_en.htm](http://ec.europa.eu/health-eu/care_for_me/index_en.htm)
- The Joint Commission, Performance Measurement: <http://www.jointcommission.org/PerformanceMeasurement/>
- WHO Regional Office for Europe, European Hospital Morbidity Database (based on discharge abstracts): [http://www.euro.who.int/InformationSources/Data/20061120\\_1](http://www.euro.who.int/InformationSources/Data/20061120_1)
- WHO Headquarters, The Global Patient Safety Alliance: <http://www.who.int/patientsafety/en/>