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Quality in Nephrology: where we came from, where we are, and where we are going to

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WHERE WE CAME FROM

Care quality control is not a process that healthcare professionals in general and nephrology professionals in particular can ignore. Society itself demands us to decrease every day the variability in clinical practice, to try and achieve adequate quality results that are similar for the same care process, and to ensure the quality of the care we provide. Quality may not only consist of «good intentions», as stated a WHO report in 1991. The time when we were good simply because we said it is past; now we have to show it. All this involves a cultural change, a change in the way we understand our activity.

In January 2004, a national survey[1] was conducted to ascertain the extent of implementation of quality management and indicator monitoring systems at the Spanish nephrology departments and haemodialysis units. The survey was sent to all public and private nephrology departments and haemodialysis centres included in the database of the Spanish Society of Nephrology (SEN), 321 in total. Answers were received from less than a half of the surveyed centres (146 centres: 46,7%). This survey demonstrated that implementation of such quality management systems was more common in the haemodialysis area, and in private as compared to public centres. This was probably because organisations that contract haemodialysis with private centres require them to have such systems available[2] in order to somehow ensure that they meet the agreement requirements, while this does not occur with public centres. However, quality has nothing to do with private or public centres, and all of them should be able to set down quality objectives, implement quality promotion systems, and be in condition to respond to the social demand to achieve the best results possible in the care of patients entrusted to them.

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On the other hand, this survey also showed that, while a great proportion of centres had defined quality indicators, there was no agreement or consensus between them. They did not know what were the most adequate indicators, with what regularity should be measured, and what were the objectives to be achieved. There are also many other aspects in the treatment of these patients that are not adequately standardised, and while clinical criteria for treatment may be common to the whole scientific community, we do not known yet which are the indicators most adequately measuring these criteria or which are their standards.

We are used to measuring amounts, times, and costs; however, we are not used to measure quality. This is because quality is not easy to measure, as its definition encompasses several aspects that are not always easy to quantify. However, such measurement is crucial, and is based on a basic principle: to improve something, you should be able to measure it. Systematic and planned measurement of quality indicators in relation to a previously defined objective or standard is one of the most important activities to be performed in the care process. It will allows us to know our actual situation and to take measures to improve it, thus increasing patient control and improving results. An indicator would only be a signal, a warning, that allows for identifying the specific action points in healthcare that require a more in-depth review, thus serving to guide our efforts for improving healthcare quality.

After the publication of the K/DOQI guidelines and the conduct of the ESRD Clinical Performance Measures (CPM's) Project and the Dialysis Outcomes and Practice Patterns Study (DOPPS), interest in evaluation and improvement of care provided to patients on dialysis has grown exponentially. Various studies have shown an association between achievement of certain objectives (evaluated using quality indicators) and a mortality reduction.[3] Whether achievement of such objectives is associated, in addition to an increased survival, with less (and shorter) hospitalisations and/or with decreased costs has been a subject less extensively studied and in prevalent patients only. The

Powe group (CHOICE Study), in a recently published multicentre, prospective study in incident patients on haemodialysis, not only demonstrated that achievement of a higher number of clinical indicators, regardless of which, was strongly associated to a decreased mortality, but noted also a significant decrease in the number and duration of hospital admissions and resource consumption in patients on haemodialysis.[4]

WHERE WE ARE

In recent years, the Spanish Society of Nephrology has advanced in the preparation of clinical practice guidelines (www.senefro.org) intended to standardise nephrological activity and facilitate decision taking to professionals in their standard clinical practice. However, availability of clinical practice guidelines appears to improve patient monitoring, but does not lead to improved results, because their effectiveness depends on how they are complied with.[5] Standardisation of different aspects of renal replacement therapy for stage 5 chronic kidney disease in guidelines, some of them international in scope, such as the Kidney Disease Outcomes Quality Initiative (DOQI)[6] or European guidelines, does not mean that such consistent compliance with standards is achieved; in fact, different studies have shown that, despite guidelines, significant differences do exist between centres and countries.[7-10]

Because of this, the members of the Work Group on Quality Management of the Spanish Society of Nephrology led a process to design quality indicators for haemodialysis, using monitoring schemes and outcome measurement and interpretation systems, that were agreed by different professionals (nephrologists, quality experts, and epidemiologists).[11] This design of quality measurement tools was also extended to the peritoneal dialysis area (Scheme for scientific and technical quality and continued quality improvement in peritoneal dialysis, www.senefro.org). Indicators were intended to result from the agreement of several professionals, to be based on scientific evidence, and to be realistic and simple in their formulation. Subsequently, the primary objective was to assess their actual applicability and to ascertain what were the appropriate standards in our setting. For this purpose, a multicentre study was designed to validate the quality indicators prepared by the Work Group on Quality Management of the SEN. Twenty-eight inpatient and outpatient Spanish centres, both public and private, are currently participating in this study, started in January 2007. As most Spanish centres use specific computer applications (Nefrosoft 3.0®, Renalsoft®, and Nefrolink®, among others) as databases for monitoring patients on haemodialysis and peritoneal dialysis, the companies leading these software tools developed, in collaboration with the Work Group on Quality Management of the SEN, computer tools that facilitated automated calculation of indicators in the established time periods, once indicators and their monitoring schedule were defined.

Thus, each centre measures indicators and sends them in automated form, through a closed shipment system (electronic mail), to a central facility where data are cleaned and individual and global reports are prepared. Data are centralised in a common database that will allow for their analysis and comparison and for assessing other measurement possibilities (calculated indicators) for eventually defining which is the limited set of indicators that provides greater information and is of most clinical value. Thus, indicators come directly from databases in the centres and provide reliable information from each of them that cannot be manipulated, avoiding transcription errors and allowing a great number of data to be collected with relatively little effort. These indicators include some providing descriptive information about the characteristics of the centre, patients, and treatment forms, while others refer to outcome assessment, which will allow for comparison between centres and to quality standards reported in the literature based on international observational studies.

WHERE WE ARE GOING TO

The US Department of Health and Human Services has conducted for more than 12 years an annual assessment of the quality of dialysis therapy (haemodialysis/peritoneal dialysis) through ESRD Clinical Performance Measures Project (ESRD CPM). At a private level, the five US corporations (Fresenius Medical Care, Gambro HealthCare, Davita, Renal Care Group, and Dialysis Clinic Inc) responsible for treatment of 70% of patients on dialysis (haemodialysis/peritoneal dialysis) in the US have also established a basic measurement of quality indicators.[12]

Care quality improvement and decreased variability in clinical practice are based on the comparison over time of the results of units both with themselves and with other units using clearly defined objectives.

The Work Group on Quality Management of the SEN intends to improve care to renal patients and its outcome b providing tools that may be used by the renal community in the patient care process and for identification of areas for potential improvement. One such tool is feedback of data collected to the participating centres through individual reports and comparative results versus all other centres. For the time being, this project affects patients on haemodialysis, but is intended to be extended to those on peritoneal dialysis. The Work Group on Quality Management of the SEN is therefore collaborating actively in selection and definition of quality indicators applicable to patients on peritoneal dialysis, and sub-

sequently to other fields of nephrology, such as transplantation.

Within quality management, benchmarking is another methodological tool expected to yield the best results. Benchmarking is an operating process of permanent learning and adaptation aimed at optimisation of results; it consists of apprehending, adapting, and implementing already tested methods that have given positive results in other organisations. This requires knowing how that process was developed and what practice made it possible to achieve a high performance level. The purpose is to obtain an in-depth knowledge of the factors that allowed for such improvement, which is stimulating for both the entity taken as reference and for the one that wants to implement such improvement in its organisation. Benchmarking acts as a mechanism for cooperation and collaboration between similar organisations in order to share information to improve their processes. It involves helping another department to face similar situations or problems based on a proven practical experience and sharing information. All this will serve to establish standardised alternatives for future development because, among its results, benchmarking provides a measure of excellence that may be used as a comparative standard.

The role that may be played by the regional dialysis and transplant registries, and by the national Spanish registry resulting from coordination of such regional registries, is included within this future vision. It will be possible to add information about compliance with quality indicators and their corresponding standards to the demographic information already recorded at these registries, now that problems for electronic transfer of detailed information are more easily resolved. Registries including treatment quality indicators in their routine information are already available.[13,14] In addition, the QUEST initiative, intended to be the first step for unifying in all national and regional registries the basic quality indicators for management of anaemia, cardiovascular disease, suitability of dialysis, and calcium-phosphorus metabolism in patients on dialysis is already ongoing in Europe.[15,16,17] All this information will represent a decisive step for extending quality measurement and evaluation in all centres and, through the benchmarking process that will be started, for promoting quality improvement in all areas of nephrology. In Spain, the national registry of quality indicators of the SEN has recently been created for that purpose.

Chronic kidney disease in their most advanced stages is a prevalent disease showing a sustained growth and using significant healthcare resources. Relevant and global information about the results of renal replacement therapy is not currently available. Availability of adequate global standards for the outcome of haemodialysis treatment and accurate information about the results of care achieved by the haemodialysis units is essential for taking decisions, preparing improvement plans, and ultimately improving processes and their results, decreasing variability in clinical practice and making our efforts both effective and efficient. We think that application of the above described tools may help the nephrological community to achieve the mentioned objectives not only in haemodialysis, but also in all other activities in the field of nephrology.

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