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Appendix to Dialysis Centre Guidelines: Recommendations for the relationship between outpatient haemodialysis centres and reference hospitals. Opinions from the Outpatient Dialysis Group

I. Berdud[1], M.D. Arenas[2], A. Bernat[3], R. Ramos[4], A. Blanco[5], Outpatient Dialysis Group

[1] FMC Service Andalucía-Córdoba. Córdoba, Spain
[2] Perpetuo Socorro Hospital. Alicante, Spain
[3] Diaverum Renal Services. Valencia, Spain
[4] FMC-Vilanova. Vilanova, Barcelona, Spain
[5] ICN Dialcentro Clinic (FMC). Madrid, Spain

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ABSTRACT

Introduction: The different clinical guidelines backed by the Spanish Society of Nephrology (S.E.N.) attempt to homogenise the monitoring of renal patients. However, this effort to homogenise treatment has been obstructed in the case of renal replacement therapy patients on haemodialysis due to, among other reasons, the existence of several different dialysis providers, with private centres located in many cities, each with their own reference hospitals and different criteria for treatment based on the existing outsourcing services agreements with the public health service, which also differ between regions. A good relationship between a private dialysis centre and its reference hospital would lead to equal treatment for all dialysis patients, at least in that particular town. The S.E.N., through the efforts of the Grupo de Trabajo de Hemodiálisis Extrahospitalaria (Outpatient Haemodialysis Group), has prioritised a close relationship and good communication between reference hospitals and dialysis centres in order to guarantee proper continuity of the health care given to these patients. **Strategies for improvement.** *Conditions for referring patients from one centre to another.* A patient that starts a haemodialysis programme should be referred from a reference hospital with a definitive vascular access for optimal treatment, with a full report updated within 24-48 hours before the transfer, including essential information for providing proper treatment: primary pathology, recent viral serology (including hepatitis B and C virus [HBV and HCV] and human immunodeficiency virus [HIV]), parameters for anaemia and calcium-phosphorus metabolism, and ions, date of the first session of dialysis, and the number and dates of blood transfusions received. Furthermore, patients referred from the dialysis centre to the hospital, whether for programmed visits or emergency hospitalisation, should be accompanied by an updated report indicating the primary diagnoses, recent events, viral serology and laboratory analyses, updated haemodialysis and treatment regimens used, and the reason for transfer to the hospital. A single, digital clinical history that is accessible by both institutions would facilitate this situation, although this option is not completely available to all centres and hospitals. There are also legal issues to resolve in this aspect. *Continued care for dialysis patients.* Good communication between dialysis centres and hospitals is fundamental for achieving a proper level of care for dialysis patients, and not only with the nephrology department. The interconsultations of dialysis patients at each private centre, as well as the requests for diagnostic tests, should be able to be requested by the centre directly. The results and reports from these interconsultations should also be sent to the

Correspondence: Isabel Berdud Godoy
FMC Service Andalucía-Córdoba.
Avda. Conde de Vallellano, 19-5.º-2. 14004 Córdoba. Spain.
iberdudg@senefro.org
iberdudg@gmail.com

centre. It would also be best if the reference hospitals and their private dialysis centres shared common treatment protocols. These protocols should include basic aspects of the treatment of renal patients (anaemia, mineral metabolism, vascular accesses including catheter infections, etc., and laboratory tests), transplant protocols, complementary tests, and other components specific to each area. Not only would this generalise and unify the approach taken with dialysis patients regardless of where they are treated, it would also facilitate access to data on all patients regarding clinical trials and research studies. *Access to medication.* Dialysis patients require medications that are only given in the hospital setting, which is normally provided by the reference hospital, as per the agreement between institutions. It would also be recommendable that any other medications not included in the agreement (antibiotics, urokinase, nutritional supplements, etc.) be dispensed in a similar manner. *Access to kidney transplant.* The management of the transplant waiting list, once a patient starts renal replacement therapy, should be controlled from the dialysis centre, as in any other procedure. As such, the nephrologists from each centre should be familiar with the existing protocols and new developments in this context, and should participate in meetings with nephrology and urology departments in each hospital. The transplant protocol at each town/region should be followed for all patients, whether dialysis is undergone in a hospital or private centre. *Characteristics of the work at dialysis centres.* The doctor attending patients at each dialysis centre must be a specialist in nephrology. This complicated issue must be a requirement for agreements within the regional health system in order to guarantee a proper and equitable treatment of patients that receive dialysis in private centres. Only in the case of an absence of a nephrologist should a general practitioner be used, and this doctor must have adequate training in haemodialysis. This training should also be standardised. Over 75% of nephrologists that work at these centres are alone during the workday, and 40% never see another colleague during the whole shift. The administrators of these centres should seek out protocols that provide professional contact, both with the hospital staff and nephrologists from other centres, which would facilitate an exchange of ideas. *Training.* The nephrologists at each centre have the right and the obligation to perform research and to continuously expand their training, so as to develop and improve health care provision. Since the majority of patients in haemodialysis programmes are treated in outpatient centres that depend on reference hospitals, we might suggest a minimal rotation of nephrology residents in private outpatient dialysis centres, once accreditation has been given for providing this training.

Keywords: *Haemodialysis. Dialysis centre. Hospital. Clinical guidelines*

Anexo a la Guía de Centros de Diálisis: Recomendaciones sobre la relación entre los centros de hemodiálisis extrahospitalarios y sus hospitales de referencia. Opinión del Grupo de Diálisis Extrahospitalaria

RESUMEN

Introducción: *Las distintas guías de actuación clínica promovidas por la Sociedad Española de Nefrología (S.E.N.) pretenden homogeneizar el seguimiento del paciente renal. Sin embargo, esta labor de homogeneización, en el caso del paciente sometido a tratamiento sustitutivo con hemodiálisis, se ve dificultada, entre otras razones, por la existencia de distintas compañías de diálisis, con centros ubicados en distintas ciudades, con distintos hospitales de referencia y distintos criterios de actuación en función de los conciertos existentes con la sanidad pública que difieren también entre las distintas Comunidades Autónomas. Una buena relación del centro concertado con su hospital de referencia permitiría conseguir la igualdad en el tratamiento del paciente dializado, al menos en esa localidad. La S.E.N., a través del Grupo de Trabajo de Hemodiálisis Extrahospitalaria, considera deseable, para garantizar una adecuada continuidad asistencial de estos pacientes, que exista una estrecha relación y comunicación entre hospitales de referencia y sus centros de diálisis.* ***Estrategias de mejora:*** *Condiciones de envío de pacientes de unos centros a otros. El paciente que inicia programa de hemodiálisis debería ser remitido desde el hospital de referencia con un acceso vascular definitivo óptimo para el tratamiento, debería llevar un informe actualizado en las últimas 24-48 horas antes del traslado y este informe debería incluir la información esencial para una buena asistencia nefrológica: principales patologías, serología vírica reciente (incluyendo virus de las hepatitis B y C [VHB y VHC] y virus de la inmunodeficienia humana [VIH]), parámetros de anemia y de metabolismo calcio-fósforo e iones, fecha de la primera diálisis, y número y fecha de las transfusiones sanguíneas recibidas. De la misma forma, el paciente que es remitido desde el centro de diálisis al hospital, tanto para un ingreso programado como para urgencias, debería llevar un informe actualizado que incluyera los principales diagnósticos, las últimas incidencias, serología vírica y analítica, pauta de hemodiálisis y tratamiento actualizados y el motivo de remisión al hospital. La existencia de una historia clínica única, informatizada y al alcance de ambas instituciones facilitaría esta situación, si bien no está totalmente al alcance de todos los centros y los hospitales. Por otra parte, existen cuestiones legales que habría que resolver. Atención continuada del paciente en diálisis. Para una buena atención a estos pacientes resulta fundamental que exista una vía de comunicación fluida entre el centro y el hospital, y no sólo con el servicio de nefrología. Las interconsultas de los pacientes que son sometidos a diálisis en los centros concertados, así como la solicitud de determinadas pruebas diagnósticas, deberían poder ser solicitadas*

directamente por el propio centro. Los resultados e informes de esas interconsultas también deberían llegar al centro. Sería deseable compartir protocolos de actuación comunes entre el hospital de referencia y sus centros de diálisis concertados. Estos protocolos deben incluir aspectos básicos del tratamiento del paciente renal (anemia, metabolismo mineral, accesos vasculares incluyendo infecciones de catéteres, etc., o plan de analíticas) como protocolo de trasplante, pruebas complementarias y otros particulares de la localidad. Esto no sólo unifica el abordaje de los pacientes, independientemente de dónde se le esté dializando, sino que también facilita el acceso a los datos de todos los pacientes de cara a ensayos clínicos y a trabajos de investigación. Acceso a la medicación. Los pacientes en diálisis precisan medicación de dispensación sólo hospitalaria, que es habitualmente suministrada, de acuerdo con el concierto, por el hospital de referencia. Sería recomendable que otra medicación no incluida en el concierto (antibióticos, urokinasa, suplementos nutricionales, etc.) fuera dispensada de la misma manera. Acceso al trasplante renal. La gestión de la lista de espera de trasplante, una vez el paciente inicie el tratamiento sustitutivo, debería hacerse como cualquier otro procedimiento, desde el centro de diálisis. Los nefrólogos de los centros, por tanto, deben conocer los protocolos y las novedades existentes en este sentido y participar de las reuniones que se hagan en cada hospital entre nefrología y urología. El protocolo de trasplante de cada localidad o cada Comunidad Autónoma debe seguirse en todos los pacientes, se realícela diálisis en el hospital o en un centro concertado. Características del trabajo en el centro. El médico que atienda a los pacientes en los centros de diálisis debe ser especialista en nefrología. Este tema, complicado, debe ser exigible en los conciertos de las Consejerías de Salud para garantizar la asistencia adecuada y equitativa de los enfermos que son sometidos a diálisis en centros concertados. Sólo en el caso de ausencia de nefrólogo se podría recurrir a un médico generalista con la adecuada formación en hemodiálisis. Esta formación debería, asimismo, estandarizarse. Más del 75% de los nefrólogos que trabajan en los centros están solos durante la jornada laboral y un 40% no coincide con ningún compañero durante toda la jornada. Habría que buscar, por parte de las empresas, fórmulas que favorecieran el contacto entre profesionales, tanto con el hospital como con nefrólogos de otros centros, y que permitiera el intercambio de ideas entre ellos. Formación. Los nefrólogos de los centros concertados tienen el deber y el derecho de investigar y de ampliar su formación de manera continuada para poder desarrollar y mejorar su labor asistencial. Dado que la mayoría de los pacientes en programa de hemodiálisis se encuentran en centros periféricos dependientes de hospitales de referencia, podría sugerirse una mínima rotación de los residentes de nefrología por algunos centros de diálisis concertados extrahospitalarios, previa acreditación para poder dar formación.

Palabras clave: Hemodiálisis. Centro de diálisis. Hospital. Guías clínicas.

INTRODUCTION

From the introduction of haemodialysis in Spain in 1957, dialysis has continued in the private sector due to a scarcity of space in public hospitals. Currently, a large number of patients on the public health system undergo haemodialysis in outpatient centres and are attended to by a large number of nephrologists whose professional activity is limited to these centres. In some cities, the patients treated at outpatient centres are more numerous than those in reference hospitals. On the other hand, and in contrast to past trends, currently, the majority of outpatient dialysis centres are owned by multi-national companies that have strict quality control programmes that oversee all processes related to dialysis treatment. In order to guarantee equitable treatment of these patients as compared to those treated in hospitals, these centres operate under outsourcing agreements with delegations from the health departments in each autonomous region throughout Spain.

The conditions of the agreement impose even greater control over the treatment given to dialysis patients. With this in mind, these conditions should be reviewed so as to ensure that the standards of quality such as ultra-pure water, high-flow haemodialysis, and even convective techniques such as on-line haemodiafiltration are at the disposal of all patients, even at outsourcing centres.

The different clinical guidelines backed by the Spanish Society of Nephrology (S.E.N.),[1-5] as well as the existence of health care indicators and standards for haemodialysis from the Quality Control Group[6] attempt to standardize the follow-up of renal patients. However, this effort to homogenise treatment has difficulties, among other reasons, because of the existence of several different dialysis providers, with centres located in different cities, and different reference hospitals with different criteria for which actions to take based on the existing outsourcing agreements with the public health system that also differ between the autonomous regions. A good relationship between the outsourcing centre and its reference hospital can ensure equal treatment for patients undergoing dialysis, at least in that city.

With the objective of standardizing the treatment of dialysis patients in outsourcing centres, the Outpatient Dialysis Group of the S.E.N. was created over 10 years ago. The primary activities of this group have been to promote continuous training for nephrologists that work in outsourcing centres, as well as to research, analyse, and disseminate the results regarding the current situation at each centre in order to improve and update the conditions of renal replacement therapy for these patients. With this objective, several different surveys were completed[7,8] and yearly meetings organised in order to share the experience of outpatient nephrologists.

When the Dialysis Centre Guidelines[2] were published, basic topics were discussed for guaranteeing the quality of treatment given to patients in outpatient dialysis centres. These initial guidelines did not go into detail about the important issue of maintaining good relationships between public (hospitals) and private (dialysis centres) entities in order to optimise the health care provided to renal patients. We have already discussed the difficulty encountered in homogenising this relationship, due to the different health care systems established in Spain and the different policies followed at each dialysis centre. In this article, we aimed to establish the principles that should be upheld in order to guarantee equity and good practice in the health care provided to renal replacement therapy patients that, for whatever reason, may be cared for in hospitals and/or dialysis centres throughout their lifetimes. We would also like to provide some possible strategies for improvement.

Although this is a consensus document, the results discussed herein are based on a cross-sectional, descriptive study that was carried out through a questionnaire that the S.E.N. sent by email to all outpatient dialysis units and reference hospitals in Spain. The results from this survey were presented at the 39th National Conference of the S.E.N. (Pamplona, 2009) and the 6th Meeting of the Outpatient Dialysis Group of the S.E.N. (Seville, 2010), and were debated upon by a forum of attendees, a group of experts (hospital nephrologists) and the working group itself in this last meeting. As a result of the conclusions obtained from these meetings, as well as the internal debates from the working group, this document was born, with the goal of achieving a continuous improvement in the treatment of renal outpatients, improving as well the work protocols in dialysis centres and reference hospitals. To our knowledge, no other similar study exists in any other country to date. Certainly, the relationship between dialysis centres and reference hospitals in Spain, even now, is different and much more interactive than in other countries.

STRATEGIES FOR IMPROVEMENT

Conditions for referring patients from one centre to another

Patients referred from outsourcing centres to hospitals and vice-versa should carry with them all documents and information necessary for providing proper care by the new institution.

Patients that start haemodialysis programmes should be referred from reference hospitals with an optimal permanent vascular access for treatment, bring an updated report from the last 24-48 hours, and this report should include the essential information for providing proper nephrological care: primary pathologies, recent viral serology (including hepatitis B and C virus [HBV, HCV] and human immunodeficiency virus [HIV]), and parameters for anaemia and calcium-phosphorous and ion metabolism, the date of the first dialysis session, and the number and dates of all blood transfusions received. Given the difficulty that some outsourcing centres have in acquiring complementary tests, it would be beneficial to provide each patient with a chest x-ray as baseline information for the centre, so as not to repeat examinations. Each hospital should also provide all information on any complementary tests performed before starting haemodialysis: echocardiography, bone scan, etc.

In a similar manner, patients referred to the hospital from the dialysis centre, whether for programmed hospitalisation or to the emergency department, should carry with them an updated report including primary diagnoses, recent incidents, viral and laboratory serology, current treatment and haemodialysis regime, and the reason for referral to the hospital.

In cases of emergency visits where the patient seeks hospital care directly from home, it would be best if the hospital had access to an updated report on all patients under the care of that hospital on an annual or semi-annual basis.

The existence of a single digitalised clinical history that is accessible to both institutions would facilitate this situation, although it is not completely available at all centres and hospitals. There would also be legal questions to consider.

Continued patient care on dialysis

Dialysis patients usually have several diseases and require care from other types of specialist doctors throughout their time on dialysis. In order to provide proper care to these patients, good communication is necessary between the dialysis centre and hospital, and not only with the nephrology department. It must be made clear that the patients treated at the outsourcing dialysis centre belong to and are patients of the reference hospital, not only to nephrologists, but all departments of the hospital (other specialists, laboratory technicians, imaging technicians, hospital pharmacy, etc.) and as such, they have the same rights to health care as patients undergoing dialysis in the hospital.

Although in many hospitals, nephrologists act as teachers, we believe that this strategy does not work well: it overburdens hospital nephrologists and delays the care provided to patients at dialysis centres, who depend on hospital nephrologist availability. As a result, they receive second-rate care. Interconsultations for patients that undergo dialysis at outsourcing centres, as well as the requests for diagnostic tests, should be directly requested by the dialysis centre, as is the case in many centres. The results and reports from these interconsultations should also be sent directly to

the centre, with direct communication between the attending physician (a nephrologist at the centre) and the relevant specialists or departments involved, including central services of radiology and laboratory analyses. As such, we should guarantee access to the internal hospital system for all outpatient nephrologists. This would include access to the results of complementary and laboratory tests that have been requested, beyond the routine controls established in the agreement. In order to achieve this goal, a digital interface should be established so that each centre can access patient reports for the different complementary tests and clinical reports provided by other departments for a given patient.

The protocols used, for example: catheter care, prophylaxis against infection, routine analyses, complementary tests, transplant protocols, etc., should be agreed upon and shared with the reference hospital. This would allow for analysing patient data and working together on research projects, clinical trials, etc.

Access to medication

Dialysis patients require medications that can only be dispensed by hospitals, such as intravenous vitamin D, iron, and erythropoietic derivatives. The outsourcing agreements generally establish that reference hospitals are responsible for providing these medications to the centre. There are other drugs that are not so common, such as urokinase, some antibiotics, and nutritional supplements, whose administration within the centre could be beneficial to the patient, and even for the hospital, since it would avoid hospitalisations.

Access to kidney transplants

The management of transplant waiting lists, once patients are on renal replacement therapy, should take place like any other procedure, in the dialysis centre. The nephrologists at the centres, therefore, should understand the protocols and developments in this field, and participate in meetings that are held in each hospital between nephrology and urology departments.

One of the problems faced by nephrologists and patients at dialysis centres is the difficulty and delay in performing the necessary tests for access to the kidney transplant waiting list, which would be minimised if nephrologists at the centres had direct access to hospital infrastructure for requesting these analyses.

Characteristics of the work at dialysis centres

The doctor attending patients at each dialysis centre must be a specialist in nephrology. This complicated issue must be a requirement for agreements within the regional health system in order to guarantee a proper and equitable treatment of patients that undergo dialysis in outsourcing centres. Only in the case of an absence of a nephrologist should a general practitioner be used, and this doctor must have adequate training in haemodialysis. This training should also be standardised and borne by dialysis companies when contracting non-nephrologist doctors. Also, although this may be off the topic, all other staff (nurses, nurse assistants, etc.) should have at least a basic training in dialysis in order to be contracted by outsourcing centres.

One of the standing issues that have to be dealt with is the strange manner in which doctors work in outsourcing centres. Over 75% of nephrologists that work at these centres are alone during the workday, and 40% never see another colleague during the whole shift. This situation is primarily due to the strict optimisation of human resources and costs, but it has the negative consequence of decreasing communication between colleagues and reducing the consensus on and homogeneity of treatment. The companies should also look for formulas that favour professional contact, both with the hospital and nephrologists from other centres, facilitating the exchange of ideas between them. This situation detracts from the motivation of health care professionals and constantly makes it more difficult to find nephrologists that want to work at dialysis centres, which then have to be replaced by non-nephrologist doctors.

Training

Nephrologists at outsourcing centres have the obligation and the right to perform research and extend their training continuously in order to develop and improve the health care they provide, especially considering that with the newest technologies available, this is available to everyone. Nephrologists at outsourcing centres must also participate in multi-centre studies, but also, and above all, studies initiated by themselves. Research and training should be a part of normal and daily activity for doctors at outsourcing centres as it is in hospitals. This would guarantee the recycling and updating of health care.

Dialysis companies should guarantee that doctors have all materials and time needed for adequate research and quality training, but the doctors at each centre should have an active attitude in this sense, with imitative and curiosity in their profession. In fact, many outsourcing centres already perform clinical research independently.

Since the majority of patients in haemodialysis programmes are treated in peripheral centres that depend on reference hospitals, we might also suggest a minimal rotation of

nephrology residents at some outsourcing outpatient dialysis centres, once they are accredited for training residents. We believe that this would have a positive effect for several reasons: the residents would have a different viewpoint on the management of haemodialysis patients with access to different strategies that are used in many public hospitals (quality control systems, organisation, etc.), and would aid future nephrologists in understanding and acknowledging the special situations and difficulties that are experienced in dialysis centres, improving future relationships between these centres and hospitals.

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Conflicts of Interest

The authors have no conflicts of interest to declare.

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