EDITH

The Effect of Differing Kidney Disease Treatment Modalities and Organ Donation and Transplantation Practices on Health Expenditure and Patient Outcomes

Final Report

Summary, conclusions & recommendations

Co-funded by
the Health Programme
of the European Union

Pilot Project (PP-1-2016) on chronic kidney disease
Project Runtime: **01. 01. 2017-31. 12. 2020**

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Contents

1

Background of the project and purpose

Chronic Kidney Disease (CKD)

is the cause of substantial morbidity and mortality and results in major burden to both individual patients and society as a whole. It has been estimated that about 10% of the population in Europe is affected by CKD. The number of patients is even expected to grow as the prevalence of typical risk factors, such as diabetes and hypertension, is still increasing[1]. CKD is a progressive disease that can lead to End-Stage Renal Disease (ESRD). Patients that suffer from ESRD are in need of a Renal Replacement Therapy (RRT). RRT modalities include hospital-based or home based haemodialysis, peritoneal dialysis and kidney transplantation from a living or from a deceased donor. It is common to all forms of RRT that they are complex and expensive.

RRT has a huge impact on the prognosis and quality of life of patients as the mortality of patients with ESRD is 10 times higher than in age-matched patients with normal kidney function[2]. It also has great impact on healthcare system costs. Developed countries typically spend 2-3% of their annual healthcare budget on ESRD

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[1] http://ekha.eu/wp-content/uploads/2016/01/EKHA-Recs-for-Sustainable-Kidney-Care-25.08.2015.pdf

[2] R.N. Foley, A.J. Collins (2007): End-stage renal disease in the United States: an update from the United States Renal Data System. In: Journal of the American Society of Nephrology, 18 (2007), pp. 2644-2648.

treatments, while ESRD patients represent approximately only 0.02-0.03% of the total population[3]. Despite its relevance - exemplified by the major impact on individual patients and the considerable burden for healthcare systems - many questions with regard to RRT are still unanswered. This is evident from the fact, that there is a great variability in the use of RRT modalities among the EU Member States. The extent of this variability gives reason to believe that not all patients with ESRD receive the most appropriate treatment.

In accordance with the values set in the EU-Health Strategy “Together for Health”, the European Pilot Project EDITH aimed to lay grounds for providing equal access to good quality healthcare throughout the European Union. With a special focus on CKD, the alignment of ESRD treatment modalities was seen as an essential precondition. To fulfil this condition, the 48-months project wanted to identify reasons for existing variations in CKD management and to obtain information on long-term kidney transplant outcomes as well as long-term health outcomes of living kidney donors. While the results of the analysis of the different treatment modalities and the related costs may have an impact on treatment choices by patients and doctors and on healthcare policies already in the short run, the major benefit of long-term data collection will only become evident after several years with the collected data in the registry cumulating and allowing more detailed analysis. It was for this reason, that EDITH has made great efforts to develop a sound sustainability strategy.

[3] Levey, A. S.; Atkins, R.; Coresh, J.; Cohen, E. P.; Collins, A. J.; Eckardt, K-U et al. (2007): Chronic kidney disease as a global public health problem: approaches and initiatives - a position statement from Kidney Disease Improving Global Outcomes. In: Kidney international 72 (3), S. 247–259. DOI: 10.1038/sj.ki.5002343.

2

CKD Treatment modalities and outcomes

2.1 The frequency of treatment modalities

In order to analyse the frequency of the different RRT treatment modalities, WP4 co-leader Amsterdam UMC, location AMC has prepared an extensive overview of different European countries by using European Renal Association – European Dialysis and Transplant Association (ERA-EDTA) Registry data supplemented by information from other sources, such as insurance data, data from Newsletter Transplant and data from scientific papers.

The results showed an overall prevalence of RRT of almost 0,1% (i.e. 985 per million population (pmp) in 2016, with more than half of all of these patients on dialysis (56%). However, substantial differences exist between European countries *(see Figure 1)*. The prevalence of kidney transplantation (817 pmp) and the prevalence of peritoneal dialysis (PD) (114 pmp) were highest in Cyprus and the prevalence of home haemodialysis (HD) (28 pmp) was highest in Denmark. The overall number of kidney transplants performed was 38 pmp. The vast majority of donor kidneys originated from deceased donors (almost 80%).

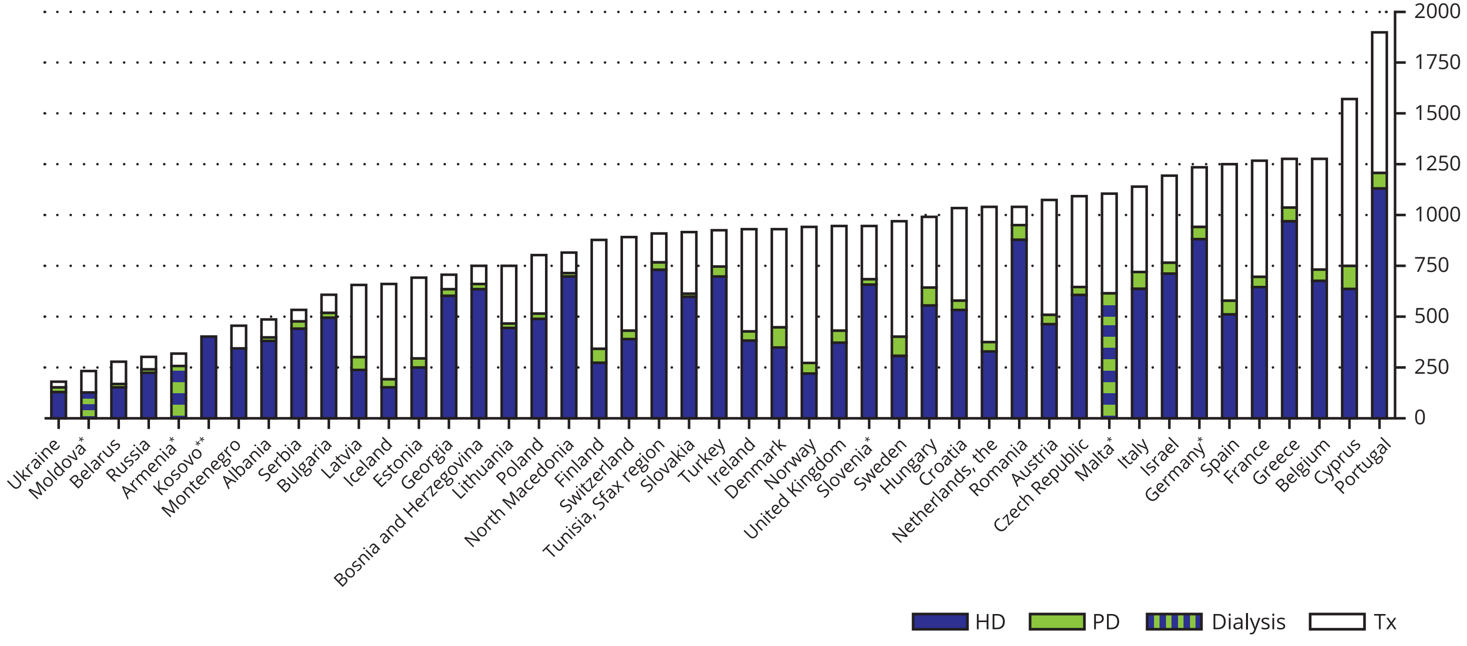


Figure 1: Prevalence pmp for RRT on 31 December 2016
** Prevalence of kidney transplantation was estimated*
*** This designation is without prejudice to positions on status,and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo declaration of independence*

Up until EDITH, little was known about the frequency of comprehensive conservative management (CCM, i.e. planned holistic care instead of dialysis) in patients with ESRD in individual European countries. Under the umbrella of a survey that was performed within the EDITH project, 587 nephrologists estimated the percentage of patients with ESRD in their clinic who received CCM *(see Figure 2)* for 2018. The analysis indicated that CCM is uncommon in some countries (<5%) such as Slovenia, North Macedonia, Serbia and Belarus and much more common in others like Austria and Hungary (>10%).

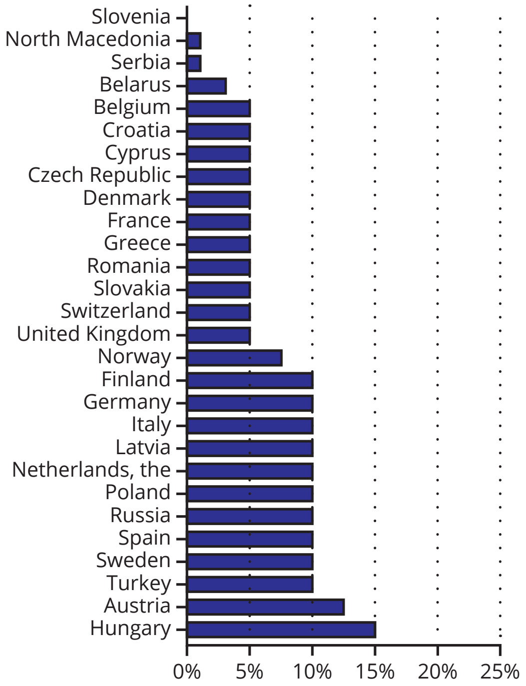


Figure 2:
Estimated median percentage of patients with ESRD who received CCM in 2018
Only countries with at least 5 respondents are included

2.2 Factors that influence the choice of a treatment modality

The optimal treatment for patients with ESRD differs from individual to individual. Although kidney transplantation offers superior quality of life and survival compared to dialysis for patients with ESRD, a substantial number of patients with ESRD are medically unsuitable to receive a kidney transplant. For those patients a form of dialysis (in-centre HD, out-centre HD, home HD or PD) may be the optimal treatment. Additionally, CCM may be an appropriate treatment for, for example, elderly patients with other severe diseases. To improve access to the optimal treatment for ESRD patients in Europe, it was considered relevant to learn from both nephrologists and ESRD patients about the factors that influence the choice of a treatment modality (e.g. information provision, decision-making and barriers). WP4 conducted a nephrologist as well as kidney patient survey - 681 professionals from 33 countries and 7820 kidney patients from 38 countries participated in these surveys, resulting in the most comprehensive data collection in this area so far.

Both surveys showed that many factors influence the choice of a treatment modality and that these factors are influenced by the country's economy – substantial differences could be shown between low, middle and high gross domestic product (GDP) countries. Patients are influenced by emotional, personal and social aspects, but also factors like timing and scope of information provision or style of decision-making have an impact on their choice of treatment modality. In general, patients on RRT were satisfied with the information provision and reported to have a good experience with the treatment modalities *(see Figure 3)*. However, patients from low GDP countries reported to have received the information later than patients from middle and high GDP countries *(see Figure 4)*. In addition they received less information about home dialysis and kidney transplantation, which supports the hypothesis of limited access to some treatments. Nephrologists, on the other side, were notably limited by healthcare system-related barriers (practical, financial, legal), particularly if a treatment was unavailable in their centre. As a result, respondents from low- and middle-GDP countries reported more often to provide information only about those modalities that were available in their centres than respondents from high GDP countries. Still, one should keep in mind that the results – in spite of the substantial participation in the surveys – may not be generalizable to all adult patients on RRT and to all nephrologists in Europe.

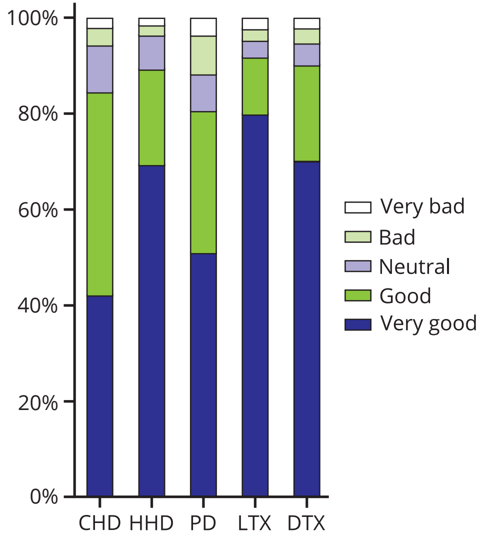


Figure 3: Patients' experience with a treatment
CHD: centre haemodialysis; HHD: home haemodialysis; PD: peritoneal dialysis; LTX: living kidney transplantation; DTX: deceased kidney donor transplantation

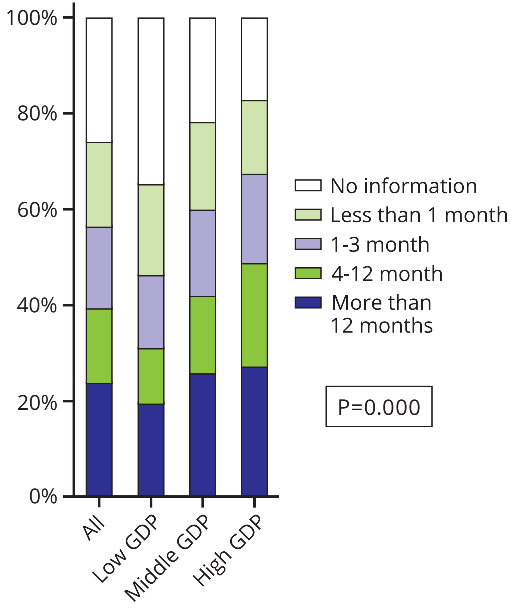


Figure 4: Timing of information before start of RRT
P-value calculated with Chi square test to compare GDP tertiles. GDP: gross domestic product

2.3 Outcomes of different treatment modalities

The ERA-EDTA Registry data provides the unique opportunity to study the current patient and graft survival of RRT modalities for a large part of Europe. An analysis conducted within the framework of the project EDITH, showed that the 1-year adjusted survival was higher for those who started PD than for those who started HD, whereas this difference was no longer present after 5 years. In addition, recipients of living donor kidney transplants generally had better graft survival rates than recipients of deceased donor kidney transplants. These results based on ERA-EDTA Registry data are in line with most other published literature.

With regard to the quality of life (QOL), a large number of systematic reviews and meta-analyses that were reviewed within EDITH, have consistently found that the quality of life (QOL) was higher for kidney transplant patients than for dialysis patients. All systematic reviews and meta-analyses have failed to show a difference in the QOL for HD and PD patients, with one exception, in favour of PD. In addition, the results of a small number of studies indicate that there may be no difference in the QOL between CCM and dialysis in elderly patients with ESRD. All findings should however be interpreted with caution due to differences in patients characteristics between patients on the different treatment modalities, the heterogeneity of studies and the sometimes low number of studies included, in particular in systematic reviews and meta-analyses aiming to compare QOL between dialysis and CCM.

2.4 Financial impacts of different treatment modalities

The evaluation and analyses of cost of different treatment options related to CKD and their impact on healthcare policies was done by WP4 co-leader CNT in cooperation with CENSIS Foundation. The analyses was performed by means of

- a literature analysis
- an analysis of the organization of different health systems in EU Member States
- the collection of the absolute and the relative numbers (pmp, per million population) regarding the incidence and prevalence of adult RRT patients (20 years and older) in 2016
- a questionnaire, that aimed at categorizing the reimbursed therapies in the different countries, as well as collecting the diagnosis-related group (DRG)/tariffs applied to each therapeutic option.

Despite the number of limitations that were encountered in this study, initial observations showed that there is a large variation among EU countries regarding the total expenses referring to different RRT treatment options (tariffs and reimbursement for defined diagnosis related groups (DRG) multiplied by number of patients *(see Figure 5)*. The investigations also showed, that standard HD or PD, no matter if delivered in public or private healthcare facilities, accounts for a greater share of health expenditures in comparison to kidney transplantations from a living or deceased donor *(see Figure 5)*. In all countries, standard HD or PD and kidney transplantations are all funded by the public health system.

To calculate the cost-savings of transplantation in contrast to dialysis, costs were compared over time for a patient undergoing RRT without complications. It was examined from which year on the recurring costs of dialysis exceed the non-recurring costs of transplantation. The analysis underlined that starting from the second year, a successful kidney transplantation is more cost-effective than dialysis.

		HD + PD	HD+PD costs % health expenditure		DKD + LKD	DKD + LKD costs % health expenditure
Belgium	€	385.150.004,00	0,83	€	14.205.025,00	0,03
Croatia	€	42.204.478,00	0,97	€	2.502.276,21	0,06
Czech Republic	€	145.191.150,00	0,95	€	4.516.472,00	0,03
Estonia	€	12.602.242,88	0,85	€	940.370,00	0,06
France	€	1.993.902.870,99	0,87	€	120.785.954,00	0,05
Germany	€	2.223.275.112,68	0,73	€	79.183.670,00	0,03
Hungary	€	76.829.598,40	0,95	€	4.442.580,00	0,06
Ireland	€	94.786.778,58	0,51	€	4.944.864,00	0,03
Italy	€	379.845.073,54	0,25	€	75.219.746,00	0,05
Latvia	€	9.154.231,80	0,57	€	835.814,00	0,05
Portugal*	€	279.797.930,10	1,55	€		-
Romania	€	288.235.319,98	2,21	€	4.779.500,00	0,04
Slovakia	€	83.098.159,00	1,17	€	2.356.772,00	0,03
Slovenia	€	44.787.500,00	1,25	€	3.358.000,00	0,09
Min	€	9.154.231,80	0,25	€	835.814,00	0,03
Max	€	2.213.703.109,92	2,21	€	102.485.469,00	0,09

Figure 5: Estimation of the impact of RRT expenses on general health expenditure for the year 2016 based on collected data
HD: haemodialysis; PD: peritoneal dialysis; DKD: kidney transplantation from a deceased donor; LKD: kidney transplantation from a living donor
** The analysis did not include DKD+LKD data from Portugal. Portugal's system multiplies a basal value of € 2.285 by a factor that varies based on the complexity of the activity performed by the single healthcare structure where the transplant is performed*

3

Transplant registries

3.1 Status on existing registries and willingness to participate

Kidney transplantation offers a therapeutic option that makes it possible for the patients to avoid (in case of pre-emptive transplantation) or to end dialysis therapy. The success of transplantation in the short and the long run is dependent on several factors, related to both, the recipient as well as the (living or deceased) donor. Though collecting data on long-term transplant outcomes including donor and recipient confounding factors is considered essential to ensure the success of transplantation and to facilitate improvements, not all EU Member States have a system comprehensively registering these data. Surveys that have been conducted in the beginning of the project in 2017 showed current experience with living kidney donor as well as kidney recipient follow-up registration among EU countries *(see Figure 6).*

3.1.1 Living kidney donor follow-up registries

A total of 24 of the 28 EU Member States completed and returned a questionnaire on current living donor registration activity and willingness to participate in a European Living Donor Registry (ELDR). All respondents (24 MS) reported that living donor transplants are performed in their countries. 5 MS stated to already have a national registry in place. 5 MS have a combination of national and local systems and 11 MS only local systems. 3 MS declared not to have a registry (yet).

18 of the 24 respondents reported that they were willing to participate in the registry that was developed within the timeframe of the EDITH project.

3.1.2 Kidney transplant recipient follow-up registries

From 21 EU MS that completed a survey on national arrangements for collecting kidney transplant follow-up data, 14 MS indicated to have a follow-up registry. Of the 7 MS that currently do not have a registry of kidney transplant recipients, three stated to have plans to introduce one.

17 of the 21 respondents stated their willingness to participate in EDITH's European Kidney Recipient Registry (EKRR).

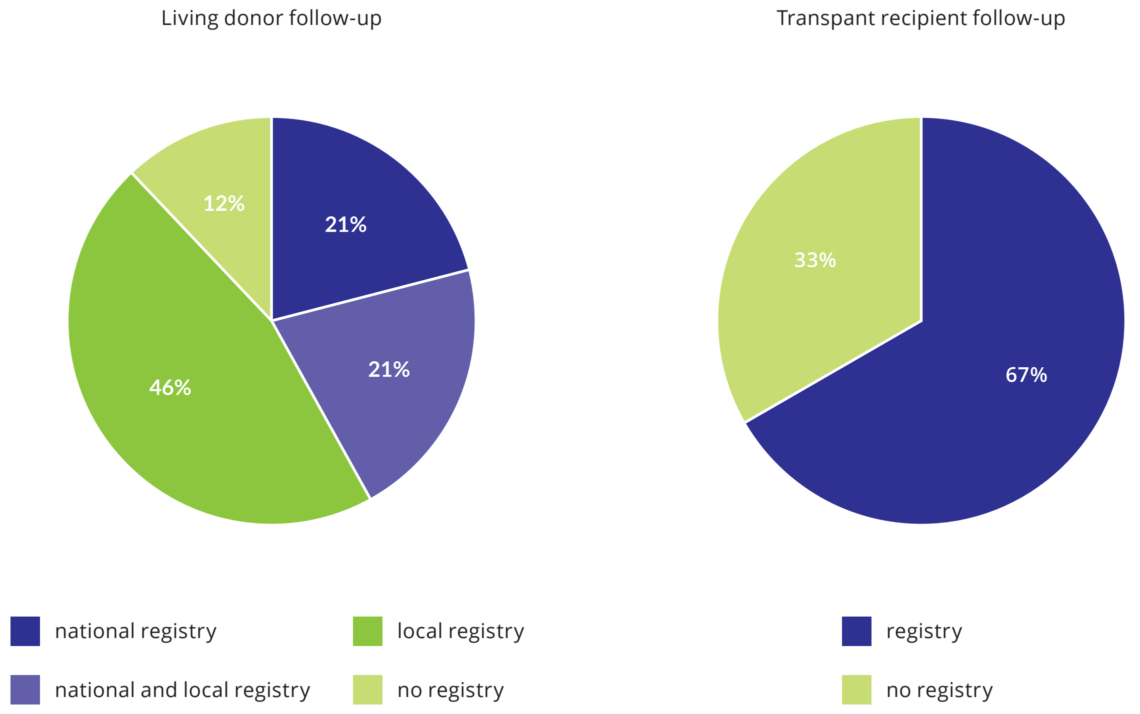


Figure 6: Overview on follow-up registrations in EU Member States

3.2 Technical realisation of European Transplant Registries

In the course of the EDITH project, two registries have been set-up and tested, a European Living Donor Registry (ELDR) and European Kidney Recipient Follow-up Registry (EKRR). Both registries, in the following referred to as European Transplant Registries (ETRs), demonstrate possible technical approaches for a European data collection.

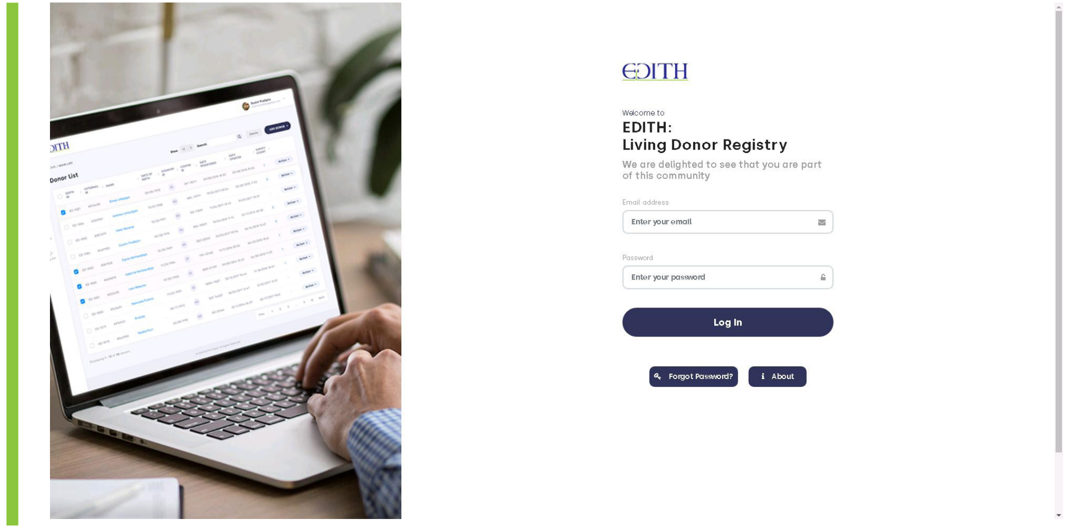
3.2.1 European Living Donor Registry (ELDR)

Within EDITH's WP5, which was co-lead by Nederlandse Transplantatie Stichting (NTS) and Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), a web based application has been developed that supports both direct data entry (typically from local centres) and file upload (typically from national databases). The infrastructure is cloud hosted by an ISO-certificated Spanish service provider.

The ELDR can be filled with data from national or local registries. The organisation of national data collection and reporting to the ELDR are a national responsibility. The ELDR provides all tools to be used for upload or direct data entry.

The data-elements of the ELDR are divided in 4 files:

- Donor demographic information
- Pre-donation data
- Peri- and post-operative data (until 3 months after donation)
- Follow-up data



Welcome to
EDITH:
Living Donor Registry
We are delighted to see that you are part of this community

Figure 7: ELDR website (https://eldr.edith.eulivingdonor.eu), accessible by an HTML5 compatible browser as: Mozilla Firefox, Edge and Google Chrome

The ELDR user manual, which is available on the website (http://eldr.edith.eulivingdonor.eu/auth/login), describes in detail all data-entry forms, the file-upload as well as search and data extraction features.

By the end of August 2020 national registries or local centres from 11 different countries are participating in the ELDR (4 with more than 1000 donors, 4 with more than 100 donors and 3 with less than 10 donors). For the UK, France, Italy, the Netherlands and Ireland the national registries have delivered the data. As they can only forward information for the centres that have agreed to this, the ELDR numbers might still not be representative of all country donors. For Spain, Germany and Czech Republic individual centres participate in the ELDR, and therefore also the ELDR numbers are not representative to the country as a whole. Also Lithuania, Slovenia and Portugal are participating and have entered their first donor(s) in the registry. Two more countries (Croatia and Malta) have already requested and received credentials for the ELDR production environment, and hopefully will be ready soon to deliver their data to the ELDR.

It is possible to extract all living donor data to build reports. ELDR participants can only extract data from their own country, but the ELDR-staff can build reports on all ELDR data. This way, several reports can be built to give general information on the use of this procedure *(see Figure 8 and Figure 9)* as well as to provide insight in the short and long term risks of living kidney donation, for instance with regard to renal function *(see Figure 10)*.

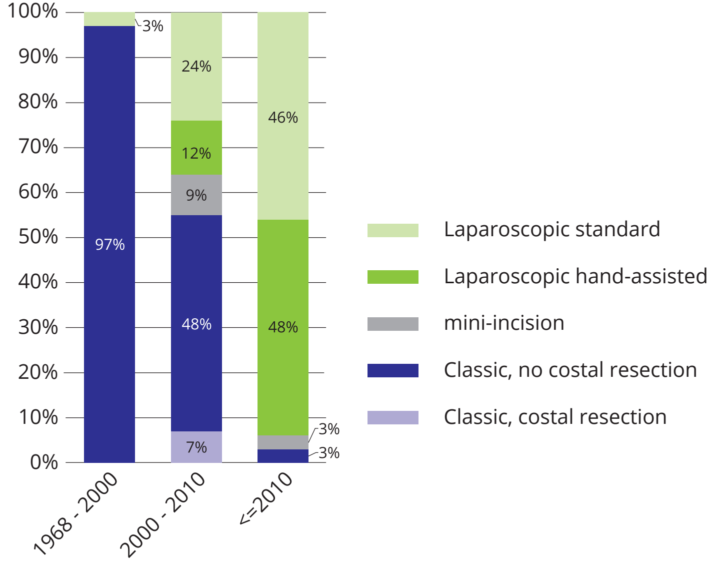


Figure 8: Living donor operation techniques used over time

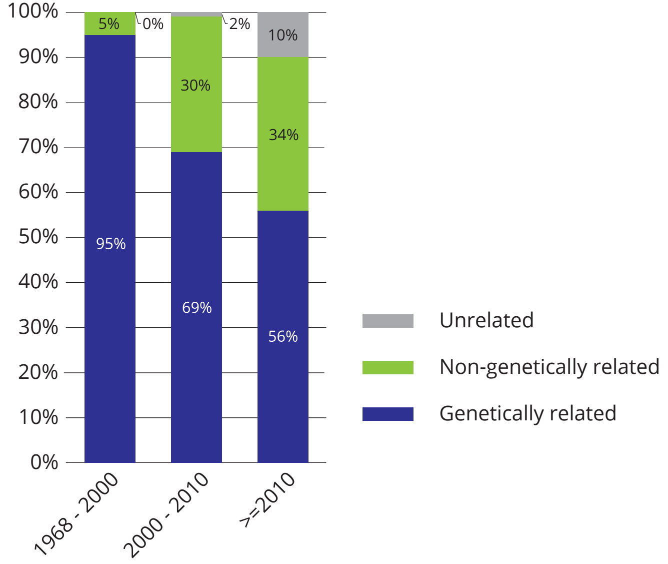
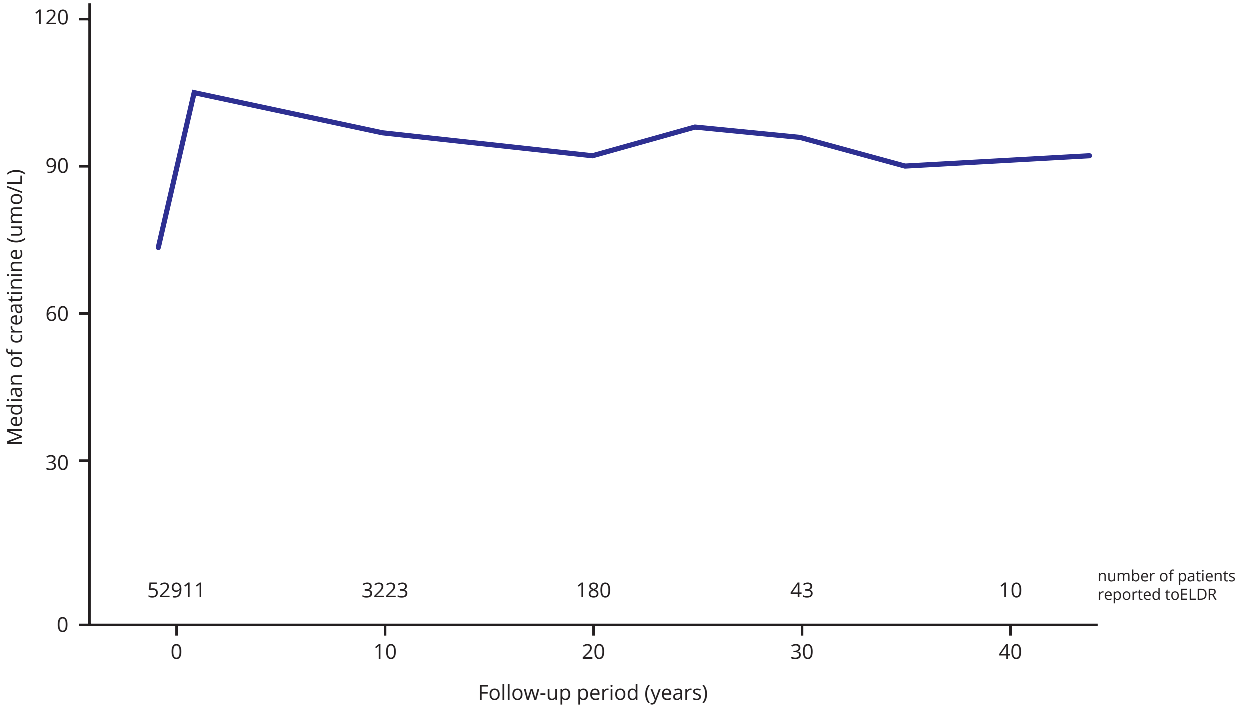


Figure 9: Living donor relation over time



A stable level of creatinine over a period up to 40 years after living donation among the patients reported to the registry is reassuring regarding the safety of living kidney donation.

Figure 10: Median of creatinine over follow-up period

3.2.2 European Kidney Recipient Follow-up Registry (EKRR)

The objective of WP6, which was co-lead by Eurotransplant and National Health Service Blood and Transplant (NHSBT), was to develop a web-based application to facilitate file-based bulk upload from various national transplant registries. The data-elements of the European kidney recipient registry (EKRR) is divided in 2 files:

- Initial (including donor, recipient and transplant information)
- Follow-up (to record yearly follow-up moments, organ failure and death)

The EKRR consists of 4 major components:

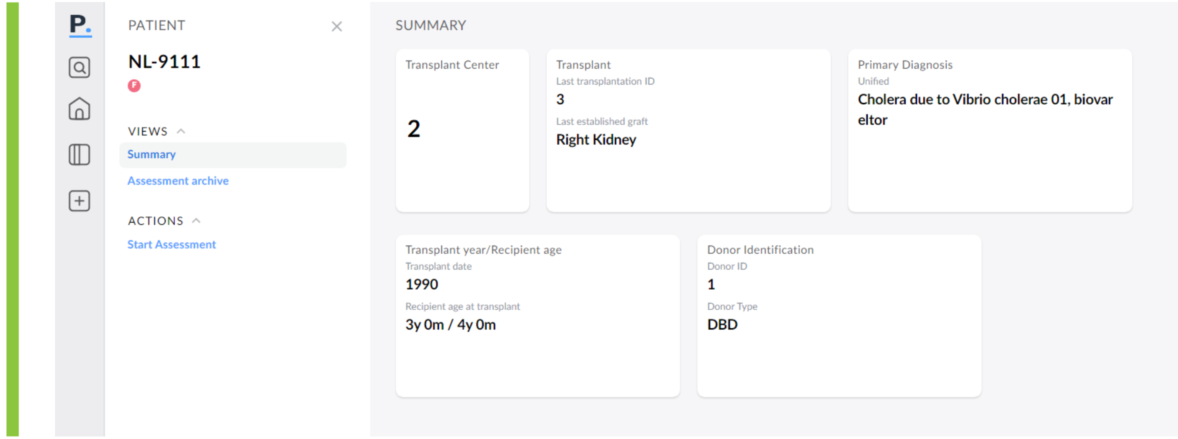
1. OpenEHR platform and tools
   'OpenEHR' is the name of a technology for e-health, consisting of open specifications, clinical models and software that can be used to create standards, and build information and interoperability solutions for healthcare.

2. Data entry application (including batch file upload)
   The data entry application is based on the Pathfinder application provided by Better.care. It can be used for manual data entry and consists of forms for both initial follow-up and recurrent (yearly) follow-up entry. It also features a batch upload for uploading bulk (CSV) files with data.

3. Analytics platform
   From the openEHR platform data is transferred to a separate analytics database (Metabase). This database provides downloads in several formats and a lightweight analytics dashboard.

4. Cloud servers and databases
   A test and production environment of the software solution stack are running on an AWS (Amazon) Cloud server. Maintenance and installation are done by a consulting partner.

By the end of August 2020 national registries or local centres from 11 different countries (BE, HR, CZ, FR, HU, IT, LI, LU, ML, PO, UK) were willing to submit data to the EKRR, however full data have yet to be upload from all these countries.



NL-9111

Transplant Center: 2

Transplant
Last transplantation ID: 3
Last established graft: Right Kidney

Primary Diagnosis
Unified: Cholera due to Vibrio cholerae 01, biovar eltor

Transplant year/Recipient age
Transplant date: 1990
Recipient age at transplant: 3y 0m / 4y 0m

Donor Identification
Donor ID: 1
Donor Type: DBD

Figure 11: EKRR patient record with summary

To enable Member States who submit data to the registry to get a comprehensive understanding of the state of transplantation within their country as well as basic comparisons between other Member States, twice yearly reports will be created. The reports will comprise in the beginning the following elements:

- Total number of kidney only transplants
- Demographic characteristics of recipients
- Key information on the transplant procedure (e.g. proportion of DBD and DCD donor transplants, ischemic time etc.)
- Graft and patient survival

3.3 Governance

The European Transplant Registries (ETRs), which include the European Living Donor Registry (ELDR) and European Kidney Recipient Follow-up Registry (EKRR), is controlled by a three-layered governance structure *(see Figure 12)*. This structure provides for scientific and political representation.The governance structure includes:

General Assembly

All Member States contributing to the ETRs as well as representatives of the European Society of Organ Transplantation (ESOT) are represented in the General Assembly. Main function is to approve policies and to monitor the overall execution of tasks. The General Assembly acts as governing body for the ETRs and is responsible to ensure that the registries can function in compliance with the existing legal, scientific and ethical regulations.

Steering Committee

The Steering Committee with members appointed by the General Assembly is the link between the General Assembly and the Registry Staff. The Steering Committee is involved in the development of policies and in the supervision of the daily business of the ETRs.

The Steering Committee evaluates the scientific functioning of the registry, and formulates proposals for changes to the data collection (procedures), reporting facilities and standard reports like the annual report. It is furthermore responsible for reviewing (and granting) requests for data or non-standardized reports. The Steering Committee works in close collaboration with the Registry Staff. It supervises the implementation of decisions by the General Assembly and takes care of decisions regarding minor changes and maintenance of the ETRs.

Hosting Organisation(s) / Registry Staff

The Hosting Organisation, together with the Registry Staff, is responsible for the day-to-day business of the ETRs. The Registry Staff will be responsible for

- Providing and maintaining the technical infrastructure of the ETRs
- Technical support for users of the registries
- Maintaining, intensifying and enlarging contacts with Member States delivering or potentially delivering data to the ETRs
- Data collection (including reminders), data hosting, monitoring of the quality of the data
- Preparation of an Annual Report and basic descriptive statistical analyses
- Providing data (extracts) for analytical statistical analysis (after prior approval by the Steering Committee)
- Implementation of all agreed policies and operating procedures
- Human resources within the financial budget

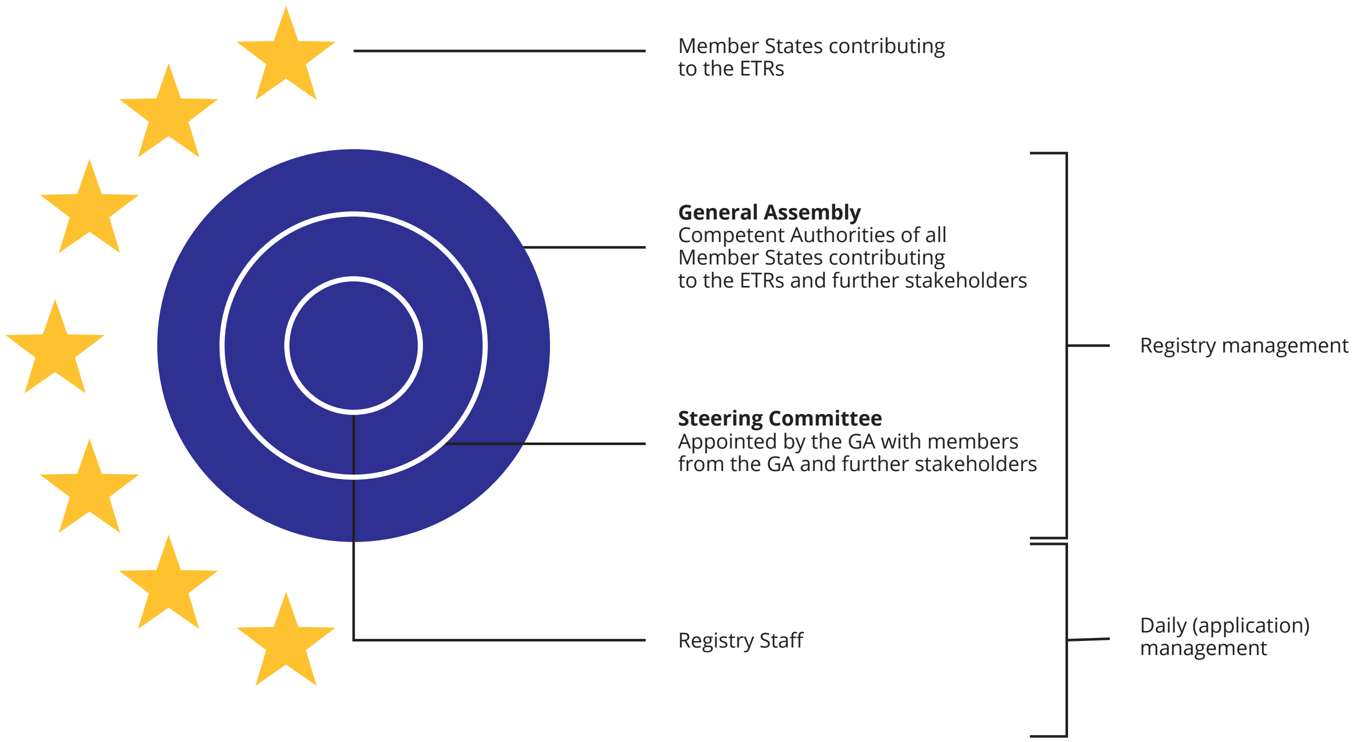


Figure 12: Governance organisation of the ETRs

4

Summary

The results of the EDITH project show that there are **substantial differences** in the application of CKD treatment modalities in patients with ESRD across the European countries. This does not only refer to the frequency of applied treatment modalities, but also to the factors that influence their choice by ESRD patients as well as nephrologists. As a result, a single European policy may not be effective to achieve an alignment of ESRD treatment modalities. Besides variation in GDP, European countries show variation also in other aspects (for example healthcare organization and legislation) which may influence uptake of RRT and CCM as well. Therefore, it is suggested that measures to improve access to treatment modalities for patients with ESRD should be tailored to **clusters of countries** with similar structural aspects where some countries can **learn from each other** and **exchange best practices.**

Gaining and increasing knowledge is another key contributor to **align treatment modalities** throughout the European Union and to provide equal access to good quality healthcare. While data on organ donation and transplant activities in European countries are readily available and published annually, similar data on donor and recipient variables and their impact on transplant outcomes are lacking in most countries. Such information – especially when combined European-wide – would allow optimizing the use of scarce organs as well as the overall benefits of organ transplantation, primarily reflected in patients' survival rate and quality of life. In addition, also a timely identification of associated risk factors would be possible, so that adverse incidents in both, transplant recipients and living donors, could be managed and preventive strategies and health policies be developed.

Within the pilot project EDITH, two approaches have been developed for a European data collection. Both, the EKRR and the ELDR provide possible technical approaches for a European data collection. In order to take full advantage of such data collection, it is of key importance to include as many and as comprehensive data as possible. The larger the volume of qualitatively sound data, the more accurate conclusions and appropriate strategies can be developed and implemented. For the ETRs, this means that they provide a framework for the **continuous collection of reliable and comprehensive data from as many countries and patients as possible.** Fixed rules regarding data handling, data ownership and publication of reports as well as a clear governance structure, which ensures scientific, political as well as patient group representation, participation and oversight are considered essential to enable the sustainable functioning of a European data collection.

5

Conclusions and recommendations

- There are substantial differences in the frequency of RRT and CCM between the European countries.
- Access to kidney transplantation and different forms of dialysis and CCM should be improved across the EU Member States.

Measures to improve the situations should be guided by the experiences of nephrologists and patients. To this end, it is needed to identify and implement actions that are tailored to clusters of countries with similar characteristics with the ultimate objective of providing equal access to good quality healthcare throughout the European Union.

- There is a large variation among EU countries regarding the tariffs and DRGs referring to different RRT treatments. Differences among EU countries find their root mainly in the organization of National Health System. Independent of this, first investigations show a greater cost efficiency for transplantation beginning in second year after transplantation.

For deeper analysis, several limitations need to be further addressed such as the difference of reimbursement costs and real costs.

- Conclusions with regard to specific comorbidities and risk factors depend on the volume of a data base. This applies both, to the transplant recipient as well as the living donor. A European registry supports the advancement of scientific knowledge as well as the establishment of preventive strategies and health policies in order to optimise the use of scarce organs. Establishing a network for European data collection will also facilitate further scientific studies.

To allow for conclusions in an adequate time frame, data bases should be combined within the EU.

- The majority of EU Member States supports the aggregation of national data.

As long as data delivery to a European registry will take place on a voluntary basis, Member States should be encouraged by their health authorities as well as national registries and professional organisations to collect data on transplantation activities and outcomes and to submit standardised data sets to an international registry.

- In order to ensure the sustainability of the European Transplant Registries (ETRs), a solid governance structure is needed. The governance structure has to address the political and the scientific relevance of the registry and has to include all contributing Member States as well as a European Scientific Organisation. During the EDITH project, a framework for the governance structure was developed, which was supported by the NCAs.

This framework should be used as a blueprint for the future governance structure of the ETRs.

- All stakeholders expect from the ETRs that its data are reliable, actual and their reports and analyses are scientifically sound.

The ETRs should respect the interests of all its stakeholders. Because of the nature of the data, data have to be handled in compliance with national and European data protection and data safety regulations.

6

Specifications

Consortium

01.	Deutsche Stiftung Organtransplantation (DSO)	DE
02.	Hungarian National Blood Transfusion Service (OVSz)	HU
03.	Ministarstvo zdravlja Republike Hrvatske (MoHRC)	HR
04.	Academisch Medisch Centrum (AMC) on behalf of European Renal Association - European Dialysis and Transplant Association (ERA-EDTA)	NL
05.	Istituto Superiore di Sanità - Centro Nazionale Trapianti (ISS-CNT)	IT
06.	Nederlandse Transplantatie Stichting (NTS)	NL
07.	Institut d’Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS) with Hospital Clinic of Barcelona as affiliated entity	ES
08.	Eurotransplant International Foundation (ET)	NL
09.	National Health Service Blood and Transplant (NHSBT)	UK

Project Runtime:

01. 01. 2017 - 31. 12. 2020

Project structure / Work packages (WP)

WP1. Coordination (DSO)

WP2. Dissemination (OVSz)

WP3. Evaluation (MoHRC)

WP4. Assessment of different treatment modalities for CKD (AMC/CNT)

WP5. Establishment of registries to follow-up living donors (NTS/IDIBAPS)

WP6. Establishment of follow-up registers for transplant recipients (ET/NHSBT)

For more information, please visit **https://edith-project.eu/**

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