45th EDTNA/ERCA
International Conference
September 17–20, 2016
The Valencia Conference Centre
Valencia, Spain

Conference Theme: Quality versus Cost
Sustainable Renal Care

Abstract Book
Acknowledgements

We would like to express our appreciation for the valuable support participating at our 45th EDTNA/ERCA International Conference in Valencia, September 17-20, 2016. Partners’ support, involvement and advice are greatly appreciated and the success would not be possible without the fantastic collaboration we have. Thank You!
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**Foreword**

Dear Colleagues,

As Scientific Programme Committee (SPC) Chair it is a great honour for me to welcome you to the 45th EDTNA/ERCA International Conference, Valencia, Spain 2016 and to present to you the Conference Abstract Book.

In accordance with the conference theme, “Quality versus Cost, Sustainable Renal Care”, we have developed a scientific programme focusing at the complexity of renal care practice and its demanding challenges in costs worldwide with very interesting parallel sessions, workshops/masterclasses as well as an expanded number of well-established expert Guest Speakers.

In total there were 294 abstracts submitted to the conference, of which 85 were accepted for oral presentation, 9 for short oral presentation and 200 for poster presentation. Abstracts were received from across 33 countries with a wide geographical range from European countries to United Arab Emirates and Hong Kong and to Australia. For the Valencia conference there were 20 distinguished guest speakers invited from 9 different countries.

Dr Francisco Maduell MD (Spain) will cover the main Dialysis session with his lecture on “Haemodialysis: High-volume online HDF increases survival in haemodialysis” and Mr Tony Goovaerts (Belgium) will speak on Peritoneal Dialysis providing delegates with a follow up of the Peritoneal testing. A new scientific session is organized this year on Ethical Issues in renal Care with eminent guest speaker Professor Francesco Locatelli MD (Italy) exploring the Ethical dilemmas in renal aging. Another new scientific session has been developed with the title “Challenge of multimorbidity” which will be covered by Dr John Harty MD (United Kingdom) who will speak on “Managing multi-morbidity in haemodialysis patients – a personalized approach”.

Professor Ann Bonner RN (Australia) will cover this year two scientific sessions: the session on Education, talking on “Education: Health literacy and renal healthcare: Why does it matter?” as well as the session on “Renal care for an aging population: Options for older patients with chronic kidney disease”. The session on Dialysis Adequacy will be covered by Dr Jasper Boomerker, Biologist (The Netherlands) Who will speak on “A Dutch Kidney Foundation initiative for the development of a Portable Artificial Kidney”. Dr Hilary Bekker, Psychologist, RN (United Kingdom) will be the guest speaker at the Psychological, physical & social impact of renal disease session presenting on “Enabling services to support patients making informed dialysis decisions”. Dr Federico Oppenheim MD (Spain) will cover Transplantation, giving a guest speaker lecture on “Transplantation: Changing people’s attitudes to become donors- difficulties and challenges” and Mrs Fiona Loud (United Kingdom) will give a talk on “Acute Kidney Injury: The British Kidney Patient Association: collaborative working to reduce acute kidney injury”. Dr Jose Ibeas MD (Spain) will cover Safe vascular access session with his lecture on “Doppler Ultrasound for arteriovenous fistula: A third generation method for fistula creation”.

The paediatric session will be presented by Professor Rita Van Damme – Lombaerts MD (Belgium) discussing “Paediatric renal care Growth hormone therapy in children before and after renal transplantation” and Dr Ian Walsh MD (United Kingdom) will present at the Open Forum giving delegates lecture on the Care in Renal Cancer. The Nutrition session this year will be presented by Professor Martin Kuhlmann, MD (Germany) who will discuss “Hidden phosphorus in the diet – consequences for CKD patients and the general population”. Mrs Karin Lomholdt, RN (Denmark) will talk on “Home dialysis: Home based dialysis in Denmark - Challenges and results” and Dr Eva Segura, Physiotherapist (Spain) on “Improving quality of renal care: Exercise & Haemodialysis”.

Mrs Cristiana Dente RN (Italy) will cover for session “End of life care” with the title: “The dialysis patient: what is the best end-of-life care? The experience of a dialysis center in Biella, Italy” and guest speaker Mr Josep Mª Gutierrez RN (Spain) will give two lectures on “CKD prevention & delay: Eldery & CKD. Dialysis for all?” and on “Diabetes and nephrology: CKD diabetic patients - Same illness different care”. As every year we hold a session on Patient experience. This year we host Mr Leonidas Morelatos (Greece) who will share with you all his 35 year challenging journey as a renal patient.

This year we have one workshop on “Ultrasongraphy for vascular access in dialysis” with guest speakers Mr Ruben Iglesias (Spain), Carolina Rubiella Rubio (Spain), Dr Jose Ibeas Lopez (Spain) and Joaquim Vallespin Aguado (Spain). The conference programme also includes three masterclasses. One masterclass on “Writing an abstract for international conferences” with Dr Helen Noble (United Kingdom) and Mr Berislav Poje (Croatia), one masterclass on “Dialysis dilemmas: costs & ethical questions” with Mr Michel Rhoden (Belgium) and Mrs Aase Riemann (The Netherlands) and one masterclass on “Transplantation” with Mrs Itziar Martinez Alpuente, Dr Lluis Pallardo, Dr Federico Oppenheim, and Dr Julio Pascual all from Spain.

Among lunchtime sessions are: The Dialysis Outcomes and Practice Patterns Study (DOPPS) Programme and the Greek Workshop on Peritoneal Dialysis and a session on “Patient & carer advisory groups - setting them up and running them. Patient & carer groups”, an interactive workshop on engagement in improving care quality with Mrs Fiona Loud, Dr Helen Noble and Assistant Professor Nicola Thomas all from United Kingdom.

Corporate Education Sessions include: CES Fresenius Medical Care “Crossing Borders, Setting Standards: Embedding a Culture of Training and Education”, CES B. Braun Avitum “Renal care for elderly patients, CES NxStage « Simply Home – Can you make it sustainable? » as well as the EDTNA/ERCA Projects with Industry Partners.
The international Council of Nurses has agreed accreditation of the Conference and awarded the 45th EDTNA/ERCA Conference Scientific Programme with 17.75 European CME credits.

The Abstract Book lists the abstracts of authors and guest speakers, presented in session order as they appear in the final Scientific Programme. The book can be used to keep in touch with presenters and Association members.

I take this opportunity to say a very big thank you to all presenting authors and EDTNA/ERCA Volunteers who with their time, effort and enthusiasm make the Conference a success; to Industry partners for supporting education sessions and the exhibition, and the Conference Department for their professional collaboration.

We hope that this conference will help all delegates further advance the renal field as well as their own practice.

Anastasia Liossatou
Scientific Programme Committee Chair
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Chief Abstract Assessors 2016

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### Speakers

#### Guest speakers for Plenary Session S 01
- Julia Bangert (Germany)
- Patrik Byhmer (Sweden)
- Siobhan Gladding (UK)
- Peter Ishii (Sweden)
- Maria Teresa Parisotto (Germany)
- Michael Reichardt (Germany)
- Laura Stevens (UK)
- Jean Pierre van Waeleghem (Belgium)
- Tai Mooi Ho Wong (Spain)

#### Guest speaker for the Opening Ceremony
- Daniel Gallego Zurro (Spain)

#### Guest speaker for the Closing Ceremony
- Anne Moulton (Canada)

#### Guest speakers (in alphabetical order)
- Joaquim Vallespin Aguado (Spain)
- Itziar Martinez Alpuente (Spain)
- Hilary Bekker (UK)
- Ann Bonner (Australia)
- Jasper Boomker (The Netherlands)
- Cristiana Dente (Italy)
- Jose Ibeas (Spain)
- Ruben Iglesias (Spain)
- Tony Goovaerts (Belgium)
- Josep Mª Gutierrez (Spain)
- John Harty (UK)
- Martin Kuhlmann (Germany)
- Francesco Locatelli (Italy)
- Karin Lomholdt (Denmark)
- Fiona Loud (UK)
- Francisco Maduell (Spain)
- Leonidas Mourelatos (Greece)
- Helen Noble (UK)
- Federico Oppenheimerr (Spain)
- Lluis Pallardo (Spain)
- Julio Pascual (Spain)
- Berislav Poje (Croatia)
- Aase Riemann (The Netherlands)
- Michel Roden (Belgium)
- Carolina Rubiella Rubio (Spain)
- Eva Segura (Spain)
- Nicola Thomas (UK)
- Rita Van Damme – Lombaerts (Belgium)
- Ian Walsh (UK)
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<td>Pedro Reinas (Spain)</td>
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Scientific Programme

Corporate Education Sessions

S 01 EDTNA/ERCA Projects with Industry Partners
Excellent Collaboration based on mutual Experience & Commitment creates Opportunities
Auditorium 1, Saturday, September 17, 2016, 16:00

S 03 CES Fresenius Medical Care
Crossing Borders, Setting Standards: Embedding a Culture of Training and Education
Auditorium 1, Sunday, September 18, 2016, 9:00

S 21 B Braun Avitum AG
Renal care for elderly patients
Auditorium 1, Monday, September 19, 2016, 11:00

S 24 NxStage Medical, Inc.
Simply Home – Can you make it sustainable?
Auditorium 1, Monday September 19, 2016, 14:00

Masterclasses & Workshops at the Conference:

S 04 Masterclass Transplantation
- Mrs Itziar Martinez Alpuente (Spain)
  The Spanish National Transplant Organization (ONT) model and how to raise the number of renal transplants
- Dr Lluís Pallardo (Spain)
  Increasing access of patients to renal transplantation
- Dr Federico Oppenheimer (Spain)
  Living donation: how to increase, modalities and results
- Dr Julio Pascual (Spain)
  Improving the results of renal transplantation

S 08 Masterclass “Who pays the Ferryman”? Dialysis dilemmas: costs & ethical questions
- Mr Michel Roden (Belgium)
- Mrs Aase Riemann (The Netherlands)

Masterclass on: Writing an abstract for international conferences
(limited number of attendees)
- Dr Helen Noble (United Kingdom)
- Mr Berislav Poje (Croatia)

Workshop on: Ultrasonography for vascular access in dialysis
(limited number of attendees)
- Mr Ruben Iglesias (Spain)
- Mrs Carolina Rubiella Rubio (Spain)
- Dr Jose Ibeas Lopez (Spain)
- Dr Joaquim Vallespin Aguado (Spain)

Lunchtime sessions include:

S 09 Patient & carer advisory groups – setting them up and running them. Patient & carer groups – an interactive workshop on engagement in improving care quality
- Mrs Fiona Loud (United Kingdom)
- Dr Helen Noble (United Kingdom)
- Assistant Professor Nicola Thomas (United Kingdom)

S 10 The Dialysis Outcomes and Practice Patterns Study (DOPPS) Programme

S 11 The Greek Workshop:
- Marios Theodoridis (Greece)
  Peritoneal Dialysis basic principles and prescription of different types of modalities (CAPD vs APD)
- Stamatia Bezirgiannidou (Greece)
  How to determine peritoneal membrane characteristics (PET test)
**Programme at a glance (1)\(^3\)**

### Saturday, September 17, 2016

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<td><strong>S 01 Plenary Session</strong></td>
<td>Chair: Marianna Eleftheroudi (Greece)</td>
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<td><strong>Chair:</strong> Anki Davidson (Sweden)</td>
<td><strong>Title:</strong> Excellent Collaboration based on mutual Experience &amp; Commitment creates Opportunities</td>
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<td>GS: Michael Reichardt (Germany)</td>
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<td>GS: Julia Bangert (Germany)</td>
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<td>EDTNA/ERCA project sponsored by B. Braun Avitum AG</td>
<td>GS: Tai Mool Ho Wong (Spain)</td>
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<td><strong>Choosing the right access at the right moment: a Nursing Best Practice Guide for Arteriovenous Graft</strong></td>
<td>GS: Maria Teresa Parisotto (Germany)</td>
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<td>Collaboration between EDTNA/ERCA &amp; Fresenius Medical Care</td>
<td>GS: Jean Pierre van Waeleghem (Belgium)</td>
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<td>Safety going Digital – Increasing the Awareness of Venous Needle Dislodgement</td>
<td>GS: Patrik Byhmer (Sweden)</td>
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<td><strong>Home Haemodialysis – A Nurses Guide to Implementing Best Practice in Home Hemodialysis</strong></td>
<td>GS: Laura Stevens (UK)</td>
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<td>Collaboration between EDTNA/ERCA &amp; NxStage Medical, Inc.</td>
<td>GS: Siobhan Gladding (UK)</td>
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<td><strong>The Advantages of Online Communication</strong></td>
<td>GS: Peter Ishii (Sweden)</td>
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<td>GS: Daniel Gallego Zurro (Spain)</td>
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| 09:00–10:30| **S 03 Corporate Education Session**  
Fresenius Medical Care  
Chair: Marie Richards (United Arab Emirates)  
**Title:** Crossing Borders, Setting Standards: Embedding a Culture of Training and Education  
Thinking different makes it happen: the value of education  
Maria Teresa Parisotto (Germany)  
Building Careers, Enhancing Skills: The NephroCare Way  
Iain Morris (Germany)  
Attract, Educate, Nurture and Retain: Foundation for Change  
Cathy Poole (UK)  
The Power of Education  
Tatyna Glushenkova (Russia)  
**GS:** Itziar Martinez Alpuente (Spain)  
The Spanish National Transplant Organization (ONT) model and how to raise the number of renal transplants  
**GS:** Lluis Pallardo (Spain)  
Increasing access of patients to renal transplantation  
**GS:** Federico Oppenheimer (Spain)  
Living donation: how to increase, (modalities) and results  
**GS:** Julio Pascual (Spain)  
Improving the results of renal transplantation | **S 04 Masterclass**  
Chairs: Anna Marti Monros (Spain)  
Berislav Poje (Croatia)  
**Title:** Transplantation  
**GS:** Itziar Martinez Alpuente (Spain)  
The Spanish National Transplant Organization (ONT) model and how to raise the number of renal transplants  
**GS:** Lluis Pallardo (Spain)  
Increasing access of patients to renal transplantation  
**GS:** Federico Oppenheimer (Spain)  
Living donation: how to increase, (modalities) and results  
**GS:** Julio Pascual (Spain)  
Improving the results of renal transplantation | **S 05 Parallel Session**  
Chairs: Aase Riemann (The Netherlands)  
Irmina Vaicekauskyte (Lithuania)  
**Title:** Peritoneal Dialysis  
**GS:** Tony Goovaerts (Belgium)  
Peritoneal testing: What can we learn from it?  
**01**  
Haemodialysis and peritoneal dialysis patients’ health perceptions: a comparative study  
Tai Mooi Ho Wong (Spain)  
**02**  
Applied nursing protocols in peritoneal dialysis in Greece  
Maria Androulaki (Greece)  
**03**  
Peritoneal dialysis or haemodialysis in pregnancy: nephrologist choice or patient choice?  
Anne Hurley (UK) | **Coffee Break** |
<p>| 10:30–11:00 |                                                                                 |                                                                               |                                                                               |</p>
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<th>Committee Room 6</th>
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<td>11:00–12:30</td>
<td><strong>S 06 Parallel Session</strong>&lt;br&gt;Chair: Itaria de Barbieri (Italy)&lt;br&gt;Jania Golland (Israel)&lt;br&gt;Title: Ethical issues in renal care&lt;br&gt;GS: Francesco Locatelli (Italy)&lt;br&gt;Ethical dilemmas in renal aging</td>
<td><strong>S 07 Parallel Session</strong>&lt;br&gt;Chair: Lesley Bennet (UK)&lt;br&gt;Mike Kelly (Ireland)&lt;br&gt;Title: Challenge of multimorbidity&lt;br&gt;GS: John Harty (UK)&lt;br&gt;Managing multi-morbidity in haemodialysis patients – a personalised approach</td>
<td><strong>S 08 Masterclass</strong>&lt;br&gt;Title: ‘Who pays the Ferryman’? Dialysis dilemmas: costs &amp; ethical questions&lt;br&gt;GS: Michel Roden (Belgium)&lt;br&gt;GS: Aase Riemann (The Netherlands)</td>
<td><strong>Masterclass</strong>&lt;br&gt;Title: Writing an abstract for international conferences&lt;br&gt;GS: Helen Noble (UK)&lt;br&gt;GS: Berislav Poje (Croatia)</td>
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<td>O 05 Empathy assessment in the healthcare professionals of the nephrology and dialysis&lt;br&gt;Claudio Squarcia (Italy)</td>
<td>O 09 Granulomatous hypercalcemia due to Crohn’s disease in a haemodialysis patient&lt;br&gt;Zuleyha Alici (France)</td>
<td>O 10 Pneumococcal vaccination in dialysis patients in Saudi Arabia – a performance improvement project&lt;br&gt;Joy Barrios (Saudi Arabia)</td>
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<td>O 06 Kidney transplant in a noncompliant young adult – as case study&lt;br&gt;Raisa Rahmanov (Israel)</td>
<td>O 07 Mental healing after acute rejection – a disregarded issue&lt;br&gt;Andrea Paar (Hungary)</td>
<td>O 11 Patients in haemodialysis experience uremic pruritus as a dual phenomenon&lt;br&gt;Helene Tarp (Denmark)</td>
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<td>O 08 Australian patient views: the impact of dialysis treatment and gaps in education and support&lt;br&gt;Debbie Fortnum (Australia)</td>
<td>O 08 Australian patient views: the impact of dialysis treatment and gaps in education and support&lt;br&gt;Debbie Fortnum (Australia)</td>
<td>O 12 Epidemiology of moderate and severe psoriasis in Greek patients on renal replacement therapy&lt;br&gt;Chrysanthi Akrani (Greece)</td>
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<td>12:30–14:00</td>
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| 12:45-13:45  | **S 09 Lunch Symposium**  
**Chair:** Karen Jenkins (UK)  
Marjetka Trkulja (Croatia)  
**Title:** Patient & carer advisory groups – setting them up and running them. Patient & carer groups – an interactive workshop on engagement in improving care quality  
**GS:** Fiona Loud (UK)  
Helen Noble (UK)  
Nicola Thomas (UK) | **S 10 Lunch Symposium**  
**Chairs:** Anna Marti Monros (Spain)  
Francesca Tentori (USA)  
**Title:** DOPPS symposium  
The Dialysis Outcomes and Practice Patterns Study (DOPPS)  
Celebrating 20 years and Looking Ahead  
The DOPPS Program continues to grow  
**New study directions:** PDOPPS and CKDOPPS  
Justin Albert (USA)  
**Recent findings from EURODOPPS:** Patricia de Sequera (Spain)  
The patient experience as a key outcome in DOPPS  
**Jennie King (UK)**  
**GS:**  | **S 11 Lunch Symposium**  
**Chairs:** Panagiota Tsoougia, HENNA President  
Vasiliki Lagazali, HENNA Secretary  
**Title:** GREEK WORKSHOP  
**GS:** Marios Theodoridis (Greece)  
Peritoneal Dialysis basic principles and prescription of different types of modalities (CAPD vs APD)  
**GS:** Stamati Bezirgiannidou (Greece)  
How to determine peritoneal membrane characteristics (PET test)  |
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<td>14:00–15:30</td>
<td><strong>S 12 Parallel Session</strong>&lt;br&gt;Chairs: Aase Riemann (The Netherlands)&lt;br&gt;Raquèl Ribeiro (Portugal)</td>
<td><strong>S 13 Parallel Session</strong>&lt;br&gt;Chairs: Nicola Thomas (UK)&lt;br&gt;Marie Richards (United Arab Emirates)</td>
<td><strong>S 14 Parallel Session</strong>&lt;br&gt;Chairs: Marisa Pegoraro (Italy)&lt;br&gt;Tai Mooi Ho (Spain)</td>
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<td><em>Title: Technical-Dialysis Adequacy</em>&lt;br&gt;GS: Jasper Boomker (The Netherlands)&lt;br&gt;NeoKidney – a renewed approach to mobile haemodialysis</td>
<td><em>Title: Education</em>&lt;br&gt;GS: Ann Bonner (Australia)&lt;br&gt;Health literacy and renal healthcare: Why does it matter?</td>
<td><em>Title: Psychological, physical &amp; social impact of renal disease</em>&lt;br&gt;GS: Hilary Bekker (UK)&lt;br&gt;Enabling services to support patients making informed dialysis decisions</td>
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<td>O 13</td>
<td>Inversion of branches in dysfunctional central venous catheters – impact on haemodialysis efficacy&lt;br&gt;Osvaldo Albuquerque (Portugal)</td>
<td>O 17 Introduction of basic life support simulation training into satellite dialysis units&lt;br&gt;Cathy Poole (UK)</td>
<td>O 21 A clinic for young adults outside the hospital&lt;br&gt;Rikke Christensen (Denmark)</td>
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<td>O 14</td>
<td>Hypoxia-inducible factor prolyl hydroxylase inhibitors: The future of anaemia management in chronic kidney disease?&lt;br&gt;Danilo Villafuerte Nebres (UK)</td>
<td>O 18 Patient empowerment – Training the person on dialysis&lt;br&gt;Helena Pereira (Portugal)</td>
<td>O 22 Burden on informal caregivers of haemodialysis patients&lt;br&gt;Cécile Soares (Portugal)</td>
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<td>O 15</td>
<td>Rheopheresis: a treatment for peripheral arterial disease&lt;br&gt;Jean Marc Lagarde (France)</td>
<td>O 19 Review of educational tools and awareness of Venous Needle Dislodgement (VND)&lt;br&gt;Sophie Halldin (Sweden)</td>
<td>O 23 Understanding the psychology of illness – helping nurses understand their patient’s behaviour&lt;br&gt;Mike Kelly (Ireland)</td>
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<td>O 16</td>
<td>Individualised heparinisation profile implementation for the extracorporeal blood circuit of haemodialysis patients&lt;br&gt;Helena Caldeira (Portugal)</td>
<td>O 20 Can assistant practitioners be successfully integrated into the nursing skill mix of haemodialysis units?&lt;br&gt;Susie Mallinder (UK)</td>
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**15:30–16:00**

Coffee break
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<td><strong>Auditorium 1</strong></td>
<td><strong>Break</strong></td>
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<td><strong>S 15 Parallel Session</strong>&lt;br&gt;Chairs: Marisa Pegoraro (Italy)&lt;br&gt;Ruben Iglesias (Spain)&lt;br&gt;Title: Safe vascular access&lt;br&gt;GS: Jose Ibeas (Spain)&lt;br&gt;Doppler Ultrasound for arteriovenous fistula: A third generation method for first approach</td>
<td><strong>Auditorium 1</strong>&lt;br&gt;Annual General Meeting 2016&lt;br&gt;Chair: Marianna Eleftheroudi (Greece)&lt;br&gt;Agenda: &lt;ul&gt;&lt;li&gt;Welcome by the President ad Interim&lt;/li&gt;&lt;li&gt;Association activities &amp; progress report&lt;/li&gt;&lt;li&gt;Approval of 2015 Financial report&lt;/li&gt;&lt;li&gt;EC Election Results&lt;/li&gt;&lt;li&gt;Lifetime Member&lt;/li&gt;&lt;li&gt;Association Strategy 2020&lt;/li&gt;&lt;li&gt;Motions&lt;/li&gt;&lt;li&gt;Volunteers acknowledgement&lt;/li&gt;&lt;li&gt;EDTNA/ERCA Manuscript Scholarship Awards&lt;/li&gt;&lt;li&gt;Any other business&lt;/li&gt;&lt;li&gt;Conference 2017&lt;/li&gt;&lt;li&gt;Date and venue for the next AGM&lt;/li&gt;&lt;li&gt;Closing of the meeting&lt;/li&gt;&lt;/ul&gt;</td>
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<td><strong>S 16 Parallel Session</strong>&lt;br&gt;Chair: Michel Roden (Belgium)&lt;br&gt;Anna Junqué (Spain)&lt;br&gt;Title: Transplantation&lt;br&gt;GS: Federico Oppenheimer (Spain)&lt;br&gt;Changing peoples attitudes to become donors- difficulties and challenges</td>
<td><strong>Auditorium 2</strong>&lt;br&gt;17:45–19:15&lt;br&gt;Annual General Meeting 2016&lt;br&gt;Chair: Marianna Eleftheroudi (Greece)&lt;br&gt;Agenda: &lt;ul&gt;&lt;li&gt;Welcome by the President ad Interim&lt;/li&gt;&lt;li&gt;Association activities &amp; progress report&lt;/li&gt;&lt;li&gt;Approval of 2015 Financial report&lt;/li&gt;&lt;li&gt;EC Election Results&lt;/li&gt;&lt;li&gt;Lifetime Member&lt;/li&gt;&lt;li&gt;Association Strategy 2020&lt;/li&gt;&lt;li&gt;Motions&lt;/li&gt;&lt;li&gt;Volunteers acknowledgement&lt;/li&gt;&lt;li&gt;EDTNA/ERCA Manuscript Scholarship Awards&lt;/li&gt;&lt;li&gt;Any other business&lt;/li&gt;&lt;li&gt;Conference 2017&lt;/li&gt;&lt;li&gt;Date and venue for the next AGM&lt;/li&gt;&lt;li&gt;Closing of the meeting&lt;/li&gt;&lt;/ul&gt;</td>
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<td><strong>S 17 Parallel Session</strong>&lt;br&gt;Chairs: Mike Kelly (Ireland)&lt;br&gt;Anastasia Liossatou (Greece)&lt;br&gt;Title: The patient experience&lt;br&gt;GS: Leonidas Mourelatos (Greece)&lt;br&gt;A 35 year challenging journey</td>
<td><strong>Auditorium 3</strong>&lt;br&gt;17:45–19:15&lt;br&gt;Annual General Meeting 2016&lt;br&gt;Chair: Marianna Eleftheroudi (Greece)&lt;br&gt;Agenda: &lt;ul&gt;&lt;li&gt;Welcome by the President ad Interim&lt;/li&gt;&lt;li&gt;Association activities &amp; progress report&lt;/li&gt;&lt;li&gt;Approval of 2015 Financial report&lt;/li&gt;&lt;li&gt;EC Election Results&lt;/li&gt;&lt;li&gt;Lifetime Member&lt;/li&gt;&lt;li&gt;Association Strategy 2020&lt;/li&gt;&lt;li&gt;Motions&lt;/li&gt;&lt;li&gt;Volunteers acknowledgement&lt;/li&gt;&lt;li&gt;EDTNA/ERCA Manuscript Scholarship Awards&lt;/li&gt;&lt;li&gt;Any other business&lt;/li&gt;&lt;li&gt;Conference 2017&lt;/li&gt;&lt;li&gt;Date and venue for the next AGM&lt;/li&gt;&lt;li&gt;Closing of the meeting&lt;/li&gt;&lt;/ul&gt;</td>
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### Parallel Session 15: Safe vascular access<br>GS: Jose Ibeas (Spain)<br>Doppler Ultrasound for arteriovenous fistula: A third generation method for first approach<br>**Chair:** Marisa Pegoraro (Italy)<br>**Chair:** Ruben Iglesias (Spain)

### Parallel Session 16: Transplantation<br>GS: Federico Oppenheimer (Spain)<br>Changing peoples attitudes to become donors- difficulties and challenges<br>**Chair:** Michel Roden (Belgium)<br>**Chair:** Anna Junqué (Spain)

### Parallel Session 17: The patient experience<br>GS: Leonidas Mourelatos (Greece)<br>A 35 year challenging journey<br>**Chair:** Mike Kelly (Ireland)<br>**Chair:** Anastasia Liossatou (Greece)

### Oral Presentation 24: Metal versus plastic cannula use for haemodialysis, an open label trial<br>Kay McLaughlin (New Zealand)

### Oral Presentation 28: Live kidney donation Aotearoa – a New Zealand solution<br>Denise Beechey (New Zealand)

### Oral Presentation 29: Impact of an organ donation initiative – teamworking across the NHS, charities & communities<br>Neerja Jain (UK)

### Oral Presentation 30: Psychosocial experiences of kidney transplant patients before and after transplantation<br>Emine Selda Gunduz (Turkey)

### Oral Presentation 31: Why don’t we donate? – Nurses’ and midwives’ attitudes towards transplantation<br>Anna Klis (Poland)

### Oral Presentation 32: Experiences of shared decision making in adult pre-dialysis patients and carers<br>Sarah Ofori-Ansah (UK)

### Oral Presentation 33: View of renal patients and general practitioners on coordination of care<br>Annemarie Hellemans (Belgium)

### Oral Presentation 34: How the haemodialysis patients see the arteriovenous fistulae cannulation technique<br>Jorge Melo (Portugal)

### Oral Presentation 35: Patients’ satisfaction with care about their treatment of chronic renal failure<br>Céline Olbrechts (Belgium)
## Monday, September 19, 2016

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<td>09:00–10:30</td>
<td><strong>S 18 Parallel Session</strong>&lt;br&gt;<strong>Chair</strong>: Sophie Halldin (Sweden)&lt;br&gt;Anna Klis (Poland)&lt;br&gt;<strong>Title</strong>: Haemodialysis&lt;br&gt;<strong>GS</strong>: Francisco Maduell (Spain)&lt;br&gt;High-volume online HDF increases survival in haemodialysis</td>
<td><strong>S 19 Parallel Session</strong>&lt;br&gt;<strong>Chair</strong>: Berislav Poje (Croatia)&lt;br&gt;Jeannette Finderup (Denmark)&lt;br&gt;<strong>Title</strong>: Home dialysis&lt;br&gt;<strong>GS</strong>: Karin Lomholdt (Denmark)&lt;br&gt;Home based dialysis in Denmark – Challenges and results</td>
<td><strong>S 20 Parallel Session</strong>&lt;br&gt;<strong>Chair</strong>: Ilaria de Barbieri (Italy)&lt;br&gt;Marie Richards (United Arab Emirates)&lt;br&gt;<strong>Title</strong>: Paediatric renal care&lt;br&gt;<strong>GS</strong>: Rita Van Damme – Lombaerts (Belgium)&lt;br&gt;Growth in children before and after renal transplantation: therapeutic options and results</td>
<td><strong>Workshop</strong>&lt;br&gt;<strong>First part: Theoretical Session</strong>&lt;br&gt;<strong>Title</strong>: Ultrasonography for vascular access in dialysis&lt;br&gt;<strong>GS</strong>: Ruben Iglesias (Spain)&lt;br&gt;Ultrasound of vascular access for nurses. Concepts and usefulness</td>
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<td>10:30–11:00</td>
<td><strong>O 36</strong>&lt;br&gt;Associations between appetite and quality of life or performance status in haemodialysis patients&lt;br&gt;Cristiana Matias (Portugal)</td>
<td><strong>O 39</strong>&lt;br&gt;Renal nurses’ perceptions regarding establishment of a home haemodialysis program in Abu Dhabi&lt;br&gt;Jent Lee (United Arab Emirates)</td>
<td><strong>O 43</strong>&lt;br&gt;Improved understanding of uraemic toxicity for management of chronic kidney disease in paediatric patients&lt;br&gt;Sunny Eloot (Belgium)</td>
<td><strong>O 46</strong>&lt;br&gt;The pain-reducing effect of Camera Flash Light for arteriovenous fistula in children&lt;br&gt;Sema Unturk (Turkey)</td>
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<td>11:00–12:30</td>
<td><strong>S 21 Corporate Education Session B. Braun Avitum AG</strong>&lt;br&gt;Chair: Martin Kuhlmann (Germany)&lt;br&gt;Title: Renal care for elderly patients&lt;br&gt;Consequences of frailty and malnutrition according to the demographic trend in dialysis&lt;br&gt;Martin Kuhlmann (Germany)&lt;br&gt;Frailty in elderly patients on dialysis – impact on nursing&lt;br&gt;Carol Bartholomew (UK)&lt;br&gt;How to manage dialysis in nursing homes – experience from the Czech Republic&lt;br&gt;Jarmila Novotna (Czech Republic)</td>
<td><strong>S 22 Parallel Session</strong>&lt;br&gt;Chairs: Michel Roden (Belgium)&lt;br&gt;Jania Golland (Israel)&lt;br&gt;Title: Open Forum&lt;br&gt;GS: Ian Walsh (UK)&lt;br&gt;GS: Eva Segura (Spain)&lt;br&gt;GS: Jose Ibeas Lopez (Spain)&lt;br&gt;GS: Joaquim Vallejo Aguado (Spain)&lt;br&gt;Care in Renal Cancer</td>
<td><strong>S 23 Parallel Session</strong>&lt;br&gt;Chairs: Lesley Bennet (UK)&lt;br&gt;Raquel Ribeiro (Portugal)&lt;br&gt;Title: Improving quality of renal care&lt;br&gt;GS: Eva Segura (Spain)&lt;br&gt;GS: Carolina Rubiella Rubio (Spain)&lt;br&gt;GS: Jose Ibeas Lopez (Spain)&lt;br&gt;GS: Joaquim Vallejo Aguado (Spain)&lt;br&gt;Challenges in exercise implementation for patients undergoing haemodialysis</td>
<td><strong>Workshop</strong>&lt;br&gt;Second part: Practical Session&lt;br&gt;Title: Ultrasonography for vascular access in dialysis&lt;br&gt;GS: Ruben Iglesias (Spain)&lt;br&gt;GS: Carolina Rubiella Rubio (Spain)&lt;br&gt;GS: Jose Ibeas Lopez (Spain)&lt;br&gt;GS: Joaquim Vallejo Aguado (Spain)</td>
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<td><strong>O 47</strong>&lt;br&gt;Francesco Pelliccia (Germany)&lt;br&gt;From empirical to evidence-based complexity evaluation of patients</td>
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<td><strong>O 48</strong>&lt;br&gt;Aydin Nazan (Turkey)&lt;br&gt;Comparison of socioeconomic situation of Turkish and Syrian haemodialysis patients</td>
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<td><strong>O 49</strong>&lt;br&gt;Ann Bonner (Australia)&lt;br&gt;Evaluating how technology is used by people with chronic kidney disease</td>
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<td><strong>O 50</strong>&lt;br&gt;Anna Junqué (Spain)&lt;br&gt;Active aging on hemodialysis: an adapted low-intensity exercise programme in elderly patients</td>
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<td>12:30–14:00</td>
<td>Lunch</td>
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| **14:00–15:30** | **Title: Simply Home – Can you make it sustainable?**<br>The long term economic challenge of dialysis population growth  
Tony Goovaerts (Belgium) | **Title: Acute Kidney Injury**<br>**GS:** Fiona Loud (UK)  
Thinking kidneys: the British Kidney Patient Association working collaboratively to reduce acute kidney injury  
Chair: Helen Noble (UK)  
Anna Kliś (Poland) | **Title: Short Orals**

| 24 Corporate Education Session NxStage Medical Ltd.  
Chair: Nikki Pacey (UK) | S 25 Parallel Session  
Chair: Michel Roden (Belgium)  
Marie Richards (United Arab Emirates) | 25 Parallel Session  
Chairs: Helen Noble (UK)  
Anna Kliś (Poland) |
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| **Session NxStage Medical Ltd.**  
Chair: Nikki Pacey (UK) | **Title: Acute Kidney Injury**<br>**GS:** Fiona Loud (UK)  
Thinking kidneys: the British Kidney Patient Association working collaboratively to reduce acute kidney injury  
Chair: Helen Noble (UK)  
Anna Kliś (Poland) | **Title: Short Orals**

| 26 Short Orals  
Chairs: Michel Roden (Belgium)  
Marie Richards (United Arab Emirates) | 26 Short Orals |
|-----------------|------------------|
| **S 25** | **O 55**  
CRRT in patients with AKI. Experience from tertiary care center in Croatia  
Bosiljka Devci (Croatia) | 0 59  
Assessment of pain and adequacy of analgesia in hemodialysis patients  
Patricia Martínez Alvarez (Spain) |
| **O 56**  
Urinary tract infections in kidney transplanted patients  
Jeanette Finderup (Denmark) | 0 60  
Monthly blood / patient reviews: A focused team based approach  
David McIntyre (Australia) |
| **O 57**  
Factors affecting the post-dialysis levels of vancomycin and gentamicin in haemodialysis patients  
Albert Acheamfour (UK) | 0 61  
Nursing coordinators in the dialysis unit  
Regina Hais (Israel)  
Samar Abed Abo Foul (Israel) |
| **O 58**  
The Undocumented Immigrants – a challenge of treatment  
Iris Romach (Israel) | 0 62  
Anxiety, depression and quality of life in patients undergoing chronic haemodialysis; observational cross section study  
Afra Masià Plana (Spain) |
| **O 59**  
CRRT in patients with AKI. Experience from tertiary care center in Croatia  
Bosiljka Devci (Croatia) | 0 63  
Ischemic hand in dialysis patients: a survey about prevalence, clinical signs and symptoms  
Ilaria Irma Sinisi (Italy) |
| **O 60**  
Assessment of pain and adequacy of analgesia in hemodialysis patients  
Patricia Martínez Alvarez (Spain) | 0 64  
Awareness of renal nurses in identification and education of patients with inherited renal diseases  
Faduma Sharif (United Arab Emirates) |
| **O 61**  
Monthly blood / patient reviews: A focused team based approach  
David McIntyre (Australia) | 0 65  
Strict monitoring of isoagglutinins levels is required for ABO-incompatible living-donor kidney transplantation  
Chloé Couat (France) |

| **O 62**  
Anxiety, depression and quality of life in patients undergoing chronic haemodialysis; observational cross section study  
Afra Masià Plana (Spain) | **O 63**  
Ischemic hand in dialysis patients: a survey about prevalence, clinical signs and symptoms  
Ilaria Irma Sinisi (Italy) |
| **O 64**  
Awareness of renal nurses in identification and education of patients with inherited renal diseases  
Faduma Sharif (United Arab Emirates) | **O 65**  
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| **O 65**  
Strict monitoring of isoagglutinins levels is required for ABO-incompatible living-donor kidney transplantation  
Chloé Couat (France) | **O 66**  
The Undocumented Immigrants – a challenge of treatment  
Iris Romach (Israel) | **O 67**  
Anxiety, depression and quality of life in patients undergoing chronic haemodialysis; observational cross section study  
Afra Masià Plana (Spain) |

| **O 66**  
The Undocumented Immigrants – a challenge of treatment  
Iris Romach (Israel) | **O 67**  
Anxiety, depression and quality of life in patients undergoing chronic haemodialysis; observational cross section study  
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Ischemic hand in dialysis patients: a survey about prevalence, clinical signs and symptoms  
Ilaria Irma Sinisi (Italy) | **O 69**  
Awareness of renal nurses in identification and education of patients with inherited renal diseases  
Faduma Sharif (United Arab Emirates) |
| **O 68**  
Ischemic hand in dialysis patients: a survey about prevalence, clinical signs and symptoms  
Ilaria Irma Sinisi (Italy) | **O 69**  
Awareness of renal nurses in identification and education of patients with inherited renal diseases  
Faduma Sharif (United Arab Emirates) | **O 70**  
Strict monitoring of isoagglutinins levels is required for ABO-incompatible living-donor kidney transplantation  
Chloé Couat (France) |
### 15:30–16:00

#### Auditorium 1

**S 27 Parallel Session**

*Title:* Nutrition  
*GS:* Martin Kuhlmann (Germany)  
*Hidden phosphorus in the diet – consequences for CKD patients and the general population*

- **O 66** Adherence of dietary and fluids restrictions and self efficacy in patients undergoing hemodialysis  
  Mukadder Mollaoglu (Turkey)

### 16:00–17:30

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| **S 28 Parallel Session**  
*Title:* End of life care  
*GS:* Cristiana Dente (Italy)  
*What is the best end-of-life care? The experience of Biella HD center, Italy*
| **S 29 Parallel Session**  
*Title:* CKD prevention & delay  
*GS:* Josep Mª Gutierrez (Spain)  
*Eldery & CKD. Dialysis for all?*  
|  |
| **O 68** Adherence of dietary and fluids restrictions and self efficacy in patients undergoing hemodialysis  
  Mukadder Mollaoglu (Turkey)  | **O 72** Advance care planning for haemodialysis patients  
  Kim Blair (UK)  | **O 75** A programme of early detection of CKD improves patient identification and outcomes  
  Marie Richards (United Arab Emirates)  |
| **O 69** Inpatient compliance with phosphate binder prescription  
  Angela Killeen (Ireland)  | **O 73** Mourning reactions among dialysis patients  
  Erzsebet Horvath (Hungary)  | **O 76** Pre-dialysis: set-up of an improved structure  
  Sarah Crols (Belgium)  |
| **O 70** New technologies to improve the diet of patients with hypertension or chronic kidney disease  
  Marina Fenollar (Spain)  | **O 74** Renal palliative care – where to after the PACKS study?  
  Helen Noble (UK)  | **O 77** Effects of systematic predialysis patient training on the clinical results  
  Aydin Zehra (Turkey)  |
| **O 71** Phosphorus levels and treatment adherence in patients with chronic kidney disease on haemodialysis  
  António Saraiva (Portugal)  |  | **O 78** Awareness of chronic kidney disease by primary care clinicians in Abu Dhabi  
  Allam Rezquallah (United Arab Emirates)  |
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<td>08:30–10:00</td>
<td><strong>S 30 Plenary Session</strong></td>
<td><strong>Title: Diabetes and nephrology</strong></td>
<td>Chairs: Karen Jenkins (UK) Debbie Fortnum (Australia)</td>
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<td><strong>Chair(s):</strong></td>
<td><strong>Josep Mª Gutierrez (Spain)</strong></td>
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<td>CKD diabetic patients-Same illness different care</td>
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<td>08:39–10:00</td>
<td><strong>O 79</strong></td>
<td>Role of nursing in improving diabetic control and preserving renal function in diabetic patient</td>
<td>Nihal Khatib (Israel)</td>
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<td><strong>O 80</strong></td>
<td>Quality of life of diabetic and non-diabetic haemodialysis patients in an urban area</td>
<td>Theodora Kafkia (Greece)</td>
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<td><strong>O 81</strong></td>
<td>Follow-up of the fate of pre-dialysis diabetic patients between 2009 and 2015</td>
<td>Dalma Kulcsar (Hungary)</td>
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<td>10:00-10:15</td>
<td>Coffee Break</td>
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<td>10:15–11:45</td>
<td><strong>S 31 Plenary Session</strong></td>
<td><strong>Title: Renal care for an aging population</strong></td>
<td>Chairs: Marie Richards (United Arab Emirates) Sophie Halldin (Sweden)</td>
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<td><strong>Chair(s):</strong></td>
<td><strong>Ann Bonner (Australia)</strong></td>
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<td>Options for older patients with chronic kidney disease</td>
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<td>10:19–11:30</td>
<td><strong>O 82</strong></td>
<td>Involving patients and carers in research: shared decision-making in advanced kidney disease</td>
<td>Nicola Thomas (UK) Karen Jenkins (UK)</td>
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<td><strong>O 83</strong></td>
<td>One year of intradialytic physical exercise programme: results on functional capacity and body composition</td>
<td>Rui Camisa (Portugal)</td>
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<td><strong>O 84</strong></td>
<td>Change of the age of patients between 1995-2015 and its effect on nursing care</td>
<td>Petr Radović (Czech Republic)</td>
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<td><strong>O 85</strong></td>
<td>How to maintain high quality of care when challenged by organisational changes?</td>
<td>Hanne Hermansen (Denmark)</td>
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<td>11:45–12:00</td>
<td>Coffee Break</td>
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<td>12:00–13:00</td>
<td><strong>S 32 Closing Ceremony</strong></td>
<td><strong>Let's Not Re-Invent the Wheel: Global Collaboration in Renal Care</strong></td>
<td>Chairs: Anne Moulton (Canada)</td>
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<td>Hanne Hermansen (Denmark)</td>
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Oral Presentations

No conflict of interest declared unless noted under abstract.

Saturday, September 17, 2016

S 01 Plenary Session
Auditorium 1, 16:00–17:45

S 02 Opening Ceremony
Auditorium 1, 18:00–19:30

Welcome Words
Welcome by EDTNA/ERCA President Marianna Eleftheroudi

Guest Lecture
The cost of quality and dialysis sessions when travelling worldwide
D. Gallego

After 21 years travelling around the world undergoing RRT (Hemodialysis in centers), the perspective of the different health systems worldwide gives a global vision of the real cost and quality of the treatments.

Mobility and travel, active lifestyle, fulfilling life, even in hemodialysis treatment, nowadays is possible. I depend on a machine to survive, but this machine I can find it everywhere (If you can afford it).

Cost, safety, quality, free access to everyone is an utopia for too many countries, currently 2.3 million people die prematurely each year in the world, without having access to renal replacement therapy.

“Of all the forms of inequality, injustice in health care is the most shocking and inhumane of all.” Dr. Martin Luther King, Jr

Entertainment
Sunday, September 18, 2016

S 03 CES Fresenius Medical Care
Crossing Borders, Setting Standards: Embedding a Culture of Training and Education
Auditorium 1, 9:00 – 10:30

“The unique function of nurses in caring for individuals, sick or well, is to assess their responses to their health status and to assist them in the performance of those activities contributing to health or recovery or to dignified death that they would perform unaided if they had the necessary strength, will, or knowledge and to do this in such a way as to help them gain full or partial independence as rapidly as possible” (Henderson, 1977, p.4).

Technological advances make the nursing profession very dynamic and with this there are great opportunities and a variety of career opportunities, such as specialist nurse roles. Dialysis nursing has been recognised as a speciality for over 35 years. All over the world, irrespective of geographical location, dialysis nursing requires a common knowledge base. Since the demand for dialysis clinical nursing services have evolved rapidly, the need for establishing training courses for these specialist nurses has increased as well.

As a provider of dialysis care for nearly 300,000 patients in our global network of more than 3,400 dialysis clinics we are committed to the delivery of high quality care to patients by highly trained, compassionate and dedicated staff and strongly believe that staff education is fundamental to providing quality patient care. We have produced a standardised education program for our clinic staff, by using a multi-country and multi-disciplinary approach.

The programme is aimed at nurses new to the dialysis setting and prepares them for the role of a Haemodialysis Nurse with the aim of developing safe, competent practitioners in a supportive environment. It was created to provide a clinically focused educational opportunity that fosters the development of theoretical and practical knowledge and clinical skills necessary. Students are required to complete all lecture and practical topics in sequence and topics must be repeated if student does not complete a portion of one of these. Additionally, students must successfully pass the clinical assessments and final performance evaluation.

Session content
Thinking different makes it happen: the value of education
Maria Teresa Parisotto (Germany)

Building Careers, Enhancing Skills: The NephroCare Way
Iain Morris (Germany)

Attract, Educate, Nurture and Retain: Foundation for Change
Cathy Poole (UK)

The Power of Education
Tatyna Glushenkova (Russia)
The Spanish National Transplant Organization (ONT) model and how to raise the number of renal transplants

I. M. Alpuente

With around 14 donors pmp at the end of the eighties, the activity in Spain was at the mid-low position when compared to other European countries. The increase in deceased donation and consequently in the number of solid organ transplants resulted from the implementation of a set of measures, named as the Spanish Model of Organ Donation and Transplantation. ONT was conceived as a technical agency embedded within the Ministry of Health, and in charge of overseeing and coordinating donation and transplantation activities in the country. The Spanish system is founded on these basic principles:

- Donor coordination network: National, regional, hospital.
- Specific profile of the donor coordinator: Medical doctors, mainly critical care physicians, and nurses
- ONT as a central agency in support of the system
- Quality assurance program in deceased donation: continuous clinical chart review of deaths at intensive care units
- Continuous professional training
- Close cooperation with the media
- Reimbursement of donation and procurement activities

We can say that following this model of Organ Donation and Transplantation with close to 40 donors and over 100 transplant procedures per million population in 2015, Spain holds a worldwide privileged position in providing transplant services to its patient population. The Spanish results are of particular merit taking into account the decline in the incidence of brain death in the country. This has prompted our system to develop new strategies to increase organ availability such as promoting the identification of possible organ donors outside of the ICU; facilitating the use of organs from expanded criteria and non-standard risk donors; developing the framework for the practice of donation after circulatory death; expanding the living kidney transplantation activity

Increasing the access of the patients to renal transplantation

L. M. Pallardo¹

¹Nephrology Department, Hospital Universitario Dr. Peset, Valencia, Spain

Background

The shortage of organs is the main barrier to have access to renal transplantation; but several medical and non-medical conditions can determine the access of the patients to be included in the renal transplantation waiting list and, in the end, receive a transplant. In my presentation I will analyse the different conditionants to be included in the transplantation waiting list, the way to improve it, and the results.

Living donation: how to increase, (modalities) and results

F. Oppenheimer¹

¹Clinical Institute of Nephrology and Urology (ICNU), Hospital Clínic de Barcelona, Barcelona, Spain

Living donor kidney transplantation (LKT) is an excellent therapeutic option for patients with chronic renal failure. The two basic premises that justify the use of living donors are the insufficient supply of grafts from deceased donors and the minimal risk of morbidity and mortality for the donor. Having accepted these premises, there are additional benefits: LKT enables preemptive transplantation (or retransplantation) and increases the transplant options for highly immunized patients. Results of LKT are influenced by HLA matching (an HLA-identical siblings is the option with the highest survival rates), previous sensitization, donor age, risk of original disease recurrence and duration of dialysis before the transplant. Genetically unrelated donors and ABO-incompatible transplants offer comparable grafts survival rates to conventional donors. Desensitization therapies in highly immunized patients shows excellent short survival rates, but long-term results are still unsatisfactory due to the early appearance of chronic humoral rejection. The use of altruistic or paired-exchange donors expands the chances of achieving a compatible donor. Combining desensitization and paired exchange donation is a good alternative in very difficult cases. Also, in patients with severe medical or technical conditions, a LKT increases the success rates. Preemtive transplantation minimizes the cost of the procedure, avoids the need of a vascular access for dialysis and improves graft survival. Also, preemptive retransplantation is feasible, reduces the morbidity associated to graft loss and prevents anti–HLA sensitisation that can preclude or difficult further transplants.
Improving the results of renal transplantation
J. Pascual

Kidney transplantation (KT) would be theoretically the best treatment for every patient with advanced chronic kidney disease. However, associated comorbidities frequently contraindicate this therapy, and shortage of organs limit the final percentage of patients truly benefiting it. Currently, only around 4500 patients, around 20% of all patients on dialysis, are listed for a KT in Spain. The first principle to improve the overall results in KT is to expand the KT indications and accessibility, and to progress in kidney allocation strategies. We need to extend initiatives to overcome barriers, inequalities, and ethical issues and in general, anything that might prevent more extensive access with the best possible results in KT both from living and deceased donors in all their possible forms. The availability of organs is another crucial point of improvement, as the current donation rates for both living and deceased donor organs are low in many European countries. Vital organ diseases, generalized arteriosclerosis, non-corrected ischemic heart disease, liver disease or neuropathy severely limit successful listing and KT. Efforts should be made in management of important diseases in potential KT recipients currently on dialysis.

The first weeks after surgery, constitute the most important period for KT outcomes. Short-term complications such as delayed graft function, acute rejection, surgical complications or severe infections are very relevant for short and long-term KT success in terms of graft and patient survival and quality of life. Despite the fact that current immunosuppressive regimens have decreased acute rejection to 10%, chronic injury and chronic rejection have not decreased to the same extent. It is therefore mandatory to joint efforts to manage chronic renal allograft injury, with early detection, distinction of causes, monitoring, and correct treatment. In this sense, individualizing the dosing of maintenance immunosuppression, improving adherence to immunosuppressive treatment regimen and continuing developing and testing of new immunosuppressive strategies and novel immunosuppressive agents remain essential for improving outcomes. Continuing research efforts in pioneer fields such as inducing tolerance or engineering of organs is also very important.

Malignancies, cardiac disease, vascular disease and infections are the most important complications and the causes of patient death with a functioning graft. Modifying traditional cardiovascular risk factors with identification, validation and modification of novel risk factors, and appropriate screening, prevention and treatment of viral reactivation and malignancy constitute basic strategies for improvement.

Finally, the best way to progress is promoting activities of high scientific interest in the generation of evidence and value in the area of kidney donation and transplantation, with clinical trials, observational studies, systematic revisions, guidelines and recommendations. In addition, promoting first class training activities that focus on KT learning for renal physicians and nurses, both in the context of the annual congresses and in other meetings, as well as through online platforms appears essential.
The peritoneal membrane is a physiologic, living tissue, which, in case of peritoneal dialysis, is being (re)used daily.

The functional characteristics can change over time. Monitoring these eventual changes is mandatory in order to adapt the prescription of the dialysis regimen.

The initial Peritoneal Equilibration Test (PET) with a 2.27% glucose solution, described by Twardowski in 1987, allows to categorize the membrane in 4 groups, according to solute transport capacities of the peritoneum, and to individualize the PD prescription.

Over time, more tests, derived or based on the PET have been developed: PET with 3.86% glucose solution, Mini-PET, double Mini-PET and finally the Uni-PET, a combination of all these tests. They provide more information on the function of the peritoneal membrane, more particularly on the water transport or ultrafiltration capacity!

Recent evidence has demonstrated the importance of testing, to detect changes of the membrane, to identify patients at risk and to avoid severe complications such as Encapsulating Peritoneal Sclerosis (EPS).
Haemodialysis and peritoneal dialysis patients’ health perceptions: a comparative study
E. Barbero Narbona1, E. Tejeda Araez1, C. Herrera Morales1, N. Gascó Coscojuela1, T.M. Ho Wong1, E. Junyent Iglesias1
1Servei de Nefrologia, Hospital del Mar – Parc de Salut Mar, Barcelona, Spain

Background
Patients with stage 5 of chronic kidney disease on dialysis have cardiovascular, musculoskeletal and psychosocial disorders that affect their physical and functional capacity. The lack of physical activity contributes to the development of chronic diseases and an increase in mortality. Health-related quality of life (HRQoL) is the self-assessment of the individual regarding their own health.

Objectives
The aim of this study was to assess and compare the health perceptions, functional capacity and psychological status of patients on haemodialysis (HD) and peritoneal dialysis (PD).

Methods
A descriptive study was performed to include all dialysis patients in our centre. A database was created and data collected were analysed using SPSS version 21. Five tools were used for assessment: the Charlson comorbidity Index, the Medical Outcomes Study Short Form scale (SF-12), the Barthel ADL index, the Lawton-Brody IADL scale and the Geriatric Depression Scale (GDS).

Results
The sample size was 42 patients (21 HD + 21 PD). The results show a homogeneous group in terms of average age (HD 64.8 ±12.9 / PD 65.6 ±11.3 years), Barthel ADL index >75 (HD 80.9% / PD 90.5%) and Lawton-Brody IADL >5 (HD 76.2% / PD 80.9%). However, HD patients were comparatively more sedentary, resulting in them feeling worse psychologically and physically than PD patients.

Conclusion/Application to practice
The results reveal that our HD patients have worse HRQoL than PD patients. We therefore plan to launch a fitness programme to improve their health and monitor those patients detected with possible depression by the GDS.
0 02
Applied nursing protocols in Peritoneal Dialysis in Greece
M. Androulaki1, D. Haniotaki1, M. Christoforaki1, K. Tzanaki1, M. Kenourgakis1, G. Mantziou1, H. Maniadis1, M. Sfakianaki1, E. Frosinaki1, P. Nzilepi1
1Peritoneal Dialysis Unit, University Hospital of Heraklion, Heraklion, Greece

Background
Peritoneal Dialysis Protocols are regarded as necessary, as the patient is directly affected by his self-care.

Objectives
This research involves the nursing protocols applied in the PD Units in Greece and their possible correlation with complications like days of hospitalization and the number of staff members in the units.

Methods
The research took place in 31 Units, in Greece. Data was collected through questionnaires that investigated the nursing practice in patient training, connection and disconnection to CAPD and APD, exit site care, patient monitoring, peritoneal catheter insertion, infections management, along with the frequency of them. The completed questionnaires were evaluated with spreadsheets and valid statistical methods. All trials were two tailed and the level of significance was set at 5% (p<0.05).

Results
The duration of the training did not seem to affect the incidence of peritonitis. The incidence of the exit site infection did not seem to be affected by:

- The frequency of care
- The way of care and coverage
- The use of antibiotic ointment

The hookup to CAPD with simple wash, no gloves with the use of antiseptic appears not to have an effect to the appearance of infection.

In APD there is a statistically significant difference in the use of gloves and the incidence of peritonitis. The use only of antiseptic seems to ensure protection.

Conclusion/Application to practice
In all units there are written protocols for the application of PD. There is differentiation from unit to unit. Isolated evidence in some protocols seem to surpass in what concerns the complications but mainly the days of hospitalization.
Peritoneal dialysis or haemodialysis in pregnancy: nephrologist choice or patient choice?

A. Hurley¹, J. Williams¹
¹Peritoneal Dialysis Department, South West Thames Renal and Transplantation Unit, St. Helier hospital, Carshalton, United Kingdom

Background
Pregnancy outcomes in patients with end-stage renal disease on dialysis are improving. Recent literature supports intensive haemodialysis as the modality of choice in pregnancy in ESRD. The author will describe a successful delivery of a healthy baby, to a mother on PD reluctant to switch to HD, achieved by using PD with HD.

Methods
This is a case study of a 28 year old with CKD, since first pregnancy started PD in 2011. In November 2014 it was discovered she was 7 weeks pregnant.

The patient was reluctant to have HD due to childcare and geographical distance and due to minimal literature supporting the use of PD exclusively in pregnancy; a patient centred approach was used. Close monitoring of the progress of mother and foetus was planned with the need to maximise PD adequacy. A combination of APD and CAPD was commenced.

At 19 weeks some HD was required to improve clearances and was commenced, 5 days per week for 3 hour sessions to fit in with childcare, creating issues with transport and current HD shifts. A room was utilised in the PD unit to accommodate the HD and monitoring of PD.

Conclusion/Application to practice
A healthy baby girl was born on 17th July at 38 weeks gestation, by caesarean section, not associated with any renal complication. Patient choice was a significant factor in designing a treatment plan that caused the least disruption to family life, whilst achieving adequate dialysis to support foetal growth and wellbeing.
Developing a shared care plan to improve patient care in peritoneal dialysis

Z. Aydin¹, S. Ozcan², N. Sagnak¹, A. Badir², E. Turkmen²

¹Health Science Institute, Koc University, Istanbul, Turkey; ²School of Nursing, Koc University, Istanbul, Turkey

Background
A multidisciplinary approach for the management of chronic diseases may improve the quality and effectiveness of care. Since Chronic Kidney Disease is a major health problem, implementing multidisciplinary care plans may improve patient care and reduce complications.

Objectives
This study aimed to develop a shared care plan that can be used by multidisciplinary dialysis teams to treat, care and follow up with patients undergoing peritoneal dialysis.

Methods
This descriptive study was designed as action research carried out in two stages. Approval was given by the Koc University Ethics Board (No: 2014.154.IRB3.107)

In the first stage, a questionnaire was used to collect data to assess the multidisciplinary care approach in our country. The study comprised 182 nurses from 140 centers.

In the second stage, the „Peritoneal Dialysis (PD) Shared Care Plan” was prepared based on the literature and the findings and expert opinions were obtained through two focus groups were conducted with multidisciplinary teams consisting of doctors, nurses, dietitians, psychologists and social workers to assess the validity of the content.

Results
Edema, catheter function, dialysis procedure assessments and the management of complications were found to be the most frequently followed parameters (82.5%, 82.5%, 72.7%, 74.8% respectively). Depression, quality of life, educational needs, and nutritional assessments were found to be the least frequently followed parameters (9%, 5%, 2.8%, 3.5% respectively).

Conclusion/Application to practice
It was found that there was no systematic implementation of an adequate multidisciplinary care approach in peritoneal dialysis treatment. A Shared care plan would help to create a coordinated multidisciplinary care approach in these settings.
The potential burdens of haemodialysis for older patients with significant comorbidities, is increasingly recognized as an hot topic. Greater recognition that health care financial resources are limited makes fair allocation more pressing, highlighting the importance of distributive justice. However we should be aware of the great risk that with the advent of accountable care and bundled payment in some countries, including United States, previous incentives to offer haemodialysis to as many patients as possible are being replaced with a disincentive to dialyze high-risk patients. It is true that as medical technology evolves, a comprehensive understanding of an ethical framework for evaluating appropriate use of medical interventions is mandatory. However while we should avoid the harm of overtreatment for elderly patients with comorbidities, there are concerns that we could return to rationing haemodialysis. In light of the recent emphasis on patient-centered outcomes and quality of life for patients, the importance of patient preferences and personal values should be of paramount in medical decisions, reflecting a focus on the principle of patient autonomy. Nephrologists and nurses are called on to help patients make their decision and should ensure that the patient is correctly informed about the potential benefits and burdens of haemodialysis, including age and all the comorbidities potentially affecting the balance between benefits and burdens. Patients care more about how they will live instead of how long.
Empathy assessment in the healthcare professionals of the nephrology and dialysis
C. Squarcia¹, D. Narcisi¹, S. Norcini¹, L. Rossi¹, A. Tancredi¹
¹Area Vasta 5 Ascoli Piceno e San Benedetto del Tronto, U.O.C. di Nefrologia e Dialisi, Ascoli Piceno, Italy

Background
The ability to empathise is considered a fundamental attitude of healthcare professionals. In particular, chronic diseases such as uraemia have a deep impact on the life of people.

Objectives
This paper aims at assessing the empathic attitude of healthcare professionals of the Nephrology and Dialysis U.O.C. [Complex Operative Unit] of Area Vasta 5, Italy.

Methods
In our observational study, the official Italian version of the Balanced Emotional Empathy Scale, in order to assess their empathic attitude, was used. The difference in empathy among male and female professionals and among age groups was assessed. 5 facets derived from the sum of responses per item group were assessed too.

Results
The level of empathic attitude resulted to be good; however, female healthcare professionals scored higher in empathic attitude. The empathic attitude of older professionals, both male and female, scored higher than the younger age group. The score results were in line with the national and international average empathic attitude data, both in absolute and category values.

Conclusion/Application to practice
Despite the observational study being carried out in a relatively narrow population, it enabled us to assess our empathic attitude in the professional. The ultimate goal is that the study leads to organise discussion groups and educational actions among healthcare professionals, led by a relationship dynamics expert and aimed at improving complex relationship management.
Kidney transplant in a noncompliant young adult – as case study

R. Rahmanov¹, R. Shternshus¹, E. Golland², J. Barry², I. Weissman¹
¹Children Dialysis Department, Galilee Medical Center, Naharia, Israel; ²Dialysis Department, Galilee Medical Center, Naharia, Israel

**Background**

Kidney transplant is the treatment of choice in ESRD, in particular for young patients. Post-transplant care requires meticulous adherence to medications. Literature shows poor prognosis of graft survival when there is suboptimal adherence to treatment before transplant, especially when patients have addictions to drugs or alcohol.

A 19 year old male started haemodialysis in January 2014. After starting dialysis he adopted various high risk behaviors: using drugs, driving without a license, surfboarding and skateboarding, not complying with medical instructions and missing some dialysis treatments. He did not have the structure of school or a job. The patient requested a kidney transplant in order to improve his quality of life.

**Objectives**

Determining whether it is morally correct to transplant this young adult.

**Methods**

Interviewing young adult, his family, the staff and bringing the case before the hospital ethical committee.

**Results**

After interviewing him and explaining the importance of non risk behaviors and compliance, he began to come to more dialysis sessions and began to change his behavior, it was therefore decided that he was suitable for transplantation.

Now, six months after the transplant the patient comes to routine visits to the post-transplant clinic. Creatinine levels are between 1.07 to 1.15, and he adheres to immunosuppressive therapy. Prograf levels are maintained as required.

**Conclusion/Application to practice**

Despite the correlation in literature of noncompliance and poor prognosis of graft survival, our results indicate that there is a moral basis for kidney transplant in a young adult with a supporting family and the desire and ability to change behavior.
Mental healing after acute rejection – a disregarded issue

A. Paar, L. Ledo, B. Kiss-Suranyi, M.D. Ónody

1Dialysis, B. Braun Avitum DialysisCentre No. 11, Gyor, Hungary; 2Clinical Research, ICON Plc., Budapest, Hungary

Background
A 49 year old male patient underwent an unsuccessful kidney transplantation two times (10.2012, 10.2014). Rehabilitation after rejection caused a significant mental stress for the patient and for the relatives as well.

Objectives
Restarting dialysis after acute rejection means a mental and somatic stress for the patients. We consider rejection as acute when it happens less than 21 days after transplantation. This event is particular, according to the medical staff. Patients should be put in condition to process the fail and create a new hope.

Methods
We wondered what kind of determinant facts caused considerable problems in this unexpected situation. We decided to investigate the circumstances that helped the patient to overcome this challenge.

Results
Rehabilitation after acute rejection usually consists of only somatic rehabilitation. There is not dedicated medical staff to help patients in their mental healing. We found that dialysis could be acceptable again but as a long term aim it will be a persistent problem after many transplantation failure. As for the patients’ personal opinion, it is worth noting that family members are totally disregarded although this could be the most determining feature in this process.

Conclusion/Application to practice
We mustn’t forget the incontestable role of the family in mental healing. The family could assist most patients, helping them to overcome this experience. We think psychologists would be necessary in the dialysis centres, if not even at the transplantation clinic.
**008**

**Australian patient views: the impact of dialysis treatment and gaps in education and support**

D. Fortnum¹, M. Ludlow²

¹Education, Kidney Heath Australia, Perth, Australia; ²Health outcomes, Kidney Health Australia, Perth, Australia

**Background**

In Australia it is acknowledged that dialysis has a huge treatment burden, even for home dialysis. However there is little data on the impact and whether patients receive enough education and support.

**Objectives**

To determine the opinions of Australians on all modalities of dialysis about education received, support (both provided and unmet needs) and the impact of dialysis on lifestyle factors.

**Methods**

A 39 question multi-choice survey was developed with consumer consultation. Following ethics approval it was distributed to all modalities of dialysis patients at 46 randomly selected units across Australia.

**Results**

1021 responses were received. 74% were satisfied with being on dialysis. Receiving over two hours of education was associated with being on home dialysis (p<0.001). Education delivery needs were more time with health care professionals (28%), more patient contact (24%) and simpler explanations/photos (23%). The top three lifestyle impacts were taking holidays (64%), social events (53%), and ability to participate in sport, varying by modality of dialysis. Financial strain was highest in those under 45yrs (p<0.001). More support was desired in many areas; financial (28%); transport (20%); information about exercise (18%) and help with housework and shopping (16%). Both centre based and home dialysis patients involved carers equally in supporting their dialysis (64%) with 27% receiving a government carer payment.

**Conclusion/Application to practice**

In Australia all modalities of dialysis had a negative lifestyle impact which was often higher in younger consumers, and also impacted on family life. There were gaps in education and support that could be addressed.
S 07 Challenge of multimorbidity
Auditorium 2, 11:00 – 12:30

GUEST SPEAKER
Managing multi-morbidity in haemodialysis patients – a personalised approach
J. Harty 1
1Renal Unit, Daisy Hill Hospital, Southern Health and Social Care trust, Newry, United Kingdom

Background
In the UK patients aged over 65 represent the fastest growing group of the dialysis population. They have a high burden of co-morbidity and polypharmacy. Malnutrition and reduced physical quality of life is common. They are less likely to be offered transplantation. Their dialysis course is often characterised by an increase in frailty, accelerated decline and reduced life expectancy.

Objectives
To understand the type, frequency and impact of co-morbid diseases in the HD population.
To identify successful interventions in managing common co-existing diseases (diabetes, PVD)
To identify key objectives which improve outcome in the multi-morbid HD cohort.
To understand the role of palliative care in symptom management.

Methods
I will focus on the practical aspect of managing common co-existing diseases in HD patients. I will review the evidence for effective intervention to reduce the cardio-vascular burden.
The importance of specialist nurse input in tailoring specific care to patients with diabetes and the importance of a vascular team to reduce amputation is stressed.
I will discuss the importance of symptom control in frail patients and the importance of early palliative care input.
Finally I will discuss the essential components of a HD review.

Results
Despite an increasingly elderly population, long-term survival of incident dialysis patients continues to improve with falling death rates from cardiovascular disease and a plateauing in infection. Withdrawal from dialysis is increasing.

Conclusion/Application to practice
Targeted intervention to reduce the burden of co-existing disease with modification of aspects of dialysis care can improve outcomes. Recognition of decline should be reflected in realistic patient goals.
Granulomatous hypercalcemia due to Crohn’s disease in a haemodialysis patient

Z. Alici
1Nephrology, CH Louis Jaillon, Saint Claude, France

Background
Normo calcemic end stage renal failure alerts us for a possible coexisting disease associated hypercalcemia or activated macrophage and dendritic cells leading to extra renal UN alpha hydroxylation of vitamin D.

Methods
A 86 year old man was dialyzed due to the evolution of multiple emboli cholesterol syndrome to end stage renal failure. He has history of pulmonary tuberculosis treated with quadruple therapy in 1970, arterial hypertension, benign prostatic hypertrophy under Tamsulosine, operated peri anal abscess and abdominal aortic aneurysm treated surgically. He was found to have hypercalcemia secondary to a confirmed diagnosis of Crohn’s disease that improved under corticoid therapy.

Results
Dysregulation of calcium homeostasis is very common in dialysis patients. Hypercalcemia associated Crohn disease was previously described and our particular case confirms it. Normalized calcium level after the start of prednisolone pointed the granulomatous origin.

Conclusion/Application to practice
Granulomatous form of Cohn’s disease may present with hypercalcemia due extra renal hydroxylation of vitamin D in the presence of renal failure.
Pneumococcal vaccination in dialysis patients in Saudi Arabia - a performance improvement project

J.M. Sedgewick¹, J. Barrios¹, T.W. Habhab², E. Al-Jehani¹

¹Department of Nursing Affairs, King Faisal Specialist Hospital & Research Center, Jeddah, Saudi Arabia; ²Department of Medicine, King Faisal Specialist Hospital & Research Center, Jeddah, Saudi Arabia

Background

Saudi Arabia welcomes 2-3 million pilgrims annually to perform Hajj, a lifetime religious duty for all Muslims. Dialysis patients require protection against communicable diseases arising from the influx of pilgrims. The Advisory Committee on Immunization Practices (ACIP) recommends pneumococcal conjugate vaccine to chronic renal failure patients. Vaccine administration other than hepatitis B, were administered by the hospital Family Medicine Department. This was time consuming leading to patients travelling to Mecca, without being vaccinated and arriving back with illness requiring antibiotic treatment.

Objectives

To improve pneumococcal vaccination rates amongst dialysis patients travelling to Mecca to perform Hajj.

Methods

The Focused PDCA methodology identified dialysis patients not receiving pneumococcal vaccination. The project involved collaboration with Logistics Department, Nursing Education, Pharmacy and Medical team. A special fridge connected to a central system ensured stable vaccine temperature and potency. Pneumococcal vaccines were provided by pharmacy and nursing education provided education on vaccine administration. Unit policies were revised reflecting the expanded practice of renal nurses. Educating patients and family focused on the benefits and of protective health behaviors.

Results

The project spanned January to December 2015. The initial vaccination target was 10% (n=8) of dialysis patients frequently travelling to Mecca. By May 2015, the target reached was 30% (n=23). Vaccination uptake until Dec. 2015 reached 95% (n=54).

Conclusion/Application to practice

This project demonstrated the impact renal nurses have on implementing preventive health strategies to protect patients. Renal nurses promoted patient health, improving their morbidity and mortality. Collaborative work with Pharmacy, Nursing Education, Logistics Department and Physician was crucial to this project.
Patients in haemodialysis experience uremic pruritus as a dual phenomenon
J. Finderup¹, H. Tarp¹, ², M. Bonde-Petersen²
¹Department of Renal Medicine, Aarhus University Hospital, Aarhus N, Denmark; ²University College VIA, Aarhus N, Denmark

Background
Uremic pruritus is one of the most frequent symptoms in patients in haemodialysis. Existing studies show that uremic pruritus increases quality of life and sleep. Patients find it difficult to describe their symptoms to healthcare professionals. This may lead to misunderstandings in the communication between patients and healthcare professionals.

Objectives
To explore how patients in haemodialysis experience the phenomenon uremic pruritus.

Methods
A qualitative phenomenological-hermeneutic framework was used to explore the experience of uremic pruritus. Fifteen semi-structured interviews were made at a Danish university hospital in November 2015. The interviews were transcribed and analysed using Malterud’s principles of systematic text condensation.

Results
Patients gave conflicting descriptions of the phenomenon. Patients experienced uremic pruritus as a dual phenomenon described as ‘the itch’ and ‘itching’. ‘The itch’ will never disappear and is unmanageable, and ‘itching’ is appearing intermittently and is possible to prevent and alleviate.

Conclusion/Application to practice
It is impossible for patients on their own to manage uremic pruritus. However, it may be possible to manage uremic pruritus by considering it as a dual phenomenon. This knowledge can help both patients and healthcare professionals to understand the symptom from a new perspective.
Epidemiology of moderate and severe psoriasis in Greek patients on renal replacement therapy

C. Avrami1, O. Delimarkou1, A. Zezou1, S. Zorbas1, A. Schoinas1, D. Karathanasis1

1Dialysis Unit, 401 Military Hospital of Athens, Athens, Greece

Background
Psoriasis is an inflammatory disease of the skin estimated to affect almost 2% of the general Greek population. Recent studies link moderate and severe psoriasis to an increased risk of Chronic Kidney Disease, but there is shortage of data regarding the prevalence of psoriasis in the population with ESRD.

Objectives
The aim of this study is to estimate the prevalence of moderate or severe psoriasis in Greek patients on renal replacement therapy, mainly on dialysis and define the impact their therapy has on the eruption.

Methods
A cross-sectional study was conducted. We designed a self administered questionnaire with 16 questions pertaining to patient’s CKD history, comorbidity, psoriasis severity and evolution in association with the introduction of renal replacement therapy. The survey was conducted in various hospital-based and private renal units in cities and islands all over the country. The patients participated on an anonymous basis.

Results
36 renal units were included in the survey. 25 patients with moderate or severe psoriasis were identified corresponding to 0,87% of the total population examined, which is 38% higher than in the general non-dialysis dependent population. In addition 36% of the patients with moderate or severe psoriasis reported significant improvement after starting dialysis.

Conclusion/Application to practice
This study implies that patients with moderate or severe psoriasis are more likely to suffer from end-stage renal disease. We also suspect that in patients who suffer from both diseases, the inflammation and psoriasis severity depends on the existence of a dialyzable factor.
“Who pays the Ferryman”? Dialysis dilemmas: costs & ethical questions”
Aase Riemann, PD consultant and Brand Ambassador, The Netherlands
Michel Roden, Brand Ambassador, Belgium

Introduction
In most countries all over the world reimbursement for chronic dialysis consumes a substantial portion of healthcare costs for a relatively small proportion of the population. ESRD treatment expenditure is in developed countries accounted for 2-3% of total healthcare expenditure, while ESRD patients represent only 0.02-0.03% of the population.

At current technology, we know that HD and PD are clinically equivalent modalities. None of these treatments rates better than the other in quality of life or patient medical outcomes.

Peritoneal Dialysis (PD) is an affordable modality in most countries. Market factors seem nevertheless to play a major role in PD utilization. Governments should realize that the bulk of PD costs arise from the market price of the CAPD bags. PD can be promoted by governments; as a dialysis first programme, by local manufacturing or by slashing import duties.

Despite literature favourable to more frequent and longer haemodialysis (HD) reimbursement strategies do not incentivize this. For home haemodialysis reimbursement is often insufficient to pay all costs.

To keep budgets low governments and insurance companies try to minimalize costs. They struggle to achieve the optimal balance between cost containment and high-quality care for all patients, regardless of socioeconomic status. Professionals in renal care are often confronted with cost-reductions but discuss very little priorities in sparing. On working level professionals are confronted with reductions in staff, shorter hospitalizations and less money for training and education. This has a direct influence on the care for patients and can cause stress and burnout by nurses who are forced to work against their own ethical values.

Nurses in renal care have knowledge about care and the value of good care to patients. Together with their patients they should discuss the priorities in situations of sparing and cost reductions. Discussions with politicians and management of health care institutions done by nurses and patients should make clear the consequences for health and quality of life of patients.

Method
During our masterclass we discuss problems of cost reductions in care with the audience. We talk with a Belgian chronic patient about costs and his own responsibilities in his treatment. Examples of unlucky sparing of costs in PD, ethical values and examples of implications of cost reductions on nursing care will be shown. Value of new developments such as eHealth-applications and cheaper dialysis machines will be discussed.

Results
Nurses should much more frequently talk in public about the ethical implications for care of reductions of costs. The masterclass intents to inspire renal nurses to take up this challenge.

Conclusion
Saving money without thinking of the quality of life of patients is against the ethical values of nurses. New developments in renal care are necessary, but reduction of staff in renal wards and less money for training and education of professionals will always have serious implications for care of patients.
Masterclass
Committee Room 6

Writing an abstract for international conferences
H. Noble, B. Poje

An abstract is a self-contained, short, and powerful statement that describes a larger piece of work. Importantly, abstracts allow readers to quickly decide whether it is worth taking time to read the full piece of work. Abstracts need to cover aspects such as the reason for carrying out the study or project and the gap in knowledge; the methods or approach used to carry out the work; what was found and why these findings are important. This Masterclass will describe the process of abstract writing in detail, and offer guidance to health care practitioners intending to write conference abstracts. The intention is to increase your chance of a successful application. We would encourage you to bring along an abstract that you are writing and we can discuss and offer advice.
S 09 Lunch Symposium
Auditorium 1, 12:45–13:45

GUEST SPEAKER
Patient & carer groups – an interactive workshop on engagement in improving care quality
F. Loud¹, H. Noble², N. Thomas³
¹British Kidney Patient Association, Alton, United Kingdom; ²School of Nursing and Midwifery, Queen’s University Belfast, Belfast, United Kingdom; ³School of Health and Social Care, London South Bank University, London, United Kingdom

Background
Groups of patients can and do make a valuable contribution to healthcare systems, whether in advising, representing how the healthcare system is working from the viewpoint of the recipient, or acting as a voice for service improvement.

Objectives
The workshop will use practical examples of creating, recruiting and maintaining patient advisory groups and will explore the learnings from this approach.

Methods
Case studies
How a patient charity set up and learned from a patient advisory group
How the UK Renal Registry set up its patient council and what it has learned to date

Results
The workshop will discuss how the charity, the Renal Registry and the patient advisors benefited from their involvement.
S 10 Lunch Symposium
Auditorium 2, 12:45 – 13:45
Chairpersons: Anna Marti Monros & Francesca Tentori

The DOPPS Program continues to grow – F. Tentori
New study directions: PDOPPS and CKDOPPS – J. Albert
Recent findings from EURODOPPS – P. de Sequera
The patient experience as a key outcome in DOPPS – J. King

All presentations will have a practical clinical focus. A brief discussion will follow each presentation and a panel discussion with all speakers and chairpersons will end the symposium.

This Symposium will focus on new findings provided by the DOPPS regarding modifiable haemodialysis practices. The program will highlight evidence-based opportunities for improving clinical management of haemodialysis patients. The international panel of speakers will present several clinically relevant practice areas, with emphasis given to the international perspectives of DOPPS. Dialogue between the panelists and audience is encouraged during the Panel Discussion in the closing minutes of the program.
Peritoneal Dialysis basic principles and prescription of different types of modalities

M.T. Theodoridis¹

¹Nephrology Department, University Hospital of Alexandroupolis, Greece

Renal replacement therapy using Peritoneal Dialysis (PD) is an effective treatment equal to hemodialysis. To apply PD we need a peritoneal dialysis solution, a peritoneal catheter, a connective system and the use of peritoneal membrane as a filter to remove the uremic toxins, the excessive fluid as well as to give useful substances e.g. bicarbonate to the body. The peritoneal membrane consist of a single layer of mesothelial cells and a submesothelial zone of connective tissue which includes various cells and blood vessels.

The uremic toxins move across blood vessels wall (major site of resistance) through the connective tissue and the mesothelial cells into the peritoneal dialysis solution. The movement of the uremic toxins (thus the clearance) is made by diffusion (due to concentration gradient) and by convection (following water movement). The excessive water is driven out of the body using osmosis due to the osmotic gradient of glucose (an important substance of peritoneal dialysis solution). The movement of water and uremic toxins through the membrane is based on two models. The three pore model and the model of effective peritoneal surface area (EPSA). The three pore model states that the endothelium of the blood vessels includes three types of pores with the smallest (aquaporines) responsible only for water movement. The EPSA model states that the vessels closed to the mesothelial layer are the only ones responsible for the solute clearances.

Even though the peritoneal dialysis adequacy is actually the total well-being of the patient, after the ADEMEX study it is defined as a total Kt/V (peritoneal and renal) of 1.7 (weekly). Kt/V is a dialysis adequacy marker that refers to the total amount of urea driven out of the body through the membrane and through the urine. In order to prescribe the correct peritoneal dialysis session to achieve the adequacy target we need to find peritoneal membrane characteristics. We determine these characteristics using Peritoneal Equilibration Test (PET). With PET test results we divide according to urea movement the patients into 3 groups: the Fast, the Average and the Slow transporters.

The Peritoneal Dialysis method is applied in the following forms: the Continues Ambulatory Peritoneal Dialysis (CAPD) and the Automated Peritoneal Dialysis (APD). CAPD refers to a method which the patient manually every 4 to 6 hours renew a specific peritoneal dialysis volume. APD refers to a method which a cycler (machine) during the night, in which the patient sleep, automate renew the peritoneal dialysis solution from the abdomen. This can be combined or not with a day time use of a peritoneal dialysis solution [well]. It is more usual for a slow transporter to be on CAPD (good ultrafiltration, difficult clearances) and for a rapid transporter to be on APD (good clearance, difficult ultrafiltration). In nowadays we can include a slow transporter safely in APD. When different studies compared CAPD with APD they found that the patient and the technique survival was equivalent. APD was slightly better for patient’s quality of life and peritonitis rates.

Finally the patient together with his/her family must decide according to his/her life style the method of PD (CAPD or APD) and the health team of the peritoneal dialysis unit the way for application.
How to determine peritoneal membrane characteristics (PET test)

S. Bezirianniou

1Health Visitor, Outer Clinic of Peritoneal Dialysis Unit, Nephrology Department, University Hospital of Alexandroupolis, Greece

The most popular method to achieve peritoneal membrane’s characteristics is Peritoneal Equilibration Test – PET, where we can calculate the equilibration rates of small solutes (e.g. uremic toxins) between dialysate and plasma (calculate Dialysate/Plasma ratio).

The equilibration rate of a substance is affected by the molecular weight, by membrane’s characteristics and by the effective peritoneal surface area.

Based on the transport rate patients are divided (classified) into three categories:
• Patients with a high transport rate - High or Rapid transporters
• Patients with an average transport rate - Average transporters
• Patients with a low transport rate - Low or Slow transporters

High transporters tend to achieve good clearances for the uremic toxins due to the rapid movement from the capillaries to the peritoneal cavity but because they loose the osmotic gradient of glucose as well they have significant ultrafiltration problems. For these reasons they are better suited with APD (short time dwells).

Low transporters tend to have good ultrafiltration because they keep the osmotic gradient of glucose but due to the slow movement of uremic toxins they achieve adequacy targets with difficulty. For these reasons they are better suited for CAPD (longer time dwells with larger volumes).

PET test consists of a four hour dwell of a 2 lt, 2.5% dextrose exchange in which we receive dialysis (d) effluent for urea, creatinine and dextrose estimation at 0, 2 and 4th hours and blood (p) specimen for estimation of creatinine at 2 hours. We calculate the ratios of d/p of creatinine at 0, 2, 4 hours as well as d/d0 ratios or glucose at 2 and 4 hours. With these results we estimate the type of transporter of our patient as well as the ultrafiltration ability of the membrane.

Patient’s Lifestyle and preferences dictate which method should be chosen.

In continuance follows the International Rules for PET test procedure, the description of different kinds of PET and report of advantages and restrictions during their implementation.
**GUEST SPEAKER**

**NeoKidney – a renewed approach to mobile haemodialysis**

**J.M. Boomker¹,², J.P. Stooker², F.P. Wieringa²,³,⁴, T.A.J. Oostrom⁵**

¹Nierstichting Nederland, Bussum, Netherlands; ²NeoKidney Development BV, Bussum, Netherlands; ³TNO Science & Industry, Delft, Netherlands; ⁴Faculty of Health, Medicine and Life Sciences, Maastricht University, Maastricht, Netherlands

**Background**

Dialysis treatment sustains the lives of millions of patients. Still many patients feel restricted by their treatment regimen and also suffer from the dismal effects of the “dialysis unphysiology”. Home dialysis offers more scheduling flexibility and the opportunity for frequent dialysis, but demands costly structural modifications to the home, is relatively complicated and therefore only an option for a restricted number of patients.

Patient organizations demands plus the apparent innovation gap within dialysis industry, triggered the Dutch Kidney Foundation to start developing a small, mobile and easy-to-handle haemodialysis device that can be used virtually everywhere. Portability/wearability is enabled by a dialysate recycling sorbent system.

We took a renewed approach by commissioning two medical device companies to combine several of their state-of-the-art technologies. Good progress is ongoing towards a portable artificial kidney (PAK) weighing 5-10 kg and using only a few litres of dialysate. The renewed approach involves patient feedback sessions to discuss the concept and design of the PAK.

This program – which has been assigned to Neokidney Development BV - is predominately funded by the Dutch Kidney Foundation (via earmarked donations from major donors) and Dutch health care insurance companies. For large scale production and distribution, we seek partnerships with companies with access to many patient clinics and patient homes.

We aim for continuous innovation: For the next generation devices several research projects already have started focusing on new sorbent filters, membranes and sensors to further decrease the size and better fine-tune dialysate composition and efficacy of treatment.
Inversion of branches in dysfunctional central venous catheters - impact on haemodialysis efficacy

O. Albuquerque¹, A. Seabra¹, J. Fazendeiro Matos², M.T. Parisotto³
¹NephroCare Coimbra, Fresenius Medical Care, Coimbra, Portugal; ²NephroCare Portugal, Fresenius Medical Care, Porto, Portugal; ³Care Value Management EMEA, Fresenius Medical Care, Bad Homburg, Germany

Background
In haemodialysis when the nurse finds an arterial branch of a dysfunctional catheter, the inversion of branches is often used, despite the known increase of recirculation. This is often done as a last resort, before implementing more expensive methods (e.g. fibrinolytic agents or even catheter replacement).

Objectives
• To assess whether the inversion of branches of dysfunctional catheters improves dialysis effectiveness.
• To compare the results obtained with functional catheters (without an inversion of branches).

Methods
28 patients with permanent tunnelled central venous catheters (CVC) were divided into 2 groups:
• group 1: 14 patients with dysfunctional CVC
• group 2: 14 patients with functional CVC

We compared the dialysis effectiveness (urea reduction ratio (URR), Kt/V) of patients dialysed
• with normal branches of group 1 with those dialysed with inverted branches of group 1.
• with normal branches of group 2 with patients dialysed with inverted branches of group 1.

Results
5 of dysfunctional CVC worked only in an inverted position of branches. In the remaining 9, the inversion of branches resulted in a decrease of Kt/V from 1.63 to 1.47 and of URR from 74.2% to 72.9%, despite the increase of Qb from 286 to 303.3ml/min. Functional catheters with normal branches had a Kt/V of 1.54 and a URR of 75%.

Conclusion/Application to practice
Despite the small population analysed, our priority is to keep the catheter on normal branches, as in our study this was associated with a better dialysis efficacy. The inversion of branches is a valid alternative in case of reduced blood flow. If this alternative is necessary, dialysis efficacy must be imperatively supervised.
Hypoxia-inducible factor prolyl hydroxylase inhibitors: The future of anaemia management in chronic kidney disease?
D.V. Nebres1, L. Goldstein1, C. Adan1, I.C. Macdougall1
1Renal Research Department, King’s College Hospital NHS Foundation Trust, London, United Kingdom

Background
The current standard-of-care for treating anaemia in CKD patients is ESA therapy, with or without iron supplementation. There are, however, some limitations with this treatment, notably the need for frequent injections. A new class of drugs, called HIF prolyl hydroxylase inhibitors, are in clinical trials; the evidence to date suggests that they also improve CKD anaemia, and their major advantage is that they are orally-active.

Methods
In our renal unit, we have performed phase 1, 2, and 3 clinical trials of two of these new agents, roxadustat and molidustat. Both drugs are given in tablet form. To date, 10 patients in our unit have been enrolled to the roxadustat study (longest on treatment 92 weeks), and 24 patients to molidustat (6-month study with extension phase).

Results
All patients in these trials had baseline haemoglobins of around 8 to 9 g/dl, and all have responded to treatment. Anecdotally, this has been associated with them feeling stronger, with less fatigue. The drugs seem well-tolerated, and no significant adverse effects have been noted. Administering the treatment as tablets would seem to be the main advantage of this class of drugs over current ESAs.

Conclusion/Application to practice
Clearly, the full analysis of the phase 2/3 clinical trials of these agents is required before any definitive conclusions can be made about their efficacy and safety, but the preliminary experience in our unit is very positive. If successful, HIF prolyl hydroxylase inhibitors would be particularly useful in CKD patients not receiving haemodialysis, preventing the need for frequent lifelong injections.
Rheopheresis: a treatment for peripheral arterial disease
M. Hermelin¹, J.M. Lagarde¹
¹DNTO, Haemodialysis, Toulouse, France

Background
Many patients suffer from peripheral occlusive arterial disease caused by arterial narrowing, especially at the lower extremities due to atherosclerosis. Age, chronic kidney failure, and diabetes are the main risk factors for peripheral arterial disease. Traditional treatments rely on trophic care, surgery, and medicines that improve blood perfusion and reduce blood viscosity.

Objectives
A novel apheresis technique called rheopheresis has been recently developed. It reduces blood viscosity by decreasing plasma concentrations of fibrinogen, alpha 2 macroglobulin, and lipoproteins.

Methods
Rheopheresis was implemented in our department in April 2015 using the Rheofilter ER4000®. This innovative treatment was decided upon by the vascular-surgery, vascular-medicine, and nephrology teams.

Results
To date, six patients have been treated using this technique. Therapy has been scheduled as follows: three sessions during the first two weeks, two sessions during the next two weeks, and then one session per week for a month. The number of sessions was adapted according to the patient’s health status. Tolerance to this therapy was excellent. Although the use of analgesics could be decreased for some patients (n=x), the criteria to evaluate the efficacy of this therapy are yet to be determined.

Conclusion/Application to practice
In conclusion, rheopheresis is a promising therapy for peripheral arterial disease. However, further studies are required to assess its efficacy.
0 16
Individualised heparinisation profile implementation for the extracorporeal blood circuit of haemodialysis patients
H. Caldeira1, S. Lima1, M. Silva1, B. Pinto2, R. Peralta2, J. Fazendeiro Matos2
1NephroCare Vila Nova Gaia, Fresenius Medical Care, Vila Nova Gaia, Portugal; 2NephroCare Portugal, Fresenius Medical Care, Porto, Portugal

Background
Anticoagulation monitoring of the extracorporeal blood circuit (EBC) during the haemodialysis session is a prerequisite for its efficiency. Therefore, individualised anticoagulation profiles are necessary to maintain EBCs’ performance and to reduce blood loss, nurses’ workload, additional disposable consumption and consequentially the treatment costs.

Objectives
• Optimise EBC anticoagulation profiles by implementing a systematic record of EBC status.

Methods
The first term of the study was from May 2013-May 2014, the second from June 2014-June 2015. During May 2014, the aspect of dialyzer and blood lines was rated. Reinfusion volume was recorded at the end of each haemodialysis session. Data inclusive EBC observations were collected for both studied periods. In the second term of the study, the heparin prescription was revised, individualised heparin profiles and reinfusion volumes were developed according to EBC observations and database records.

Results
Of the 109 patients studied, 67 were males. 8 patients did anti-aggregation medication and 7 had no associated anticoagulant. All patients participated in the two terms of the study. The average age was 69 years.

Comparing the first studied year versus the second year revealed:
• 18,881 treatments versus 18,712 treatments,
• 64 versus 56 clotted EBCs,
• a heparin consumption of 183 versus 191 vials,
• an average reinfusion volume of 334ml versus 355ml.

Conclusion/Application to practice
Individualised EBC anticoagulation under standard blood heparinization for haemodialysis seems to contribute to a reduction in EBC clotting, as well as a cost optimisation.
54th EDTNA/ERCA
International Conference
September 17–20, 2016
Valencia, Spain

S 13 Education
Auditorium 2, 14:00 – 15:30

GUEST SPEAKER
Health literacy and renal healthcare – Why does it matter?
A. Bonner1, 2, 3
1School of Nursing, Queensland University of Technology, Brisbane, Australia; 2NHMRC Chronic Kidney Disease Centre of Research Excellence, University of Queensland, Brisbane, Australia; 3Kidney Health Service, Metro North Hospital and Health Service, Brisbane, Australia

Background
Healthcare professionals largely believe that if people have adequate knowledge about what to do they will engage in self-management behaviours. However, this presupposes that people have sufficient health literacy skills as well as sufficient understanding of their health problem. There is an assumption that health literacy is a generic set of competencies and skills. Health literacy is more than having the necessary functional skills (e.g. reading information); rather it is a broader practice which entails having the knowledge, motivation and competence to make decisions in everyday life concerning healthcare needs.

During this presentation, I will explain that health literacy skills must adapt to varying disease contexts and settings and people’s experience of and within these contexts. This means that living with a complex disease such as chronic kidney disease (CKD) requires that effective health literacy must be formed and then practised in that context which changes during the trajectory of CKD. Health literacy is both a cognitive ability and a social skill. All of this matters for renal health professionals because our current focus on non-adherence and low self-management behaviours needs to be redirected towards putting the individual’s information experience of CKD and its self-management at the centre of health literacy to better inform consumers of health education.
O 17
Introduction of basic life support simulation training into satellite dialysis units
C. Poole1, P. Burdis1
1Training & Education, Fresenius Medical Care, Birmingham, United Kingdom

Background
Research identifies that simulated healthcare training has a beneficial impact on learners’ self-confidence and self-efficacy. Cardiac arrests in patients receiving long term chronic haemodialysis in satellite haemodialysis units is not commonplace. As an adjunct to annual basic life support (BLS) training via e-learning BLS simulation was introduced into the satellite dialysis units.

Objectives
1. enable staff to practice BLS skills in a familiar clinical environment
2. provide a more realistic approach than classroom
3. familiarise use of local resuscitation equipment
4. promote consideration for other patients.

Methods
Simulation equipment was purchased for eight Area Head Nurses and consisted of the following:
• Resuscitation manikin
• Floor mat
• BLS Algorithm from the Resuscitation Council (UK)
• Pocket mask
• Resuscitation bag valve mask to assist ventilation
• Carry case for all equipment
• Resuscitation face shields
• Universal wipes

Consistency of the simulation was ensured with a session plan to guide the instructor through the simulation. This was supported by a simulation quiz and evaluation form.

Results
30 simulations undertaken involving 123 staff members who include registered nurses and healthcare support staff. Participants per session ranged from 1 - 8 with a mean of 4. Ninety eight percent of participants were more confident in their BLS skills, 75% preferred this training approach and 100% of participants confirmed that all staff should have BLS simulation training.

Conclusion/Application to practice
BLS simulation has been well received. The simulation prompted discussion linked to the ethical and practical issues of cardio pulmonary resuscitation in dialysis units. We recommend BLS simulation as an effective training methodology.
Background
Patients on haemodialysis have to live daily with the conditions of their disease and with changes in their daily lives. The Declaration of Jakarta (1997) reinforced the importance of selecting health care professionals for the promotion of patients’ health. Therefore, the nurses when subscribing to the empowerment model for their care should consider patients as equitable partners in the health team, with a role to support and strengthen individual, family and community functioning.

Our clinic team plans to train the patient in order to improve their autonomy and their knowledge when it comes to decision-making.

Objectives
- To identify training needs and describe the implementation of an education programme

Methods
The survey of patient satisfaction from 2012 indicates that 8.8% of our patients felt there was a lack of information. This made us aware that there was a need to make information available. To develop a training project, literature research was conducted in the EBSCO database, b-ON, Google scholar.

We identified training needs from our literature searches and also from the analyses of 50 people on haemodialysis treatment during the year 2014 through informal interviews. From the mentioned analysis, we developed individual training sessions.

Results
Throughout the year 2015, 14 training courses were held with the duration of approximately 30 minutes for 84 people. Each person took part for a total of 7 hours spread over 12 months.

Conclusion/Application to practice
Nurses as important links in the care of the person in regular haemodialysis programme should promote patients’ autonomous decision making and adherence with the treatment regimes.
Review of educational tools and awareness of Venous Needle Dislodgement (VND)

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Background

Haemodialysis (HD) is a routine treatment, but life-threatening complications still happen, such as VND. In 2008, the EDTNA/ERCA launched a project “How to minimize the risks of VND” which produced some educational tools. We were interested in current awareness of VND and the value of the previous project.

Methods

This study was based on a survey undertaken at the EDTNA/ERCA congress 2015 in Dresden. The survey was introduced during a presentation and was handed out and collected in the Redsense booth in the exhibitor area.

Results

Survey respondents (n=81) were predominantly experienced nurses. Over half had experienced a VND at their own clinic. Two-thirds assessed the risk of VND at least every month, but only 60% of these are recording the assessment in the patient’s chart. Of the respondents who had experienced a VND, 26% still did not regularly do risk assessments.

Two-thirds of respondents were aware of the “12 steps to minimize the risks of VND” poster, whereas only 40% were aware of the Risk Assessment tool. A quarter had paper copies of the Risk Assessment Tool in their clinics, but almost 90% suggested that it would be helpful to have the tool in a digital format - preferably on a computer.

Conclusion/Application to practice

There remains a significant group who are not undertaking risk assessments for patients at risk of VND and who are not aware of the Risk Assessment Tool. There is a need for an educating tool to minimize the risks of VND.
Can assistant practitioners be successfully integrated into the nursing skill mix of haemodialysis units?

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Background
Shortages of Registered Nurses is widely acknowledged in the National Health Service. Different strategies are used to overcome this shortfall. The assistant practitioner (AP) is a relatively new development. The numbers of renal patients continues to grow and haemodialysis satellite units are being built. Ensuring appropriately educated staff are recruited to the renal workforce is challenging.

Objectives
To ensure a competent workforce is available to care for haemodialysis patients by supporting structured, tailored education to unregistered staff.

Methods
Following literature review, 4 healthcare assistants within the renal department commenced a foundation degree in healthcare. The 2-year programme has practice based competencies. Renal and Haemodialysis care competencies were developed with the university, to ensure the AP’s successfully completing their training are skilled to deliver high standards of care in the haemodialysis unit.

Results
The healthcare assistants successfully completed the 2-year programme, supported by the practice educator. They deliver care under supervision of a registered practitioner, with knowledge and skill beyond that of traditional healthcare support workers, taking some tasks from registered professionals, working across traditional boundaries. A medicines management competency document was developed to support the practitioners.

Conclusion/Application to practice
The AP’s have a positive impact on service delivery, improved patient experience and optimal use of resources. The initiation and completion of out-patient haemodialysis is a continuous process, delivered by AP’s. Integrating unregistered practitioners into the nursing workforce has challenged boundaries, however, to ensure a competent workforce is available in the future, innovation and change are required. This project has been positively evaluated by patients and renal unit staff including the AP’s.
Enabling services to support patients making informed dialysis decisions

H.L. Bekker

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Background
Clinical guidelines recommend kidney services deliver predialysis programmes to support patients with end stage kidney disease make dialysis choices. Predialysis services provide patient leaflets and education, and patients are satisfied with their kidney care, but they consistently report needing more support in making treatment decisions.

Objectives
This talk draws on the decision sciences to understand better what helps and hinders people make reasoned healthcare decisions. Using evidence from patient decision aid (e.g. The Dialysis Decision Aid Booklet – Kidney Research UK) and shared decision making evaluations (My Kidneys, my Choices – Kidney health Australia), it illustrates how patients and professionals can be supported to think differently about making dialysis decisions in the context of kidney disease management and their lifestyles.

Conclusion/Application to practice
It is likely integrating decision aids within usual care enables staff to meet service delivery guidelines on patient involvement more consistently within and across services. The discussion focuses on ways to support predialysis programmes pragmatically to adapt to changes in practice.
A clinic for young adults outside the hospital

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Background
Young adults with kidney disease have a higher risk of losing their kidney function and have more challenges combining their daily life and their life with kidney disease. In Oxford they have a clinic for young adults outside the hospital where they have developed a network between the young patients supporting each other to manage life with kidney disease.

Objectives
To support young adults with kidney disease to have a good life and to decrease the loss of kidney function and to prevent rejection of the transplanted kidney caused by treatment non-adherence.

Methods
The young adult clinic outside the hospital has been developed in a collaboration between the young adults and the clinic in Oxford. The clinic has been evaluated qualitatively and quantitatively. The qualitative evaluation consisted of focus groups and individual interviews with the young adults, their parents and the healthcare professionals. The quantitative evaluation consisted of laboratory data.

Results
Four clinics have been held, every third month during a year and two weekend meetings. A Facebook group “Pee-and-not-to-pee” have been made with daily activities. The main theme identified both by the young adults and the healthcare professionals are “To be in the same boat”. The quantitative data is too small for statistical analysis at this point.

Conclusion/Application to practice
A young adult said: “Before the young adult clinic, I experienced to be alone as a young adult with kidney disease. Now I have developed a lot with the experiences I have got, and I have become better to put words on how I am.”
Burden on informal caregivers of haemodialysis patients

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1NephroCare Braga, Fresenius Medical Care, Braga, Portugal; 2NephroCare Arcos, Fresenius Medical Care, Arcos de Valdevez, Portugal; 3NephroCare Portugal, Fresenius Medical Care, Porto, Portugal; 4Care Value Management EMEA, Fresenius Medical Care, Bad Homburg, Germany

Background

Haemodialysis patients experience significant changes in their quality of life on a physical, emotional and social level, as well as the informal caregiver (IC). The IC provides care and assistance to others, usually to a person with whom a relationship already exists. This is done without any payment as an expression of love and affection.

Objectives

• To evaluate the physical, emotional and social burden on ICs of haemodialysis patients

Methods

To evaluate the physical, emotional and social burden on the ICs, a self-developed socio-demographic questionnaire, validated for the Portuguese population (QASCI) were used. Non-institutionalized ICs of haemodialysis patients for at least 6 months, who wanted to participate, did so.

Results

Burden of studied ICs was moderate (average score=34.61) (burden is absent=0, light=1-25, moderate 25-50, serious=50-75, extremely serious=75-100). There was no burden difference between females and males, except with regards to negative feelings such as the perception of being manipulated or the embarrassment of the experience, or the offense by the manifest behaviour of the family member, in this aspect women have a greater burden to bear. Concerning negative feelings and family support, the husband/wife, children or son/daughter-in-law felt less overloaded compared to other family member. ICs who provided informal care >10 years perceived a higher degree of burden because of a lack of knowledge and family support.

Conclusion/Application to practice

ICs feel physical overload, suffer emotional changes and limitations on their social life. As there is a demand on psychological coping mechanism, a psychological intervention to lessen ICs’ perceived burden is important.
Understanding the psychology of illness - helping nurses understand their patient’s behaviour

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¹Irish Kidney Association, Dublin, Ireland

Background
In understanding how patients behave we have to recognise that there is a wide variety of responses, in terms of perception, thinking and feeling when is diagnosed a chronic illness. Research over the past sixty years provides ample evidence showing that a diagnosis and treatment for chronic kidney disease has a significant psychological and emotional impact on patients. As nurses, we don’t have to be told that many of our patients experience, among other emotions, varying degrees of anxiety, stress and depression at points in their dialysis journey. In their day to day interaction with patients, nurses are often confronted with these, often debilitating, psychological reactions. In patients, the feeling of anxiousness, stress or depression, can undermine their ability to accommodate to their illness with the subsequent knock on effect that this has on their day to day life and of their family.

Conclusion/Application to practice
Having some understanding of the psychological aspect of illness, allows nurses to;
• reframe how they view their patients and in this way enhance the service they provide
• create a space to think through their patients’ behaviour and offer an appropriate response
• understand the patient’s behaviour in a way that conveys to the patient that their concerns are heard and understood, thereby alleviating to some degree the psychological reaction that the patient is experiencing
• offer an appropriate response or refer on to an appropriate allied health professional
S 15 Safe vascular access  
Auditorium 1, 16:00–17:30

GUEST SPEAKER
Doppler Ultrasound for arteriovenous fistula: A third generation method for first approach
J. Ibeas1
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Vascular Access (VA) complications produce high morbi-mortality, worsened quality of life, hospitalizations and costs. Screening of pathology with the first generation methods is very specific but no sensitive. That means that in this way pathology is usually late diagnosed and VA can be loosed. Second generation methods are based in flow determination. The techniques used are based or in dilution methods or in Doppler ultrasound (DU). DU was usually reserved for selected patients by its dependence of other departments.

DU has the advantage of flow measurement and image study in the same examination. Latest Spanish 2016-Guidelines advise for surveillance with flow measurement and use of US in the diagnosis of pathology, with angiography only for selected cases.

The possibility of incorporate the US in the Hemodialysis Unit has made possible the pathology screening and its precise diagnosis in the same act, giving the opportunity not only to do flow screening but the image control of stenosis, masses and collections or the determination of confusing or alternative collaterals. Allows treatment prioritization depending on the flow rate or dangerous findings like pseudoaneurysms, can permit treatment orientation to surgical, interventional or even conservative approach and even the mapping looking for new VA placement. Finally, is a fundamental tool with the possibility of the US guided puncture, mainly in the deep vessels or in pathological VA waiting for treatment. All this create a new concept in nephrology, the US as a third generation method that can be used in the first approach.
Metal versus plastic cannula use for haemodialysis, an open label trial

K. McLaughlin1

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Objectives
To compare complication rates between plastic and metal cannulae when accessing new arteriovenous fistula for haemodialysis.

Methods
An open label trial was conducted involving 3 groups of 10 patients, all with arteriovenous fistula that had never been cannulated before. The first 6 cannulation sessions were included for each patient to enable any complications to be recorded and compared between the patient groups. Group 1 included random cannulators using standard metal dialysis cannulae; group 2 used expert cannulators and plastic cannulae and group 3 combined expert cannulators with metal cannulae in an attempt to reduce bias.

Results
There were a total of 180 cannulation sessions recorded. Patients who had a random cannulator using metal cannulae (Group 1) were more likely to have complications compared to the expert cannulators using the same metal cannulae (Group 3), (odds ratio, 2.8; 95% CI, 1.28 - 6; p=0.010). Patients who had the same group of expert cannulators using plastic cannulae (Group 2) were less likely to have complications compared to when they used metal cannulae (Group 3), (odds ratio, 0.34; 95% CI, 0.13 - 0.89; p= 0.028).

Conclusion/Application to practice
Plastic dialysis cannulae are a safe and effective alternative to metal cannulae for accessing arteriovenous fistula and appear to reduce the occurrence of complications during the initial cannulation period. The expertise of the cannulator plays a key role in successful cannulation and when combined with using plastic cannula, resulted in better outcomes.
Identifying barriers to implementing rope ladder cannulation

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Background
Dialysis prevalence in Abu Dhabi is about 1000 per head of the population with 95% receiving haemodialysis of which 70% have either an AV fistula or AV graft. Because of the high volume of needle insertions, the site selection for each cannulation is paramount in the preservation of the vascular access. There are three different needling techniques of which rope ladder is most commonly recommended and is policy in our units.

Objectives
To understand the barriers to adherence to the rope ladder cannulation policy.

Methods
A survey was developed using a Likert scale which collected nursing demographics and looked at three domains, nursing knowledge, nursing skills and experience and patient factors.

Results
10 responses were obtained, 60% female, 80% with more than 3 years of dialysis experience. The awareness of the benefits of rope ladder cannulation and of the local policy were very high but respondents appeared to lack training in its introduction. Nurses lacked confidence in the use of the technique particularly when under time pressure. They felt that there was a lack of monitoring of adherence to the policy. There is a perception that patients do not like rope ladder due to anxiety over the use of a new site, increased pain and increased likelihood of infiltration.

Conclusion/Application to practice
Whilst there is an understanding that rope ladder cannulation is the preferred method to successfully implement such a policy, a nurse and patient education programme is required to provide support for the nurses and a clear understanding to the patients of the benefits of the procedure.
Does vascular access management improve outcomes? The Portuguese experience

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Background
The conversion to a capitation system for dialysis payment, which includes the Vascular Access responsibility, required the definition and implementation of a dedicated program to meet these new challenges.

Reimbursement for chronic dialysis represents a substantial portion of healthcare costs for a relatively small part of the total population. Dialysis reimbursement costs are generally between €20,000-€80,000 annually per individual, depending on the country and the strategy. Since April 2008, Portuguese health authorities convened with dialysis providers a capitation package, and in 2011, the vascular access (VA) management was included in the capitation budget.

Objectives
To determine the health quality improvements related to VA management by the dialysis providers.

Methods
A retrospective analysis of VA characteristics and hospitalizations related to vascular access between 2011 and 2014.

Results
In 2010 the number of hospitalizations caused by vascular access complications were 651, resulting in a total of 3029 hospitalization days and representing 18.31% of all hospitalizations.

Between 2011 and 2014 there was a relevant decrease in the number of hospitalizations due the vascular access complications compared to 2010 (-43.8%) and hospitalizations days (-49.8%), representing savings of €1,500,000/year for the National Health Service. During this period in a populations of around 4500 patients there was an improvement in AVF of 70.1% (+4.2%), reducing the AVG to 15.8% (-2.1%) and catheter to 14.8% (-2.1%).

Conclusion/Application to practice
VA management with Vascular Access Centres reduces VA related hospitalizations decreasing morbidity and mortality, improving patient clinical outcomes and economical and organizational outcomes for the National Health Service.
Improving vascular access cannulation technique: the power of education
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¹Fresenius Medical Care, Nursing Coordination, Bad Homburg, Germany

Background
Haemodialysis nurses have predominately on-the-job training. We would observe whilst our preceptor would cannulate patients who had arteriovenous fistula (AVF), and then we would be given the needles and expected to perform a cannulation. Haemodialysis nurses knowledgeable and skilful in vascular access are crucial to ensure the correct cannulation technique is performed and they must maintain knowledge of current developments.

Objectives
To provide training in a well prepared, well-structured and appropriate manner, enabling haemodialysis nurses to choose the most appropriate cannulation technique.

Methods
Creation of a vascular access learning tool to ensure staff have the knowledge to enable them to perform the best type of cannulation technique.

Results
All nurses in the network undertook the VA e-learning course with an average score of 82 points out of 100. To evaluate the training’s learning effectiveness in daily practice, data was extracted for patients having an AVF from 2009 (N=10,807) and 2015 (N=18,164) for cannulation technique, direction of arterial needle, bevel position and needle rotation. Comparing results of 2009 vs 2015, cannulation technique distribution was as follows: rope-ladder 31.0% vs 56.2%, area 61.0% vs 29.2% and buttonhole 6.1% vs 14.6% of patients. Arterial needle direction antegrade 67.0% vs 75.1%; bevel position upwards 73.3% vs 34.7%; needle rotation yes 56.4% vs 12.4% of patients.

Conclusion/Application to practice
The creation of a vascular access learning tool is essential for teaching the basics of needle cannulation in an appropriate, well prepared and well-structured manner, working towards having all dialysis staff members understand and master the basics of vascular access cannulation.
GUEST SPEAKER
Changing peoples’ attitudes to became donors: difficulties and challenges
F. Oppenheimer

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Living donor kidney transplantation (LKT) is an excellent alternative to increase the transplantation rate and reduce the list of patients waiting for a deceased donor. Over the last decades, the number of living donations has markedly increased, even in countries with a high rate of deceased donors, like Spain. However, LKT activity rates vary along the European countries and these differences are not well explained by differences in the health care system, cultural or religious attitudes or richness ranking.

Important points in the suitability and promotion of living donation are, in addition to national legislation and health-care organization and resources, the Nephrologists attitudes onwards it. Many patients with end-stage kidney disease and the general public have misconceptions about living donation or feel uncomfortable with living donors undertaking harm. Whereas Nephrologist and nurses in care of these patients have the maximum capacity to appropriately inform the patients, Internet is today the principal source of information. However, identifying potential kidney donors using social networking is becoming popular, but concerns about some ethical issues and the risk of coercion or commercialism are present.

Proactive strategies are necessary to expand all modalities of LKT including unrelated donors, ABO- and/or HLA-incompatible donors and altruistic or paired-exchange donation.

A crucial period in defining the potential LKT alternatives is during the pre-dialysis stage. Systematic information about LKT as part of the ESRD treatment options is mandatory.
Live kidney donation Aotearoa - a New Zealand solution

D. Beechey

1 Renal Service, Counties Manukau Health, Auckland, New Zealand

Background
The Live Kidney Donation Aotearoa Project is a 3 year initiative to increase the number of people donating kidneys to patients with end stage kidney disease either before commencing dialysis or receiving dialysis treatment at Counties Manukau Health (CMH), South Auckland, New Zealand. The focus is on indigenous Maori and migrant Pasifika people both donating and receiving kidneys as there is a demonstrated disparity compared with the rest of the CMH dialysis population. Year 1 (2013) of the project predominantly involved the development of all the resources with year 2 and 3 of the project being the implementation period.

Objectives
The project aims to increase live kidney donation offers and completed donation in the Counties Manukau area over 3 years using a multi-faceted health-service delivery improvement project to educate, encourage and facilitate live donation.

Methods
Established to enable a whole renal service and community approach to improve live donation offers and transplantation. These include resource development, peer support, home based education, policy change, community engagement and primary health care education.

Results
Live kidney donor offers have increased from average of 10 per year to 59 May 2013–May 2014 and 84 May 2014–May 2015
Live kidney donation has increased from average of 2 per year to 15 in 2014 and 17 in 2015
Patient referral rates for renal transplant assessment and LKD have increased from 39.4% to 59%

Conclusion/Application to practice
This project has demonstrated that a wide ranging approach to improving live kidney donation has resulted in improved patient outcomes for priority populations in CMH.
Impact of an organ donation initiative – team-working across the NHS, charities & communities

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¹Development, Kidney Research UK, Peterborough, United Kingdom; ²NBTA, NBTA, London, United Kingdom; ³Organ Donation and Transplantation, Scottish Government, Edinburgh, United Kingdom; ⁴Transplant Policy, Department of Health, London, United Kingdom

Background

Kidney failure is up to 5x more common in Black, Asian and minority ethnic (BAME) communities in the UK. These patients have to wait up to a third longer for an organ transplant due to a shortage of BAME donors and account for almost twice as many patients on the kidney transplant waiting list.

Objectives

We are developing a “bottom up” approach to engaging with people in BAME communities to raise awareness of these issues and to encourage donation.

Methods

We used our award winning Peer Educator (PE) initiative: motivated people from the targeted communities, trained to engage with their peers with whom they have a natural cultural/linguistic empathy. Training courses are at accredited standards.

Results

An independent evaluation team provided the evidence base for our initiative which was published in Clinical Kidney Journal 2015. We have been proactively approached by English & Scottish Governments and commissioned to deliver donation projects. Further funding has followed. The Birmingham PE team has national and local government support. Across all awareness programmes, we have trained >130 PEs, reached >27,000 ‘at risk’ people, and registered >2,700 potential donors. I felt a great sense of pride and accomplishment… Education is the key to success in such a process…” (Senior P E).

Conclusion/Application to practice

The model is a proven, culturally sensitive, effective and a highly adaptable approach to addressing health and organ donation issues. Work is ongoing and the session will detail current projects and wider application. This is especially pertinent as the proportion of BAME communities will increase in Europe.
Psychosocial experiences of kidney transplant patients before and after transplantation

E.S. Gunduz¹, N. Akyolcu²
¹Vocational of Health Services, Akdeniz University, Antalya, Turkey; ²Istanbul University, Istanbul, Turkey

Background
Physical for the patient and family, emotional and economic aspects of transplantation is an important life experience. Good organizational success in transplantation, surgery preparation, and post-operative care, as well as biopsychosocial care and rehabilitation, is extremely important. Care interventions should be based on the individuality of the patient and should be undertaken in line with requirements.

Objectives
Of patients who underwent renal transplantation, and to identify psychosocial problems in this research conducted in order to gather comprehensive information on their experience in the transport process, phenomenological type of qualitative research design was used.

Methods
The research population, the province of Antalya Akdeniz University Hospital Organ Transplant Center of the planned 15 patients with organ transplants formed. A sample used in qualitative research “ Purposive Sampling ” and “ Quota sampling. In-depth individual interview data were collected by semi-structured form. A week in the hospital before surgery and after surgery, including two interviews were done after 6 months. Content analysis Data were analyzed with SPSS17 and N- Vivo7 program.

Results
The average age of participants 38, 53.3 % male, 33.3 % of primary school graduates, 13.3 % unable to work, 73.3 % were married, ort.7.3 years renal failure patients, 60% of haemodialysis, transplant waiting period 4.5 years 66.7% had a live donor transplants, 20% of mothers transmitter, the transmitter is equal to 20.0%.

Pre-transplant themes; Experiences and Perceptions of Coping (illness perception, anxiety, interpersonal relationships, individual coping);

the Emotions Regarding Transmission (meaning for individuals of organ transplants);
Post-transplant themes; Early Experiences (be happy, live strain);
Long-Term Experience (mood changes, changes in self-perception, the meaning for the individual organ transplantation, interpersonal relationships, productivity, individual coping studies, perception of the body, feelings towards organ donor)
as thus categorized reached a large number of sub-themes.

Conclusion/Application to practice
This research will contribute to the literature and a limited number are expected to lead to new research.
Why don’t we donate? – Nurses’ and midwives’ attitudes towards transplantation
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¹Hemodialysis Unit, Szpital Wojewódzki, Bielsko-Biała, Poland; ²Medical University of Silesia, Katowice, Poland

Background
Organ transplantation is a treatment method, which annually saves the lives of about 1500 people in Poland. However, the needs are much greater. Although there are many social campaigns promoting organ transplantation, the total number of transplants in the year 2015 was lower than in the previous year. It’s still a controversial method and many people cannot decide whether to donate organs after death in spite of the topic being widely discussed in media - see the spectacular successes in this area, like face and hands transplantation or cross transplantation of kidney from living donors.

Objectives
Recognize the attitudes and opinions of nurses and midwives on organ donation and transplantation.

Methods
The research in the form of the author’s questionnaire was conducted in 2015 among 187 respondents: nurses (N = 172), midwives (N = 15) from the South of Poland.

Results
Nurses and midwives have a positive attitude to transplantation: 96% of respondents accepted transplantation as a form of treatment (from both deceased or living donor) and 90% declared the willingness to be a donor. The consent to donate organs of a deceased close relative declared over 63%. Almost 63% of respondents talked to their loved ones on donation organs. Most nurses believed that death occurs when the brain doesn’t work even though the heart is still beating (brain death), but midwives often chose the answer where death means ceased brain and heartbeat functions.

Conclusion/Application to practice
Despite the fact that almost all respondents accept transplantation, there are still some areas that need further education, like brain death determination, legal aspects or even the possibility to object to transplantation.
S 17 The patient experience
Auditorium 3, 16:00–17:30

GUEST SPEAKER
35 year challenging journey
L. Mourelatos
1Kefalonia General Hospital, Dialysis Unit, The Island of Kefalonia, Argostoli, Greece

Background
Within this presentation I am given the opportunity to take you to a trip and share with you my experience as a renal patient from my childhood to adulthood. It has been a 35 year journey with many challenges, achievements and accomplishments. At the age of 9, in 1981, my journey began, having being diagnosed with kidney failure. My treatment consisted of dialysis, in Greece. In 1984, I came to London and in 1985, I had my first kidney transplant. This was a success as it lasted for 11 years. In 1996, my body rejected the kidney and I was back to dialysis. In 2002, I had my second transplant and it lasted for 3 years. From 2005, I went back to dialysis again and I went on the waiting list for my third transplant. I managed to survive all these years with the psychological and emotional support I received from my family and the professional help from all those excellent clinicians who cared for me.
**O 32**

**Experiences of shared decision making in adult pre-dialysis patients and carers**

S. Ofori-Ansah

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**Background**

Chronic kidney disease is an irreversible chronic condition, can progress to kidney failure and is treated with dialysis or potential kidney transplantation or no treatment. Evidence suggests that patients and carers become less engaged and are not able to make timely decisions on their treatment options. However, there is less literature on issues relating to the decision making process from the patients and carers perspective.

**Objectives**

This study explored the lived experiences of being involved in shared decision making to identify common themes and for factors that enhances or deter their engagement.

**Methods**

This is a qualitative study that used semi-structured interviews. Sixteen participants were recruited from an acute hospital to the study and interviewed.

**Results**

There are mixed responses regarding patient involvement in decisions about their treatment options. While some patients and carers preferred to be actively involved, others chose to be passive.

**Conclusion/Application to practice**

The study will provide an understanding of patient and carer experience of decision making and may contribute to policies on service delivery on effective patient and carer education from their perspective.
0 33

View of renal patients and general practitioners on coordination of care
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¹Nephrology, University Hospitals of Leuven, Leuven, Belgium

Background
Progression of Chronic Kidney Disease (CKD) can be delayed by adequate treatment of hypertension, obesity and behavioural changes such as treatment adherence, smoking cessation and an active life style. Integrated care with intense cooperation between general practitioners (GP’s) and nephrologists is imperative to reach this goal.

Objectives
The aim of this study is to evaluate the perspective of patients and general practitioners on the coordination of care.

Methods
456 patients with CKD from the University Hospitals of Leuven were included in this study. Patients completed a standardized questionnaire. The study included 205 CKD stage IIIb-IV, 129 haemodialysis, 22 peritoneal dialysis and 100 transplanted patients. 47 GP’s were enrolled.

Results
The majority of patients chose the nephrologist as coordinator of their care. The main reason was the frequent visits to the outpatient clinic and dialysis unit. In contrast GP’s found GP’s to be the main coordinator especially for the treatment of hypertension, diabetes, pain therapy and preventive care. 52,1% of the GP’s actively support patients with CKD in behavioural changes and 81,3% of the GP’s admit that their knowledge about renal pathology and treatment is too limited. 85,4% would accept the active role of a renal nurse for care coordination.

Conclusion/Application to practice
The majority of patients viewed the nephrologist as their care coordinator as opposed to the GP’s. GP’s acknowledge the aid of a nurse practitioner. Further research is necessary to define the effect and exact role of a renal nurse in the transmural care of patients with CKD.
How the haemodialysis patients see the arteriovenous fistulae cannulation technique
J. Melo¹, P. Goncalves¹, R. Sousa¹, S. Campos¹, A. Anjos¹, R. Peralta², J. Fazendeiro Matos²
¹NephroCare Viseu, Fresenius Medical Care, Viseu, Portugal; ²NephroCare Portugal, Fresenius Medical Care, Porto, Portugal

Background
Vascular access has been justly described as both the lifeline and the Achilles’ heel of haemodialysis therapy. An appropriate technique is vital to the preservation of the arteriovenous fistulae (AVF) and nursing teams have to involve patients and their families in the process. But there are no data relating to patient participation in this role.

Objectives
• To understand how patients see cannulation technique of their AVF.

Methods
We developed a longitudinal quantitative, exploratory, descriptive study, through the application of a cannulation technique survey which included various items about the vascular access like:
• how the patient observes the technique and how they feel about it;
• if this process influences treatment adherence positively.

Results
Questionnaires were applied to all patients with AVF in our unit.
Most patients are cannulated with multiple single puncture technique, followed by buttonhole and finally rope-ladder and area techniques.
Generally, all patients are satisfied with the technique in use.
Over 75% state that they were previously informed about cannulation techniques and were involved in the choice of the technique.
Only 32% of patients reported that pain associated with cannulation is very low. Regardless of the technique used, pain is the main disadvantage mentioned.
About 91% reported that the nursing team takes extreme care when providing vascular access care and that this facilitated the adherence to haemodialysis treatment.

Conclusion/Application to practice
Although there is no perfect cannulation technique, these results do however show that our patients are satisfied with the cannulation technique in use and say that the vascular access care allowed for better treatment adherence.
0 35
Patient satisfaction with care about their treatment of chronic renal failure
  C. Olbrechts1, N. Van Paesschen1, S. Crols1, M. Roden1, C. Tielemans1, R. Buy1, Nursing Staff Haemodialysis Unit UZ Brussel1
  1Haemodialysis Department, UZ Brussel University Hospital, Brussel, Belgium

Background
The number of patients in need of dialysis treatment in our country has increased in the past 15 years. Chronic renal failure and its treatment mean a major and time-consuming event in the life of such patients. Qualitative care, adapted to patients’ needs, is important because of the long-term and intense care relationship. Patient’s satisfaction is a quality indicator of this, but there is a lack of research.

Objectives
Besides identifying the satisfaction of dialysis patients, this study aims to provide a base for practical interventions.

Methods
A quantitative cross sectional study was conducted on one dialysis ward. All of the patients of the centre on haemodialysis and peritoneal dialysis who met the inclusion criteria were included. Patients were surveyed using the standardised CHOICE-satisfaction questionnaire, completed with 3 general questions on a VAS-scale, translated into French and Dutch.

Results
Seventy patients participated, of which 41.4% experience their dialysis care in general as excellent and 70.8% would without doubt recommend the centre. In general satisfaction with nephrologists is rated lower than with the staff, and in addition high care patients score the physician even lower. Communication-aspects of the nephrologist are experienced least well, with helpfulness and caring of the staff as best. There is overall dissatisfaction with coordination between physicians. Moreover, people who are single or live alone are even more dissatisfied.

Conclusion/Application to practice
Improvements in satisfaction are possible by modifications in communication, and by using an integrated communication tool in the patient’s records.
Monday, September 19, 2016

S 18 Haemodialysis
Auditorium 1, 9:00–10:30

GUEST SPEAKER
High-volume online HDF increases survival in haemodialysis
F. Maduell¹
¹Hospital Clinic, Barcelona, Spain

The introduction of online hemodiafiltration (OLHDF) using ultrapure dialysis fluid as the source of the replacement fluid has allowed the replacement volume to be increased and has significantly reduced the cost of the procedure. These techniques offer superior uremic toxins removal over a wider range of molecular sizes than other dialysis modalities. Randomized studies with small sample sizes and nonrandomized studies conducted during the last 20 years have shown that OLHDF improves control of hyperphosphoremia, malnutrition, inflammation, anemia, infectious complications, joint pain, amyloidosis associated with dialysis, intradialytic tolerance, insomnia, irritability, restless leg syndrome, polyneuropathy and itching.

Several retrospective studies showed a mortality risk reduction between 20 to 50% in patients treated with high-efficiency OLHDF compared with those treated with LFHD or HFHD. During the last few years, three large, prospective, randomized studies have been conducted in distinct European countries to compare major clinical outcomes in prevalent patients receiving conventional HD and OLHDF. The CONTRAST study randomized 714 patients to LFHD or OLHDF; at the end of the study, with a mean follow-up of 3 years, the two groups showed no difference in survival. Similarly, in the Turkish HDF study, 782 patients were randomized to HFHD or OLHDF; over a 2-year follow-up, the outcome was not affected by treatment allocation. Finally, in Catalonia (Spain), the ESHOL study randomized 906 patients to HF-HD or OLHDF. In this clinical trial, allocation to OLHDF was associated with a 30% reduction in all-cause mortality. Recently, several meta-analyses have confirmed reduced overall and cardiovascular mortality. In all of these large, randomized studies the convective volume seemed to be an important issue. Secondary analyses of these studies observed an association between convective volume and survival. Therefore, a minimum convective volume of 23 L per session was recommended until more conclusive scientific evidence became available.
Associations between appetite and quality of life or performance status in haemodialysis patients

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Background
The concept of Chronic Kidney Disease (CKD) describes a progressive and irreversible worsening of a person’s renal function. CKD is characterised by a slow and progressive loss of renal excretory capacity due to the gradual reduction of glomerular filtration main excretion of toxic solutes produced by the body. This disease presents a set of clinical manifestations, such as, loss of appetite with decreased taste, changes in sleep patterns, including insomnia and daytime sleepiness (Durvasula Himmelfarb, 2011). Malnutrition, inflammation, and atherosclerosis often coexist in the case of CKD patients, and each of these risk factors independently predicts the outcome for these patients (Stenvinkel et al., 2000).

Objectives
Investigate the association between appetite and:
- Kidney disease specific quality of life;
- Performance status in haemodialysis patients.

Methods
91 people (46 males) who undergo haemodialysis participated in this cross sectional study. Data collection included the questionnaire KDQOL version 1.3 (Kidney Disease Quality of Life) and the Karnofsky Performance Status Scale. Nutritional status was assessed by collecting blood samples and included haemoglobin, serum albumin, creatinine, urea, c-reactive protein, calcium, phosphorus. Appetite was assessed by questionnaire.

Results
We found a positive correlation between appetite and physical health (p=0.009), even after controlling for confounders (p=0.044). This correlation was not found for mental quality of life. Appetite and Karnofsky were positively correlated (p<0.001). Using ANOVA statistical analysis we found a correlation between appetite and serum albumin (4.02 (0.312)), urea and appetite (135.16 (38.93)).

Conclusion/Application to practice
This study contributes to further support experimental studies to improve the quality of life in haemodialysis patients.
037
Pain following needle insertion into a fistula of individuals on haemodialysis and affecting factors
D. Arslan¹, N. Kiliç Akça¹
¹Nursing, Health School, Bozok University, Yozgat, Turkey

Objectives
This study was conducted to determine pain following needle insertion into a fistula and the affecting factors for individuals on haemodialysis treatment.

Methods
Descriptive study; 102 individuals between 24-84 years, with a fistula on haemodialysis treatment who agreed to participate. Data was collected on a descriptive characteristics information form, created by scanning the literature, other research and Visual Analog Scale. Descriptive statistics, t-test, one-way anova were used for data analysis and p<0.05 were considered significant.

Results
It was found out that mean age of the participants was 50.6±14.7, mean duration of haemodialysis was 5.8±4.1 years and mean duration of arterio-venous fistula 38.4±25.6 months. We found 54.9% of the individuals to use moisturizer in the fistula area and 49.0% of the individuals to practice strengthening exercises in the fistula area. Of individuals on haemodialysis treatment 92.2% were found to experience moderate level pain score - 4.8±2.6 (min 0 - max 10) following needle insertion into a fistula. Age, sex, education, duration of haemodialysis and fistula was found not to have a statistically significant relationship between the pain experienced of individuals (p>0.05).

Conclusion/Application to practice
As a result, it was determined that haemodialysis patients experienced pain following needle insertion into a fistula. It is recommended to evaluate individuals experience of pain and to provide appropriate nursing interventions.
Impact of massage therapy during haemodialysis sessions on patients’ QoL: A pilot study
M. Bayoumi 1.
1Medical Surgical Nursing, Nursing Faculty, BSU, Cairo, Egypt

Background
The benefit of massage therapy is known to reduce stress, pain and depression in chronic diseases, however studies have shown the use of massage therapy in dialysis patient can relieve pruritus and significantly improve anxiety levels. The Saudi Center for Organ Transplantation (SCOT) highlights approximately 11,437 patients on haemodialysis therapy in Saudi Arabia.

Objectives
To evaluate the impact of massage therapy during haemodialysis sessions on QoL and physical fitness.

Methods
The study involved 16 patients with end stage renal disease who were undergoing haemodialysis treatment. They were randomly assigned to either a control group or an experimental group. The control group received only standard care for haemodialysis patients for eight weeks while the experimental group received massage therapy during the same period. Assessments were conducted on the participants both at the beginning of the study and at the end of the eight week treatment period. Researchers used the physical fitness Scale and KDQoL-SF 36. The scores of the participants at the start of the study were compared to their scores at the end.

Results
The pre-post physical fitness practice of intervention sessions’ activities among patients in the two groups were compared. Significant differences were found in the Chair (seconds), Arm curl (seconds), Chair sit & reach (cm), 8-foot up & go (count) and 2-min step test (count). Regarding to blood pressure and pulse changes, blood flow and session duration among patients in the two groups the systolic blood pressure was decreased and pulse, session duration and blood flow were increased. More interestingly the post KDQoL-SF showed that the sleep pattern was improved with massage therapy and reported patient satisfaction.

Conclusion/Application to practice
Based on these findings, the study researchers concluded that massage therapy can effectively benefit patients’ QoL and physical fitness and recommend that it be integrated into the standard care given to such patients.
S 19 Home dialysis  
Auditorium 2, 9:00–10:30

GUEST SPEAKER

Home based dialysis in Denmark – Challenges and results

K. Lomholdt

Fifteen years ago, we established programmes for unplanned start on PD and for assisted APD (aAPD) in order to increase the number of patients managed on a home based dialysis and to give more patients a real choice of dialysis modality selection.

Unplanned start on PD is offered to the late referred patients with urgent need for initiation of dialysis. Assisted APD is offered to the growing group of older patients with ESRD who are usually not candidates for PD due to advanced age and a heavy burden of comorbidities. Assistants are professional nurses or health care technicians briefly educated by PD nurses from our dialysis unit. They are offered 3 hours of theoretical training at their office and 3 hours of practical training in the patient’s home at discharge from hospital. It is our goal to make both the patient and the assistants confident with the treatment and the procedures while constantly focusing on the patient’s well-being and resources to keep them as independent as possible. We have documented, that unplanned start on PD is not associated with increased risk of infectious complications and has no negative effect on long term PD catheter survival.

Assisted PD is an evolving dialysis modality, and may in the future prove to be a feasible complementary alternative to HD for the growing group of dependent older patients with ESRD. Unplanned start on PD and aAPD may also be useful tools to increase the number of patients managed on a home based dialysis modality.
Renal nurses’ perceptions regarding establishment of a home haemodialysis program in Abu Dhabi

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Background
End Stage Renal Disease (ESRD) is recognized as a significant public health problem in Abu Dhabi. The ESRD population grows by 8-10% annually. Globally the self care model of home dialysis is recognized as a viable RRT. As yet there is no such program in Abu Dhabi.

Objectives
The purpose of this qualitative study was to explore renal nurses’ perceptions of the requirements for establishing HHD program in Abu Dhabi.

Methods
A purposive sample of renal nurses with previous experience of home haemodialysis participated in a semi-structured face to face interview and a thematic analysis was used to analyze the data.

Results
Three major themes with sub-themes emerged. Theme 1: Knowledge about home haemodialysis based on western experience, theme 2: requirements of home haemodialysis within the self-care model, and theme 3: The western self-care model of home haemodialysis is perceived to be unachievable locally. Whilst the usual obstacles to such a programme (space, utilities supply, committed carer etc) were identified the largest obstacle appeared to be the local culture of a nurse dependent care.

Conclusion/Application to practice
This study identified the key elements and the requirement for establishing HHD based on western experience and provides a basis for establishing a viable HHD program in Abu Dhabi. Based on the qualitative data collected a service development project plan was proposed as a viable pilot for a HHD program in Abu Dhabi. It is clear from this survey that an alternative model of self or assisted care will need to be developed to overcome local cultural issues.
Home dialysis versus in-centre dialysis

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Background
Home haemodialysis (HHD) allows the patient, after completing a training programme of 16 weeks, to perform dialysis treatments at home 24hours/day. The HHD program includes nursing support and promotes self-care, autonomy, patient comfort and quality of life.

Objectives
- Compare clinical outcomes and medication consumptions in HHD with in-centre haemodiafiltration (HDF).

Methods
From January to December 2014 we compared clinical data of 9 patients performing HHD (group A) with data of 10 randomly selected in-centre patients on HDF (group B). Relevant clinical data were Kt/V, Hb, ferritin, albumin and ESA, iron, antihypertensive consumption.

The Wilcoxon-Mann-Whitney test was applied.

Results
Comparing data of group A versus group B revealed:
- an average age of 62.88±4.90 versus 63.60±4.78 years; p=0.466;
- 1 diabetic versus 2 diabetics;
- 4 patients (44.5%) versus 6 patients (60%) consumed antihypertensive medication.

Age-adjusted Charlson Comorbidity differences between both groups were not statistically significant.

Furthermore, the following average levels were obtained for group A versus group B:
- Hb: 11.42±1.08g/dl versus 11.15±1.06g/dl; p=0.057;
- ESA: 0.73±0.71μg/kg versus 1.44±1.23μg/kg; p<0.001;
- Albumin: 4.05±0.29g/dl versus 4.10±0.49g/dl; p=0.916;
- Ferritin: 487.30±230.16ng/ml versus 665.75±369.39ng/ml; p<0.001;
- Iron mg/kg/month: 2.08±0.18 versus 2.50±0.13; p=0.027;
- Kt/V: 1.51±0.25 versus 1.90±0.39; p<0.001;
- Effective treatment time: 240min versus 238min.

Conclusion/Application to practice
There was no difference in outcomes between both groups besides a lower ESA consumption in HHD and a higher Kt/V in in-centre dialysis. Differences in Kt/V are probably justified by the different prescriptions (haemodialysis versus HDF). With HHD we can offer efficient treatment which could probably help reduce costs for the NHS (e.g. caused by the transportation to the dialysis centre).
RenalPro, an excellent problem solving and experience dissemination tool

A. Marti Monros¹, L. Seco Lozano¹, T. Garcia Fornieles¹, I. Fonfria Perez¹, J.F. Martinez Martinez¹, A. Sanz Escriba¹,
E. De La Iglesia¹, R. Ortells Corresa¹, L. Quevedo¹
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Background
RenalPro is a neutral forum, free of any industrial interest, making the bridge between renal care workers, worldwide. In 1994, Rob Huizinga RN(Canada), launched an email-based discussion forum, hosted and sponsored by University of Alberta Canada. Chairs have been: Bobbie Knotek(USA), Andre Strgier(Belgium) and Elizabeth Lindley(UK), in 2003 was agreed to switch to a full moderation of this forum to avoid: auto responders messages, product advertisements, computer virus spread, unsuitable postings...

Subscribers are from more than 46 countries.

Objectives
To describe how RenalPro can easily contribute to problem solving and experience dissemination.
To stimulate use of RenalPro to improve renal patient care and professional development.

Methods
Our Nephrology Department decided to re-open our Home Haemodialysis (HHD) program.
The first action was to make a literature research in order to identify „state of the art” of different aspects of HHD.
We also decided to send a request for information on:
1. checklist prior to sending patients home for HHD.
2. strategies to identify potential HHD patients.
The request was accepted by the RenalPro chair.

Results
We received valid information from countries around the world, describing their experience, concerns, practical protocols on HHD and links to different webs, from Nurses, Technicians, Managers, Educational professionals...the information has been a valid resource of information when setting up our own program.

Conclusion/Application to practice
Using RenalPro is one of the easiest ways, maybe the best one, to receive up to date information in different aspects of renal care, subscribers can share or alert their colleagues for any practice problem and/or ask for advice.
Legal blindness and home haemodialysis: the challenge of unassisted therapy

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Background

A legally blind patient with loss of peripheral vision requested to perform home haemodialysis in our nocturnal home haemodialysis program. The 64-year-old patient’s aim was to pursue home haemodialysis treatment by himself, including cannulation of the arteriovenous fistula using the buttonhole technique. In our program, blindness was classically considered an exclusion criteria due to heightened risks of infection, infiltration and technical errors.

Objectives

We hypothesized that the patient could safely perform home haemodialysis with a specific training where adapted tools and devices were used to manage needles, tubing system and connections in a safe and ergonomic approach.

Methods

We evaluated the patient’s ability to combine precision and action despite his visual impairment. A step-by-step method was developed to guide the patient through the different stages of the process: reading, tubing assembly, cannulation technique and connections. We collaborated with the Montréal Institute Nazareth and Louis-Braille (experts in visual impairment support) to find the appropriate visual aid device. We optimized the patient’s partial vision by using adapted ergonomic approaches to manipulate needles and mirror effect reflection of the magnifier.

Results

Special training allowed this patient to perform unassisted home haemodialysis. After a follow-up of 15 months only one infiltration occurred. No infections occurred. Once dialyzing at home, a few additional adjustments were needed to optimize his cannulation technique.

Conclusion/Application to practice

Motivation, special training and creativity allowed successful use of home haemodialysis. This positive experience resulted in the reassessment of visual impairment as a contraindication to home haemodialysis in our program.
GUEST SPEAKER
Growth in children before and after renal transplantation: therapeutic options and results
R. Van Damme-Lombaerts

Growth retardation is very common in children with advanced CKD. After a successful transplantation (Tx) the expected catch-up growth does not always occur. Recent European studies demonstrate that final height (FH) is below percentile 3 in 50% of children requiring RRT below the age of 13 yrs (ESPN/ERA-EDTA registry 2014). Better medical and nutritional approach is essential to overcome growth failure in CKD. rGH (recombinant growth hormone) therapy is available since more than 20 years and improves growth in all stages of CKD, the best in the younger age group. Respons is diminished during dialysis. After Tx, steroid minimisation is essential before rGH therapy is started. rGH treatment causes few adverse events. After Tx the incidence of rejection is not clearly increased following rGH.

The price of rGH is varying from one product to another by 25% and is expensive: around 10,000 – 12,000 Euro/year/child. This is justified since short stature has major consequences for quality of life and self esteem.

Even in 2016 rGH is not reimbursed in all countries of the EU and the specific conditions for reimbursement vary considerably. Undertreatment of growth failure in CKD patients is still a problem resulting in dissatisfaction with body height in young adults. Long term rGH treatment results in an increased FH. All efforts should be done to start rGH at young age before puberty and before RRT. Adjustment of reimbursement between different EU countries is necessary.
0 43
Improved understanding of uraemic toxicity for management of chronic kidney disease in paediatric patients
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Background
Chronic kidney disease (CKD) in childhood is a devastating disease characterised by decreased life expectancy and important comorbidities negatively impacting the quality of life and integration in society. Retention of uraemic toxins is accepted to play a major role in the pathogenesis of the comorbidities, but studies in children are lacking. Furthermore, there are currently no good tools to monitor therapy adequacy, resulting in suboptimal management.

Objectives
The scientific objective of our four years project (started Oct 1st, 2015), is to provide the clinician with new diagnostic and therapeutic tools for the management of children with CKD, based on improved understanding of uraemic toxicity.

Methods
New uraemic toxin marker(s) are derived based on 1) associations between concentrations of an array of uraemic toxins with different comorbidities in CKD children, i.e. growth, QoL, cardiovascular factors, sleep and psychosocial functioning; and 2) simulations of the kinetics of these toxins in children on haemodialysis. The kinetic models are validated based on toxin concentrations and their relation to comorbidities in individual patients after an intervention, i.e. switching to a different strategy. Finally, an open access prediction simulator (PAEDSIM) based on patient characteristics and toxin marker concentrations is developed to optimise and individualise dialysis therapy.

Conclusion/Application to practice
By providing clinicians with more advanced tools to improve management of children with CKD, i.e. better assessment of renal dysfunction and start of therapy, and more accurate monitoring of dialysis adequacy, we aim to improve neurocognitive and psychosocial functioning (short term), growth and social integration (median term) and survival (long term).
044

The role of the nurse in the management of kidney injury due to HUS

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Background
Hemolytic Uremic Syndrome (HUS) is the most common cause of sudden, short term acute renal failure in children. Haemodialysis (HD) and peritoneal dialysis (PD) are treatment options for these patients.

Objectives
The purpose of the study is to share our experience with acute kidney injury in children due to HUS.

Methods
Data of patients who had HD, PD or continuous veno-venous hemodiafiltration due to acute kidney injury secondary to HUS between September 1st 2015 and October 1st 2015 were collected.

Results
Five patients were followed up within this period of time. All of the patients presented after an acute attack of diarrhea and were accepted to have typical HUS. The mean age was 6.2 years. Hemodiafiltration was performed in three patients in intensive care unit followed by PD in two patients and HD in one patient in pediatric nephrology clinic. One patient had only PD and one patient had only HD treatment. The number of haemodialysis sessions were 14 and 15. The mean duration on PD was 9.33 days. All patients’ renal functions improved completely and the patients were discharged from hospital in good health condition.

Conclusion/Application to practice
Nurses have a very important role in the management of acute dialysis in children. Nurses need to monitor vital sings, assess the hydration status, nutritional support, blood sampling, and educate patients and families. So, they should be familiar with the treatment options for hemolytic uremic syndrome.
045
Paediatric nurses perception of barriers to the creation of AVFs in children on haemodialysis
M. Hamoudeh1, N. Alqaissi2, D. Dowsett3, C. Greenway3, P. Byers3, A. Cullimore1, N. Richards1, M. Richards1
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Background
The incidence and prevalence of end stage renal disease in paediatric populations is rising. Haemodialysis remains the most frequent modality of RRT in paediatric population. Vascular access is the cornerstone of HD. Selection and creation of the best vascular access is the most challenging aspect in the care of children on HD.

Objectives
The purpose of this study was to explore barriers perceived by renal paediatric nurses to the creation of AVF for children. The specific objectives were to: Conduct a comprehensive literature review. Assess the knowledge of the paediatric renal nurses with regards to haemodialysis vascular access. Suggest an evidence based service development plan to implement the use of AVF for the long term HD paediatric patients.

Methods
A descriptive, qualitative research design was used. A purposive sample of paediatric renal nurses was recruited from the paediatric HD unit, and data were collected and analyzed using a thematic analysis approach.

Results
Three related themes were identified: 1) nurses’ knowledge of paediatric HD vascular access based on experience, 2) perceived challenges to paediatric AVF creation and 3) the need for increased awareness and education of the benefits of AVF for paediatric patients.

Conclusion/Application to practice
These data acknowledge the long term benefits of AVF in children. There is a need to focus on raising awareness and educating nurses with regards to AVF benefits.
The pain-reducing effect of Camera Flash Light for arteriovenous fistula in children

S. Unturk¹, M. Anil², N. Akcan¹, A. Bat³, N. Aksu³, O. Yavascan³, M. Tanrisev¹, S. Ersan¹, A. Demir¹, N. Demiroglu¹

¹Haemodialysis, Tepecik Teaching and Research Hospital, Izmir, Turkey; ²Pediatric Emergency Department, Tepecik Teaching and Research Hospital, Izmir, Turkey; ³Pediatric Nephrology, Tepecik Teaching and Research Hospital, Izmir, Turkey

Objectives
To investigate the positive effect of camera’s flash light to reduce the pain due to AVF fistula insertion in children followed in chronic haemodialysis program.

Methods
11 pediatric patients in chronic haemodialysis treatment program for at least two months (median age: 15.5; minimum 11, maximum 18; male / female: 8/3) were evaluated. It was performed according to four different procedures applied to each haemodialysis session on different days. Session 1: AVF insertion without local anesthetic. Session 2: AVF insertion immediately after taking a photo without a flash from a distance of 2 m. Session 3: AVF insertion immediately after taking a photo with a flash from a distance of 2 m. Session 4: AVF insertion after lidocaine spray. Five minutes after the procedure, the patient and his/her mother evaluated the severity of the pain in each session (Visual Analog Scale: ranges from scoring 0-10. 0 = no pain; 10 = worst pain I remember).

Results
The median pain scores of children were 8, 4, 2, 2 in session 1, 2, 3 and 4 (p = 0.01), respectively. The median pain scores of the mothers were 8, 5, 3, 2 in session 1, 2, 3 and 4 (p < 0.001) respectively.

Conclusion/Application to practice
Taking a photograph with flash light was an effective and simple method for reducing the pain severity due to arteriovenous fistula insertion in children followed in chronic haemodialysis program.
Workshop
First part: Theoretical Session
Committee room 8+9, 11:00–12:30

Ultrasound of vascular access for nurses. Concepts and usefulness.
R. Iglesias

Alarm signs of vascular access dysfunction are specifics but low sensible, being frequent thrombosis and access loss. Also, difficult puncture arteriovenous fistula (AVF), can hide pathology and a difficult path that can cause traumatic punctures and morbidity. These signs do not normally generate radiological examinations and are result in late diagnostic.

That’s why the use of ultrasound by nurse in Haemodialysis units, can become a very useful tool to optimize punctures and therapy. Working coordinated with neurologists, radiologists and vascular surgeons we can achieve a decrease in morbidity.

This workshop is designed for nephrology nurses.

The aim of the course is to make nursing capable of, with the use of ultrasound:

- To learn the basic principles and technical adjustments of vascular access ultrasound.
- To recognize AVF’s suitable for puncture through screening of pathological AVF, detection of maturation parameters and anatomical variability.
- To measure the AVF flow.
- To locate optimal puncture sites. Ultrasound guided puncture.
S 21 CES B. Braun Avitum AG
Renal care for elderly patients
Auditorium 1, 11:00–12:30

Abstract is not available

Session content
Consequences of Franty and malnutrition according to the demographic trend in dialysis
Martin Kuhlmann (Germany)

Frailty in elderly patients on dialysis – impact on nursing
Carol Bartholomew (UK)

How to manage dialysis in nursing homes – experience from the Czech Republic
Jarmila Novotna (Czech Republic)
The clinical presentation of renal cancer has changed from the historical “textbook” triadic presentation of haematuria, loin pain and a palpable mass. Many cases present earlier during investigation or screening for other diseases. As a result, renal malignancies are being detected at an earlier stage within their natural history.

The presentation, investigation and clinical management of renal cancer is also complex and challenging; extending beyond typically primary surgical intervention. This demands full deployment of truly multidisciplinary clinical teamworking. The requisite placement and implementation of medical, surgical, human factor and nontechnical skills are discussed.
From empirical to evidence-based complexity evaluation of patients

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Background
The relationship between the patient complexity and the outcome is usually empirically determined from large data sets. A Nursing Patient Review (NPR) staging tool has been developed to measure the complexity and the prognosis of patients in the dialysis unit based on a multi-professional clinical evaluation.

An objective patients’ classification is the baseline for an effective patient care plan based on their specific needs.

Objectives
To develop a staging system to classify the patients from fully independent to fully complex.

Methods
To validate the staging system, a retrospective observational study was conducted. Pearson correlation (95% CI) and Kaplan-Mayer cumulative survival were used for statistical analysis.

Results
Clinical data was extracted and analysed for 795 patients (mean age 68.5 years; 307 females) from 27,543 treatments. The patients were staged according to their complexity between minimally complex to complex.

Age (r=0.44; P<0.0001) and treatment complication frequency (r=0.28; P<0.0001) showed stronger correlations with NPR stage.

Patients’ follow-up (period of two years) results showed that the more complex the patients are, the lower their probability of survival over a longer period (NPR1: 96.5% vs NPR5: 74.9%).

Conclusion/Application to practice
These findings demonstrate that it is possible to create an instrument that is statistically valid and clinically coherent that can be accepted, used and endorsed by all clinical staff.

The NPR staging system provides a complexity stage, from a variety of clinical variables.

The derived stage can also be considered as a mean of predicting the likelihood of patient mortality.
Comparison of socio-economic situation of Turkish and Syrian haemodialysis patients

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1Haemodialysis, Bakirkoy Dr. Sadi Konuk Education and Research Hospital Haemodialysis Unit., Istanbul, Turkey; 2Haemodialysis, Bagcilar Education and Research Hospital, Istanbul, Turkey

Background
Turkey is hosting nearly 2.5 million Syrian refugees and providing them health, education and food aid.

Objectives
The aim was to compare socio-economic situations including living situations and income distribution between Syrian and socially underprivileged Turkish haemodialysis patients.

Methods
We compared 23 Syrian patients with 82 Turkish, socially underprivileged dialysis patients with regard to “Income Distribution and Living Condition” questionnaire that has been made by Turkish Statistical Institute. The questionnaire forms were answered by the patient in the observation of nurses.

Results
There were 82 Turkish (41 Male, mean age 55.13±18 years) and 23 Syrians (11 Male, mean age 34.1±12.3 years) patients. Syrian patients were younger and better educated (table 1). Compliance with haemodialysis sessions was lower in refugees (p=0.002) and also temporary haemodialysis catheters were more frequent than in Turkish patients (p=0.012). Though there were more persons working in Syrian families (1.86±1.09 vs 1.04±0.92;p=0.003), per capita income was lower (1±0.9$ vs 4.5±2.8$;p=0.001). The only income for Syrian patients was “daily wage” and “salary”. They were not taking any social charity (p=0.001). People living together were 4.5±2 in Turkish families and 7.4±3 in Syrian families (p=0.001). Most of the Syrian patients were tenants (p=0.018) and they didn’t have any hot water installation (p=0.043). Owning of washing machine, dishwasher and refrigerator was more common in Turkish patients (p=0.014;p=0.001;p=0.001). Syrian patients couldn’t afford having their goods repaired and to pay their bills (p=0.014;p=0.001).

Table 1: Findings of questionnaire of the Syrian and socially underprivileged Turkish haemodialysis patients

<table>
<thead>
<tr>
<th></th>
<th>Turkish patients n=82</th>
<th>Syrian patients n=23</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age years</td>
<td>55.1±18</td>
<td>34.1±12</td>
<td>0.000</td>
</tr>
<tr>
<td>Male %</td>
<td>50</td>
<td>47.8</td>
<td>NS</td>
</tr>
<tr>
<td>Dialysis vintage months</td>
<td>62.5±48.5</td>
<td>45.3±46.9</td>
<td>NS</td>
</tr>
<tr>
<td>Compliance of HD session %</td>
<td>98.8</td>
<td>78.3</td>
<td>0.002</td>
</tr>
<tr>
<td>Temporary catheter %</td>
<td>9.8</td>
<td>34.8</td>
<td>0.012</td>
</tr>
<tr>
<td>Education %</td>
<td></td>
<td></td>
<td>0.004</td>
</tr>
<tr>
<td>No education</td>
<td>39</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Self education</td>
<td>15.9</td>
<td>4.3</td>
<td></td>
</tr>
<tr>
<td>Primary / Junior High School</td>
<td>37.8</td>
<td>60.9</td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>7.3</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>-</td>
<td>8.7</td>
<td></td>
</tr>
<tr>
<td>Person numbers in home</td>
<td>4.5±2</td>
<td>7.4±3</td>
<td>0.000</td>
</tr>
<tr>
<td>Major sources of income %</td>
<td></td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>Salary and daily wage</td>
<td>61</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Social charity</td>
<td>14.6</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Salary+ Social charity</td>
<td>13.4</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Daily income per capita US dollar</td>
<td>4.5±2.8</td>
<td>1±0.9</td>
<td>0.000</td>
</tr>
<tr>
<td>Owner of Home %</td>
<td>32.9</td>
<td>4.3</td>
<td>0.018</td>
</tr>
<tr>
<td>Tenant of Home %</td>
<td>61</td>
<td>95.7</td>
<td></td>
</tr>
<tr>
<td>Hot water in home %</td>
<td>89</td>
<td>69.6</td>
<td>0.043</td>
</tr>
<tr>
<td>Household machines %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fridge</td>
<td>97.6</td>
<td>73.9</td>
<td>0.001</td>
</tr>
<tr>
<td>Laundry machine</td>
<td>93.9</td>
<td>73.9</td>
<td>0.013</td>
</tr>
<tr>
<td>Dishwasher</td>
<td>56.1</td>
<td>8.7</td>
<td>0.000</td>
</tr>
<tr>
<td>Ability to repair utilities at home %</td>
<td>72</td>
<td>43.5</td>
<td>0.014</td>
</tr>
<tr>
<td>Availability of paying bill %</td>
<td>8.5</td>
<td>39.1</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Conclusion/Application to practice
Syrian haemodialysis patients are younger and more educated than underprivileged Turkish patients. They are dealing with difficulties in starting a new life in a foreign country. Although they’re trying to improve their socio-economic situations, they haven’t reached sufficient living conditions.
Evaluating how technology is used by people with chronic kidney disease

A. Bonner¹,², K. Corones¹, K. Campbell⁴, B. Hayes⁵, B. Harvie⁶, J. Kelly⁴, K. Gillespie¹, K. Havas¹,²

¹School of Nursing, Queensland University of Technology, Brisbane, Australia; ²NHMRC Chronic Kidney Disease Centre for Research Excellence, University of Queensland, Brisbane, Australia; ³Kidney Health Service, Metro North Hospital and Health Service, Brisbane, Australia; ⁴Bond University, Gold Coast, Australia; ⁵Renal Unit, Cairns Hospital, Cairns, Australia; ⁶Renal Unit, Bundaberg Hospital, Bundaberg, Australia

Background
Globally, technology is used by people with chronic diseases to find out about their health problems and treatment. It is also being increasingly used by renal teams at various stages along the chronic kidney disease (CKD) trajectory to support, educate and communicate with patients. However, the level and type of technology use in Australia is unknown.

Objectives
To investigate the use of internet and mobile phones in people with CKD.

Methods
A cross-sectional design undertaken at five locations recruited 619 participants. Inclusion criteria included: >18 years of age (no upper age limit); with known CKD (any stage); and attending a renal clinic or dialysis unit. A 38-item self-report survey captured demographic characteristics and internet and mobile phone use.

Results
Most participants were male (54.3%), <60 years of age (51.9%), had >10 years of schooling (52.4%) and were not on dialysis (59.1%). Internet was accessed at home (77.4%) via a laptop (30.8%) for checking emails (81.5%). Only 24.9% were aware of websites to get information about renal healthcare and even fewer used chat rooms (5.9%). Mobile phones were primarily used for making calls (86.1%) or SMS (80.8%). Those with smartphones mostly used apps for social networking, communication (e.g. email, Skype), banking or playing games. About half (50.6%) indicated a willingness to use technology for their renal healthcare including taking photos of meals for later advice.

Conclusion/Application to practice
The wide-spread introduction of technology to support CKD self-management may be justifiable; although it assumes that patients have good general and health literacy skills.
Active aging on haemodialysis: an adapted low intensity exercise programme in elderly patients

A. Junqué

Nefrologia, Consorci Sanitari de Terrassa, Terrassa, Spain

Background
Elderly haemodialysis (HD) patients are an increasing group with high dependency and comorbidity. Benefits of exercise have not been specifically evaluated in elderly HD population.

Objectives
Analyze an adapted low intensity intradialytic exercise on muscle strength, functional capacity and quality of life in our elderly HD patients (> 75 years) as well as body composition and nutritional parameters.

Methods
12 weeks single-center study. HD patients were assigned into exercise (ET) or control group (C). Analyzed:
1.- Nutritional and lipid profile biochemical data.
2.- Maximum length quadriceps strength [MLQS] and hand-grip [HG].
3.- “Sit to stand to sit” [STS10] and “six-minutes walking test” [6MWT].
4.- Health questionnaire: EQ-5D.
5.- Body composition [EBI].

Results
22 patients. 50% male. Mean age 83.2 years. 44.1 months in HD. 11 group E, 11 group C. No related adverse effects. Finally, ET group globally improved (* p < 0.05): MLQS 10.5±7.6 vs 12.9±10.1 kg, HG *16.6±8.7 vs 18.2±8.9 kg, STS10 *29.9±10.6 vs 25±7.87 sec, 6MWT *14.6%, 234.4 vs 274.7 m and EQ-5D 49±19.1 vs 59.5±20.3. Non significant lower body fat (FAT) (33.2±13.1 vs 32.8±12.8) and higher musculoskeletal tissue percentage (27.2±6.5 vs 28.2±6.2) were observed in ET. No biochemical, dialysis adequacy or EBI changes were found.

Conclusion/Application to practice
1.- An adapted low intensity exercise programme improved muscle strength, functional capacity and quality of life in our elderly patients on HD and stand out the benefits of exercise in HD patients, even in this elderly population. 2.- We did not find relevant changes on nutritional data and body composition in our elderly HD patients. 3.- We should consider an adapted low intensity intradialytic exercise as a part of comprehensive care in despite of elderly HD patient.
S 23 Improving quality of renal care
Auditorium 3, 11:00–12:30

GUEST SPEAKER
Challenges in exercise implementation for patients undergoing haemodialysis
E. Segura-Ortí
¹Physiotherapy, Universidad CEU Cardenal Herrera, UCH CEUs, Valencia, Spain

Background
Physical function of subjects undergoing hemodialysis is lower compared to healthy counterparts. Factors that explain this low physical condition include impaired kidney function, decreased physical activity and low muscle mass. We will analyze which of these factors are more important to explain physical function. By the other hand, there is a wide variety of tests used to measure physical function in this cohort, but there is a need to identify the most reliable ones and to standardize measurement procedures. We will show results regarding reliability studies of several commonly used physical function tests. Since the early 80’s exercise has been implemented in different hemodialysis units around the world, and it has resulted in benefits for subjects undergoing hemodialysis, including the improvement of physical function. So, why exercise is not implemented as a routine for this cohort? We will analyze the literature regarding the reasons why the adherence to exercise is low. We will review barriers for subjects undergoing hemodialysis to exercise and barriers from health care professionals working at hemodialysis units to implement exercise programs. We will discuss possible options to overcome these barriers, including home exercise programs and the use of new technologies. Preliminary results on the use of virtual reality combined with intradialytic exercise will be discussed.
The missing piece: Self-management support desires of patients with chronic kidney disease

K. Havas1, 2, A. Bonner1, 2, 3, C. Douglas1

1School of Nursing, Faculty of Health, Queensland University of Technology, Brisbane, Australia; 2Chronic Kidney Disease Centre for Research Excellence, University of Queensland, Brisbane, Australia; 3Kidney Health Service, Metro North Hospital and Health Service, Brisbane, Australia

Background

People with chronic kidney disease (CKD) must self-manage their illness to slower disease-progression, but this is complex, and people desire support. Despite the importance of person-centred care, people with CKD are rarely consulted regarding their desires for self-management support (SMS).

Objectives

To investigate the SMS preferences of CKD patients.

Methods

A cross-sectional survey was conducted face-to-face in a Queensland primary-care clinic and distributed Australia-wide via an online interface promoted by Kidney Health Australia during 2015. Participants were ≥18 years old and had a diagnosis of CKD (any stage; N=97). The survey was based upon literature identifying 10 areas that those with CKD require as an additional support.

Results

Of the 97 participants, 36 completed a hardcopy survey, and 61 completed the online version. Just over half (60.8%) were female, age ranged from 16-89 (M=56.44), and time since diagnosis ranged from just diagnosed to 60 years (Mdn=8.08 years). Strong interest in receiving additional support was reported across all 10 areas (Mdns=8.00–10.00), with “keeping a positive attitude and taking care of mental and physical health” receiving the highest rating. Those who were: younger (p<.001); more highly educated (p<.001); working (p<.001); diagnosed longer ago (p=.015); and women (p=.050) expressed stronger desire for additional support.

Conclusion/Application to practice

In addition to information about CKD and medications, everyday strategies ought to be prioritised in patient education. Varying levels of engagement and eagerness to learn more about self-management, highlights the need for a person-centred approach to SMS.
052
The impact of psychological conditions and established adaptation strategies to QoL in ESRD patients
B. Poje1, Z. Vidic1, S. Siljegovic1, V. Babic1, A. Rundic1, D. Petric2, J. Grkovic2
1Department of Nephrology, Dialysis and Kidney Transplant, KBC Rijeka, Rijeka, Croatia; 2Psychiatric Clinic, KBC Rijeka, Rijeka, Croatia

Objectives
This study aimed to examine how anxiety and depression affect mental state and to measure adaptation strategies (coping skills) and consequently the quality of life of patients with chronic kidney disease in pre-dialysis stage and on renal replacement therapy.

Methods
Study involved 119 patients; 28 patients in the pre-dialysis education program, 36 patients treated with regular hemodialysis up to five years, 28 patients treated with continuous ambulatory peritoneal dialysis less than five years, and 29 patients who had a kidney transplant for less than five years. Beck’s scale was used to determine the degree of depression (BDI). For level of anxiety we used (STAI-X1) and for anxiety related to personality traits we used (STAI-X2). Coping skills were assessed with COPE questionnaire. Quality of life was measured by the Manchester Short Assessment of Quality of Life (MANSA).

Results
Depression significantly differed related to the CKD stage (F (3,115) = 05.04; p=0.009). Quality of life was significantly different related to the stage of chronic kidney disease (F (3,115) = 3.15; p=0.028). Patients on hemodialysis had the lowest quality of life, significantly lower than transplant patients (p=0.004) and patients on peritoneal dialysis (p=0.033).

Conclusion/Application to practice
Quality of life differed significantly when comparing the stages of chronic kidney disease. Patients on hemodialysis had the lowest quality of life, significantly lower than the transplant patients and patients on CAPD.
Symptom experience in non-dialysis-dependent chronic kidney disease: a UK qualitative study

K. Pugh-Clarke¹, S. Read², J. Sim²

¹Kidney Unit, Royal Stoke University Hospital NHS Trust, Stoke-on-Trent, United Kingdom; ²Research Institute for Social Sciences, Keele University, Staffordshire, United Kingdom

Background
Studies indicate that symptoms attributable to impaired kidney function are important determinants of quality of life and functional status in patients with chronic kidney disease (CKD). Accordingly, symptom assessment and subsequent control are prerequisites to high-quality care in this patient population. Whilst symptom burden in patients with advanced CKD managed without dialysis has been likened to that of palliative care cancer populations, there is little information about the nature and range of symptoms in earlier stages of the CKD trajectory. This paper reports the preliminary findings of the first phase of a PhD study aimed at exploring the symptom experience in patients with CKD Stages 4 and 5.

Methods
Eighteen semi-structured patient interviews were conducted, using an interview schedule developed specifically to guide discussion. Data were analyzed using thematic analysis to identify symptom themes and patterns across the patient experiences.

Results
Patients reported a wide range of symptoms, with over 50 different themes and sub-themes emerging from the interview data. Themes could be broadly classified into physical symptoms, such as ‘Altered taste perception’, ‘Sleep disturbance’, and ‘Fatigue’; and psychological symptoms, such as ‘Forgetfulness’, ‘Poor concentration’, and ‘A sensation of gradually slowing down’. Of note, when questioned further, patients indicated that they would not usually report their symptoms to clinicians.

Conclusion/Application to practice
This study suggests that patients with CKD Stages 4 and 5 may have a high symptom burden. The finding that patients did not routinely report their symptoms emphasises a need for clinicians to incorporate symptom assessment into routine clinical consultations.
Predictors of health status in patients with CKD

M. Kelleher¹, P. Paul¹, G. Wong¹
¹Nephrology, Prince of Wales Hospital, Sydney, Australia

Background
There is an extensive body of literature examining the health status of patients with chronic kidney disease (CKD). It is well reported that patients on dialysis experience numerous stressors, both physical and psychosocial, associated with dialysis treatment for instance itchiness, poor sleep quality and fatigue just to name a few.

Objectives
The objective of this paper is to explore the predictors of health status in patients with CKD.

Methods
191 patients with chronic kidney disease were enrolled in the study. The following physiological data was collected on each participant: weight, height, BMI, comorbidities and body composition. Body composition was determined using bioimpedence spectroscopy. Each participant was asked to complete a questionnaire which collected data on 9 domains of health status which included questions pertaining to general health, sleep quality and symptomatology.

Results
The data was analysed using SPSS 23. Multiple linear multiple regression was used to determine the greatest predictors of health status. From the analyses participants who worked (t = 4.042; p<.0001) and lean tissue mass (t = 2.109; p = .037) were the greatest predictors of health status (f = 3.685; p<.0001).

Conclusion/Application to practice
The results from this study will assist in developing rehabilitation programmes for patients with CKD focusing on the importance of work and physical activity to maintain lean muscle.
Workshop
Second part: Practical Session
Committee room 8+9, 11:00–12:30

Ultrasonography for vascular access in dialysis
R. Iglesias, C.Rubiella Rubio, J. Ibeas Lopez, J. Vallespin Aquado

Alarm signs of vascular access dysfunction are specifics but low sensible, being frequent thrombosis and access loss. Also, difficult puncture arteriovenous fistula (AVF), can hide pathology and a difficult path that can cause traumatic punctures and morbidity. These signs do not normally generate radiological examinations and are result in late diagnostic.

That’s why the use of ultrasound by nurse in Haemodialysis units, can become a very useful tool to optimize punctures and therapy. Working coordinated with neurologists, radiologists and vascular surgeons we can achieve a decrease in morbidity.

This workshop is designed for nephrology nurses.

The aim of the course is to make nursing capable of, with the use of ultrasound:

- To learn the basic principles and technical adjustments of vascular access ultrasound.
- To recognize AVF’s suitable for puncture through screening of pathological AVF, detection of maturation parameters and anatomical variability.
- To measure the AVF flow.
- To locate optimal puncture sites. Ultrasound guided puncture.
S 24 CES NxStage Medical, Inc.
Simply Home – Can you make it sustainable?
Auditorium 1, 14:00–15:30

Abstract is not available

Session content
The long term economic challenge of dialysis population growth
Tony Goovaerts (Belgium)

The clinical experience of Home Haemodialysis with new systems
Jean Shears (UK)

Practical experience of organising a training programme
Johanna Bjork & Marju Silventoinen (Finland)

Home Haemodialysis is a green therapy
Pedro Reinas (Spain)

Patient experience using NxStage
Henning Sondergaard (The Netherlands)
GUEST SPEAKER
Thinking kidneys: the British Kidney Patient Association working collaboratively to reduce acute kidney injury
F. Loud¹
¹Policy, British Kidney Patient Association, Alton, United Kingdom

Background
In the UK up to 100,000 deaths in hospitals each year are associated with Acute Kidney Injury (AKI), it is estimated that 30% of them could be prevented with the right care and treatment.

Objectives
The National Health Service in England has for the past 3 years developed a ‘Think Kidneys’ campaign to tackle avoidable harm, in which the BKPA was a founder member. The talk will illustrate the innovative work of the programme and how a patient charity supported and enhanced its work.

Methods
A multi-disciplinary team was established with workstreams for risk, education, intervention, hydration, measurement, detection and implementation.

It developed education, interventions, guidance and introduced a warning algorithm to detect AKI in hospitals and subsequently in general practice. As a patient charity the BKPA was very aware of the lack of information for patients at risk of or recovering from AKI and collaborated to produce supportive patient-facing information, and to make sure the patient voice was heard in the work of the programme.

Results
The wide ranges of resources and the 300+ people who worked on this programme have created excellent resources which are now being used in the NHS to reduce the avoidable harm of AKI.

Conclusion/Application to practice
The full impact of the programme is under evaluation but the extensive work of this programme demonstrates clearly what can be achieved through collaboration, determination and appropriate funding.
O 55
CRRT in patients with AKI - experience from a tertiary care center in Croatia
B. Devci1, V. Racki2, M. Praskalo2, B. Madzar1, I. Mikolasevic1, L. Orlic3, S. Racki1
1Department of Nephrology, Dialysis and Kidney Transplantation, University Hospital Centre Rijeka, Rijeka, Croatia; 2School of Medicine, University of Rijeka, Rijeka, Croatia

Background
Continuous renal replacement therapy (CRRT) is one of the methods for the treatment of acute kidney injury (AKI). We analyzed the patients and treatment characteristics as well as effect of CRRT on the outcome of our patients with AKI receiving CRRT.

Objectives
In this retrospective study, we have analyzed a total of 299 patients treated with CRRT in the intensive care unit (ICU) during the period 1st of January 2010 to the 30th of June 2015.

Methods
Patients’ demographic characteristics, as well as prescribed CRRT therapy and patients’ outcome were analyzed.

Results
Out of 299 analyzed patients, there were 201 (67%) men and 98 (33%) women with an average age over 65 years of age (ranging from 1-89 years). The most common prescribed treatment was a continuous veno-venous haemodialysis (CVVH) (85% of our patients CVVHDF using AN69 membrane applied in 11 (29%) patients. Of 299 analyzed patients, 107 (35.8%) of them died, while, 23 (7.7%) of patients did not recover their renal function and continued further renal replacement therapy. One hundred and thirty (56.5%) patients had recovered their renal function in the end of the CRRT treatment.

Conclusion/Application to practice
The mortality rate of our AKI patients treated with CRRT was around 50%. Although, the mortality rate in patients with AKI treated with CRRT is still high, the percentage of patients with preserved renal function is increasing.
Urinary tract infections in kidney transplanted patients
J. Finderup1, J.P. Hoffmann2, T. Hoeher-Thomsen2

1The Department of Renal Medicine, Aarhus University Hospital, Aarhus N, Denmark; 2Via University College, Aarhus N, Denmark

Background
Urinary tract infections (UTI) in kidney transplanted (TX) patients increase the risk for rejection and loss of the graft. It is thus important that TX patient with a UTI receive appropriate care and treatment. Two years ago a clinical guideline on care and treatment in relation to UTI was implemented.

Objectives
To estimate the quality and identify quality flaws in the diagnosis of TX with a UTI before and after the introduction of a guideline on UTI care.

Methods
A clinical qualitative audit of the medical record for 135 patients covering a period of 3.5 years. The period was separated by the time for the introduction of the guideline. Relevant data was quantified and analysed by simple statistics.

Results
Quality flaws were identified but also improvements in the diagnosis of cystitis, pyelonephritis and urosepsis after implementation of the guideline. The number of patients with a UTI has decreased. An increasing number of patients go through the right diagnostic procedures and receive treatment, but still there is a need for improvement. A few patients had a UTI less than 50 days after TX. Most of the patients had a UTI more than 120 day after TX and had several UTIs.

Conclusion/Application to practice
The quality has increased after the introduction of the guideline but there is still a need for improvement. The results indicate that earlier removal of the JJ-catheter maybe improve quality. Prevention and early detection of UTI may be the best way to improve quality in TX patients contracting a UTI.
Factors affecting the post-dialysis levels of vancomycin and gentamicin in haemodialysis patients
A. Acheamfour, E. Tungu-Dabu, M. Giannopoulous, B. Sood, D. Makanjuola
1Renal Unit, St. Helier Hospital, Surrey, United Kingdom

Background
Patients undergoing dialysis are prone to dialysis access related infections. Empirical antibiotic therapy in our unit is Vancomycin and Gentamicin. Delays in obtaining drug levels can lead to missed doses, or inappropriately administered doses, which could adversely affect the patient.

Objectives
We investigated whether there were any parameters which could help predict what the percentage reduction of the pre-dialysis drug levels would be following a dialysis session.

Methods
Inpatients on antibiotic therapy for various indications were included. All patients were on haemodiafiltration using FX60 high-flux dialysers. Data on weight, dialysis access type, blood pump speed, duration of dialysis, litres processed per session, ultrafiltration volume, time on dialysis and Vancomycin and Gentamicin levels were collected and analysed.

Results
88 samples were collected from 21 patients, 62% were male, mean age 70.2 years. The only positive correlation was between the litres processed per session adjusted for body weight pre-dialysis ($R^2 = 0.23$). This was not the case with ultrafiltration volume/kg body weight ($R^2 = 0.003$).

Conclusion/Application to practice
The best correlation with the percentage reduction in drug level following dialysis was the litres processed adjusted for pre-dialysis body weight. All our patients were using high-flux dialysers and were on HDF, so it is not clear whether this would apply to patients using either low-flux dialysers, or patients on haemodialysis rather than HDF. If it is possible to come up with a ‘nomogram’, based on a few of these parameters to guide antibiotic dosing, it would be of great benefit, especially in the outpatient setting.
The Undocumented Immigrants – a treatment challenge
I. Romach¹, J. Jenin¹, A. Gal-oz¹, I. Gutman¹, A. Veretnik¹
¹Dialysis, Tel Aviv Souraski Medical Center, Tel Aviv, Israel

Background
Immigrants and refugees are a vulnerable population. They have no medical insurance, and their compliance is low. Though there is a free clinic serving the undocumented immigrants, they do not use it, thus arriving at the hospital in critical conditions including Chronic Kidney Disease (CKD) stage 5, necessitating urgent Haemodialysis Treatment (HD) via temporary catheter. Morbidity and mortality rates among them are very high.

Objectives
Two undocumented immigrants were hospitalized with CKD stage 5. They started their dialysis treatment via temporary and later permanent tunneled cuffed catheters - both compassionate. Definite peripheral vascular access or Kidney Transplantation were not an option.

Results
: 3-4 years after initiating HD both patients developed access failure. They started Peritoneal Dialysis (PD). It took several episodes of Peritonitis and Peritoneal Catheter changes, prolonged hospitalizations and massive broad spectrum, expensive antibiotic treatment, until finally the PD Treatment was exhausted. The last access possible was a Trans lumbar HD Permacath. Both were noncompliant due to financial limitations. We partly supplied their medications by including them in several research projects (Anemia, Bone Dis.), other patients who donated some medications, samples donated by pharmaceutical companies, and leftovers. This was suboptimal treatment, but it was enough to keep them alive. Their debt is 1,053,323 Euro for 10 years and 593,434 Euro for 6 years, respectively.

Conclusion/Application to practice
Preventing morbidity and mortality among Undocumented Immigrants is challenging and requires creativity. Local health suppliers and Nephrologists should find solutions and financial resources to treat those patients according to the international guidelines.
059 / P 019
Assessment of pain and adequacy of analgesia in haemodialysis patients
R. Pelayo Alonso¹, P. Martínez Alvarez¹, J.L. Cobo Sanchez¹, M. Gándara Revuelta¹, E. Ibarguren Rodriguez¹,
¹Nefrology Department. Haemodialysis Unit, “Marqués de Valdecilla” University Hospital, Santander, Cantabria, Spain

Background
Pain is the most common symptom in renal patients due to comorbidity, the dialysis technique and more time on haemodialysis.

Objectives
To determine the prevalence of intradialytic and chronic pain as well as the adequacy of analgesic therapy in patients on haemodialysis.

Methods
Descriptive study in 33 patients on haemodialysis in which different rating scales were used: Brief Pain Inventory (to determine the chronic pain), Visual Analogue Scale (to assess the intradialytic pain) and Pain Management Index (for checking the conformity of analgesia).

Results
Chronic pain occurs in 57.57% of patients and intradialytic pain in 78.8%. In both cases, pain was musculoskeletal, mild (3.14 points and 3.13 points respectively); and related to more time on haemodialysis. Chronic pain interfered with the mood, the usual work and relationship with others. The adequacy of the treatment was successful for chronic pain but not for intradialytic pain.

Conclusion/Application to practice
Pain is a frequent symptom in our sample. The intradialytic pain presents a worst pharmacological management than the chronic pain.
Monthly blood / patient reviews: A focused team-based approach

D. McIntyre¹, N. Lorenzen², K. Jakeman¹, M. Rice³
¹Renal, The Royal Brisbane and Womens Hospital, Brisbane, Australia; ²Dietetics, The Royal Brisbane and Womens Hospital, Brisbane, Australia; ³Pharmacy, The Royal Brisbane and Womens Hospital, Brisbane, Australia

Background
The previous only medical model often led to poor communication and fragmented follow up. With the introduction of a Nurse Practitioner and a focused nurse manager, a tailored interdisciplinary approach was trialled. The reviews maximised the finite resources of the MDT and better targeted the nephrologists time. The MDT consisted of a Renal Nurse Practitioner, Pharmacist, Dietitian and Nurse Unit Manager. Patient’s haemodialysis information, monthly biochemical and haematological results, medications, nutritional status and psychosocial concerns were reviewed. The MDT reviews featured real time documentation with the patient clinical record and feedback provided to the patient within 48 hours.

Objectives
To report on the implementation and outcomes of monthly MDT reviews within a satellite dialysis unit.

Methods
A documented framework for the MDT to follow and regular review of the initiative identified ways to improve efficiency and target areas for the unit to focus on. The MDT reviews are fully supported by nephrologists and have facilitated an increase in their clinic availability.

Results
A fully collaborative approach to monthly patient reviews has resulted in:
- Maintenance of biochemical and haematological performance key indicators comparable with the previous medical only model
- Increased patient involvement
- More timely referrals and follow up
- Transparent review process with real time documentation
- Optimisation of limited allied health resources
- Ongoing professional development for the MDT

Conclusion/Application to practice
Monthly MDT reviews are now embedded into our practice. The process improves efficiency and is highly valued by patients, nursing staff, the MDT and Nephrologists.
Nursing coordinators in the dialysis unit
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Background
There is a diversity of care required for dialysis patients, which includes pain management, infection prevention, vascular access care, diabetic care, phosphate control, transplant care and education about renal failure.

The increased number of dialysis patients raises the need for nurses with specified responsibilities in various specialties, including patient education, improvement of work procedures, implementation of new protocols and ensuring a continuum of care between the specialties.

Objectives
Nurses were appointed as coordinators responsible for an area of specialized care, including pain treatment, infections, vascular access, diabetic care, phosphate control, transplant care and patient education. A survey was conducted to assess their impact on the quality of care and patient knowledge.

Methods
A questionnaire relating to patient satisfaction and understanding of their treatment in these areas was developed and distributed. The data were collected and translated to percentages, so each subgroup received a score on a scale from 1-100. Next, the reasons for the lowest scores were considered, and an interventional plan built.

Results
Patient satisfaction was highest in the specialties of infection control, pain management and vascular access care, and was lowest in diabetic care and transplant care. A plan for improving the scores in the lower rating subgroups has been implemented, and an additional survey will be performed at the end of the intervention.

Conclusion/Application to practice
There was a positive correlation between the function of the coordinating nurse and the high scores received in the various fields. Methods of improving the scores in the lowest rating subgroups must be determined and implemented.
Anxiety, depression and quality of life in patients undergoing chronic haemodialysis; observational cross section study

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Background
Patients undergoing chronic haemodialysis treatment can suffer different stressful and threatening situations. The impact of emotional disorders can be a determinant to the progress of the chronic illness.

Objectives
1. Describe quality of life and the level of anxiety and depression. 2. Explore the correlation between anxiety and depression with quality of life levels. 3. Analyse the predictor factors between quality of life and anxiety and depression.

Methods
This was a quantitative, cross-sectional study. 138 patients were interviewed in Spain. The Kidney Disease Quality of Life short form (KDQOL-SF) questionnaire and the Hospital Anxiety and Depression Scale (HADS) were used for the data collection.

Results
The results show that 15.9% of patients suffer clinical depression and 19.6% suffer clinical anxiety. The levels of quality of life are significantly below the average population. Findings suggest that anxiety and depression have a negative correlation with quality of life levels. The ANOVA studies between anxiety and depression and quality of life show significant differences with nearly all the scales of quality of life.

Conclusion/Application to practice
Patients
An initial and ongoing evaluation of patients emotions should be performed. It is fundamental that nursing care planning is constant to improve quality of life and avoid emotional disorders, considering a holistic view of the patient. A nurse-led nephrology nursing practice program should be considered, offering social choices and psychological support based on an individualised evaluation of the needs.
Ischemic hand in dialysis patients: a survey about prevalence, clinical signs and symptoms

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Background
Ischemic Hand (IH) is a peculiar complication among dialysis patients. Its mechanism is based on reduced blood flow of the arterial tree below the elbow where the AV Fistula may trigger the syndrome.

Objectives
To assess prevalence of IH and the role of nurses in the prevention of complications.

Methods
We promoted a national survey to investigate IH prevalence in setting of patients on RRT, evaluating early and over time clinical signs. The survey included 41 dialysis units, collecting information on 2,082 patients.

Results
Early signs of IH were detected in 45 patients out of 2,082 (2.2%). 73% perceived pain during dialysis. Pharmacological pain control was requested by 22% of patients, low temperature of the hand was perceived by 64%; 33% needed to wear a glove; 62% experienced skin-colour change after cannulation for dialysis; 33% had advanced lesions (skin lesions, necrosis in 14 out of 45 patients) In addition, 41 interviewed clinicians underlined a high or very high clinical importance in 36% and 17% of the cases. Moreover, they detected an insufficient understanding of strategies to follow in 51%; lack of available experts in 37.8% and the necessity of a vascular surgeon in 64.5%.

Conclusion/Application to practice
This survey showed that IH is not a rare disease and underlines the critical role of nurses in detecting and following early clinical signs of this potentially complication.
Awareness of renal nurses in identification and education of patients with inherited renal diseases

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Background
Genetic disorders in the United Arab Emirates are common. Increased awareness of the importance of early identification of patients with genetic disorders has provided the disorders a high level of prominence in primary health care settings. Nevertheless, there is empirical evidence indicating that there is a low level of understanding of inherited diseases among nurses.

Objectives
This study explored how renal nurses identify patients with or at risk of inherited renal diseases and the nurses’ awareness of support services available for patients and their families.

Methods
A descriptive phenomenological study approach, with semi-structured interviews was used to collect data from paediatric renal nurses working within SEHA Dialysis Services.

Results
All paediatric dialysis nurses responded to the survey. They identified polycystic disease, Alport’s syndrome and congenital nephrotic syndrome as the commonest genetic disorders in their practice. Other conditions such as neurogenic bladder and diabetes were incorrectly mentioned as was the idea that 60% of all patients had an inherited disorder. Whilst all nurses were aware of the possibility of transmission to children and the concept of a carrier status none were able to correctly describe the inheritance of any of the conditions and the likelihood of an affected child being born from affected parents. All correctly identified consanguineous marriage as the cause for the high prevalence of such conditions within Abu Dhabi. Few support services are available.

Conclusion/Application to practice
The findings presented in this study indicate that there is a need to provide genetic training and education to renal nurses with regards to inherited renal disorders.
Strict monitoring of isoagglutinins levels is required for ABO-incompatible living-donor kidney transplantation

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Background
Due to the shortage of organs from deceased donors, kidney transplantation from living donors has been developed. Besides standard kidney transplantation from living donors, HLA-incompatible and ABO-incompatible (ABOi) kidney transplantation have been developed. Hence, French authorities allowed ABOi transplantation in 2011.

Objectives
Since 2011, the Department of Nephrology and Organ Transplantation (Toulouse University Hospital) has performed desensitization protocols to enable ABOi transplantation.

Methods
Desensitization protocols included apheresis sessions (immunoadsorption), rituximab, and intravenous immunoglobulins. The number of apheresis sessions was chosen according to the isoagglutinin level needed for ABOi transplantation. Isoagglutinin levels were also determined daily within the first days post-transplantation, weekly during the first month, and then monthly for 1 year. An increased isoagglutinin level prompted physicians to modify immunosuppression and/or to conduct immunoadsorption sessions to avoid acute rejection.

Results
Between March 2011 and December 2015, 55 ABOi kidney transplantations were performed in our institution. Only three graft losses occurred. Of these, only one was related to chronic antibody-mediated rejection. Monitoring isoagglutinin levels allowed us to determine the best pre- and post-transplant therapeutic options.

Conclusion/Application to practice
Monitoring isoagglutinin levels is mandatory when performing successful ABOi living-donor kidney transplantation.
Interconnected care in haemodialysis: patient, nurse and informal caregiver

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Background
In the context of Health-Related Quality of Life, it is mandatory to ascertain what perceptions individual patients have when it comes to their own health and not purely rely on the traditional clinical measures. This concept covers several scientific areas and research fields such as social integration and support, satisfaction with life and physical condition, affective and relational capacity, network backup of all players involved in the world of healthcare.

Objectives
• Gain a comprehensive understanding on how the informal caregiver (IC) and nurses interrelate with the rest of the network of haemodialysis patient’s relationships.
• Identify the importance of IC such as firefighters and taxi drivers.

Methods
A group of 112 haemodialysis patients undergoing treatment in our clinic were assessed. Surveys were carried out and data was collected from May 12 until June 13.

A qualitative instrument, the „Sickness Impact Profile” (SIP) Portuguese Translation, was used and analysed. SIP is behaviourally based and measures sickness related dysfunction and outcome of health care services.

Results
Our outcomes highlighted the importance of the support received from health professionals and caregivers, their loved ones and the techniques employed during haemodialysis treatment. An equally important finding is related to the IC such as the role of the taxi driver who revealed themselves as privileged element and connecting link between the different actors.

Conclusion/Application to practice
The IC, who is very rarely spoken about, proved to be a key player, exercising a therapeutic role thanks to their ability to help, the chance to observe and establishing trust with the dialysis patient, family and clinical staff.
Haemodialysis — Rethinking our environmental responsibilities

A. Bastar

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Background
As global efforts to combat climate change and carbon generation accelerate, the environmental impact of dialysis practice will come under increasing regulatory focus. That is why each of us has the responsibility to protect the environment as much as possible and optimize resource consumption.

Objectives
Our objectives are to minimize the negative effects and reduce consumption of natural resources, to raise awareness of all employees.

Methods
We reduced the water consumption by using post-dilution haemodiafiltration, with an automatic adjustment of the relation of dialysate flow rate / blood flow rate to 1.2.

We implemented Kaizen by training and involving employees in order to improve the daily activities and we raised the employees’ awareness towards the importance of environmental protection.

We reduced contaminated waste by separating domestic, plastic waste: reduce, re-use, recycle – always look for ways to use fewer resources. We implemented specific emptying procedures for haemodialysis and HDF circuits.

Results
We reduced the amount of contaminated waste/treatment from 1.2 to 0.9 kg during one month for each patient. We have minimized the risks for the company, employees, environment and patients with internal directives and compliance with legal requirements and optimized processes and results thus achieving economic objectives.

Conclusion/Application to practice
Protecting the environment is a priority of the entire staff of our dialysis unit in order to ensure a high quality and safe treatment with minimum impact on the environment.
S 27 Nutrition  
Auditorium 1, 16:00–17:30

GUEST SPEAKER  
Hidden phosphorus in the diet – consequences for CKD patients and the general population  
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1Internal Medicine - Nephrology, Vivantes Klinikum im Friedrichshain, Berlin, Germany

Background  
Hyperphosphatemia has been identified as a strong predictor of mortality in advanced kidney disease (CKD). A recent study of patients in stage CKD 5 revealed that 12% of all deaths in this group were attributable to an elevated serum phosphate concentration. A high-normal serum phosphate concentration has been found to be an independent predictor of cardiovascular events and mortality in the general population. Therefore, phosphate containing additives in food are a matter of concern.

Results  
Dietary phosphate content is closely associated with protein content. The natural organic phosphate esters contained in foods is only incompletely absorbed and restricting its intake may result in protein malnutrition. On the other hand, inorganic phosphate in food additives is effectively absorbed and can measurably elevate the serum phosphate concentration in patients with advanced CKD. While processed food and „fast food“ contain high amounts of phosphate containing food additives this is not the case for biologic food, where most phosphate containing additives are not permitted. The main pathophysiological effect of phosphate is vascular damage and vascular calcification. Patients with advanced renal failure are advised to limit their daily phosphate intake by carefully selecting meals and specifically avoiding phosphate additives containing food components.

Conclusion/Application to practice  
Although prospective controlled trials are currently unavailable, renal patients as well as the public should be informed that phosphate containing food additives may be damaging to health. European calls for labeling total phosphate content of foods or the content of phosphate additives have been issued.
Adherence of dietary and fluids restrictions and self efficacy in patients undergoing haemodialysis

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Background
Many haemodialysis patients have difficulty complying with fluid and dietary restrictions. These patients require major lifestyle changes. A person with an increased perception of self-efficacy is more likely to participate in self-care activities, which increase the patient’s adherence to the treatments.

Objectives
The aim of the study is investigate relationship between the adherence to dietary-fluid restrictions and self-efficacy in haemodialysis patients.

Methods
This is a descriptive cross-sectional study with a convenience sample of 146 haemodialysis patients. Data were collected by using a Personal Information Form, Nonadherence Questionnaire with Dialysis Diet and Fluid Restrictions and General Self-Efficacy Scales.

Results
Frequency of non-adherence to fluid was more common in patients. In total, 79 patients (54.2%) reported mild to very severe nonadherence to diet, and 88 patients (60.3%) reported mild to very severe nonadherence to fluid restrictions. There was a significant relationship between adherence to dietary - fluid restrictions and self efficacy. Noncompliance in dietary and fluid restrictions were related to some personal and clinical characteristics of patients. The results of this study showed that nonadherence was more common among older, low educated patients and those with lower levels of self efficacy.

Conclusion/Application to practice
Fluid and dietary non-adherence were highly prevalent in our patients receiving haemodialysis. Early identification and appropriate interventions may potentially lead to improvement in adherence of these patients. Health professionals providing care to patients should consider these individuals’ sense of self efficacy and fluid- dietary nonadherence at the time care is delivered. For these renal patients coping with the disease and treatments, these concepts are extremely important.
O 69
Inpatient compliance with phosphate binder prescription

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Background
Hyperphosphataemia is a predictor of cardiovascular mortality in patients with chronic kidney disease. Phosphate binder ingestion should be timed with a meal to limit phosphate absorption. A previous audit demonstrated low compliance of binder administration at mealtimes. Strategies to improve binder ingestion were agreed, implemented and re-audited.

Objectives
To determine whether implementing changes in practice would increase the proportion of phosphate binders ingested with meals.

Methods
Renal inpatients prescribed a phosphate binder on a single medical ward were included in a prospective observational audit. Changes in practice included nursing staff education, binder notification on the nursing handover document, alteration of binder container labelling and increasing prescriber awareness of correct binder prescribing. Re-audit was conducted together with a survey of nurse opinion on the effectiveness of interventions implemented.

Results
The initial audit observed 34 binder ingestion opportunities in 9 inpatients while re-audit observed 56 opportunities in 13 patients. The proportion of binders ingested with a meal increased from 2.9% (1 of 34) to 37.5% (21 of 56). The proportion of inappropriate binder administration decreased from 88.2% (30 of 34) to 53.6% (30 of 56). Feedback from nurses indicated the majority of changes implemented were helpful in improving binder ingestion with meals.

Conclusion/Application to practice
Changes in practice led to a significant increase in phosphate binder compliance. A continuous programme of staff awareness and resources for patient education are being explored to promote binder adherence, including self-administration.
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New technologies to improve the diet of patients with hypertension or Chronic kidney disease

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Background

Many diseases have dietary requirements to improve their control and prevent complications. Hypertensive patients should reduce sodium intake, in Chronic Renal Disea etc. it is important to reduce potassium and phosphorus intake because their excessive accumulation increases the risk of arrhythmias, vascular calcification and cardiovascular mortality. Our Nephrology Department at the Althaia Foundation, Barcelona, Spain, in synergy with a private Health & Nutrition foundation, have developed PUKONO, an application for mobile phones and tablets. It provides instant information about Sodium, Potassium and Phosphorus content in food, including a section with recommendations how to make food safer and a number of appropriate recipes. These are presented in an easy and attractive way, which aims to improve both safety and patients’ quality of life. We have conducted an observational, descriptive study with the data retrieval platform „Flurry” to assess the usability of the application.

1.5 years after its launch, the application has been downloaded by 10,145 users; 1,145 of which (11.19%) are considered active users. The average rate of new users is 563/month and since its inception it has remained among the 30 most downloaded health-applications in Spain. The total number of consultations has been 240,999 and the average time per consultation 56.4 seconds. User ratings are highly favorable (overall rating: 4.2/5 for Android and 5/5 for iOS). Most queries (76.5%) are about the safety of a particular food. Our results suggest that PUKONO is a useful tool for patients and for their caregivers, in the choice of a safe and varied diet.
Background
Hyperphosphataemia in haemodialysis patients is associated with major health problems. This situation is often associated with non-adherence to treatment. Authors seem to address this issue from two different and dissociated perspectives: pharmacological or nutritional.

Objectives
• Analyse the relation between phosphorus levels and adherence to drug therapy and nutrition recommendations.
• Assess the impact of a multidisciplinary teaching programme on phosphorus levels and treatment adherence.

Methods
This is a quantitative, descriptive, correlational and analytical study and entails the implementation of a multidisciplinary three months education programme.

Patients were selected according to inclusion criteria and divided into 3 groups (A, B and C). Groups A and B will consist of patients with normal phosphorus values. Group C will consist of patients with phosphorus levels above the normal range. The teaching programme will be applied in Groups B and C.

Phosphorus levels will be assessed through the average measurement of monthly values for the quarter prior to the education programme and the average for the three months during the education programme. Adherence to medication will be evaluated by using the Measure Treatment Adherence scale. Adherence to dietary recommendations will be assessed through a questionnaire pertaining to knowledge and attitudes about nutrition and food intake records.

Results
There aren’t conclusive results at this point because the study ends in May of 2016.

Conclusion/Application to practice
With a multidisciplinary approach, we want to optimise hyperphosphataemia treatment by focussing on the patient’s own role in their treatment and recovery and we expect to improve patient’s medical condition and decrease health costs.
S 28 End of life care
Auditorium 2, 16:00–17:30

GUEST SPEAKER
What is the best end-of-life care? The experience of Biella HD center, Italy
C. Dente
1UO Dialisi, ASL Biella, Biella, Italy

Background
According to the international literature, the prognosis in dialysis patients over 65 appears to be similar to that of colorectal cancer patients and slightly better than the one in patients with lung cancer. The benefits of dialysis, in terms of survival, seem minimal in over 75 year olds: 8.3 months with dialysis treatment vs. 6.3 months with palliative care, namely survival increased by 16% with twelve months dialysis. They are elderly patients with high levels of comorbidity, high clinical symptomatology, and low quality of life. Due to some experienced difficulties approaching end-of-life care, doctors and nurses at the Dialysis Center in Biella (Italy) started casting doubts on the appropriateness of dialysis in terminally ill patients.

Objectives
The aim of this project is to create a palliative care service for ESRD patients in Biella Hospital (Italy).

Methods
At our HD Center we began to collaborate with palliativist physicians by implementing Cohen Predictive Index in order to quickly find out about terminally ill patients.

Results
Palliative care patients, whose treatment was suspended, have exponentially grown over the years and in some cases our Nephrology Team managed to provide home peritoneal dialysis, as well.

Conclusion/Application to practice
Thanks to some training courses, the Dialysis Team now manages to provide terminally ill patients with better care and shows improved skills when it comes to delivering bad news. Through a questionnaire the staff emphasized the importance of end-of-life care as well as the emotional involvement this issue entails.
Advanced care planning for haemodialysis patients
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Background
It is recognised that most patients would prefer to die at home but most dialysis patients die in hospital. It appeared that end of life care had somewhat been neglected in this patient population.

Objectives
The objective was to determine whether "Advanced Care Planning" (ACP) could result in the following
1. Empowering the patient and family
2. Improvement in end of life care and measurable advances in patient experiences
3. Fewer hospital admissions or less of treatments which are life prolonging
4. Better provision of service relating to individual patient needs

Methods
Individual patients were identified as having high co-morbidities, often in parallel with advanced age, with the likelihood of dying in the next year. A voluntary process of discussion regarding their future care between the individual patient and their care providers was implemented. An ACP was utilised to ensure that patients’ relatives, haemodialysis staff and the community teams knew the patients’ wishes.

Results
The professional interviewer needed to be sensitive to cultural interpretations, individual patient views which change over time and acknowledge that patients and relatives may have a clash of viewpoints. The discussion can be seen as a bad news interview. The ACP allowed a patient, his/her family with the support of the above teams to implement his/her wishes.

Conclusion/Application to practice
Initially 8 patients were identified, and now this has been increased to 25. The referring hospital has decided to roll out the programme to all of its satellite units as a standard of good practice.
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Mourning reactions among dialysis patients
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Background
People can mourn not only over the loss of a family member but also over the loss of their own health. Going onto dialysis is a traumatic event for every patient with chronic kidney disease. Even if they received pre-dialysis care and the start of the treatment was planned, it always causes a negative change in life-style and quality of life.

Objectives
We have interviewed patients at our dialysis unit about their mourning reactions.

Methods
The questioner was based on the work of Dr Hegedüs. Patients were interviewed at initiation of dialysis and also several month later on dialysis.

Results
We found that mourning over their disease is very common reaction among chronic dialysis patients. In some cases we saw a delayed reaction as the patient needed to focus on the decision making and the procedures around the start of the treatment. Reaction in these cases occured weeks later when they had to settle into the new situation. We could observe the different stages of the reaction (denial, anger, haggling, depression and acceptance) even half a year after initiation of treatment. The stages of haggling and depression lasted longer and alternated in many cases.

Conclusion/Application to practice
After initiation of dialysis many patients need psychological support in order to cope with the new life-situation. Psychological services should be involved in pre-dialysis care to prepare patients for oncoming treatment and lessen the burden. Patients new to dialysis could also benefit from peer support programmes.
Renal palliative care - where to after the PACKS study?
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The PAlliative Care in chronic Kidney diSease study (PACKS study) is examining quality of life, decision making and decisional conflict, costs and mortality in patients with advanced chronic kidney disease who have opted for palliative care. It is also exploring the impact of the decision on the quality of life of carers. The study includes adult patients with end stage (stage 5) chronic kidney disease who have opted for palliative care, adult carers of these patients and renal physicians/clinical nurse specialists who have experience of treating patients with end stage chronic kidney disease who have opted for palliative care.

Early initial findings relate to clinician perspectives on patient decisional conflict, in making complex decisions between dialysis and conservative management. Interviews were conducted with nephrologists and clinical nurse specialists across 10 renal centres in the UK. Themes with associated subthemes include “Frequent changing of mind regarding treatment options,” “A paternalistic approach to decision-making” and “Intricacy of the decision”. These findings will be presented and recommendations for future research and education made. Clinicians need to take a more patient centered approach to decision-making. Interventions aimed at increasing understanding of renal disease and its treatments may reduce decisional conflict and raise decisional quality and it is recommended these are tested in the renal specialty.
S 29 CKD prevention & delay
Auditorium 3, 16:00–17:30

GUEST SPEAKER
Eldery & CKD. Dialysis for all?
J. Mª Gutierrez

Abstract is not available
A programme of early detection of CKD improves patient identification and outcomes

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Background
The prevalence of CKD-5 in Abu Dhabi is >20%. The dialysis prevalence is 1000 per million of the Emerati population and >90% of patients present to dialysis as an emergency which obviates the possibility of upstream preventative strategies, early access creation and pre-emptive transplantation. The dialysis population is set to double in the next 5-8 years. An algorithm driven, community based programme of early detection of CKD, with online decision support and renal community nurses within primary care was introduced in February 2014 to address this problem.

Objectives
To assess the impact of the programme and describe factors associated with progression of CKD.

Methods
Data (demographics, laboratory, medication, comorbidities) were collected on all outpatients with two eGFR recording between February 2014 and March 2015. Logistical regression and multivariate analysis were used to assess associations with progression.

Results
10,739 patients were identified, 26% demonstrated progressive CKD. Progression was associated with uncontrolled blood pressure (OR 1.33, p<0.006), diabetes (OR 1.43, p<0.001), congestive heart failure (OR 1.71, p<0.001), hypertriglyceridaemia (OR 1.22 per μmol/l, p<0.001) and the progression risk (KDIGO) yellow, amber and red (OR 1.28, p<0.001, 2.71, p<0.01, 3.63, p<0.001 respectively). The prescription of NSAIDs fell progressively by 41% in primary care and 35% in secondary care and declined with increasing CKD level. NSAID prescription was not associated with CKD progression. AVF at first dialysis increased from 2.6% in 2013 to 13.9% to 2014 and 22.5% in 2015.

Conclusion/Application to practice
This early detection programme clearly led to a dramatic improvement in patient identification and timely management.
Pre-dialysis: set-up of an improved structure

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Background
The aim of a pre-dialysis education program (PDEP) is to inform and prepare patients as much as possible for their renal replacement therapy (RRT).

Objectives
Evaluate the pre-dialysis education program of a university hospital, modify it, and evaluate the changes.

Methods
Information of the time between the first pre-dialysis clinic visit and dialysis start, eGFR at the first visit and follow-up appointment of all new pre-dialysis patients was collected during 2 years to evaluate the ongoing PDEP. A survey was conducted and results compared with the data collection. To improve the pre-dialysis clinic an improved structure was set up. Patient information forms were introduced to guarantee individualized RRT information. A year after the PDEP modification, the same data was collected and compared with those of the initial PDEP.

Results
In the former program, 105 patients visited the pre-dialysis clinic of which 41% had no follow up. The mean eGFR at first visit amounted 12mL/min/1.73m² and the mean dialysis-start was 70 days after the first visit. Within the new structure patients were referred earlier to the pre-dialysis clinic, which resulted in a better prepared dialysis start.

Conclusion/Application to practice
With the improved structure, more patients were included in the pre-dialysis program and had a better follow up. Patients who started RRT after program modification are better informed, started with treatment of their own choice and had a suitable dialysis access. The pre-dialysis nurses give adapted information thanks to the patient information form and more attention is given to the pre-transplant options.
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Effects of systematic predialysis patient training on the clinical results

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Objectives

Aim was to compare the effectiveness of predialysis education on clinical results, self-care ability, quality of life and psychological status of patients who have already started dialysis treatment.

Methods

Totally 202 patients (108 who have attended a systematic education programme—the case group; and 94 who have not taken any education—the control group) enrolled onto the study. Data regarding quality of life, self-care capacity and depressive condition were obtained through Short Form-36 Scale, Self-care Scale, Patient’s Health Questionnaire (PHQ-9) as well as through Patient’s Definition Form which includes sociodemographic, clinical and biochemical results of patients. Ethics approval was obtained.

Results

The mean of self-care score in control group (82.35±21.48) was found lower than the mean of self-care scores in the case groups (98.04±11.38 and 98.33±8.45) (p<0.001). The frequencies of moderate and severe depression were more than the frequencies of case groups (respectively 31.9% vs 20.2% and 12.8%; p<0.001). The mean scores of SF-36 and its subscales as physical functions, physical roles, pain, general health, emotional functions and mental health in case group were higher than those scores in the control group (p<0.001). “EPO”, “Phosphate”, “PTH”, “Creatinine” and “BUN” values, which are determinants of inadequate dialysis, were significantly high in the control group (p<0.01).

Conclusion/Application to practice

These results indicated that the systematic predialysis patient education helped to improve the quality of life, developed self-care capacity, increased psychosocial health by decreasing depressive features and thus brought a positive effect on the clinical results.
Awareness of chronic kidney disease by primary care clinicians in Abu Dhabi

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¹Nursing, SEHA Dialysis Services, Abu Dhabi, United Arab Emirates; ²Nursing, Fatima College of Health Sciences, Abu Dhabi, United Arab Emirates; ³Health Faculty, De Montfort University, Leicester, United Kingdom

Background
Chronic kidney disease is common in Abu Dhabi but late presentation suggests that awareness, particularly in primary care is low. An algorithm based, automated detection programme with online decision support was introduced in February 2014.

Objectives
This study assessed the awareness of primary care clinicians regarding the identification, referral and treatment of patients with CKD 18 months following the introduction of the early detection programme.

Methods
A quantitative, descriptive, web based survey (SurveyMonkey™), administered to a sample of clinicians in chronic disease clinics in primary care was used to assess levels of awareness of CKD. The survey covered three themes, CKD awareness, indications for referral and medication. Answers were deemed to be correct or incorrect.

Results
The response rate was 47% of study the population (n=99), 76.5% female, 40% with 10-20 years of work experience. In theme 1 the correct responses ranged from 27.9% - 97.8%. In theme 2 from 42.5% - 89.3% and in theme 3 from 68.0% - 80.8%.

Conclusion/Application to practice
Answers to theme 1 suggested good overall awareness of CKD with the majority of respondents being aware of the algorithm although there was little understanding of the appropriateness of dialysis counselling at different CKD levels. In theme 2 89% of respondents were happy with timing of patient referral but 42% thought referral at CKD 1 was appropriate. Theme 3 suggested that there was good awareness of the harmful effects of NSAIDs and the beneficial effects of ACEi. Overall awareness of CKD and its management appeared to be good although with some confusion.
Tuesday, September 20, 2016

S 30 Diabetes and nephrology
Auditorium 2, 8:30–10:00

GUEST SPEAKER
CKD diabetic patients—Same illness different care
J. Mª Gutierrez

Abstract is not available
Role of nursing in improving diabetic control and preserving renal function in diabetic patient

N. Khatib1, B. Ricon1, K. Hasan1, B. Layfer1

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Background
Diabetes is the leading cause of end stage renal disease and dialysis. The incidence of diabetes is rapidly increasing as are the number of patients with diabetic nephropathy that require dialysis. Supervision and care of diabetic patients is a challenge and require a multidisciplinary approach to decrease complications and to maintain proper control of diabetes.

Objectives
To improve diabetic control and to preserve renal function in patients with chronic kidney disease (CKD) due to diabetic nephropathy.

Methods
60 patients with CKD due to diabetic nephropathy and HbA1c>9% who inject insulin using an incorrect technique were enrolled in the study. All patients received frequent guidance from experienced dietetic and nursing staff including repeated technical guidance for proper injection techniques of insulin, treatment adherence and careful monitoring of blood glucose. Laboratory monitoring was performed at baseline and after 4 and 8 months.

Results
Mean age was 65.0 years, 56.4% were with morbid obesity (BMI>35kg/m²), 40.9% were smokers and only 8.2% engaged in physical activity. HbA1c decreased significantly at 4 and 8 months (p≤0.001). Diabetic control improved in 88.6% of participants at 8 months. No significant decrease in mean eGFR was observed during the study (p≥0.626). eGFR inversely correlated with HbA1c levels (p≤0.009). Levels of daily proteinuria were significantly decreased at 8 months.

Conclusion/Application to practice
Nursing staff play a central role in managing patients with diabetic nephropathy. This should include patient and family education and communication between the multidisciplinary team including primary health care clinics, diabetic clinics and dieticians.
Quality of life of diabetic and non-diabetic haemodialysis patients in an urban area

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Background
Chronic Kidney Disease (CKD) and Diabetes Mellitus (DM) have high prevalence and incidence, as well as great cost for patients, families and health services. Within this context, the concept of Quality of Life (QoL) plays an important role, within the context of culture and values system and in relation to the individual’s goals, expectations, standards and concerns.

Objectives
The aim of this study was to evaluate and compare QoL between two groups of haemodialysis patients, with and without Diabetes Mellitus.

Methods
In order to evaluate QoL, the Kidney Disease Quality of Life questionnaire (short form) was used, along with epidemiological and demographic data. The study was conducted in a public hospital’s Dialysis Unit in big city in Europe, during the second semester of 2014.

Results
Patients’ mean age was 71.5 (±11.03) years old and 62.5% (n=50) were males, 50% (n=40) diabetics. Regarding vascular access, 57.5%(n=23) of the diabetics had an arteriovenous fistula, compared to 67.5%(n=27) of the non-diabetics. The general and the mental health of non-diabetic dialysis patients was significantly better than diabetics. Furthermore, cognitive and sexual function of non-diabetics dialysis patients were better than diabetics. Finally, men and younger patients had higher levels of physical and mental health.

Conclusion/Application to practice
Diabetic renal patients have to effectively manage two chronic diseases proven to negatively affect physical and mental health. Assessement of their QoL helps healthcare professionals to measure acceptance and adaptation to the new health status. Maintaining or restoring quality of life is the main goal for any interventions practised by the multi-professional team.
Follow-up of the fate of pre-dialysis diabetic patients between 2009 and 2015

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Background
The number of patients with chronic kidney disease, including those suffering from diabetes mellitus (DM), increases from year to year.

Objectives
To compare the fate of those diabetic and non-diabetic patients in which the eGFR repeatedly reached or decreased below 20 ml/minute/1.73m².

Methods
Out of the 759 patients included in the study, 391 (51.5%) were diabetic. The overwhelming majority (94%) of the patients are suffering from type 2 DM.

Results
At the start of care, the mean age of DM patients was 69.7±12.0 years and that of non-DM patients was 68.4±15.7 years. The mean follow-up time was 3.7±2.4 and 4.1±2.6 years in the DM and non-DM (nDM) group, respectively.

The proportion of patients still receiving care at present is 25% and 24%. The proportion of deceased patients was 17% and 16% in the DM and nDM group, respectively. Because of the improvement of renal function, 7% vs. 9% were returned to their family doctor’s care. The proportion of ‘vanished’ patients was 15% and 16%.

Thirty-five % of the patients was included in a dialysis program in both groups, the difference being that in the nDM group a higher proportion of dialysis patients (46.5% vs. 30.5%) opted for peritoneal dialysis (PD). Pre-emptive transplantation was performed on one DM patient and two nDM patients.

Conclusion/Application to practice
We did not find a notable difference in the fate of pre-dialysis DM and nDM patients, with the exception of the more expressed preference for PD observed in the nDM group.
S 31 Renal care for an aging population
Auditorium 2, 10:15–11:45

GUEST SPEAKER
Options for older patients with chronic kidney disease
A. Bonner¹, ², ³
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Background
Globally the prevalence of chronic kidney disease (CKD) is increasing, and it is associated with the ageing population in many developed and developing countries. At the same time, advances in health and medical technology has led to increased access for the general population to a variety of complex medical treatments not previously widely available. Renal replacement therapy is a treatment to sustain life in people with end stage kidney disease (ESKD), however for the older individual who receives RRT, it can prove to be burdensome in terms of time, symptoms, and travel for treatment. There is growing evidence that suggests older patients are rarely informed about the various options about future health care. Frail older patients facing facing end of kidney life require access to a pathway of individualised care and treatment tailored to their needs. In its absence, patients are accessing high cost, high technological treatment options which can cause more suffering than provision of relief. RRT could be considered futile for some older patients. Cancer care, where symptom burden is similar to ESKD, offers a model of seamless access to specialist palliative and supportive care however for older patients it is largely non-existent or at best on an ad hoc basis. Drawing from current research, various options for older patients will be examined within the context of multidisciplinary care teams.
**Involving patients and carers in research: shared decision-making in advanced kidney disease**

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¹London South Bank University, London, United Kingdom; ²East Kent Hospitals University NHS Foundation Trust, Canterbury, United Kingdom; ³Barts Health, London, United Kingdom

**Background**

A systematic review (Moustakos et al 2012) made recommendations for further research in the area of shared decision-making in advanced CKD.

**Objectives**

The aim of this qualitative study was a) to involve patients and carers in the research process and b) to understand the experiences of shared decision-making in older people (over 70 years) in two hospitals. Patients and carers were involved in all aspects of the research process: writing the research proposal, developing interview questions, undertaking interviews and being involved in data analysis and dissemination of the findings.

**Methods**

The study team set up a Patient and Carer Group with six participants who co-led the project with the three researchers. The Group developed the interview questions and then undertook the interviews, lasting 10-45 minutes, with 28 people who had commenced dialysis, or had made a decision not to have dialysis, within the past six months. Interview data were then transcribed and analysed using thematic analysis.

**Results**

The majority of patients were satisfied with the amount of information that they had been given although some identified that the quality of the information could be improved i.e. more explanation of how daily living can be affected by dialysis. The importance of families in the decision-making process was identified. Many patients still wanted the doctor to decide what would be best for them.

**Conclusion/Application to practice**

Our study is innovative because patients/carers have been involved throughout. It is important to deliver patient information in different ways for older people to enable this age group to better understand the concept of shared decision making.
One year of intradialytic physical exercise programme: results on functional capacity and body composition

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¹NephroCare Coimbra, Fresenius Medical Care, Coimbra, Portugal; ²NephroCare Portugal, Fresenius Medical Care, Porto, Portugal; ³Care Value Management EMEA, Fresenius Medical Care, Bad Homburg, Germany

Background
Haemodialysis causes catabolism, sedentary lifestyle and immobility, all affecting body composition and functional capacity. Muscle catabolism is a predictor of mortality of haemodialysis patients. There are many studies showing the benefits of physical exercise programmes in this population.

Objectives
To assess the influence of an intradialytic exercise programme on functional capacity and body composition.

Methods
We developed a randomised controlled trial with 40 patients, 20 in each group. Sit-to-Stand (STS) and Up and Go (UG) tests were applied in order to assess functional capacity. Body composition (lean tissue index_LTI, fat tissue index_FTI) was evaluated with bioimpedance spectroscopy and the body mass index (BMI) was determined. Experimental group performed intradialytic exercise training. During the first 6 months, patients performed an intradialytic aerobic training in cycle ergometer. In the last 6 months, a strength training of the lower limbs was also included. Control group had no intervention.

Results
After 6 months there weren’t any significant statistical differences in body composition. However, after one year, the experimental group increased LTI on average by 3.13% (p=0.024) and decreased FTI on average by 9.26% (p=0.05), this was not verified by the control group (p=0.893 and p=0.521). No significant statistical differences were observed relating to BMI in both groups.

Related to functional capacity, immediately after three months, the experimental group improved in STS (p=0.007) and UG (p=0.008), while the control group didn’t have significant statistical results (p=0.308 and p=0.51).

Conclusion/Application to practice
Intradialytic exercise programme improved functional capacity, LTI and lowered FTI. Haemodialysis patients benefit from physical exercise programmes.
Change of the age of patients between 1995-2015 and its effect on nursing care

P. Radovič1
1Dialysis Unit, B. Braun Avitum s.r.o., Prague, Czech Republic

Background
The average age of patients treated by haemodialysis is increasing in the world and the number of patients with limited mobility is going up correspondingly.

Objectives
Adaptation of nursing care to polymorbid and immobile patients to HD.

Methods
Comparison of statistical average ages of patients in 1995 with patients treated in our dialysis centre in 2015.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Year 1995</th>
<th>Year 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 years and less</td>
<td>28%</td>
<td>12.5%</td>
</tr>
<tr>
<td>60 years and less</td>
<td>22%</td>
<td>12.5%</td>
</tr>
<tr>
<td>70 years and less</td>
<td>35%</td>
<td>33.5%</td>
</tr>
<tr>
<td>Over 70 years</td>
<td>15%</td>
<td>41.5%</td>
</tr>
</tbody>
</table>

The comparison shows almost a three times higher number of patients aged 70+.

Conclusion/Application to practice
Nursing care is changing as a result of a significant increase in the average age of the patient. The personnel is subject to higher demands in nursing care with respect to the necessary assistance in positioning and securing bodily comfort; communication with patients with limited cognitive functions is more difficult, securing quality care requires more frequent contact with the family. In addition to nursing skills, increased psychological skills within communication are expected from the personnel.

Practical Recommendations: Based on these findings, we perform changes in the nursing process so as to adequately respond to the changing conditions of our patients, who tend to be older and more ill. With the new findings and procedures, we endeavour to secure adequate quality of life and satisfaction of our patients.
How to maintain high quality of care when challenged by organisational changes?

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¹The Department of Renal Medicine, Aarhus University Hospital, Aarhus N, Denmark

Background
In Denmark there is an ongoing demand for reducing costs and increasing quality of health services. In 2016, our haemodialysis unit at a university hospital is challenged by staff reduction of 10% while maintaining high quality of care.

Objectives
To create a sustainable organisation, with optimal use of ressources, to involve patients in their treatment and to initiate for more home based treatments.

Methods
The process started with a brainstorm generating general themes. Based on these themes an interviewguide was designed and a third of the staff was interviewed. Their statements were used by task groups to plan specific actions. Deming’s Plan-Do-Check-Act cycle was used as a method to test these actions. Questionnaires and staff meetings were used to monitor the process. The nursing staff was highly involved throughout the process.

Results
Development of a method to use in organisational changes with high level of staff involvement.

Conclusion/Application to practice
High involvement of staff in the process of organisational changes has contributed to maintain high quality for patients, a good working environment and at the same time a reduction of costs. Development of this method may be usefull in future organisational changes. Furthermore, the method might be modified and applied in other organisations.
S 32 Closing Ceremony
Auditorium 2, 12:00–13:00

GUEST SPEAKER
Let's Not Re-Invent the Wheel: Global Collaboration in Renal Care
A. Moulton

Abstract is not available
List of Posters

No conflict of interest declared unless noted under abstract.

Poster Session A – Monday
September 19, 2016, 9:00–10:30

Haemodialysis

P 001
Intravenous versus oral iron for the treatment of anemia of chronic kidney disease
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Background
Iron supplementation is essential for the treatment of patients with anemia of chronic kidney disease (CKD). It is not clear which is the best method of iron administration.

Objectives
• Anemia is a very common complication of chronic kidney disease (CKD) and is associated with increased morbidity and mortality.
• There are confounding data regarding the best method of iron supplementation in CKD patients, without a consistent approach in clinical practice.
• We undertook a systematic review and meta-analysis to evaluate the efficacy and safety of treatment with intravenous (IV) iron versus oral iron in patients treated for anemia of CKD.

Methods
• Search strategy: We searched The Cochrane Library, MEDLINE and conference proceedings.

Results
Our search yielded 11 trials which compared IV iron preparations (iron sucrose, iron gluconate or iron dextran) to oral iron. Five included pre-dialysis patients and 6 included dialysis patients.

Hb level:
Dialysis patients: Compared to oral iron, there was a significant rise in Hb level in the IV iron treated haemodialysis patients (WMD 1.17; 95%CI 0.19-2.15). Significant heterogeneity was observed due to different baseline Hb values, baseline iron status, different dosages of oral iron and different dosages of ESA.
Pre-dialysis patients: There was a small but significant difference in the Hb level favouring the IV iron group (WMD 0.28; 95% CI 0.15-0.4).

Conclusion/Application to practice
• Our review demonstrates that dialysis patients treated with IV iron have better Hb response than patients treated with oral iron.
• For predialysis patients, this effect is very small.
Burnout syndrome and stress among dialysis nurses in Slovenia

M. Ovcar1

1Center for Dialysis, General Hospital Slovenj Gradec, Slovenj Gradec, Slovenia

Background
We live in a fast moving world. We are required to do everything to the maximum of our abilities every step of the way, be it at work or at home. Are we ready for it? Nowadays events follow each other in quick succession, everyone is always in a hurry and everything must be done in the shortest possible time which makes workplaces stressful. Dialysis nurses work with patients with chronic diseases who are often very demanding and require a lot of understanding, support and attention. Nurses at the dialysis centres have greater risk of being exposed to infectious diseases (hepatitis, AIDS etc.) and are more likely to develop mental health issues. The risk of contracting the listed diseases increases the incidences of stress and burnout.

Objectives
We want to determine if nurses who work at dialysis centres in Slovenia are exposed to stress and burnout. Additionally, we want to know if the individual dialysis centres care for the prevention and reduction of stress and burnout. Our aims are: to analyse the results, interpret them and suggest solutions based on the gathered results. Further more, we want to determine if stress and burnout are present among the employees and which are the most common symptoms caused by stress and burnout.

Methods
In order to present the data we used MBI (Maslach Burnout Inventory) questionnaire and for the stress we used our own questionnaire. We gathered, we employed a variety of research methods: analytical approach (dividing the whole into separate parts), descriptive approach (describing), citing and referencing (using notes and quotes by other authors), deductive approach (making conclusions based on the general knowledge) and statistical analysis. Data was gathered by means of a questionnaire and then processed using a computer and shown in the form of charts and tables. We used two programs, Microsoft Excel and SPSS 17.0. To process the statistical data we used the methods of description and analysis.

Results
Based on the analysed data, we believe that the dialysis nurses are not subjected to burnout, but have an average level of efficiency, they are overburdened and have a stressful workplace. Nurses take the time to regularly exercise and relax, they see their work at the dialysis centre as interesting and perceive it as a challenge rather than a chore. When they need help, they ask for it. Head nurses at the dialysis centres know how to praise their employees and how to run the dialysis wards efficiently.

Conclusion/Application to practice
Due to the nature of this work, as it is very specific and because of the very demanding patients, we expected the results to be worse. However, we can now assert with confidence that the dialysis nurses are adept at their specific work with the dialysis patients. They know how to sympathise with their patients, and form friendships and trust with the regular patients that come for dialysis. This profoundly helps the nurses to overcome obstacles and stress at the workplace.
Medical cannabis effects in haemodialysis patients

N. Doni¹
¹Ziv Hospital, Safed, Israel

Background
Chronic dialysis patients very often suffer from severe chronic neuropathic pain. The pain may be unresponsive or patients may be intolerant to a variety of medications. This has a huge negative impact on their quality of life. Other problems in this population are reduced appetite, nausea, insomnia, and depression. In recent years, the use of cannabis in certain pain conditions is expanding. Dialysis patients are sometimes prescribed cannabis after conventional therapies have failed. However, specific recommendations are lacking.

Objectives
To evaluate the effects of cannabis on pain, nausea, appetite, sleep quality and depression in dialysis patients.

Methods
6 chronic haemodialysis patients, aged 36 to 75, with severe neuropathic pain unresponsive to six months of conventional medical therapy were studied. Eligibility for cannabis was approved by the Ministry of Health, and supplied by an authorized supplier. Cannabis was taken by smoking. A monthly dose of 20 mg, was taken as needed (2-3 times daily on average). Patients were interviewed before the first dose and after 10-12 weeks, using the same questionnaire, and by the same nurse. Questions covered the following issues: pain, appetite, nausea-vomiting, sleep and mood.

Results
At the time of writing, 4 (out of 8) patients concluded 10-12 weeks of cannabis intake. Pain improved significantly in all 4. One patient continues taking pain medications, in reduced dosage. Appetite, nausea and vomiting improved in 3 patients with resultant dry weight gain. Sleep quality improved in all but depression did not improve significantly.

Conclusion/Application to practice
These preliminary results suggests that cannabis therapy may improve symptoms observed in chronic dialysis patients.
Intradialytic hypotension: is it all a matter of timing?

D. McIntyre1, K. Havas2, A. Bonner2

1Renal, Royal Brisbane and Womens Hospital, Brisbane, Australia; 2Health, Queensland University of Technology [QUT], Brisbane, Australia

Background

Intradialytic hypotension (IDH) occurs frequently and is a potentially serious complication associated with haemodialysis. International guidelines offer limited advice about the frequency of assessment for IDH, and many haemodialysis (HD) units use a standard assessment schedule.

Objectives

To audit the incidence of IDH amongst a group of chronic HD patients to identify predictors of IDH.

Methods

A 34 question audit tool was completed by nursing staff over 4 weeks across three HD units to capture information about every chronic HD session for 132 patients (n = 1,584 sessions).

Results

Nurses returned 876 audits (55.3% response rate), most patients were male (59.4%) and receiving haemodialysis (90.5%) for 5 hours (42.8%). There were 57 actual episodes of IDH and 65 episodes where nurses recorded intervening to prevent IDH. Blood pressure had been assessed only at the start of treatment (74.3%) and there was varying frequency of assessment during a hypotensive episode. Logistic regression was conducted on 452 cases (including 57 episodes of IDH). We developed a model with 10 predictor variables which explained 14.1% of the variance in whether a patient would experience IDH (p<.001). Of these, five variables were individually significant predictors of an IDH episode; namely low dialysate calcium, dialysate temperature, length of dialysis treatment, pre-dialysis systolic blood pressure and number of co-morbidities.

Conclusion/Application to practice

Individualised haemodynamic assessment plans during HD should be developed. Increased frequency of assessment should occur during the second and third hours of treatment, especially in patients with multiple co-morbidities or higher ultrafiltration rates.
P 005
Mild hyponatremia is associated with functional and cognitive decline in chronic haemodialysis patients
S. Danin1, I. Mikeladze1, C. Tirnover1, I. Slotki1, L. Shavit1
1Adult Nephrology, Shaare Zedek Medical Center, Jerusalem, Israel

Background
Cognitive impairment is common in dialysis patients and associated with adverse outcomes.

Objectives
To evaluate factors influencing cognitive function in haemodialysis patients over a 2 year period.

Methods
We prospectively evaluated cognitive and global function and symptoms of depression in adult chronic haemodialysis (HD) patients. The following tests were performed: modified Mini Mental State (3MS), Trailmaking Tests A (Trails A) and B (Trails B), 15-item Geriatric Depression Scale (GDS) and Activities of Daily Living (ADL). Tests were performed at yearly intervals in 2010-11. Global cognitive impairment was defined as a 3MS < 80 and impaired executive function as a Trails A performance time > 75 seconds and Trails B > 180 seconds.

Results
56 patients aged 65.00 ± 17.8 years were studied; 57% male; 86% had HTN, 40% were diabetic and 35% had ischemic heart disease, congestive heart failure and dyslipidemia. 24% had mild chronic hyponatremia (Na 131-135 meq/L). Other labs were appropriate for adequately-dialyzed patients. In 2010, 50% had 3MS < 80, 71% and 91% severely impaired Trails A and B tests (respectively), 54% depressive symptoms and 50 impaired ADL. Retesting in 2011 revealed increased prevalence of cognitive and functional declines and worsening depression. Univariate analysis demonstrated significant correlation between cognitive decline and age, female gender, education, poor executive and functional status, inadequate dialysis dose hyperphosphatemia and hyponatremia. Multivariate stepwise logistic regression analysis revealed significant associations between hyponatremia and impaired ADL and mortality.

Conclusion/Application to practice
Treatments aimed at modifying hyponatremia might mitigate functional decline or mortality.
Improving clinical outcomes through patient education, use of dialysis technology and monitoring quality indicators

P. Olivieri, G. Santoro, N.L. Favicchio, R. Iraze, M. Moretti, A. Pizzo, F. Pelliccia, M.T. Parisotto

1NephroCare Italia, Arenaccia Dialysis Unit, Naples, Italy; 2NephroCare Italia, Nursing Coordination, Naples, Italy; 3Fresenius Medical Care, Nursing Coordination, Bad Homburg, Germany

Background
Several studies have demonstrated a correlation between the administered dialysis dose and mortality and morbidity of dialysis patients. To avoid the negative effects of inadequate dialysis, continuous monitoring is essential. The nursing staff know how difficult it is to achieve targets, e.g. time of dialysis or Kt/V, due to the low patient compliance.

Objectives
To improve dialysis adequacy and increase treatment time for at least 90% of the new patients after the merging of two dialysis centres.

Methods
At time 0 (T0) two clinics “A” (50 patients) and “B” (20 patients) merged. Nurses were requested to monitor the duration of the dialysis session and the relative dialysis adequacy of patients of clinic B more strictly. After 6 months, nurses started the project to improve the clinical target by means of patient education, regular meetings to check the target, and evaluating all relevant quality indicators for a period of one year (T1).

Results
T-Test was used for statistical analysis.
90% of clinic B patients achieved the target of treatment time with a statistically significant improvement (p<0.0001) from 225.00 min (T0) to 239.45 min (T1).
95% of clinic B patients achieved the target of dialysis adequacy with a statistically significant improvement (p<0.0001) from Kt/V 1.03 (T0) to Kt/V 1.75 (T1).

Conclusion/Application to practice
By means of the continuous improvement programme implemented through continuous patient education performed by the nursing staff, we were able to achieve the targets and increased both treatment time and Kt/V.
The usefulness of patient’s education focussing on vascular access management in haemodialysis

G. Di Pietro¹, D. Donato¹, T. Argese¹, I. Bombara², A. Pizzo², F. Pelliccia³, M.T. Parisotto³
¹NephroCare Italia, Taranto Dialysis Unit, Taranto, Italy; ²NephroCare Italia, Nursing Coordination, Naples, Italy; ³Fresenius Medical Care, Nursing Care Coordination, Bad Homburg, Germany

Background
Vascular Access (VA) is at the same time both the ‘lifeline’ and the ‘Achilles heel’ of haemodialysis. A well-functioning VA is essential for providing efficient dialysis therapy; its complications are the leading cause of morbidity in a dialysis populations and cause high healthcare costs.

Objectives
To evaluate the perceived usefulness of the educational programme

Methods
From January to November 2015, one nurse from the dialysis unit ran an educational programme for all patients about VA management, hygiene, complications, and targets to be achieved in dialysis. An evaluation questionnaire was given to patients and nursing staff.

Results
90 patients [pts] were involved in the study, 83 pts [92.22%] completed the whole period; 65 of them [78.31%] answered the training evaluation questionnaire. Of those 65 patients, 48 [73.85%] were male, 60 [92.31%] had an arteriovenous fistula (AVF). 55 pts [84.62%] declared that they had increased their knowledge of VA and 62 [95.38%] recognized the usefulness of the nurse programme. 62 pts. [95.38%] noticed nursing staff taking better care of their VA.

Nursing team consisted of 19 nurses, of whom 12 [63.16%] were female. 10 [52.63%] nurses of the staff had performed their professional activities for more than 11 years and 14 [73.68%] noticed an improvement in their knowledge of VA management and monitoring.

Conclusion/Application to practice
This study shows that an educational programme about VA that aims to inform, manage and prevent complications can be useful to patients and staff in maintaining and improving the quality of life of patients, which may reduce social costs.
Evaluation of the factors effecting psychological endurance of haemodialysis patients

E. Dane¹, N. Olgun², F. Dane³
¹Haemodialysis, Acibadem University, Istanbul, Turkey; ²Hasan Kalyoncu University, Gaziantep, Turkey; ³Arel University, Istanbul, Turkey

Background
Chronic kidney failure, is a chronic disease which restricts people’s ability to have a normal life, as it impairs people’s life quality, causes them to live in fear for their life and causes reduction in ability to work and necessitates some to end their own working life altogether. It influences almost every age group but especially young adults.

Objectives
The aim of this study is to evaluate the state of psychological endurance of haemodialysis patients and the factors which influence this state.

Methods
In this research 178 haemodialysis patients who receive haemodialysis treatment at private dialysis centers, constitutes the research sample. Survey data included socio demographic characteristics and completion of a psychological endurance scale. Statistical analyses of survey data were done with t-test and ANOVA analyses of variance.

Results
No significant effects were found by age, type of family, duration of receiving haemodialysis treatment, demographic determinants and psychological endurance as a positive psychological concept. A significant relationship was determined between gender, marital status, level of education, employment situation and psychological endurance.

Conclusion/Application to practice
It is suggested that further studies are completed with wider sample groups and different disease groups.
P 009
Increase patient safety by taking responsibility for their treatment
N. Graho1, N. Bednjanec2
1Dialysis Unit, General Hospital “Dr. I. Pedišić”, Sisak, Croatia; 2Kirkomerc d.o.o, Zagreb, Croatia

Background
The absence of patients at their regular dialysis sessions directly affects their health and has a negative impact on the outcome of the treatment. Skipping at least one treatment of dialysis per month is associated with 25% to 30% higher risk of death. Regular dialysis attendance according to the agreed schedule in Croatia is left up to the patients who have awareness and responsibility for their own health. Patients on dialysis come in by private transport, private car or an ambulance.

Methods
Case report

Results
During 2015, in General Hospital „Sisak” there were three patients who, despite regular re-education, regularly avoided coming to dialysis. The absence of two patients from their dialysis treatment had ultimately resulted in their hospitalization in extremely poor condition, the need for a continuous method of dialysis in the ICU and subsequent mortality. In the case of the third patient, the dialysis centre has taken the initiative and informed the competent institutions, highlighting the patient’s behaviour, possible effects on health and the quality of the service provided, and also the increase of costs that such behaviour causes. The patient is now transported by an ambulance, accompanied by a nurse and comes regularly to his dialysis treatments.

Conclusion/Application to practice
Individual approach to the patients and a good estimation of their awareness of the responsibility for their own health are crucial in presenting a high-quality and safe health care. It also has a positive correlation with the financial part of the health strategy.
How to assess patients in two graphics?
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Background
Multi-frequency bioimpedance spectroscopy (BIS) is a non-invasive method of determining hydration and nutrition status in haemodialysis patients. The application of this method has been increasing constantly during the past few years, most probably due to a software tool which allows monitoring of hydration and nutritional status via user-friendly plots.

Objectives
Differentiation of patient groups based on their hydration and nutrition status using graphical tools in two measurement intervals of one year.

Methods
Generation of graphical tools – Hydration Reference Plot and Nutrition Reference Plot - from selected BIS measurement results taken in two periods of one year in a single haemodialysis clinic.

Results
BIS measurement results presented with Hydration Reference Plot and Nutrition Reference Plot attest to good control of overhydration and malnutrition.

Conclusion/Application to practice
BIS provides reliable support to a HD unit’s medical team in its management of fluid and protein energy waste of their patients. Using graphical tools like Hydration Reference Plot and Nutrition Reference Plot helps one to interpret results simply and rapidly.
**Background**

Patients need more and more examinations: nurses have to organise their workload to manage.

**Objectives**

Facilitating care of our patients, including examination procedures, by creating a specific checklist, including the nursing report.

**Methods**

A team of 20 nephrologists, 90 nurses, 5 nurses’ assistants, 1 dietician, 1 psychologist and 11 medical secretaries shared their know-how to optimise patients’ support in renal care during the first four months of dialysis. In collaboration with the Country Medical Director responsible for all clinical activities in our network, a table of items was drawn up to enable data collection by nurses and doctors: cardiologic assessment, diabetic assessment, anaemia, vascular access, dialysis dose, vaccination and virology status, hydration status, nutritional assessment, access to transplantation.

This proactive medical programme helps medical personnel to identify hotspots of chronic renal kidney disease (CDK) stage 5D and aims to reduce its comorbidities, if they are identified in the first four months of dialysis.

All of us decided together what kind of document was needed. The chosen design was a checklist, kept in the patient file until it is completely filled. Alongside the medical record it helps nurses not to forget any examination or document.

Every unit can have a customised document following the medical protocols.

**Results**

Head nurses created an original document now used in all units in Ile de France.

**Conclusion/Application to practice**

This document will evolve in content and layout to suit the needs of staff and patients.
Influence of dialysis duration on the progress of secondary hyperparathyroidism

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Background
Secondary hyperparathyroidism (SHPT) is a serious complication for patients with chronic kidney disease affecting the bone and cardiovascular systems.

Objectives
To determine the influence of dialysis duration on the progress of SHPT.

Methods
240 patients were divided into the following groups
- group 1: 143 patients up to 5 years on dialysis;
- group 2: 63 patients 5-10 years on dialysis;
- group 3: 34 >10 years on dialysis.

The groups were compared by: age, gender, effective treatment time, Kt/V and blood biochemical parameters.

Results
Results did not show any influence of age and gender on the development of SHPT. Effective treatment time and Kt/V in all groups were adequate, so we cannot evaluate their adverse effects.

- Calcium was >2.5mmol/L in 17.6% of patients of group 3 versus 2.7% of the first and 6.3% of the second group.
- Phosphate was >1.78 mmol/L in 36.3% of group 1 versus 31% of group 2 and 20.5% of group 3.
- Parathyroid hormone was >600 pg/ml in 44% of patients of group 3 versus 34.9% of group 2 and 18% of group 1.

Conclusion/Application to practice
The study shows that the duration of dialysis has a direct impact on the development of SHPT. Nurses should train their patients regularly to stick to a low-phosphate diet, to use phosphate binders and to take vitamin D. This may contribute to an inhibition of the disease development and improve patients’ quality of life.
P 013  
Willingness to perform physical exercise: a survey among dialysis patients  
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Background  
Physical exercise represents a recognized form of therapy for any cardiovascular patient and more specifically for dialysis patients, even if their mobility is often compromised because of multiple comorbidities.

Methods  
A series of simple questions was administered to a cohort of 296 patients, all treated in 7 dialysis centres in Lombardy. All patients were homogeneous in terms of clinical status and dialysis regimen. The male/female ratio was 2:1. The majority (73%) was older than 60 years.

Results  
A large part of the patients declared already active (63%), mainly walking (70%), at least 2 hours of physical activity weekly (80%). The willingness to be trained in a gym was 61% in patients older than 60 years, with a minimum of 2 hours weekly (77%), to be performed on days not dedicated to dialysis. The majority of the patients declared that they were in favour of mild physical activity, using Tapis Roulant and Cyclette.

Conclusion/Application to practice  
This survey showed that dialysis patients, in spite of their often incapacitating clinical conditions, are willing to undertake a programme of physical activity. These data are encouraging for the development of programmes of physical rehabilitation and for its consideration as a feasible therapy.
Haemodialysis with citrate anticoagulation

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Background
Citrate can be used in haemodialysis (HD) and haemodiafiltration (HDF) for systemic anticoagulation, preventing blood clotting of the extracorporeal blood circle. European guidelines for haemodialysis (HD) recommend using HD without heparin or use of citrate for: patients who have HIT (heparin-induced thrombocytopenia), high risk of bleeding due to trauma, surgery, bleeding in eye ground, etc.

Objectives
To apply adequate citrate anticoagulation.

Methods
Since October 2013 a long term patient has been treated with a continuous flow of 15% citrate during HD/HDF treatments. Blood flow during treatments was increased from 250 ml/min initially to 300 ml/min now. Anticoagulation was monitored via ionised calcium (iCa: 0.25-0.35 mmol/L); coagulation time (13-15 min) and visual dialyser and blood line assessment at treatment end. Calcium is replaced by an infusion of 1 M CaCl in the venous line. In each treatment we have an additional ultrafiltration volume of 500 ml, to remove volume caused by the infusions.

Results
The patient treated with citrate anticoagulation and HD/HDF over two years had no complications and no problems related to overweight.

Conclusion/Application to practice
The nurse plays an important role in citrate anticoagulation during HD/HDF and has to be well trained, competent and precise. The most important person in this process is the patient. With proper nursing care and understanding, the patient can be treated at least as well as the patient on standard heparin dialysis.
Controlled ultrafiltration to reduce intradialytic complications

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Background
Inadequate ultrafiltration which withdraws more circulating blood than the surrounding tissue is supplying can lead to interdialytic hypotension and cramps even if the patient is hyperhydrated. To keep intravascular blood volume stable during haemodialysis, we apply a device which measures changes in blood volume and controls fluid removal.

Objectives
To study an occurrence of intradialytic complications and interdialytic hyperhydration among haemodialysis patients.

Methods
72 patients were involved in this study. 36 patients were in the study group and treated with controlled ultrafiltration via a device which measures blood volume changes and a control group of 36 patients was treated without this device. The number of hypotension episodes, cramps and the level of interdialytic weight gain were compared.

Results
Initially, 11 patients (30.5%) in each group had hypotension; 3 patients (8.3%) in the main group and 5 (13.9%) in the control group had cramps; 26 (72%) patients in each group had an interdialytic hyperhydration.

At the end of the study, 2 patients (5.5%) in the main group and 9 (25%) in the control group had hypotension; 2 patients (5.5%) in the main and 4 (11%) in the control group had cramps; hyperhydration over 15% remained among 13 patients (31%) in the main group and 22 patients (61%) in the control group.

Conclusion/Application to practice
Monitoring changes in blood volume and controlling for fluid removal may reduce haemodialysis complications and facilitates reduction of interdialytic weight gain. The application of a controlled ultrafiltration level during the procedure gives an opportunity to ensure an individual approach to every patient.
P 016
Aromatherapy Massage On Pain And Xerosis Following Needle Insertion Into A Fistula In Patients

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Objectives
This study sought to determine the effects of aromatherapy massage on pain and xerosis following needle insertion into a fistula in patients undergoing haemodialysis.

Methods
This is a randomized, placebo-controlled, double-blind study in which 67 patients undergoing haemodialysis with arteriovenous fistulas were randomly divided into three groups. To the experimental-group patients were applied aromatherapy massage concentration (lavender, tea tree oil) of 3%, to the placebo group olive oil massage for 5 min during 12 seans. Control-group patients received routine care.Data were collected with descriptive characteristics information form created by scanning the literature by researchers, Visual Analog Scale and The Skin-pH-Meter. Descriptive statistics, Kruskall-Wallis, friedman and borferoni corrected wilcoxon analysis were used for data analysis and p<0.05 were considered significant.

Results
The mean VAS pain intensity score in the experimental, placebo and control groups before the intervention was respectively 5.23±2.25, 5.60 ± 2.12 and 5.56±1.07 (p> 0.05). The mean VAS pain intensity score in the experimental, placebo and control groups afterwards, was respectively 2.69±1.66, 4.28±2.07 and 5.34±1.26 (p<0.001). Experimental group who has received aromatherapy massage will have lower rate of xerosis than the placebo and control group (p<0.05).

Conclusion/Application to practice
As a result, aromatherapy massage may be an effective technique to reduce pain and xerosis following needle insertion into a fistula in haemodialysis patients.
P 017
The role of nursing in infection prevention
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Background
Dialysis patients represent a weakened immune risk group and have many associated diseases which lead to the need for various interventions.

Objectives
To constantly optimise infection prevention.

Methods
Regular vaccinations, laboratory testing, adequate interventions and disinfection of dialysis machines prevent bacterial or viral cross contamination. Patient’s laboratory results (≤ one months old) must be negative for viral markers (HBV, HCV, HIV). If not, the patient stays in isolation room until hospital transfer, used marked dialysis machine is reserved only for positive patients.

In August 2014 we admitted a female with a negative viral and normal liver status, who then completed 3 vaccinations for hepatitis. Because of non-responsiveness to erythropoietin she needed several transfusions. In April 2015 her HBsAg was unexpectedly positive.

Retesting of HBsAg and PCR test on HBV DNA were positive.

Results
After immediately involving the Institute for Transfusion Medicine, they performed re-testing of archived test units (of HBsAg and HBV DNA) of all blood donors for those blood units given to our patient. Prior to arrival in our clinic the patient had received fresh frozen plasma. Afterwards she received haemodialysis on different machines. All patients and employees were repeatedly tested for viral markers and liver function. No cross infections were found. All dialysis machines underwent large-scale disinfection.

Conclusion/Application to practice
Despite following all infection protocols, we missed the so-called diagnostic window. Consequently, we reviewed the annual laboratory plan and subjected the frequency of viral marker checks, in all clinics for all patients, to permanent monitoring.
P 018
Success rate of education, application of phosphate binders carried out by a nurse
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Background
Patient adherence is very important for the success of the treatment, but adherence in keeping dietary measures by patients is generally very problematic.

Objectives
Achieving the maximum patient adherence both in dietary measures and in correct use of phosphate binders.

Methods
We have selected 12 patients out of a 60 patients’ group treated in our centre who had reported a high phosphor level for a long time.
12 patients, average 65 years old (34-70)
time on dialysis 56 months (7-156)
5 women
7 men
We carried out targeted education on the correct use of phosphate binders with the current dietary habits.

Results
We achieved a reduction in the phosphor level in blood within 4 months in all patients included in the programme of targeted intensive education focused on the administration of phosphate binders.

Conclusion/Application to practice
We proved that the correct use of phosphate binders in hyperphosphatemia treatment is very important, it brings positive results and limits our patients less than strict dietary measures.

Practical recommendations: the correct selection of the method, means and goal of education plays a large role in the ultimate success.
Assessment of pain and adequacy of analgesia in haemodialysis patients

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Background
Pain is the most common symptom in renal patients due to comorbidity, the dialysis technique and more time on haemodialysis.

Objectives
To determine the prevalence of intradialytic and chronic pain as well as the adequacy of analgesic therapy in patients on haemodialysis.

Methods
Descriptive study in 33 patients on haemodialysis in which different rating scales were used: Brief Pain Inventory (to determine the chronic pain), Visual Analogue Scale (to assess the intradialytic pain) and Pain Management Index (for checking the conformity of analgesia).

Results
Chronic pain occurs in 57.57% of patients and intradialytic pain in 78.8%. In both cases, pain was musculoskeletal, mild (3.14 points and 3.13 points respectively), and related to more time on haemodialysis. Chronic pain interfered with the mood, the usual work and relationship with others. The adequacy of the treatment was successful for chronic pain but not for intradialytic pain.

Conclusion/Application to practice
Pain is a frequent symptom in our sample. The intradialytic pain presents a worst pharmacological management than the chronic pain.
Non-invasive tests for examination of diabetic foot among haemodialysis patients

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Background
In patients with diabetes on dialysis, neuropathy and atherosclerosis of the lower extremity are the leading causes of mobility-related disability. We examined in our survey the foot-status of diabetic and non-diabetic patients by three non-invasive methods. Presence of neuropathy also can be associated with renal failure itself.

Methods
A total of 125 people (male 72, female 53) were evaluated, their mean age was 66 years; time on dialysis was 4.07 years, 60 persons were diabetic. The ankle-brachial index (ABI) indicates peripheral vascular disease. The 128Hz calibrated tuning-fork test is a well-known sensory neuropathy screening method of the diabetology, which can be supplemented by sudomotor neuropathy dysfunction detection test. Undergoing dialysis these three measurements can be easily made. In addition they give possibility for a simultaneous physical examination of legs and the chance to discover any concealed lesion of the patient.

Results
The ABI measurement results were not evaluable in 24 patients (amputation, leg wounds, lack of cooperability), 55 patients' ABI were between 1-1.3, and 32 patients had results below 0.9. According to the tuning-fork test, 46 cases out of 97 patients were abnormal. Neuropad-test were performed in 21 patients with diabetes, among which 13 cases were found pathologic and in other cases were found asymmetric patients. Plantar ulcers were discovered in 10 cases.

Conclusion/Application to practice
The described simple methods can detect patients at-risk, allowing to change the medication. The patient’s attention can be directed towards foot care, so we can make more efficient education about this subject. We can prevent lower extremity infections and consequent septic complications.
A new diabetological education method among haemodialysis patients

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Background
Worldwide the growing number of diabetic patients entering haemodialysis program, represents a new type of tasks for dialysis nurses. Frequent meetings with patients creates the possibility for refreshing knowledge on the management. We aimed to assess the diabetological knowledge of our patients, and develop a specific educational system to improve the attitudes of self-treatment.

Methods
A total of 40 people (16 male 24 female; T1DM 7 and T2DM 31 patients) were evaluated. The average diabetes duration was 17.8 ± 10.5 years; 34 patients have had previously conventional diabetes care. The global knowledge was measured by a 25-point structured quantively questionnaire (0-1-2 points). We asked information about the diet, the diagnosis and treatment of low and high blood glucose levels, blood glucose meters and insulin pens, timing and impact of anti-diabetic treatment.

Results
Among our patients, 31 were on insulin, 5 patients had ‘burnt out’ diabetes, some patients took oral agents. We experienced 9 patients optimal and 22 patients with partial cooperation. Mainly they were in need of immediate exchange of blood glucose meters and insulin-administering pens. Eight patients had scored over 40 and the same number of patients was below 10.

Conclusion/Application to practice
The described simple method makes possible to assess the level of knowledge of haemodialysis patients with diabetes both quickly and during the follow-up comparable way. A structured patient education can be used as a guideline, the gaps could be repaired as soon as possible. The periodic repetition can help to avoid dangerous changes of carbohydrate metabolism.
Ultrasound scanning in dialysis and pre-dialysis: a winning choice

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Background
An ultrasound scan is an important diagnostic tool, widely spread among professionals. In dialysis, ultrasound scan has gained popularity also among nurses, which they use it for the assessment and management of the fistula arteriovenous.

Objectives
Establish a pool of competent nurses in the ultrasound and pre-dialysis-dialysis field at the Nephrology, Dialysis and Transplant Unit prof. La Manna at the Polyclinic S. Orsola Malpighi Bologna.

Methods
A group work will be created with the purpose to identify the essential tasks needed at the base level of the project. This will be achieved through work experience and literary reviews.

The different stages can be summarized in 8 steps:
- Step 1: Identify the scope,
- Step 2: Define the objectives,
- Step 3: Identify the skills and competencies necessary for the pool of nurses,
- Step 4: Elaborate and develop,
- Step 5: Recognize the clinical results necessary to measure the validity of the project,
- Step 6: Collect the data,
- Step 7: Analyse the data collected,
- Step 8: Implement the recommendations developed for all the nurses in dialysis and pre-dialysis and create a specific formation process.

Results
The project will improve the overall organization, work environment, and group dynamics by defining moments of discussion and comparison. The nurse responsible for the patient, in partnership with him, will choose the best therapeutic alternative.

Conclusion/Application to practice
The project provides an opportunity for professional growth to a group of nurses and helps them to develop skills and competencies. It also helps patients to make a conscious choice.
P 023
Long Nocturnal Dialysis: three distinct realities
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Background
Long nocturnal dialysis (LND) is a well-tolerated and effective treatment. Several studies have linked LND with reduced morbidity and mortality and increased the quality of life.
LND Portuguese programmes variables: HD/HDF and autonomous/interdependent.

Objectives
• To compare treatment parameters and medication consumption of LND patients depending on different variables.

Methods
Retrospective, observational, multicentre study.
Analyse populations of three centres with LND programmes: LND-HD, autonomous LND-HD, LND-HDF over 14 months. Consider treatment parameters, laboratory values and medication consumption.

Results
Population characterization:
LND-HD: 7 patients, 1 female, average age 46.57 years, HD-Vintage_75.86 months, average age-adjusted Charlson Comorbity_3.0; Autonomous
LND-HD: 8 patients, 3 females, average age 55.12 years, HD-Vintage_134.13 months, average age-adjusted Charlson Comorbity_4.8;
LND-HDF: 6 patients, 6 male, average age 50.50 years, HD-Vintage_115.50 months, average age-adjusted Charlson Comorbity_4.00.
Statistically different results for LND-HD versus autonomous LND-HD versus LND-HDF with p<0.005 were:
Effective weekly treatment time: 1178.71(±31.88), 1233.41(±26.42), 1204.92(±38.07) min/week,
Qb: 331.47(±26.45), 301.98(±10.89), 282.47(±7.75) mL/min,
Processed blood volume: 389.17(±18.30), 372.30(±12.42), 339.38(±5.32) L/week,
Ferritin: 483.93(±162.16), 673.98(±162.17), 470.2833(±95.60) μg/L,
Iron consumption: 0.90(±0.87), 2.34(±0.81), 3.30(±0.99) μg/kg/month,
Difference BMI Admission-Current: -0.51(±0.94), 38.013(±12.88), -1.017(±1.76) kg/m².
Groups were comparable in Kt/V in-line measurement [2.10(±0.42) versus 2.31(±0.39) versus 2.03(±0.26)] in fluid removal, erythropoietin consumption, haemoglobin, potassium and phosphorus levels (p>0.005).

Conclusion/Application to practice
Groups with a higher average age, had a higher age adjusted Charlson Comorbity. On average, patients on LND-HD were younger, had a lower weekly treatment time, a higher Qb and processed blood volume compared to the other groups. Apparently, treatment type and autonomy doesn’t influence Kt/V and fluid removal. Clinical parameters like erythropoietin consumption, haemoglobin potassium and phosphorus levels were comparable between the groups.
Depression and its association with social support and clinical outcomes in dialysis patients

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Background
Patients with end-stage renal disease (ESRD) undergoing dialysis show a high prevalence for depression, which has been independently associated with non-adherence, hospitalizations and mortality.

Objectives
The aim of this work was to evaluate the geriatric depression scale (GDS) score predictors in ESRD patients undergoing dialysis.

Methods
An observational cross-sectional study including a total of 114 ESRD patients was conducted. Depression status was evaluated using the GDS scale (higher GDS scores reflect a higher degree of depression). Social support, sociodemographic, comorbidities and laboratory data were also evaluated.

Results
Our results showed that 43% (n=49) of our ESRD patients showed a GDS score lower than 5 (=normal), 28.1% (n=32) between 5 and 8 (=mild depression), and 28.9% (n=33) showed a score of 9 or more (more severe depression). When comparing these three groups of patients, we found significant differences in age, creatinine, substitution fluid volume, relative fat mass, fat tissue index (FTI), lean tissue index (LTI), lean tissue mass (LTM) and social support score. Moreover, a significant positive correlation was found between GDS score and FTI and relative fat mass; and a negative correlation was found with Kt/V, social support score, creatinine, LTM and LTI.

Conclusion/Application to practice
In conclusion, our results showed a high depression rate among ESRD patients undergoing dialysis and which is associated with low social support and decreased muscular mass and creatinine serum levels. It will be important to consider social support as being pivotal in non-pharmacological interventions to reduce depression rates.
P 025
Successful pregnancy in a haemodialysis patient in Saudi Arabia – a case study
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Background
Pregnancy in patients with renal disease is challenging. Worsening residual renal function leads to the development of complications in pregnant women. Within the Saudi Arabian culture, becoming a mother is one of the greatest desires for Muslim women. Only 7% of live births have been reported in haemodialysis patients in Saudi Arabia.

Objectives
This case study discusses the clinical management of a haemodialysis patient reaching a full term pregnancy.

Methods
Despite setting a target Hb of 10-11%, the management of anemia during the second trimester was hugely problematic despite increasing ESA doses by 20% each trimester; serum iron and Ferritin levels were normal. Dry weight management during the second trimester was variable and achieved with ultrafiltration. Blood pressure control responded well with frequent dialysis with all hypertensive medications withdrawn. Anticoagulation regime during the first trimester was heparin then changed to salicylates during both the second and third trimester. Dialysis dose increased from 16 hours weekly in the first trimester to 20 hours in second and finally 24 hours weekly during the last trimester.

Results
The pregnancy reached full term at 37 weeks and following a caesarean section a healthy baby girl weighing 2.6 kgs was delivered. The patient returned to chronic haemodialysis after delivery.

Conclusion/Application to practice
Pregnancy outcomes in end stage renal disease along with prognosis of mother and newborn have improved. Close monitoring of maternal and fetal wellbeing, vigilant monitoring of volume depletion and close collaboration between nephrology and obstetrics teams ensures that successful outcomes are possible.
Process of decision-making regarding initiation of dialysis by patients aged 75 and above

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Background
In Japan, many challenges exist when it comes to patients aged 75 and above (regarded as elderly after this age) autonomously performing self-management after initiating dialysis. This is mainly because the elderly tend to be evasive regarding the topic of dialysis while some tend to be dependent on others which greatly influence their personal decision-making.

Objectives
The purpose of this study was to clarify the process of decision-making regarding the initiating of dialysis by the elderly, and to obtain an indication of nursing support.

Methods
To target elderly, data was collected from initial dialysis prognosis until about one year after the dialysis initiated. A semi-structured interview was performed and analyzed qualitatively.

Results
Subject is 4 patients, average age was 82 years old and their average dialysis history was 10 months. Regarding the initiation of dialysis, patients had the following four experiences of decision-making process. They were,
1. To perceive shock, impatience, regret and disappointment, limitation of self-management by the prognosis of dialysis
2. Patients either rely on the doctor or unwillingly decide to initiate dialysis
3. While they realize the effectiveness, they face new problems such as discomfort and other issues
4. Decision to live with dialysis

Conclusion/Application to practice
At first, elderly chose to begin dialysis due to medical need. Then they gradually became convinced of the necessity of dialysis for life and they soon accepted it and came to terms with it. It means that even though dialysis was initiated based on external factors, they have changed and decided to continue dialysis based on internal factors.
P 027
From Latrodectus (Black Widow) spider bite to dialysis: a case study
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Background
In this case study a peculiar “fight” of a 58-year-old man is presented

Results
This patient toured the world as a truck driver. His disease commenced in 2008 as after downloading his cargo, his left ankle was bitten by a spider. Shortly afterwards his ankles were swollen and painful. While in Germany, his wound was taken care of in a Dresden hospital. Two weeks later his complaints recurred. Subsequently, his wound was re-opened whilst in Vienna. Two months elapsed and his symptoms reappeared again in Rostock. Hepatic failure was diagnosed in Vienna, due to HCV infection. He received a new liver in 2010, which, due to CMV infection and the subsequent deterioration of the functioning of the graft, was rejected. This resulted in a second liver transplantation in 2012.

During the operation, postero-inferior AMI occurred with immediate stenting. Immuno-suppression was Tacrolimus, 3X2mg. In January 2013, gastrointestinal bleeding, vomiting, diarrhoea and pyrexia were treated, and anaemia corrected. In January 2014 he was transported to the Nephrology Department of Tatabanya due to hypertension, headache and vomiting. End-stage renal failure was diagnosed with diffuse renal lesion, nephrotic syndrome and HCV-associated membranous nephropathy. HD treatment started at the Transplant Clinic in January 2014. Due to bleeding haemorrhoids and anal adenoma, haemorrhoidectomy occurred on 13 November 2014.

Conclusion/Application to practice
Currently, at the age of 58 years, this patient is undergoing 3x5 hours per week HD treatment, which is performed via a left forearm fistula. The patient co-operates well and he encourages his fellow patients.
Nursing coordinators in the dialysis unit
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Background
There is a diversity of care required for dialysis patients, which includes pain management, infection prevention, vascular access care, diabetic care, phosphate control, transplant care and education about renal failure.

The increased number of dialysis patients raises the need for nurses with specified responsibilities in various specialties, including patient education, improvement of work procedures, implementation of new protocols and ensuring a continuum of care between the specialties.

Objectives
Nurses were appointed as coordinators responsible for an area of specialized care, including pain treatment, infections, vascular access, diabetic care, phosphate control, transplant care and patient education. A survey was conducted to assess their impact on the quality of care and patient knowledge.

Methods
A questionnaire relating to patient satisfaction and understanding of their treatment in these areas was developed and distributed. The data were collected and translated to percentages, so each subgroup received a score on a scale from 1-100. Next, the reasons for the lowest scores were considered, and an interventional plan built.

Results
Patient satisfaction was highest in the specialties of infection control, pain management and vascular access care, and was lowest in diabetic care and transplant care. A plan for improving the scores in the lower rating subgroups has been implemented, and an additional survey will be performed at the end of the intervention.

Conclusion/Application to practice
There was a positive correlation between the function of the coordinating nurse and the high scores received in the various fields. Methods of improving the scores in the lowest rating subgroups must be determined and implemented.
Non occlusive mesenteric ischaemia due to a decrease of blood pressure during haemodialysis treatment

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Background
Various complications may follow dialysis treatment: heart problems, infections, hypotension, gastrointestinal bleeding, bone diseases etc.

Non Occlusive Mesenteric Ischaemia (NOMI) in haemodialysis patients is rare. It may have fatal complications with unknown pathophysiology. Symptoms are abdominal pain without evidence of shock or abdominal rigidity. Late diagnosis causes intestinal ischaemia, abdominal pains, sepsis and death in 59%.

Results
We have dealt with 4 cases of NOMI. 3 patients died in the intensive care department after abdominal operations. One patient remained alive with severe complications.

During dialysis he suffered hypotension and did not follow recommendations from staff regarding diet/fluid regimes. As a result, he developed NOMI and underwent hemicolectomy and stoma. He excretes 5 litres fluid daily and lost 20 kg/year. This led to haemodynamic instability, with difficulty in electrolyte/glucose balance. In addition, stoma and constant fluid excretion impaired communication and social activities. His treatment plan required careful assessment from the multidisciplinary team: doctors, nurses, dietician and social worker. The patient started IDPN. Haemodynamic balance includes fluid load during dialysis and arriving on an additional day for fluid infusion. The emphasis is made on diabetes control, including glucose monitoring during the treatment and insulin injections. The patient is carefully weighed and weekly dry weight assessment is made.

Conclusion/Application to practice
1. NOMI is a life threatening complication.
2. Staff awareness of NOMI can reduce or avoid the phenomenon.
4. Great emphasis should be made on the patient’s education regarding fluid regime and improvement of compliance.
Benchmarking and centralised data analysis as a guide for sustainable practice in large organizations

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Background
Despite the 21st century e-world with communication highways to share knowledge between continents, inside large organizations a lack of communication sometimes remains, especially when it comes to ways of obtaining the best outcomes (effective) with the best use of resources.

Objectives
• Implement a benchmarking model along all the dialysis centres of a country organization.
• Identify nursing best practices and compare costs versus outcomes of different realities and practices.

Methods
At least twice a year structured visits to each centre were carried out. Observations were documented in a pre-defined checklist which ensured an easy identification of the best practices deviations. Action plans were implemented whenever deviations were identified in order to achieve better outcomes. Balanced Score Card (BSC) data was analysed. Wilcoxon test was used for statistical analysis.

Results
2013 versus 2015:
108 versus 123 visits/year, on average 3±1.65 versus 3.42±2.23 visits per clinic/year; p=0.544.
BSC data:
• Clinical outcomes variation (measurable patient outcomes): 78.91%±6.60 versus 97.97%±21.86; p=0.003; +19.06%.
• Cost of disposables per treatment (tmt): -4.62%.
Standardization of practices:
• Hand disinfectant: 2.84mL/tmt versus 3.41mL/tmt; +18.07%
• Use of catheter set: 88,576 versus 106,528; +20%
• Training hours/nurse/year (BSC): 21.07±5.02 versus 35.30±3.18; p=0.003; +40.29%
• Product portfolio variability (disposables): -25%.

Conclusion/Application to practice
The implementation of a central nursing organization helps to standardize the best nursing practice and the use of consumables, while improving patient outcomes.

Greater expenditure doesn’t always mean the best outcomes.

Our approach could reduce the cost of disposables per treatment thanks to a price negotiation advantage derived from a reduction of the variability of the disposables used.
Nursing care of patients with kidney failure after intoxication boosters

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**Background**

**Summary:** There has been an increase in the number of hospitalizations and deaths associated with severe poisoning of the body and the onset of renal failure as a result of the consumption of poisons.

**Keywords:** poisoning, patient care.

**Objectives**

Determination of nursing problems in the care of patients with kidney failure after poisoning.

**Methods**

Study of individual cases.

**Techniques:** Interview, analysis of patient histories, the nursing process, laboratory tests and imaging.

**Results**

Consuming poisons is high especially among young people. CKD is polysymptomatic syndrome which is a result of kidney damage that may occur due to severe poisoning xenobiotics.

**Conclusion/Application to practice**

Interdisciplinary nursing care of the patient in ARF and CKD requires careful observation of the degree of renal failure, the corresponding troubleshooting required, personal action planning and implementation of nursing care.
P 032
Efficacy of baclofen in controlling rebel muscle cramps in a haemodialysis patient
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Background
Baclofen is an amino butyric acid (GABA) –B receptor agonist, usually used to treat central spasticity, intractable hiccup and alcohol ism

Methods
This case study is about a 79 year old lady under renal replacement therapy due to the evolution of chronic tubule-interstitial nephritis precipitated by radiotherapy after the excision of an adenocarcinoma of the rectum. Since the start she was complaining of diffuse muscle cramps not related neither alleviated by dialysis. She reported a spectacular improvement after the introduction of Baclofen.

Results
Pathophysiology of muscle cramps remained unknown and controversial. Despite usage of various pharmacological agents sole Gabapentin combined with baclofen was fruitful.

Conclusion/Application to practice
Baclofen is efficacious in treating rebel muscle cramps in haemodialysis patients
**P 033**  
**Barriers to the implementation of a renal anaemia management protocol**  
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**Background**  
The implementation of an anaemia management protocol within a haemodialysis unit can be both beneficial for patients as well as the institution itself in terms of cost-effectiveness. SEHA Dialysis Services (SDS) has an existing standardized anaemia management protocol, which is not universally adhered to by medical staff resulting in non-achievement of international standards.

**Objectives**  
To explore barriers contributing to non-adherence from a nursing viewpoint and to understand what enabling strategies are needed to improve future adherence.

**Methods**  
A qualitative phenomenological research study was conducted using a purposive sample and interviews with the anaemia link nurses. Individual interviews were conducted utilizing an interview guide asking the nurses to share their views of enabling strategies to improve anaemia management.

**Results**  
The anaemia link nurses were all highly experienced dialysis nurses who fully understood the anaemia policy, its relevance to patient quality of care and the expected targets. The predominant barriers appeared to relate to the interface between nurses and nephrologists. Junior nurses being reluctant to press nephrologists to change management, because of the way this may be received, possibly underpinned by their own insecurity in anaemia management. Suggested improvement strategies included involvement of the anaemia link nurses within the multidisciplinary team meetings, the use of senior nurses to approach nephrologists, improved anaemia education of junior nurses and finally garnering the support of the lead nephrologist in the implementation of the anaemia policy with his medical colleagues.

**Conclusion/Application to practice**  
The main barriers to implementation of the policy appears to be communication at the doctor:nurse interface.
Volume management in a dialysis patient

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Background
Volume is an independent and significant predictor of mortality in patients on regular dialysis therapy, incorrect setting of optimal hydration results in clinical consequences.

Objectives
Correct determination of patient’s dry weight, correct set-up of ultrafiltration and dialysis parameters to prevent complications of a dialysis therapy.
Risk of hypotension depending on the speed of UF significantly increases with increasing speed of UF.

Methods
Methods used to determine dry weight
- Clinical assessment by physician, blood pressure measured at home
- Ultrasound techniques
- Blood volume monitoring, e.g. Crit-line
- Bioimpedance spectroscopic analysis, e.g. BCM
- Ultrafiltration setup
- Ultrafiltration profile
- Isolated ultrafiltration
- Minimal ultrafiltration
- Dialysis profiling
- Ultrafiltration profiling
- Sodium profiling
- Dialysate temperature profiling

Patient education – on a regular basis, in cooperation with physician, according to the clinical condition of the patient and monthly samples collection
Primary nurse – 90-day education, in all areas of nursing care
Coordinator for nutrition care – resolution of more complex problems in relation to dietary and hydration regimen

Conclusion/Application to practice
Proper management of dry weight minimizes possible complications during dialysis therapy, at the same time reducing the mortality of our patients and improving the quality of their life.
Background
Since the beginning of the 90’s, there have been several attempts to educate patients using online learning methods in Australia and USA.

Providing information and guidance to patients after inserting a catheter to perform dialysis comes in line with the development of technologies. Courseware is a unique method which combines advanced technology, leader training class, which allows visualization and friendly use, standardization of training and the ability to motivate, implement and institutionalize the process at cross-organizational level, as an integral part of professional activity.

In the nephrology department of Hillel Yaffe Medical Center we developed courseware. The main topics are: explanation on central line, daily treatment and complications. At the end of courseware a number of questions are presented to test the patient’s level of understanding.

Benefits of courseware;
- improves efficiency of training, and standardization of training.
- Allows visualization and friendly use- «a picture is more than a thousand words.»
- Helps the patient learn anywhere (regardless of geographic location) and anytime (available to the patient 24 hours).
- Allows individual learning - customization of needs, order and rhythm of learning of each patient.
- Ability to practice a wide range of activities.
- Flexible study hours, and unlimited hours.
- Savings of time meeting with members of the multi-professional team, fewer hospitalizations due to complications.

Today courseware has been operating for a year and provides a solution for patients, nursing staff and students regarding ongoing care centres to insert haemodialysis catheters.
Case Study: Silver dressings and Buttonhole technique in fistula with panniculitis

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Background
The buttonhole technique reduces complications related to frequent venipunctures, pain, bleeding and haematoma. Silver dressings with antimicrobial action can be used as a barrier for microorganisms in high-risk of infection wounds.

Methods
We observed a 62 year old male patient, who underwent nephrectomy after dialysis treatment for 3 years and two months.

Over the past few years, due to vein failure, an episode of thrombosis occurred in his right PTFE Prosthetic AVF as well as two unsuccessful permanent CVC.

In July 2015 a native superficialized distal left AVF was prepared for this patient. Afterwards the tissue overlying the venipuncture area showed a panniculitis. The first venipunctures performed in November 2015, caused an eschar on the venous site, which made the venipunctures complicated.

The patient was enrolled for the Buttonhole technique, using a silver ion releasing dressing at the end of the dialysis session.

Results
During the three weeks of preparation of the tunnel, there was a reduction of oedema as well as the elimination of the eschar, which made the venipuncture easy and less painful.

Conclusion/Application to practice
We observed the efficacy of the silver ion releasing dressing in the reduction of the eschar at the needle insertion point in the AVF, moreover the synergy of the buttonhole technique and silver allowed the easy venipuncture of a highly-complicated fistula.
Estimation of vascular access type in Greek’s haemodialysis population - Multicentric study

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Background
Sustainable vascular access providing blood flow rates Qb>300ml/min, is essential among patients undergoing haemodialysis. These can be achieved through arteriovenous fistula, arteriovenous grafts, or tunneled dialysis catheters (TDCs). Despite the effort of limit use, the TDCs often remain in use for months or years.

Objectives
A special designed questionnaire was sent to 161 renal units (RU) from public and private health sector, between August and October 2015. This was an attempt to reflect the nationwide percentage of patients undergoing haemodialysis with TDC. The questionnaire was answered by 87 RU (54.03%). 49 RU were from public hospitals (55.7%) and 38 from private ones (44.3%). The patients undergoing haemodialysis in these 87 RU are 5640, and 3575 are men and 2065 women.

Methods
Patients undergoing haemodialysis with TDCs are 1369 and represent a percentage of 24.27%. It seems that women are the majority, is 721 (52.66%) and men 648 (47.34%). Also, from the total number of the patients who undergo haemodialysis and took part in this study, the 713 patients (12.64%) undergo haemodialysis through arteriovenous vascular graft. It is estimated that the remaining percentage 63.09% of the patients, uses arteriovenous fistula.

Results
In conclusion, the results of our study have shown that 24.25% of patient uses TDC as vascular access, similar to the USA and European countries. Despite NKF’s recommendation and the KDOQI guidelines for short use of these catheters, in a percentage of <10% of the patients, an increase trend worldwide is observed and it is also confirmed among the Greek haemodialysis population.
Intradialysis neuromuscular electro stimulation, muscle strength, functional capacity and body composition

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Background
Haemodialysis (HD) patients presents great muscle wasting. Recently, neuromuscular electrostimulation (NMES) becomes as adjunctive exercise treatment in HD patients. The exclusive NMES role and body composition in HD have not been published.

Objectives
Analyze the intradialysis quadriceps NMES’s effect in muscular strength, functional capacity and body composition in our HD patients.

Methods
12 weeks single-center prospective study. HD patients assigned into electrostimulation (EMS) or control group (CO). EMS was performed using Compex® Theta 500i device in both quadriceps. C group standard HD care. Analyzed: 1.- Nutritional data. 2.- Quadriceps muscular composition. 3.- Maximum length quadriceps strength (MLQS), hand-grip (HG). 4.- “Sit-to-stand-to-sit” (STS10) and “six-minutes walking test” (6MWT). 5.- Body composition.

Results
13 HD patients included: 69.2% men. Mean age 65.7 years, 33.9 months on HD. Significant (* p < 0.05) improvements in MLQS* (11.7 ± 7.1 vs 13.4 ± 7.4 Kg), STS10* (39.3 ± 15.5 vs 35.8 ± 13.7 seg) and 6MWT* (9.9%, 293.2 vs 325.2 m) observed. A significant increase in quadriceps muscular area (QMA*: 128.6 ± 30.2 vs 144.6 ± 22.4 cm²) and decrease of fat quadricipital area (FQA*: 76.5 ± 26.9 vs 62.1 ± 20.1 cm²). No significant changes were observed in nutritional parameters, body composition or dialysis adequacy data.

Conclusion/Application to practice
1.- EMS improved muscle strength, functional capacity and quadriceps muscle composition in our HD patients. 2.- Our results underline the local aspects on EMS, given the absence of relevant changes on nutritional parameters and body composition. 3.- Future studies are mandatory to establish EMS as a new alternative to prevent muscle atrophy and progressive functional deterioration of these patients.
Factors affecting the quality of dialysis treatment and improving patient’s lives

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Background
Good dialysis treatment provides the highest possible quality of therapy, the best possible care, better survival chances and increased patient satisfaction.

Objectives
Good elimination of uremic toxins, control of blood pressure with minimum medication, positively treated anaemia, regulation of acid-base status.

Methods
Counseling of patients about maintaining hygiene AVF, careful patient care and observation of even the smallest change of health status and vascular access, successful cannulation with strict hygiene measures, gradually increasing Qb, recording of patients’ reactions to treatment, patient education about treatment and the provision of quality care in an attentive and kind manner. In following, we show the results of a patient who underwent treatment in our clinic.

Results
The patient SJ, age 63: Haemoglobin-93 g/L, Kt/V-0.91, CRP-11.6 mg/L, Calcium-1.85 mmol/L, Phosphate-1,71mmol/L, iPTH-858.3 pg/mL. In the clinical examination pronounced pallor, and poor nutritional condition (BMI 20 kg/m2), hypertension 160/90 mmHg. After six months: Haemoglobin-120 g/L, Kt/V-1.923, CRP-0.6 mg/L, Calcium-2.15 mmol/L, Phosphate-1,19mmol/L, iPTH -602.8 pg/mL. Corrected therapy of: anaemia, secondary hyperparathyroidism. Anamnestic patient negates complaints from the reception. BMI 21.2 kg/m2. Average blood pressure 130/80 mmHg with reducing antihypertensive therapy.

Conclusion/Application to practice
Adequate dialysis in the presented case led to:
- the correction of anaemia that does not require the use of transfusions;
- regulation of the calcium and phosphorus, metabolism,
- correction of hypertension,
- reduced inflammation,
- an improved nutritional and subjective and objective health status.
This all may reduce the risks for of necessary hospitalizations.
P 040
Can saturation of oxygen and heart rate variations predict the intradialytic hypotension occurrence?

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Background
Intradialytic hypotension is a common symptom among end stage renal disease patients in haemodialysis. It occurred during haemodialysis and might cause severe or life-threatening complications. No effective pre-occurrence alarm system has been developed for monitoring patients’ conditions at this time. It was found that variations of saturation of oxygen and heart rate were associated with intradialytic hypotension occurrence. These two signals might be used as predictors for detecting intradialytic hypotension occurrence.

Methods
Sixty-eight patients of end stage renal disease who required temporary or long-term haemodialysis treatment were recruited. Intradialytic hypotension was defined as having a decrease in systolic blood pressure by at least 30mmHg below the predialysis measurement or to a systolic value below 100 mmHg. Oxygen saturation data and heart rate during their haemodialysis sessions were collected, and analyzed by sequence alignment and Boolean algebra.

Results
Data in variations of oxygen saturation and heart rate were classified into three Classifiers which were developed as predictors for determining pre-occurrence of intradialytic hypotension within 30 minutes. The sensitivity and specificity of these Classifiers for the prediction of intradialytic hypotension occurrence were found to be over 80%.

Conclusion/Application to practice
The results suggested that variations of saturation of oxygen and heart rate could be used as predictors for developing an alarm system. Such predictors if be used in a timely manner can act as an intervention for patients during haemodialysis therapy to preventing intradialytic hypotension.
P 041
Old age and renal failure in Szabolcs-Szatmár-Bereg county
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Background
Currently there are 600 million people over 60 years of age in the world, and this number may double by 2025. The kidneys undergo anatomical and functional changes with age. The weight of the kidney decreases in old age, as do the renal blood flow and the GFR.

Objectives
In Szabolcs country three dialysis centres provide care for patients requiring renal replacement therapy. The average age of the treated patients was 64.3 years.

Methods
• Descriptive

Results
In Hungary, among incidental patients receiving dialysis treatment the proportion of 65 to 74 years old and >75 years old patients was 29.2% and 28.2%, respectively. Among the prevalent patients the corresponding proportion was 28.17% and 22.29%, respectively. In Szabolcs county, among the new dialysis patients the proportion of >65 years old and >75 years old patients was 48.2% and 25.3%, respectively.

Among the new patients, the prevalence of diabetic nephropathy was 25.4% and that of hypertensive nephropathy was 20.3%. Within the cohort of patients receiving treatment on 31 December, this ratio was 29.7% and 21.9%, respectively.

In the new patient group, with patients over 65 years of age, the prevalence of diabetic nephropathy and hypertensive nephropathy was 39% and 32%, respectively; on 31 December the corresponding figures were 43% and 36%, respectively.

Conclusion/Application to practice
The authors are highlighting and emphasizing the importance of screening and providing care to the population at risk.
P 042
Uremic pruritus is related to dialysis adequacy in haemodialysis patients

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Background
Uremic pruritus is one of the most common symptoms among end-stage renal disease and haemodialysis patients. Pruritus can be persistent and distressing for patients and may have a significant negative impact on their quality of life. It is accompanied by potential psychological, functional and social impacts, as well as increased morbidity.

Objectives
To identify the factors related with the presence of pruritus amongst haemodialysis patients.

Methods
All relevant haemodialysis patients in our centre (age ≥ 18 years) in March 2015 were included. Patients underwent dialysis three times a week for 4 hours per session using haemodialysis machines. Demographic data (age, gender and dialysis vintage) and comorbidities (diabetes and viral hepatitis) were compiled from the patients’ medical files. The presence of pruritus was assessed by means of an interview. Laboratory measurements included serum haemoglobin, calcium, phosphorus, parathyroid hormone (PTH), hs-CRP, and eKt/V.

Results
A number of 249 patients (123 males, average age 59.2 ± 13.4 years) were included. Of these, 54 complained of pruritus. The only factor that was significantly associated with pruritus was eKt/V; mean eKt/V was 1.49 in patients without pruritus versus 1.39 in those with pruritus (p = 0.012). However, in subgroup analysis, eKt/V was associated with pruritus only in the case of male patients and in patients without hepatitis.

Conclusion/Application to practice
Uremic pruritus is related with dialysis adequacy. An eKt/V ≥ 1.4 may be required to control pruritus in haemodialysis patients.
Haemodialysis — Rethinking our environmental responsibilities
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Background
As global efforts to combat climate change and carbon generation accelerate, the environmental impact of dialysis practice will come under increasing regulatory focus. That is why each of us has the responsibility to protect the environment as much as possible and optimize resource consumption.

Objectives
Our objectives are to minimize the negative effects and reduce consumption of natural resources, to raise awareness of all employees.

Methods
We reduced the water consumption by using post-dilution haemodiafiltration, with an automatic adjustment of the relation of dialysate flow rate / blood flow rate to 1.2.

We implemented Kaizen by training and involving employees in order to improve the daily activities and we raised the employees’ awareness towards the importance of environmental protection.

We reduced contaminated waste by separating domestic, plastic waste: reduce, re-use, recycle – always look for ways to use fewer resources. We implemented specific emptying procedures for haemodialysis and HDF circuits.

Results
We reduced the amount of contaminated waste/treatment from 1.2 to 0.9 kg during one month for each patient. We have minimized the risks for the company, employees, environment and patients with internal directives and compliance with legal requirements and optimized processes and results thus achieving economic objectives.

Conclusion/Application to practice
Protecting the environment is a priority of the entire staff of our dialysis unit in order to ensure a high quality and safe treatment with minimum impact on the environment.
P 044
Burnout levels of haemodialysis nurses

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Background
Burnout syndrome is a complex phenomenon related to a stressful working environment. It is a syndrome that can be due to emotional exhaustion, depersonalization and decreased personal accomplishment. Providing care for patients with chronic disease such as end-stage renal disease, working in a technical environment with machines and facing the high expectations of patients is stressful.

Objectives
The purpose of this study was to determine the burnout levels of nurses working in haemodialysis units.

Methods
Data were collected by means of the Maslach Burnout Inventory. 40 nurses with more than 15 years of work experience completed the questionnaires. The Maslach Burnout Inventory was used to assess levels of haemodialysis nurse’s burnout. The inventory is a 22-item measure that assesses the frequency of occurrence of three aspects of burnout: emotional exhaustion, depersonalization, and personal accomplishment.

Results
The results of the study revealed that nurses working in haemodialysis units experience a medium-level burnout in terms of subscales of emotional exhaustion, depersonalization, and a low-level burnout in terms of the subscale of personal accomplishment.

Conclusion/Application to practice
It is important to monitor burnout level, in order to recognize susceptible subjects and implement timely organizational and supportive measures to increase the quality of working conditions in such environments, improving working lives of nurses, and thus preventing the deterioration of the quality of care.
P 045
Extremity axillary loop graft - an opportunity in haemodialysis access
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Background
Vascular access in haemodialysis patients can be challenging especially in those with failed primary, secondary and/or tertiary procedures. A functioning vascular access represents a key issue in the management of patients needing chronic haemodialysis. However, all involved in vascular access creation and preservation are facing an everyday challenge: how to meet their HD patients’ vascular access needs.

Objectives
To offer our experience with an alternative technique of vascular access for haemodialysis in which a prosthetic graft was anastomosed to the axillary artery and internal jugular vein, at the patient who have run out of conventional option.

Methods
Anterior chest wall prosthetic accesses are a particular type of vascular access. The axillary artery is anastomosed by means of a PTFE graft to the internal jugular vein. We present a case of a 60-year-old male, with a history of complex vascular access for end-stage renal failure. He started the haemodialysis treatment in 1988 with femoral left catheter. His vascular access history included a left wrist shunt, a left upper arm access graft, a right upper arm arteriovenous fistula and multiple long life catheters in his jugular veins and femoral left vein.

Results
Ultrasound examination played a major role in the early identification of vascular access complications. The treatment results showed that the Kt/V target was reached.

Conclusion/Application to practice
The axillary-axillary loop graft is a valuable salvage option in patients with complex vascular access.
P 046
Questionnaires patient reported outcomes, an useful tool for nephrology nursing
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Background
The incorporation of subjective criteria such as questionnaires results obtained by patients (PRO-Patient Reported Outcomes) who has as their central axis the direct perception of Health Related Quality of Life (HRQOL) of each person without any more interpretation of the answers but itself.

Objectives
To evaluate the health-related quality of life for people with end-stage renal disease and identify the most significant differences depending on gender and treatment received, with a PRO questionnaire.

Methods
Observational, analytical and cross-sectional study (second semester 2014) carried out on people having haemodialysis or On-line hemodiafiltration treatment. We made an evaluation of the HRQOL with the Kidney Disease Quality of Life-Short Form (KDQOL-SF), previous informed consent, more clinical and socio-demographic data were collected too.

Results
Significant differences in:
Albumin values according to the dialysis technique and appropriate treatment doses (Kt/V) depending on gender, Quality of life test dimensions: Symptoms/problems, employment status, sexual function, physical activity, pain and vitality (depending on gender) and according to technique with sleep, staff attitude and physical activity.

Conclusion/Application to practice
People, who live alone and are educated, have better test results in HRQOL. People, who are treated with HDF–OL, have better nutritional status than those treated with HD, as well as, best results in the test KDQOL-SF. Despite the fact that women get more doses of dialysis than men and show better results with the scale of human sexuality and job situation, have more pain, worse physical conditions and less vitality.

If we know their needs, we can offer them a more individualized care.
P 047
Delivering a large renal study across multiple satellite dialysis units
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Background
High quality clinical research studies are necessary to improve healthcare in patients. In contrast to other medical specialties, the majority of dialysis patients in the UK are managed in satellite dialysis units, geographically distinct from the mother unit. At our renal unit in London, there are 6 satellite dialysis units located up to 16 miles from King’s College Hospital. More than 80% of our haemodialysis patients are treated in one of these units. This potentially creates problems for clinical research in dialysis patients, since including them in a large clinical trial is essential for study delivery.

Methods
To facilitate recruitment and smooth running of the PIVOTAL study (2080 patients throughout the UK), several practices were adopted, as follows:-
- Delivery of study training to 6 renal satellite units
- Implementation of a telephone consenting process
- Identification of “link nurses” at the satellite units
- Regular communication with satellite unit managers and link nurses
- Regular visits to satellite units
- Support from Kidney Research UK (research nurse funding, posters and patient contact cards, Patient Support Group).

Results
Over the past 2 years, 136 patients have been screened and 118 patients have been randomised from our unit. 116 of the 136 patients were located in one of the 6 satellite units.

Conclusion/Application to practice
Delivering a large renal study across multiple satellite dialysis units is possible, but research staff need to be aware of the hurdles that require to be overcome. Strategies need to be implemented to overcome these hurdles in order for the study to be successful.
Background
Performing haemodialysis in Intensive Care Unit always increases the risk of potential nosocomial infections. We have to face this situation more and more often because dialysis (e.g.: sequential) became a preferred method next to necessary volumentherapy at the Intensive Care Unit (ICU).

Objectives
Year by year, performing adequate and safe haemodialysis in Intensive Care Units presents a challenge. Our aim is to minimalise the potential risk of nosocomial infections. Intensive care therapy constitutes the highest risk of nosocomial infection among all the other wards because of the potential well-known factors: suppressed immune system, polytrauma, invasive devices etc.

Methods
We analyzed the potential contaminations during the process of preparing a haemodialysis treatment.

Results
We found two particular steps that include high risks as for the infection danger on the side of dialysis therapy. 1. Water machine disconnection 2. Moving dialysis machine between treatment rooms. We found that the dialysis staff should be responsible for the adequate treatment, especially the nurse and the technician, to make appropriate decisions in order to assure operation according to aseptic processesing.

Conclusion/Application to practice
It is required to build a closed system as much as possible. It is highly necessary to achieve perfect collaboration and communication with the staff of the Intensive Care Unit. Further examination is planned to gather more datas, particularly as for the numbers of suspected nosocomial infections.
P 049
The self control of exercise and oral medication management among Japanese haemodialysis patients
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Objectives
To examine discounting of delayed hypothetical money and the self control of water intake among Japanese haemodialysis patients.

Methods
1) Study Participants: Sixty five haemodialysis patients in Japan participated.
2) Study items: A questionnaire was contained exercise behavior and oral medication intake management, the hypothetical discounting money questionnaire.
3) Grouping:
   3-1) Participants who adhered to the exercise behavior were assigned to the well exercised group (WEG), while participants who did not take regular exercise in daily life were assigned to the unmanaged exercise group (UEG).
   3-2) Participants who adhered to the oral medication intake were assigned to the well managed group (WMG), while participants who did not manage it were assigned to the unmanaged group (UMG).
4) Data Analysis: \( V = \frac{A}{1 + bX} \), where \( V \) is the subjective, discounted value of the delayed or probabilistic reward; \( A \) is the actual amount of the reward; \( X \) is the delay until, or adds against, receipt of the reward; and \( b \) is the parameter that describes the rate of discounting.

The scores of \( V \) were used to compare the two groups in two conditions. A Mann-Whitney U test was applied and the significance threshold was put at 0.05.

Results
A significant difference was not shown between the WEG and UEG, also between the WMG and UMG, however, the score of \( V \) in the UMG was higher than the score of \( V \) in the UMG.

Conclusion/Application to practice
This study revealed that discounting of delayed hypothetical money might have an effect on management of their oral medication intake.
The association between quality of nursing care and quality of life among haemodialysis patients

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Background
Sometimes we’re looking for a very expensive methods of treatment, haemodialysis equipment, drugs etc. to improve quality of life of HD patients but maybe we don’t appreciate the nursing role enough, which could be also effective and cheaper in increasing quality of their life.

Objectives
The aim of this study was to explore the relationships between different aspects of the QOL and the quality of nursing care perceived by haemodialysis patients.

Methods
We examined 48 HD patients. The study was performed using two self-administered questionnaires: a SF-36 questionnaire and a questionnaire of nursing care satisfaction made on purpose for this study. The quality of life questionnaire regarded 8 aspects of life: physical functioning, social functioning, pain, physical and emotional limitations, energy, mental health, vitality and general health perception. The quality of nursing care questionnaire included questions about the patients satisfaction with education, welfare activities, health promotion activities, nurses behavior during the administration of medicines, diagnostic activities and organizational tasks. The association between quality of life aspects and quality of nursing care aspects was performed by R-Spearman correlation coefficient.

Results
The study demonstrated that there is a significant and positive relationship between pain perception and nurses diagnostic activities, a general health perception and educational activities (p<0.05). We noted no correlation between mental health and treatment activities, role limitations due to physical and emotional problems and welfare activities of nurses. Vitality and activities associated with health promotion also were not correlate with each other.

Conclusion/Application to practice
Education and nurses diagnostic tasks should be accented as en element of increasing HD patients QOL.
Relationship between adherence, overhydration, potassium and phosphorus levels and acceptance of chronic kidney disease

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Background
Chronic diseases such as CKD represent a state of crisis for the patients affected by them. Adaptation to the new situation results from the interaction between the demands of the disease and the ability to confront it. According to the literature, a good degree of acceptance involves the use of strategies to deal with the disease as a personal growth opportunity. But when this acceptance doesn’t happen, the ability to adhere to a therapeutic process may be compromised.

Objectives
To verify if adherence, overhydration, potassium and phosphorus levels are influenced by
• sociodemographic and clinical characteristics
• the acceptance of chronic disease.

Methods
This is a quantitative, descriptive and correlational study.

We surveyed haemodialysis patients applying the acceptance of illness scale and the measure treatment adherence scale. These were self-administered questionnaires.

From a period of three months before this survey, we extracted from a clinical database and evaluated retrospectively the following patient data: mean levels of overhydration, potassium and phosphorus.

Results
At the moment there aren’t any conclusive results, but preliminary results would seem to indicate greater adherence in relation with higher acceptance of chronic disease.

Conclusion/Application to practice
When we talk about improving adherence levels among haemodialysis patients, we talk about health outcomes improvement and lower costs. Therefore, this adherence related to the acceptance of chronic disease, allows the multidisciplinary team to develop strategies to help them in their rehabilitation process and acceptance of the disease, encouraging their motivation, their adaptive processes and providing them with support in order to be able to face this new condition.
P 052
Nurse’s role in extra-dialysis drugs management for end-stage renal disease patients
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Background
The nurse has a fundamental role in the therapy success of end-stage renal disease (ESRD) patients. A correct and precise therapeutic management and consequent adherence contribute to a lower hospitalization rate and a reduction of health costs. In the haemodialysis context, the responsibility of extra-dialysis drugs management is attributed to the nurse and this nurse is required to implement sustainable strategies to improve therapy management in order to achieve lower costs.

Objectives
- To identify and relate the consumption of extra-dialysis drugs with costs in 2015
- To identify strategies to improve extra-dialysis therapeutic management in order to reduce costs.

Methods
The methodology is based on a descriptive study carried out from January 2015 to December 2015 in ESRD patients who were on a regular dialysis programme in our clinic. The average consumption of extra-dialysis drugs and subsequently the associated costs was analysed.

Results
Detailed analysis of the average consumption of drugs showed that there was a decrease in the consumption thereof associated with reduced costs.

Conclusion/Application to practice
In our unit, the decrease in drug consumption helped to reduce costs. We consider that to maintain the accurate management of extra-dialysis drugs consumption, it is absolutely necessary to organise a group with a maximum of ten nurses for the respective management. This can help avoid gaps of communication between the multidisciplinary team. Additionally, we proposed to assign one shift leader to each nursing group allowing greater proximity and accuracy with the particular group of patients.
Renal replacement therapy preferences of chronic kidney disease patients receiving nephrological care

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Background
Although we put much energy into pre-dialysis patient education, the proportion of chronic kidney disease patients avoiding dialysis therapy in a non-planned manner fails to decrease.

Objectives
To survey the preferences of patients receiving care at the nephrology outpatient clinic regarding dialysis therapy.

Methods
In the period of study (3 weeks) we asked 344 patients receiving regular nephrological care to complete a questionnaire compiled by us. We received a complete and interpretable response from 266 patients.

Results
The patients' mean age was 72.2±13.2 years. Seventy-five percent of the patients had regularly attended nephrological care for more than one year and 45% for more than 3 years. The mean eGFR was 32.8 (11.7–57.9) ml/minute/1.73m² volt. The number of patients with an eGFR of 20 ml/minute/1.73m² or less was 88 (33.4%).

Seventy-one patients (27%) were receiving darbepoetin treatment, and 31 patients (12%) already had a functioning arteriovenous fistula.

The number of patients accepting dialysis therapy was 146: 36% accepted both peritoneal dialysis (PD) and haemodialysis (HD), 46% accepted only HD and 18% only PD.

Among the patients rejecting dialysis (120 patients, 45%), 56 already had an eGFR below 20 ml/minute/1.73m².

The most common reasons for rejection included the lack of sufficient information, old age, and concomitant diseases.

Conclusion/Application to practice
It was surprising that, despite the regular nephrological care and the repeated educations, nearly half of the patients rejected the dialysis programme, and many of them cited lack of information as a reason.
Follow-up of the fate of our pre-dialysis patients between 2009 and 2015

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Background
The number of patients with advanced chronic kidney disease increases from year to year.

Objectives
To follow up the fate of patients in whose case the need for renal replacement therapy has arisen.

Methods
We included in the study such patients (n=759) who repeatedly had an eGFR value of 20 ml/minute/1.73m² or less while being in our care.

Results
The mean age of the patients followed up was 69.1±13.9 years at the start of the care (70% were over 65 years of age), and the mean follow-up time was 3.6±2.9 years. The mean eGFR was 19.5±6.4 at the start and 19.2±7.8 ml/minute/1.73m² at the end of the follow-up period. At the end of 2015, 182 patients (23.9%) were still in our care. At the end of the follow-up period their mean age was 75.8±12.6 years and the mean eGFR had changed only slightly.

Because of markedly improving renal function 61 patients (8%) were redirected to their family doctors. Sixty patients (7.9%) disappeared. A total of 127 patients (16.7%) died – their mean age at the time of death was 77.3±10.3 years and their mean eGFR value was 18.6±7.1 ml/minute/1.73m². A total of 265 patients (34.9%) were drawn in a dialysis program: 101 patients chose peritoneal dialysis and 164 opted for haemodialysis.

Pre-emptive transplantation was performed in 3 patients.

Conclusion/Application to practice
Twenty-four percent of the patients have been in our care in stable condition for 4.2±2.6 years on average. Thirty-eight percent of patients entering a dialysis program chose peritoneal dialysis.
Pre-dialysis follow-up by peritoneal dialysis nurse

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Background
The advanced CKD patient reaches a crossroads where he must choose the most appropriate treatment modality - transplantation (living/cadaver), haemodialysis, peritoneal dialysis or support treatment without dialysis.

Objectives
To describe the clinical pathway of a PD patient.

Results
CKD3-4 patients are referred by a nephrologist from nephrology in-hospital or community clinics, or during hospitalization. The patient is summoned with family members or caregiver.

Our department has a unique arrangement – the patient is directed to peritoneal dialysis nurse for: assessment, patient education and emotional support; advising about the type of treatment according to matching criteria and needs, patient’s preferences and family support. Among the nursing assessment: demographic and family background, living conditions, co-morbidities, functional ability, vision and coordination.

The instruction allows patient and family an understanding of the disease, of the need for treatment and for adjusting the optimal renal replacement therapy. The process includes demonstration of dialysis methods including conversation with patients. Asking questions helps to allay fears and to focus on the most appropriate treatment.

The nurse as a link between the patient and caregivers: referral to the multidisciplinary team - dietician, social worker and sexologist for interested. Referral to kidney-transplant coordinator promotes the process before dialysis starts. HD candidates -vascular access preparation. PD Candidate – physical examination for hernia elimination, previous surgery, other diseases, referral to surgeon or determination operation by nephrologist.

Nursing follow-up: PD candidates - summoning according CKD progression several additional meetings, preparation for tenchoff-catheter implantation by PD staff.

Conclusion/Application to practice
Following-up the patient towards renal replacement therapy contributes to the continuum of care, builds confidence and security sense. Patients reported satisfaction and feel supported toward weighty decisions.
P 056
Nursing care to improve quality of life for patients undergoing haemodialysis therapy

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Background
Physical functioning declines over time in haemodialysis (HD) patients receiving dialysis therapy

Objectives
To improve quality of life for patients receiving haemodialysis therapy

Methods
A quasi-experimental intervention design was used with pre and post assessment of the effect of implementation of an exercise program for haemodialysis patients at Mohail General Hospital- southern of Saudi Arabia. The questionnaires used to collect data were Physical Fitness Measurement, KDQoL-SF™ 1.3, Borg’s 15-point scale for rating of perceived exertion (RPE). Data was collected on vital signs and lab investigations.

Results
The pre and post physical fitness scale as assessed among patients; statistically significant changes in the scores of all activities (p<0.001). Regarding the correlations between pre-post-program, QOL scores indicated weak to strong statistically significant positive correlations in all domains except for those of cognitive function, quality of social interaction, and sleep. Moreover the patients’ Borg scores saw statistically significant decreases throughout the three months of follow-up (p<0.001). In addition improvements in the adequacy of dialysis (kt/v) and in serum potassium level (p<0.001) from the first to the third months. Although the percentage of patients with hemoglobin level 11 gm/dl or higher increased from 41.1% at the first month to 60.3% at the third month, this difference did not reach statistical significance (p=0.067).

Conclusion/Application to practice
Implementation of the exercise program was associated with significant improvements in the score of all domains of quality of life and physical fitness scale. We suggest a correlation in application to practice in patients receiving peritoneal dialysis which requires evaluation for further improvement.
P 057
Haemodialysis patients needs priorities according to Maslows’ hierarchy and quality of life
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Background
Patients receiving haemodialysis (HD) therapy are reported to have increased suffering related to comorbidities. The patients’ quality of life (QoL) is an important indicator to reflect patients’ needs. Maslows’ needs are classified to five basic needs including physiological, safety, belongingness, esteem and self actualization

Objectives
To assess the needs for patients undergoing haemodialysis therapy

Methods
The study was cross-sectional and included all the haemodialysis patients referred to the haemodialysis center of King Khalid University Hospital and Security Forces Hospital in Saudi Arabia. Data was collected using a structured interview questionnaire. A needs assessment sheet was developed according to Maslows’ hierarchy and the Kidney Disease Quality of Life scale short form (KDQoL SF).

Results
The correlation between the total score of QoL was found to be negatively correlated with patient age, dialysis duration, and positively correlated to the level of education in the haemodialysis patients. Conversely, the total needs score is positively correlated to age and negatively correlated with the education level. All these correlations are statistically significant. The strongest correlation is between QoL and age. The best fitting multiple linear regression model explain statistically significant independent predictors of QoL are age, sex, dialysis duration and total needs score.

Conclusion/Application to practice
Measuring quality of life helps health care professionals consider patients’ needs more seriously. This study indicates statistically significant negative correlation with decreasing total score of QoL as the total needs score increases.
End stage renal disease and patients’ satisfaction with their health care outcomes

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Background
Patients’ satisfaction assessment is becoming an increasingly important indicator of health care outcome. We consider the evidence that better patient satisfaction might be associated with better medical outcomes.

Objectives
To assess the haemodialysis patients’ satisfaction with their health care outcome.

Methods
The cross-sectional study was used and the study sample was recruited from General Mohail Hospital (April to Jun 2013). 79 patients completed the patient satisfaction PS18 Questionnaire.

Results
This study involved 79 patients on haemodialysis. The sample included slightly more males (59.5%), the majority of the patients are married (74.7%), and their education was mostly reading/writing (48.1%) or primary (26.6%). More than half of the patients had been on dialysis therapy between 1 and 5 years. There was a significant variation in all dimensions reported by patients being unsatisfied except with time spent with doctor (64.6) and accessibility & convenience (57.0). Moreover technical quality was good (53.2%). Furthermore there was correlation between patients’ satisfaction dimensions and patients’ personal characteristics. There was highly significant correlation (P=.003) between sex and technical quality, whilst marital status was negatively correlated (P=-.042) with time spent with doctor.

Conclusion/Application to practice
Nonetheless, our results suggest that almost half of the study sample reported in general satisfaction were unsatisfied. However the financial aspect, communication and interpersonal manner should be achieved to improve health care outcome then subsequently increase level of patients’ satisfaction. Further research regarding patient satisfaction is required.
P 059

Subjective burden on family carers of haemodialysis patients

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Background

Haemodialysis (HD) is an important objective burden (task) on patients with end stage renal disease (ESRD) and the caregiver has a subjective burden which may contribute to lifestyle changes which result in depression, anxiety, declining physical health, social isolation and financial strain.

Objectives

To evaluate the subjective burden on family caregivers who care for patients receiving maintenance haemodialysis therapy.

Methods

50 main family caregivers for each patient on HD were followed and the questionnaire used was the Caregiver Burden Interview (CBI) completed by the caregiver as a subjective response to care giving.

Results

The present study findings demonstrated that the mean age of a caregiver was 40 (11.0) years, two thirds were female, and they were mostly married (78.0%) with children. The total family caregiver burden reported was 43.3 (21.7), role strain 50.0 (25.4) and the personal strain 39.5 (19.7). The total caregivers’ burden significantly positively correlated with the patients’ age (r = 0.461) and negatively correlated with patients’ level of education (r = −0.290). Moreover the role strain, personal strain and total caregiver burden scores were statistically and significantly negatively correlated with their age (r = −0.444) and level of education (r = −0.416) and the total burden scores were ranked as moderately to severely burdened all family caregivers.

Conclusion/Application to practice

Caregivers’ appraisal, coping strategies, interpersonal relationship issues and social support need to be considered for caregivers of patients maintained on HD.
P 060
Effects of teaching programme on quality of life for patients with end-stage renal disease
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Background
End-stage renal disease and its treatments negatively affect quality of life. Self-care is an important approach for helping the patients deal with their problems.

Objectives
To improve self-care and quality of life of haemodialysis patients through teaching and evaluating their quality of life.

Methods
This quasi-experimental study was conducted in the dialysis unit of Suez Canal University Hospitals. Participants were 50 patients receiving maintenance haemodialysis.

Results
Data was collected using a structured interview questionnaire and the Kidney Diseases Quality of Life Scale Short Form. Statistically the results show significant improvements that were revealed in the scores of many domains of quality of life, p < 0.001, except the physical domain. Statistically significant associations were revealed between pre- and post programme improvement in the total quality-of-life scores.

Conclusion/Application to practice
The statistically significant independent predictors of quality-of-life improvement were programme attendance, dialysis duration and marital status.
Comparison of the inferior vena cava measurement and perfusion index in chronic haemodialysis patients

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Background
The inferior vena cava collapsibility index is a sign of hypervolemia in haemodialysis patients.

Objectives
The aim of the study was to compare the inferior vena cava (IVC) diameter by ultrasound (US) with perfusion index (PI) from pulse oximeter in chronic haemodialysis (HD) patients.

Methods
One bedside US certified physician measured the IVC diameter during inspiration (IVCmin) and expiration (IVCmax), the IVC collapsibility index (IVCCI) as well as PI before and after HD. IVCCI was calculated using the standard formula (IVCCI= IVCmax-IVCmin/IVCmax x 100). Indexed IVCmax (IVCimax) size was calculated by dividing IVCmax by the body surface area (in meters squared). According to the US criteria, patients were considered underhydrated if IVCimax <8 mm/m², normohydrated if IVCimax was between ≥8 mm/m² and ≤11.5 mm/m², and overhydrated if IVCimax >11.5 mm/m².

Results
There was a significant reduction in patient weight, IVCmin, IVCmax, IVCimax, IVCCI and PI after HD (p<0.05). We didn’t find a significant difference in PI value among the underhydrated, normohydrated and overhydrated patient groups before and after HD (p>0.05). Before HD, there were not a significant correlations between IVCmax and PI, IVCmin and PI, IVCCI and PI and IVCimax and PI (p>0.05). After HD, there was only a significant correlation between IVCCI and PI (p<0.05; r= -0.361).

Conclusion/Application to practice
PI from pulse oximeter were not able to describe the hydration status before and after HD. There was a weak but significant correlation between the PI and IVCCI after HD.
New interest in an old idea: shared care as an option for dialysis nursing

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Background
Dialysis patients traditionally have had access to education programmes related to the disease and its treatment. The baseline and ultimate purpose is to provide the appropriate resources, training and support to ensure the best quality of care and well-being of chronic patients. Past research suggests that patients’ self-management behaviour and knowledge about their treatment may impact functioning and well-being.

Objectives
To explore the dynamics of:
• haemodialysis patients’ empowerment in self-care
• improved patients’ ability to take control of their haemodialysis treatment.

Methods
Qualitative study based on data principles where haemodialysis patients were able to share their experiences of being in a partial self-care programme. Using a study case of a couple of patients, with more than two decades under dialysis, we could assess the starting point of a shared care haemodialysis. Data from semi-structured interviews with open-questions was evaluated using content analysis.

Results
Our results have shown that dialysis patients who take an active role in their treatments tend to have better clinical outcomes, feel more in control of their lives and build self-esteem from providing their own care. Self-management has been defined as the positive efforts of patients to oversee and participate in their health care, such setting up their machines in order to optimize health, prevent complications, control symptoms and minimize the intrusion of the disease into their preferred lifestyles.

Conclusion/Application to practice
Future interventions should increase patients’ overall participation in care and self-management. Patients’ partnership established with the clinic staff and the shared responsibility in the dialysis treatment is a source of respect for patients.
A reference nurse programme on overhydration control of haemodialysis patients

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Background

For a better control of adverse intradialytic events and comorbidities, normohydration is a major goal for health care professionals in haemodialysis. Nurses can play an important role in teaching and motivating patients about strategies to reduce thirst and, consequently, to control intradialytic weight gain.

Objectives

- To assess the influence of a reference nurse programme (RNP) on patient’s overhydration.

Methods

In June 2015, an RNP on overhydration control was implemented. We developed a quantitative, descriptive and correlational study in 2-time frames, having as reference the month of June

- March to May 2015 – before RNP
- July to September 2015 – after RNP

For this study, we assessed 34 patients with a relative overhydration higher than 15%, 19 male and 15 female. The average age was 70.32 years old and the average time undergoing treatment was 6.85 years.

Bioimpedance spectroscopy was used to evaluate absolute and relative overhydration. The average value of the 3 evaluations before and after the programme was used.

Results

In females, levels of relative overhydration were reduced from an average of 15.97% to 14.12% (p=0.044). In males, levels of relative overhydration were also reduced from an average 16.08% to 14.54%, however, this was not a significant statistical result (p=0.0612). No relation was observed between age, time on haemodialysis and hydration status.

Conclusion/Application to practice

We can conclude that there was a significant improvement in the over-hydration control thanks to the reference nurse programme. However, it is necessary to develop strategies to improve the adherence of male patients.
P 064
Utilising shared-care documents to promote self-care for a patient with trypanophobia
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Background
Research suggests that patient engagement in shared-care/self-management programmes improves compliance and health outcomes for patients with long-term health conditions. Facilitating a shared-care programme aims to give the trained nurses guidance to developing the patients knowledge and skills with the view to performing dialysis independently ideally using the buttonhole cannulation technique. The patient concerned in this paper has extreme Trypanophobia and lacked confidence.

Objectives
The main objective was to develop the patient’s confidence to overcome her needle fear, to promote self-care and self-cannulation using the buttonhole technique.

Methods
• Identify an appropriately trained nurse to assess and train this patient in the management of their dialysis including buttonhole self-cannulation of her arteriovenous fistula.
• Utilisation of available Shared/Self Care training resources.
• Development of a personalised training plan to achieve the patient’s self-care objectives and competence.

Results
Development of the patient’s necessary skills and knowledge to self-cannulate empowered the patient to overcome her fear of needles and promoted independence.

Conclusion/Application to practice
The nurse/patient shared-care program was successful in improving patient confidence; compliance to treatment and empowerment to overcome trypanophobia.

Adapting training to this patient’s specific learning needs was an important aspect to a successful outcome. A calm confident approach to the training process enabled the patient to develop at her own pace. An ongoing assessment of the patient is undertaken to monitors continuing good practice.
P 065
Factors associated with haemodialysis patients’ quality of life
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Background
Chronic Kidney Disease (CKD) is characterised by a gradual and inexorable loss of kidney function (Sullivan, 2010). The reduction in quality of life (QOL) of people in regular haemodialysis programme has been verified by many authors. Several studies show that the QOL is lower in people on haemodialysis treatment suffering from CKD (stage 5D), compared with the general population (Rebollo, 2001).

Objectives
• To evaluate the correlation between kidney-disease specific quality of life and age using the Karnofsky Performance Status Scale and comorbidities in maintenance haemodialysis patients.

Methods
91 people (46 males), who were undergoing a haemodialysis programme participated in this cross sectional study. The data collection included the questionnaire KDQOL vs.1.3, Karnofsky Performance Status Scale and Charlson Comorbidity Score. Sociodemographics were gathered by the existing database in the clinic and these included age and gender.

Results
Participants in the study showed an overall low quality of life, mostly in the physical component. A statistically significant inverse correlation was found between QOL and age (p<0.001) as well as between QOL and the Karnofsky Performance Status Scale (p<0.001). Comorbidities had a significant inverse correlation with the physical component of QOL (p=0.001).

Conclusion/Application to practice
Age and comorbidities appear to be important components of the physical health domain of quality of life. An increase in age and in the number of comorbidities, were associated with significantly lower QOL scores. This study contributes to support further studies aimed at improving the QOL in haemodialysis patients.
Acute kidney injury from mushroom poisoning

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Background
In the event of intoxications resulting from mushroom poisoning, extracorporeal treatment, plasmaferesis, haemoperfusion and haemodialysis can often be required.

Patients suffering acute kidney damage caused by Orrelanus syndrome are reviewed from a nurse’s point of view.

Objectives
To identify the cause of intoxication and recovery

Methods
A 45 year old male and his parents were hospitalised with acute kidney injury of unknown origin. Following substantial and interactive questioning it turned out that they had eaten mushrooms which they had collected themselves. The establishment of the cause of intoxication necessitated the initiation of haemodialysis because of the acute kidney damage. During the administration of treatment they required intensive, continuous psychological support by nurses as it was difficult for them to accept the fact that the serious damage that each of them had suffered to their health was caused by mushroom poisoning. The mother’s death was caused by pneumonia three months later.

After 18 months of haemodialysis, a successful cadaver transplant was performed on his father. His son had spent eight months in the haemodialysis before his living-donor transplantation was also successfully carried out.

Results
After transplantation our patients were able to adapt to the new circumstances in their lives. They attend regular examinations along with the living donor.

Conclusion/Application to practice
In the case of acute kidney injury which occurs unexpectedly, nurses performing dialysis have a key role in providing psychological support for patients.
The advantages and disadvantages of conventional haemodialysis versus self-dialysis

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Background

Many studies have shown that people on haemodialysis who are actively involved in their treatment process, take direct responsibility for their care and often experience better clinical outcomes.

The concept of Chronic Kidney Disease (CKD) describes a progressive and irreversible deterioration of kidney function. The self-care dialysis people often require a qualified and specialised supervision performed by nurses who require scientific knowledge, technical and human skills, aware of aspects of the person, family and environment.

Objectives

The purpose of this study is to understand the advantages and disadvantages of conventional haemodialysis compared to self-dialysis in our clinic.

Methods

The interview is a particular way of verbal communication established between the researcher and the participants in order to collect data. It also allows gathering information from participants relating to the facts, ideas, behaviours, the preferences, feelings and attitudes, making it the most complete information.

Results

After analysis, the following themes emerged:

• CKD and myself (loss of autonomy was one of the most important reasons for patients to decline dialysis treatment);
• CKD, the others and me (where a dialysis unit enables and actively encourages self-management, patients will tend to select themselves, and if well motivated, may overcome significant difficulties in order to exceed the expectations or predictions of dialysis staff);
• CKD and my life (The adherence to treatment and health-related quality of life are two highly complex conditions for people living with CKD).

Conclusion/Application to practice

Self-dialysis allows greater personal fulfilment and comes as close as possible to having a normal life.
Darbopoietin-alfa versus epoetin beta - The reality in our dialysis clinic

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Background

Administration of erythropoiesis stimulating agents (epoetin alfa, epoetin beta and darbepoetin alfa) has become the standard anaemia treatment in dialysis patients.

Objectives

To compare darbepoetin alfa with epoetin beta administration in terms of effectiveness of anaemia treatment and iron status management in patients on online haemodiafiltration.

Methods

The target population of this study consisted of 107 patients (54 (50.5%) were male) who underwent online haemodiafiltration in our clinic between May 2014 and June 2015. The patients underwent darbepoetin alfa treatment from May to December 2014, and underwent treatment with epoetin beta between January and June 2015. Parameters of anaemia management and dialysis adequacy were analysed.

Results

Darbepoetin alfa doses administrated during the follow-up period ranged from 3×(3.1-6.3μg)/week. In this period, the haematocrit and haemoglobin levels ranged from 33.2-35.3% and 11.1-11.5g/dL, respectively. Epoetin beta doses ranged from 3×(555.6 to 2617.7 IU)/week. In this period, the haematocrit ranged from 33.7-35.3% and the concentration of haemoglobin from 10.9-11.5 g/dL. When the patients were under darbepoetin alfa treatment, the replacement volume ranged from 23.3-24.6L and Kt/V from 1.74-1.91. Similar results were found when patients were treated with epoetin beta, in which the replacement volume ranged from 23.3-24.2L and Kt/V from 1.66-1.91. No differences were also found in the levels of ferritin, iron status and in the type of vascular access used.

Conclusion/Application to practice

Our results show that the degree of anaemia, iron status and dialysis adequacy in online haemodiafiltration was similar to the administration of both erythropoiesis stimulating agents.
Patient education and the role of nurse-physician team in improving quality indicators

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Background
A performance indicator or key performance indicator (KPI) is a type of performance measurement. KPIs evaluate the success of an organization or of a particular activity in which it engages. In a patient perspective network, specific quality goals were defined. For each KPI, a target for clinical excellence has been defined in accordance with international standards.

Objectives
The aim which we set ourselves as a team was to improve patients’ clinical outcome in order to best meet their needs.

Methods
The patient perspective is determined by 6 KPIs related to the dialysis process (e.g. weekly treatment time) and 4 related to dialysis outcomes (e.g. haemoglobin). We evaluated the percentages of assessments which reached the target values for each KPI. Evaluating the KPI results, we identified those patients whose treatment parameters were not reaching their targets. In order to achieve the identified targets (the optimised values for measured factors), we have reorganised the tasks involved.

Results
In December 2012 results from the patient perspective was 72.4%, the parameters most effected were the weekly treatment time; 17%, infusion volume; 34%, KT/V; 68.1%, Haemoglobin 63.8%; hydration status 0%. In December 2013 the patient perspective based upon our new approach was 79.8%, in December 2014 93.77%. In October 2015 the result was 100%, the weekly treatment time 91.7%, infusion volume 88.6%, KT/V 88.9%, haemoglobin 83.3%, hydration status 74.3%.

Conclusion/Application to practice
The objective indicators, summarised reached the pre-defined targets and it proved that patient education and team work are effective in improving the adequacy of dialysis.
How can we manage intra-dialytic hypotension?

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Background
Variations in intra-dialytic blood pressure are a common and predictable occurrence in ESRD patients. These are caused by various factors, such as a decrease in blood volume provoked by ultrafiltration, a lack of normal compensatory responses, underlying cardiac disease, and electrolyte changes.

Objectives
- Implement a systematic intervention to minimise the occurrence of intradialytic hypotension (IH) in haemodialysis patients.

Methods
We prospectively evaluated the occurrence of IH in haemodialysis patients between February-December 2014 and February-December 2015. In January of 2015, we structured our intervention to minimize the occurrence of IH. The intervention included adapting the haemodialysis prescription to patients’ factors and management of patients’ hydration status by assessing body composition via bioimpedance spectroscopy (BIS). IH was defined as an intradialytic decrease in systolic blood pressure by more than 30mmHg and/or a systolic blood pressure <90mmHg.

Results
Results of the studied periods before and after intervention implementation were the following:
- 102 patients and 35,119 treatments were evaluated;
- Age 72.37±13.5 versus 73.07±12.64;
- Gender 62% male and 38% female versus 59% and 41%;
- Diabetic patients 47.9% versus 47.2%;
- Age-adjusted Charlson Comorbidity Index score 8±2.78 versus 8±2.56;
- Structural cardiac disease/peripheral artery dysfunction 25% versus 27%;
- 81.2% versus 84.2% of patients had Hb levels 10-13g/dl;
- 8428 IH episodes versus 5225 IH episodes, reflecting a decrease of 38% in IH occurrence.

Conclusion/Application to practice
Correction of patient factors, modulation of haemodialysis prescription, and the management of dry weight by assessing patients’ hydration status via BIS can reduce but not eliminate the occurrence of IH.
Central dialysis catheter - to be or not to be. Is there an alternative?

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Background
We were informed about a new arteriovenous (AV) graft in 2011 that is possible to cannulate within 24 hours after surgery. With that possibility the risk of stenosis of the internal Jugular vein from a central dialysis catheter (CDC) could be avoided. We started to use this new "early cannulation" graft in January 2012. The patients who received this kind of graft had an urgent need to start dialysis treatment and they had no peripheral access or an access with poor function. Currently 21 patients have received this kind of graft.

Objectives
To study if these "early cannulation AV grafts" could replace the use of CDC in an urgent or unexpected start of dialysis treatment.
To see how many interventions were made and patency of these AV grafts during that period 2012-2015.

Methods
Cannulation according to the company’s recommendations vs cannulation three days after surgery or more. In order to see all interventions a review of the national dialysis access register and medical journal was carried out.

Results
CDC placed in the internal Jugular vein could be avoided but occasional haemodialysis by vena femoralis were sometimes necessary.

Conclusion/Application to practice
To decrease the risk of complications we recommend at least five days after surgery before first cannulation. An experienced nurse should perform the cannulation for the first two weeks after surgery using a sterile technique.
P 072
Home haemodialysis activities in Finland at Kuopio University Hospital and Päijät-Häme Central Hospital Lahti
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Background
Up to 30% of dialysis patients are in home care in the North-Savo Hospital District’s Kuopio University Hospital (KUH). Half of the home dialysis patients are undergoing home haemodialysis (HHD) treatment. The employment rate of the HHD patients in Kuopio is over 50%.

At the dialysis unit in KUH four nurses teach HHD: how to carry out haemodialysis and self-monitoring. Important aspects are aseptics, blood flow, dialysis machine management, risk prevention and acting in emergencies.

Patients visit outpatient clinics once a month (nephrologist & HHD nurse or HHD nurse) to monitor treatment and support the patient’s wellbeing. The HHD nurse instructs and ensures the knowledge and skills of the patient when the prescribed treatment changes. HHD patients can upon agreement or in acute situations visit the hospital for dialysis and carry out part/complete independent dialysis in the main unit or in the unit’s independent dialysis room.

Päijät-Häme Central Hospital Lahti (PHCHL) has been developing home dialysis since spring 2005. There are three trained and one back up HHD nurse in the unit where patients are trained.

In 2014 Lahti had the challenge of training a Russian speaking patient in HHD. The interpreter was needed in all stages of the training period including discharge. Instructions were translated into the patient’s native language. The patient understood quickly and learned fast to care for his own HD independently. The training period lasted two months with four training sessions a week. The patient will make equipment orders and notify about treatment sessions by email.
Teaching & Learning, the first steps of home haemodialysis training

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Background
The idea of introducing home haemodialysis (HHD) was formulated when there was a significant need for HHD. This then resulted in the collaboration between the Hungarian Society of Nephrology, the nephrology centre of a hospital and a private dialysis company.

Objectives
To develop an educational syllabus aimed at HHD patients in order to establish the personal conditions and materials that training needs to consist of.

Methods
The trainer’s selection was based on their outstanding professional knowledge and their experience in patient education. The theoretical training for HHD patients was based on the education material used by Professor Christopher Chan. The practical education segment was provided by the private dialysis company. The selection of patients is based on cooperation, motivation and skills for learning. We realised that we must acquire the necessary knowledge for HHD education while working with the first patients. At the beginning patients just observe, than we gradually involve them in all tasks under supervision until they can carry out the treatment themselves. Patients must take theoretical and practical tests at the end.

Results
We have educated four patients so far and they are now performing HHD on their own, although in the hospital because the legal and financial situation of HHD is still being developed and clarified.

Conclusion/Application to practice
HHD training requires completely new knowledge and skills on the part of the trainers however, this is not included in the nephrology education of specialised nurses in Hungary. Developing the educational program was essential.
Acceptance, choice & empowerment for dialysis patients: a collaborative approach to improve choice

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Background
There is a disproportionate amount of people in the UK receiving haemodialysis compared to peritoneal dialysis. Self-care renal replacement is associated with improved quality of life and cost-savings. Factors associated with PD in the literature include Caucasian race, flexibility & control.

Objectives
Having a high proportion of patients from South Asian communities and low rates of home therapies, we wanted to address this issue. We have identified a method that may support the patient’s decisionmaking.

Methods
We are a collaborative team between a renal unit and a national Charity. We have recruited 11 volunteers, called Peer Educators (PEs) who have some experience of renal replacement therapy. They are trained to an accredited level (equivalent to a 1st year undergraduate). A proven model of peer support, we are adapting it in collaboration with the kidney failure nurse’s support team to enable patient’s acceptance, choice and empowerment. A 12-month pilot study to evaluate the effectiveness of this unique approach to dialysis decision making, we will also use other decision making tools. Evaluation will be quantitative and qualitative including reflective diaries.

Results
We have just started the pilot project and will be able to report on findings by the conference date. We are optimistic as our previous work with PEs is now proven in effectiveness and has been commissioned by funders.

Conclusion/Application to practice
We hope to be in a position soon to interpret our findings and make some suggestions about solutions to this issue. This is likely to benefit patients, carers and the renal units serving them.

Disclosure
This pilot project has been funded through an educational grant by Baxters Healthcare Ltd.
Utilising an e-learning platform to monitor training compliance

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Background
Maintaining continuous personal professional development and compliance with statutory and mandatory training is a fundamental requirement for all Registered Nurses. Training requirements also extend to other members of the healthcare team. The ability for healthcare organisations to easily and quickly report on training compliance to internal and external customers has previously been largely a manual process. Following the recent introduction of a new learning management system (LMS) our ability to generate training activity reports has been greatly enhanced. This offers the ability to generate local/regional and national reports electronically using predefined templates and the ability to generate bespoke reports.

Objectives
Undertake a full review of the uptake of training during 2015 in order to identify compliance with training requirements.

Methods
A full data extract report was automatically generated and downloaded as a Microsoft Excel workbook using a predefined template via the report wizard functionality of the LMS. Obtaining the report in this format offered ease of statistical analysis of the data and therefore presentation of the training activity on a local, regional and national level.

Results
The full data extract captured a total of 7,911 completed training activities covering the following blended learning activities;
• Tasks
• Classroom training
• Virtual classroom training
• Online training
Initial analysis confirms that on average each of our clinical staff completed 14 internal training activities.

Conclusion/Application to practice
The report functionality of the LMS is a useful tool for rapid analysis of training compliance. Training remains critical in promoting high quality, safe patient care.
Monthly blood / patient reviews: A focused team-based approach

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Background
The previous only medical model often led to poor communication and fragmented follow up. With the introduction of a Nurse Practitioner and a focused nurse manager, a tailored interdisciplinary approach was trialled. The reviews maximised the finite resources of the MDT and better targeted the nephrologists time. The MDT consisted of a Renal Nurse Practitioner, Pharmacist, Dietitian and Nurse Unit Manager. Patient’s haemodialysis information, monthly biochemical and haematological results, medications, nutritional status and psychosocial concerns were reviewed. The MDT reviews featured real time documentation with the patient clinical record and feedback provided to the patient within 48 hours.

Objectives
To report on the implementation and outcomes of monthly MDT reviews within a satellite dialysis unit.

Methods
A documented framework for the MDT to follow and regular review of the initiative identified ways to improve efficiency and target areas for the unit to focus on. The MDT reviews are fully supported by nephrologists and have facilitated an increase in their clinic availability.

Results
A fully collaborative approach to monthly patient reviews has resulted in:
• Maintenance of biochemical and haematological performance key indicators comparable with the previous medical only model
• Increased patient involvement
• More timely referrals and follow up
• Transparent review process with real time documentation
• Optimisation of limited allied health resources
• Ongoing professional development for the MDT

Conclusion/Application to practice
Monthly MDT reviews are now embedded into our practice. The process improves efficiency and is highly valued by patients, nursing staff, the MDT and Nephrologists.
Awareness of renal nurses in identification and education of patients with inherited renal diseases

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Background
Genetic disorders in the United Arab Emirates are common. Increased awareness of the importance of early identification of patients with genetic disorders has provided the disorders a high level of prominence in primary health care settings. Nevertheless, there is empirical evidence indicating that there is a low level of understanding of inherited diseases among nurses.

Objectives
This study explored how renal nurses identify patients with or at risk of inherited renal diseases and the nurses’ awareness of support services available for patients and their families.

Methods
A descriptive phenomenological study approach, with semi-structured interviews was used to collect data from paediatric renal nurses working within SEHA Dialysis Services.

Results
All paediatric dialysis nurses responded to the survey. They identified polycystic disease, Alports syndrome and congenital nephrotic syndrome as the commonest genetic disorders in their practice. Other conditions such as neurogenic bladder and diabetes were incorrectly mentioned as was the idea that 60+% of all patients had an inherited disorder. Whilst all nurses were aware of the possibility of transmission to children and the concept of a carrier status none were able to correctly describe the inheritance of any of the conditions and the likelihood of an affected child being born from affected parents. All correctly identified consanguineous marriage as the cause for the high prevalence of such conditions within Abu Dhabi. Few support services are available.

Conclusion/Application to practice
The findings presented in this study indicate that there is a need to provide genetic training and education to renal nurses with regards to inherited renal disorders.
Interconnected care in haemodialysis: patient, nurse and informal caregiver

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Background
In the context of Health-Related Quality of Life, it is mandatory to ascertain what perceptions individual patients have when it comes to their own health and not purely rely on the traditional clinical measures. This concept covers several scientific areas and research fields such as social integration and support, satisfaction with life and physical condition, affective and relational capacity, network backup of all players involved in the world of healthcare.

Objectives
• Gain a comprehensive understanding on how the informal caregiver (IC) and nurses interrelate with the rest of the network of haemodialysis patient’s relationships.
• Identify the importance of IC such as firefighters and taxi drivers.

Methods
A group of 112 haemodialysis patients undergoing treatment in our clinic were assessed. Surveys were carried out and data was collected from May 12 until June 13.

A qualitative instrument, the „Sickness Impact Profile” (SIP) Portuguese Translation, was used and analysed. SIP is behaviourally based and measures sickness related dysfunction and outcome of health care services.

Results
Our outcomes highlighted the importance of the support received from health professionals and caregivers, their loved ones and the techniques employed during haemodialysis treatment. An equally important finding is related to the IC such as the role of the taxi driver who revealed themselves as privileged element and connecting link between the different actors.

Conclusion/Application to practice
The IC, who is very rarely spoken about, proved to be a key player, exercising a therapeutic role thanks to their ability to help, the chance to observe and establishing trust with the dialysis patient, family and clinical staff.
P 079
Tunneled catheter functionality is affected by tip position
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Background
When all arteriovenous accesses are exhausted, tunneled haemodialysis catheters [THC] are the only solution. The aim of this study was to examine the impact of different catheter tip positions on catheter duration, dysfunction and infection in jugular THC.

Methods
Duration and late complications of THC inserted in our department were analysed for a follow-up of 24 months. Right internal jugular vein was the preferred site for catheter placement. We have analysed only implanted Tesio twin catheter systems.

Results
A total of 156 tunneled dialysis catheters were placed in 152 patients (89 (58%) males and 63 (42%) females, mean age 60.56 (SD 17.08) years). There were 68 (44%) implanted THC with the catheter tip in the right atrium (RA) (21 catheter (31%)) or cavo-atrial junction (CAJ) (47 catheter (69%)) and 88 (56%) with the tip in vena cava superior (VCS). When we compared catheter related complications regarding catheter tip position between RA and CAJ there were no significant differences. Catheters placed in VCS had a significantly higher rate of complications than those in atrium/cavoatrial junction (ACJ) (thrombosis and dysfunction all \( p<0.05 \)) while all catheters had a low infection rate probably due to good nursing care.

Conclusion/Application to practice
Our study demonstrated no differences in implanted THC survival or late complications with tips positioned in the RA or CAJ while they were significant in favor of catheters tips placed in ACJ compared to VCS. Good nursing catheter-related care is of great importance in prolonging THC functionality.
Experiences with a tunneled permanent central venous catheter in our haemodialysis patients (2007–2015)

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Background
Because of the difficulties of fistula creation in elderly patients with arteriosclerosis we have no option other than to implant a permanent central venous catheter (PC).

Objectives
To follow up the outcome of haemodialysis patients using a PC.

Methods
Between 2007 and 2015, we performed 310 PC implantations in 217 patients in our Centre. In 43 patients the PC was the primary access, while in 174 cases the patient had already received treatment in a peritoneal dialysis (PD) or haemodialysis (HD) program (through an arteriovenous fistula [AVF]).

Results
The patient’s mean age at the beginning of HD was 68.1±11.9 years, while the average time spent in the dialysis program was 4.1±3.2 years. The technical survival time of the PCs was 26.4 (1–91) months in average. In the 8-year period of study, 131 patients (60%) did not have a cannula infection, while in 86 patients infection was observed on a total of 239 occasions (0.048 case/1 patient month). Exit site infection occurred in 131 cases (0.026 case/1 patient month), tunnel infection in 32 cases (0.0065 case/1 patient month), while bacteraemia was observed in 76 cases (0.0015 case/1 patient month). We lost 21 patients because of PC-induced septicaemia.

Conclusion/Application to practice
The use of a PC is a ‘makeshift solution’ in haemodialysis (the creation of an AVF is the primary option). If the treatment of patients cannot be continued by PD or via an AVF by HD, with the help of an implanted PC we managed to double the survival of patients.
P 081
Primary vascular access type and survival in chronic haemodialysis programme
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Background
Our dialysis centre is responsible for treatment of a quarter million population (mp). The prevalence of dialyzed patients is 1000/mp. We have 56 patients on peritoneal dialysis (PD), and 40% of our hemodialysed (HD) patients have permanent canulla (PC).

Objectives
To justify the significance of the first vascular access in survival of HD patients.

Methods
In our dialysis centre 430 patients were treated in the chronic HD programme from 01.01.2010 to 31.12.2015. 387 had HD primarily and 43 switched to HD from PD. Survival was examined retrospectively till the end of period or till drop-out.

Results
186 out of 387 (48%) primary HD patients’ treatment was initiated via arteriovenous fistula (AVF), 50 (13%) patient had permanent canule (PC), and 151 (39%) had temporary canule (TC). In 99 of these patients AVF was formed later. Survival of patients treated via AVF from the beginning was 5.6 ±2.8 years, while in patients conversed from TC to AVF it was only 3.3 ±1.9 years. The shortest survival was observed in the group of patients who switched from TC to PC (2.7 ±1.8 years).

Simultaneously survival of patients treated via PC from the beginning was 3.0 ±2.1 years, of those conversed from AVF to PC was 7.6 ±3.4 years respectively.

Conclusion/Application to practice
In accordance with our earlier studies our present results verify, that if HD treatment is initiated via TC the prognosis is significantly worse than in case of other primary vascular access. The better option is to commence with PD.
P 082
Regular monitoring as an efficient method to prolong well-functioning vascular access
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Background
Dialysis patients have a high risk of vascular access problems, such as infiltration, haematoma, thrombosis, stenosis, developing of aneurysms and pseudo-aneurysm. This may lead to vascular access dysfunction, inefficient dialysis and decreased quality of life of dialysis patients.

Objectives
Regular monitoring of vascular access as the best approach for early identification of possible complications.

Methods
Monitoring includes:
• Doppler ultrasound and physical assessment in predialysis stage.
• Patient training immediately after creation of vascular access.
• Periodic patient training during the year.
• Assessment of vascular access before, during and after each dialysis session, recording the results in a clinical database.
• Doppler ultrasound: twice a year and off-schedule – at emergence of complications.
• Doppler ultrasound before the first puncture in the presence of a nurse who will carry out the first puncture. It is important for the nurse to know the direction of blood flow, and the depth and diameter of vessels. This will allow the avoidance of possible complications during dialysis.
• Measurement of recirculation by thermodilution.

Results
During 2013-2015, the number of patients increased from 474 to 557. In the same period, the number of „cannulation problems” decreased from 204 episodes out of 59,118 treatments in 2013, to 142 episodes out of 77,507 treatments in 2015; “Poor Blood Flow” from 147 to 80 episodes per year.

Conclusion/Application to practice
Regular monitoring is a reliable way to guarantee well-functioning vascular access. It helps to reduce the number of possible complications, to ensure an effective dialysis and possibly to prolong the lives of dialysis patients.
P 083
Utilization of AV graft as vascular access in our dialysis network

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Background
According to DOQI guidelines on vascular access, AV graft is considered as “acceptable” second choice for vascular access. DOPPS annual report reveals that 5-10% of patients are receiving haemodialysis through AV graft in most of the countries.

Objectives
Our network annual reports of the last 8 years show that AV graft is utilized in less than 0.5% of the patients. We have been looking for possible causes behind the low number of grafts based on our own experience.

Results
One of the possible causes is that special grafts used for placement as vascular access is not reimbursed by the local health care system. The second cause could be the low number of patients itself.

In our unit there were only 3 patients with AV graft during this 8-year period. As accessing an AV graft needs different technique than a fistula, nurses were educated on this issue specifically on both occasion. Still most of the nurses had lower self-confidence about the procedure, as they had a chance to treat the patient with graft very rarely. As a result unsuccessful needling events were more frequent and the life-time of the grafts were lower than expected (11, 24 and 5 months respectively).

Conclusion/Application to practice
In order to lower the ratio of permanent central venous catheters, AV graft could be utilized in higher numbers for patients with failing AV fistula. More patients with graft could make nurses more confident about needling grafts as they could take care of these patients more often.
Benefits of regular vascular access monitoring in dialysed diabetic and non-diabetic patients

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Background
Regular monitoring of VA provides the patients with the following benefits:
- Effective dialysis and maintenance of the quality of life at the highest possible level.
- Maximum life of VA and prevention of complications.

Objectives
To determine the differences in the occurrence of VA complications in dialysed diabetic and non-diabetic patients using VA monitoring (measurement of recirculation).

Methods
Group of 40 patients:
- 21 diabetic (18x AVF [AV fistula], 3x AVG [AV graft])
- 19 non-diabetic (15x AVF [AV fistula], 4x AVG [AV graft])

Measurements:
- thermodilution transducer
- ultrasound dilution

207 measurements in 6 months.

Measurement interval:
- new and complicated AVF/AVG 1x per month
- AVG with flow over 600 ml/ 1x per month
- stable AVF/AVG 1x per month

Calculation of actual flow (QVA):
- \[ QVA = QB \cdot \left( \frac{1}{RX} - 1 \right) \]
(where \( QB \) – effective flow, \( R \) – recirculation)

Results
18x low QVA measured:
- 9 diabetic patients, 13 complications
- 5 non-diabetic patients, 5 complications

Conclusion/Application to practice
HVA [haemodialysis vascular access] complications occurred in 42.9% of diabetic and 15.8% of non-diabetic subjects.

For practice:
The results confirmed the importance of monitoring the function of HVA through regular monitoring for early diagnosis of complications, especially in diabetic subjects.
Single-needle Cross-Over - Solutions for complicated vascular access

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Background
This is a highly-effective single-needle dialysis technique, possibly bringing better results to patients, in terms of dialysis therapy, than the standard single-needle techniques.

Objectives
To achieve the best possible results in patients with complicated vascular access.

Methods
Single-needle Cross-over – single-needle dialysis. This method is based on a special function of the dialyser, where arterial and venous valves are alternatively opening and closing, based on properly setup control pressure. This is a pressure-pressure control method. Thanks to a system made of two blood pumps, continuous blood flow is ensured through the dialyser. PBS sensor ensures continuous control of pressure in the dialyser. There is minimal recirculation.

Conclusion/Application to practice
High efficacy of haemodialysis treatment is achieved using this method. Specifically, this has risen to an improvement of 70%-80% compared to other single-needle systems. This enables us to give patients, who are temporarily not eligible for two-needle dialysis, a chance for a better quality and less distressing treatment.
Do non-renal nurses in the emergency department understand ‘saving the vein’ in CKD patients?

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Background
An arteriovenous fistula is the vascular access of choice in dialysis patients. It is vital to protect lower arm veins in CKD patients for future fistula creation.

Objectives
This study was conducted to measure the level of knowledge of non-renal nurses working in an Emergency department regarding the ‘Save the Vein’ program and guidelines for CKD patients.

Methods
A survey utilising SurveyMonkey™ was used to address three themes. The general knowledge of non-renal nurses in ED regarding CKD and the importance of AVF for CKD patients. To identify the areas of need among non-renal nurses with regard to the save the vein program for CKD patients. To propose a save the vein program aiming to help non-renal nurses protect arm veins in CKD patients. Possible answers were True, False and dont know. 1 point was awarded for a correct answer, zero for incorrect or dont know.

Results
95% of respondents had not worked in a renal field, 79% had >6 years experience in ED. In the three themes respondents scored 76% correct answers on the importance of an AVF, only 35.5% were correct regarding the importance of saving the vein and 60% were correct regarding CKD. Only two respondents were aware that a peripherally inserted central venous cannulal should be avoided in patients with CKD and 84% were unaware of a save the vein campaign.

Conclusion/Application to practice
This study demonstrates that there is a large knowledge gap regarding the value of peripheral arm veins for future AVF creation in patients with CKD.
Use of silver dressings on different skin types in Northern Italy
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Background
In Italy some 18% of haemodialysis patients use a long-term central venous catheter as a vascular access. This can create a risk of infective complications.

Objectives
Due to Europe’s multiethnic population, the attention to skin types should be increased.

Methods
A specific observational study has been carried-out in five hospitals at Northern Italy. The focus was on recognition and treatment of the diseases, comparing the differences between light skin (photo-type 1) and dark skin (photo-type 4). In fact light skin patients infectious signs are immediately visible, while in the dark skin ones infectious signs are highlighted in a second stage.

Results
Study carried-out using silver-based dressings, demonstrated that after few applications there is an improvement of infection without the need for additional local or systemic antibiotic therapy. Also, that reduces the pharmaceutical costs by 30%.

Conclusion/Application to practice
The results obtained have created a flow chart for the use of silver dressings.
P 088
Acute pain related to fistula punctures in haemodialysis
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Background
The purpose of this study was to investigate acute pain in relation with needle insertion in haemodialysis.

Objectives
The objective is to evaluate subjective assessment of pain in relation to cannulation of AVF and the possibility of affecting it by using different methods.

Methods
39 patients were invited to participate in the study. The patients’ ages ranged between 24 and 87 years.

The questionnaire had three sections for three periods, each containing a numeric rating scale (NRS) for the assessment of pain intensity. I. period - methods without affecting the pain II. period - using distraction methods, III. period - cold application to the skin of the patient (ethyl chloride spray).

Results
We have found the pain experienced by patients was less significant in arterial puncture compared with venous. Woman reported higher level of total pain than the males.

When using the method of distraction the patients pain perception was a lower intensity compared to conventional needling.

The application of ethyl chloride spray was reported more effective than using method of distraction.

Conclusion/Application to practice
The application of ethyl chloride spray and the method of distraction are effective measures in preventing pain associated with needling in patients undergoing haemodialysis.
Arteriovenous fistula between the femoral artery and superficial femoral vein a good choice?

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Background
The scientific community considers the arteriovenous fistula (AVF) the optimal vascular access for HD. This access has greater durability, less infections, decrease of thrombosis and hospitalizations compared with central venous catheters and grafts (Besarab & Brouwer 2004, Sousa 2009).

Arteriovenous fistula between the femoral artery and superficial femoral vein in patients with no other autologous access options is described as a good option when the veins of the arms are not accessible. To minimize the problems of the vascular access, it is fundamental that a close collaboration is established between nephrologists, vascular surgeons and nurses in order to maximize the potential for optimal vascular access placement.

Objectives
To describe the experience with placement an autologous vascular access in the lower limb.

Methods
The patient was evaluated by a vascular surgeon for construction of a new autologous access. The construction of a right AVF humeral-basilica and left humeral-basilica was first considered. Assessment of vasculature revealed a superior vena cava syndrome and it was decided to construct an AVF femoral-femoral. The AVF matured after 4 months and has been successfully cannulated for haemodialysis with blood flows of 400ml/min and providing an adequate dialysis dose.

Conclusion/Application to practice
The ideal vascular access is the one able to provide adequate and sustainable flow with low complications rate. Among all possible vascular accesses, the AVF is the one closest to be ideal. We must never give up the construction of an ideal access when this study shows that it is possible.
P 090
Elements of dialysis nursing practice associated with successful cannulation: result of a survey
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Background
Vascular Access (VA) cannulation is an essential skill for dialysis nurses: failure to correctly repeat this operation day after day may result in serious complications for the patients.

Objectives
The aim of this study was to investigate if the different aspects of arteriovenous fistula (AVF) and graft (AVG) cannulation have an effect on the development of acute access complications which may, in the medium-long term, affect the survival of the vascular access.

Methods
In April 2009, a cross-sectional survey was conducted in 171 dialysis units located in Europe, the Middle East, and Africa to collect details on VA cannulation practices. Information on cannulation retrieved from the survey comprised fistula type and location, cannulation technique, needle size, application of arm compression at the time of cannulation, needle and bevel direction, needle rotation and needle fixation.

Results
In total, 10,807 cannulation procedures of an equivalent number of patients were observed and included in the current evaluation. Out of all observed cannulation procedures, 367 showed some kind of complication, the most frequent (33.8%) being the need for multiple cannulations. In summary, the following were associated with a significantly higher odds ratio for acute complication: prescription of 16-17 gauge needles, of back-eye needles, the use of rope-ladder cannulation technique, the insertion of the venous needle as first needle and the rotation of the arterial needle.

Conclusion/Application to practice
This study highlights critical steps in the process of cannulation potentially affecting the lifespan of the vascular access, stressing the need for additional research aimed to improve the practice.
P 091
Collecting and utilizing data, to setting standards for vascular access longevity

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Background
The lifeline for haemodialysis patients is their vascular access (VA). Currently, the arteriovenous fistula (AVF) is recognised as the gold standard for the permanent access of a dialysis patient. Vascular access problems such as low blood flow rates and loss of patency are frequently noted in dialysis units. These issues can reduce dialysis adequacy and increase hospitalisations.

Objectives
Being proactive in preventing vascular access complications, by monitoring and surveillance, thus leading to VA longevity.

Methods
To record and report a vascular access assessment data for each patient, for every treatment, in a clinical database.

Results
Data was extracted for 18,164 patients having AVF from 1,617,874 treatments performed. Cannulation technique distribution was as follows: rope-ladder 55.8%, area 27.9% and buttonhole 16.3% of patients. AVF thrill was reported as clear for 99.0% of the treatments, dull for 0.9% and absent for 0.1%. Pulse was reported as normal for 98.3% of the treatments, hyper pulsation for 0.9%, hypo pulsation for 1.3% and absent for 0.1%.

Conclusion/Application to practice
Vascular access data collection offers many advantages for the patient, the healthcare professionals, and the organisation. During the nurses’ training, special effort should be made to teach the correct clinical procedure and the importance of data collection which lies at its core. Data integrity is essential to prevent the patients’ care plan from resting on a fragile footing.
P 092
Vascular access quality programme in a Portuguese haemodialysis centre

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Background
The vascular access is the patient’s lifeline. Its vigilance is the constant work of each and every one of the healthcare professionals in our clinic.

Objectives
• Promote the vascular access quality programme of a dialysis clinic.

Methods
Aiming to achieve the improvement of the vascular access quality of our patients, a vascular access quality programme was implemented with the help of a team responsible for the continuous assessment of the vascular access. This team consists of a coordinator, 2 physicians, and 2 nurses. The results of all assessments carried out in the dialysis room are communicated to this team.

Results
The communication of changes in the vascular access transmitted by the room nurse to the vascular access team has led to:
• Earlier detection of problems with respect to the vascular access;
• Planning of the realization of a new vascular access and of the surgical or angiographic correction of existing access;
• Strict compliance with the reaction protocols in vascular access infection related situations;
• Improvement of the staff’s skills and knowledge.

Conclusion/Application to practice
Since the establishment of the vascular access continuous assessment team and the participation of the room nurse in surveillance, and following consultation with the team, there was an earlier intervention, with greater agility, in complications relating to vascular access. This all may help to increase the life expectancy of vascular accesses, and therefore result in health gains for our patients.
The nursing view about the cannulation techniques in haemodialysis

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Background
The most important nursing procedure is the cannulation of a vascular access (VA) and it is carried out on numerous occasions. The choice of the correct technique is a fundamental factor for an optimal dialysis session. Recently we have seen some observational studies showing the importance of the VA nursing care, but none put forward the views of nurses about the VA.

Objectives
• To know the nursing views about the importance of cannulation techniques in VA care.

Methods
A qualitative, exploratory research, through a semi-structured interview to the nurses in our haemodialysis centre, was developed.

Results
The interviews were conducted by the head nurse of the unit. All interviews were audio recorded and involved 20 nurses, approximately 80% of the nursing team.

The general ideas that we extracted from the study were that the cannulation technique is the main nursing procedure in VA care. The choice of technique, the monitoring of the VA, education is given to the patient on caring for the VA were key points referred to by nurses. Besides these issues, the main advantages and disadvantages of the existing techniques were mentioned. The multiple single puncture technique (a combination of rope-ladder and buttonhole technique) was emphasised as the most consensus technique for fistulae cannulation because of its advantages for both nurses and patients.

Conclusion/Application to practice
With this exploratory study, we can say that nurses had the knowledge about both the major advantages and disadvantages of the cannulation techniques, and they are the most capable professionals to lead the VA care in haemodialysis units.
Hygiene audit on vascular access washing programme

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Background
Infection of vascular access is one of the most frequent complications. It is important to implement training programs for professionals and patients about vascular access washing in order to prevent infections.

Objectives
The goal of this study is to audit the cleaning process of vascular access by patients, according to the established protocol.

Methods
57 patients were selected, more than 18 years old, with arteriovenous fistula or arteriovenous graft and with the ability of self-care related to hygiene of their vascular access. An observational method was used, registering the results by crossing a check-list with all the steps. The audits were carried out in two different times. The first audit was made after theoretical training about vascular access washing. Before the second audit the correct realization of the technique was demonstrated and explained, to each person, by a nurse.

Results
Only 5% of the studied population followed strictly the washing technique of vascular access in the first audit against 37% in the second. The critical points of the process were, by order:
- Respecting the time of work of the antibacterial soap for 90 second;
- Dry with a paper towel in a single movement and apply the antibacterial soap in a circular motion.

The results presented in the second audit were statistically better.

Conclusion/Application to practice
Theoretical training is not enough for the population under study to correctly adhere to the washing technique. After the practical training and individual accompaniment it was possible to obtain better results.
Ischemic hand in dialysis patients: a survey about prevalence, clinical signs and symptoms

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Background
Ischemic Hand (IH) is a peculiar complication among dialysis patients. Its mechanism is based on reduced blood flow of the arterial tree below the elbow where the AV Fistula may trigger the syndrome.

Objectives
To assess prevalence of IH and the role of nurses in the prevention of complications.

Methods
We promoted a national survey to investigate IH prevalence in setting of patients on RRT, evaluating early and over time clinical signs. The survey included 41 dialysis units, collecting information on 2,082 patients.

Results
Early signs of IH were detected in 45 patients out of 2,082 (2.2%). 73% perceived pain during dialysis. Pharmacological pain control was requested by 22% of patients, low temperature of the hand was perceived by 64%; 33% needed to wear a glove; 62% experienced skin-colour change after cannulation for dialysis; 33% had advanced lesions (skin lesions, necrosis in 14 out of 45 patients). In addition, 41 interviewed clinicians underlined a high or very high clinical importance in 36% and 17% of the cases. Moreover, they detected an insufficient understanding of strategies to follow in 51%; lack of available experts in 37.8% and the necessity of a vascular surgeon in 64.5%.

Conclusion/Application to practice
This survey showed that IH is not a rare disease and underlines the critical role of nurses in detecting and following early clinical signs of this potentially complication.
Background
Patients with diabetes have a high risk of developing Peripheral Vascular Diseases. As a result, their arteriovenous fistula (AVF) requires more time for maturation, and they have a high risk of AVF failure and repeated surgical intervention.

Objectives
Study of (AVF) maturation features for patients with diabetes.

Methods
All patients of our dialysis centre were divided into two groups: 86 non-diabetics and 23 diabetics. The groups were compared by AVF maturation.

Results
The average maturation time was 5 weeks for all patients, this time was needed for 79% of non-diabetics and 28% of diabetics. The AVF maturation took

- up to 4 weeks in 4% of diabetics and 44% of non-diabetics,
- 4-6 weeks in 14% of diabetics and 35% of non-diabetics and
- > 6 weeks in 82% of diabetics and 21% of non-diabetics.

Surgical correction of AVF was required in the first day after the surgery in 9% of diabetics and in 3% of non-diabetics, within a year in 64% of diabetics and 17% of non-diabetics. AVF was not reconstructed within two years in 27% of diabetics and 80% of non-diabetics.

Conclusion/Application to practice
An individual approach to diabetic patients is extremely important: it is necessary to plan AVF creation before the beginning of treatment; to make a thorough pre-surgical examination; to inspect AVF more frequently after surgery; to carry out individual patient training. Moreover, nurses should pay special attention to first cannulations and haemostasis. Together, this makes it possible to provide an AVF that functions over the long term; this may improve patients’ quality of life.
Catheter infections caused by Ralstonia Insidiosa - a single centre experience
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Background
During three month of 2011 a small epidemy (8 cases, attack rate 7.7,%) was observed of haemodialysis catheter infections caused by Ralstonia Insidiosa (Ralstonia Pickettii – like) in our dialysis center. Only patients with long term tunelised catheters were affected. Clinical signs were consistent with intraluminal infection.

Objectives
Treatment was conservative – antibiotic lock and systemic antibiotics according to microbial sensitivity. No catheter extraction was necessary, infection was eradicated in all patients. Extensive epidemiologic survey was performed. Detailed examination of all materials, aids and medicaments revealed no findings. Also examination of water tratment station and water circuit was negative. Ralstonia Pickettii is described as potential origin of hospital epidemies. Source of infection can be contaminated materials, infusion solutions, medicaments and water for dialysis devices. Hygienic precautions, cathether care and dialysis practice was found adequate.

Conclusion/Application to practice
In our case no source of infection and transmission path was established. Contamination of some material or medicament consumed before the start of epidemiologic examination cannot be excluded. No new Ralstonia infection was observed.
Contributions of a centre Application Specialist

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Background
The Application Specialist (AS) position was established in July 2013 with the objective of transferring knowledge to the team, increasing the efficient use of haemodialysis machines (HDM) and reducing the maintenance costs.

Objectives
To assess the differences between the periods before and after the presence of an AS in each centre in terms of:
- proper use of the devices
- need for corrective maintenance.

Methods
Retrospective and observational study. HDM Preventive Maintenance (PM) and Corrective Maintenance (CM) were analysed during four years (we considered the same device during the observation period):
T1_June/2011 to June/2013, before AS,
T2_August/2013 to August/2015, after AS.
T2 we provided annual training to the team in order to increase their level of knowledge in relation to the HDM.

Results
We analysed 438 interventions (234_T1 and 204_T2):
PM: T1_85 and T2_102;
CM: T1_149 and T2_102;
PM: there was an increase from T1 to T2;
CM: T1, similar in the two years; T2, was found to have experienced a progressive decrease over the 2 year period.
On average, each HDM has undergone: T1 to 0.09 PM and 0.16 CM/month; T2 to 0.11 PM and 0.11 CM/month.

Conclusion/Application to practice
CM in HDM decreased by 31%, the PM increased by 18%, which allows us to infer that our unit benefited from the presence of AS. The training carried out contributed to the increased knowledge of the team when it comes to the HDM, which somehow justified the increase in PM.

We found a decrease in costs associated with CM and users training when upgrading software versions.
Occupational exposure - the problem still valid
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Background
The problem of occupational exposure is a difficult problem, not appreciated by both the medical staff and the government. Despite the fact that in June we will be celebrating the third anniversary of the implementation of Directive 2010/32 / EU - Poland as well as many of the Member States have failed to fully implement these regulations. As a result, the scale and repeatability of cases of exposure among employees indicates that the problem is not decreasing but rather increasing.

Every year in the European Union there are recorded 1.2 million injuries caused by needle stick injuries. In Poland such cases per year is 37 000. Occupational exposure concerns 60% of nurses and very often applies to dialysis nurses. Occupational exposure leads to infections, 37% viral hepatitis B, 39% viral hepatitis B, 4.4% HIV. If employers invest in safety equipment then nurses would be more secure.

Objectives
The research was carried out on 200 nurses. We asked nurses what circumstances occur regarding occupational exposure, whether they have access to safe equipment and if their employer provides training for occupational exposure.

Methods
The research tool was a questionnaire, which included 30 open and closed questions. The survey was anonymous.

Results
Nurses make many mistakes at work that cause occupational exposure. Employers save and nurses do not provide the right equipment.

Conclusion/Application to practice
Occupational exposure among nurses in dialysis is a very big problem, often overlooked. Be sure to take care of this problem. Occupational exposure threatens the health and lives of nurses.
P 100
The development of a safe “ready to use” set for nursing procedures
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Background
Nursing workflow analysis shows that connection and disconnection procedures are the bottleneck of daily activities during a shift caring for patients. One important reason for this is the number of movements needed to collect the diversity of materials needed to complete these tasks.

Objectives
To develop a safe “ready to use” set to reduce the nurses’ workload, improving safety and reduce risk of infection.

Methods
A “spaghetti diagram” before and after introducing the “ready to use” sets was used to evaluate the changes in nurse workload. Patient safety status quo and further potential improvements were also part of the overall analysis.

Results
The implementation of the “ready to use” sets had reduced 25% of movement needed to collect the material required for each connection and disconnection procedure.

Nurses and patients perceived the improvement in safety while working with sterile material. Reducing the procedure time could be reached as all material needed was available in one single package.

Further analysis showed that compensation of development and replacement costs will be possible within a three year period. Working with corporate suppliers for 80% of the network’s needs would result in very low production costs meaning savings of up to 50% are expected over the three year implementation period.

Conclusion/Application to practice
Development of predefined sterile connection and disconnection sets had a positive impact on nursing activities by reducing the time needed to collect materials needed for the procedures and adding safety to the operations.
Hemoglobin A1c level as an index in diabetic haemodialysis patients

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Background
Literature suggests that Hemoglobin A1c is a reliable and efficient determination of diabetes and prevention of future complications, but in patients with chronic renal failure, this index is influenced by a number of factors and often does not reflect the patient’s glycemic condition.

Objectives
We examined the validity of the HbA1c for diabetic haemodialysis patients by doing a literature review and a case study.

Methods
Most of the literature review suggests that Hemoglobin A1c level (HbA1c) may underestimate glycemic control in haemodialysis patient. Discrepancy between sugar level and level of HbA1c depend on: receiving transfusions, anemia, treatment with high doses of erythropoietin.

Results
Our case study is a 70 year old women in haemodialysis, suffering from diabetes dependent on insulin for five years. Background: hypertension, heart failure, chronic anemia. The patient suffers from frequent hypoglycemia. HbA1c levels ranged between 4.3% -5.2% during the period examined. However, checking blood glucose levels lab (not fasting) range from 180 -340 mg% (HbA1c = 8).

Our patient, takes erythropoietin therapy according to accepted protocol in maximal dose 30,000 units per week, receiving a transfusion each month and also has anemia according to haemodialysis (Hematocrit ~28-31%).

Conclusion/Application to practice
There is no correlation between the levels of HbA1c and results of sugar in blood test of our patient.

Moreover, research show that measuring the degree of glycemic control by HbA1c testing in haemodialysis patients is impacted by the life span of erythrocytes. Therefore, it is important to be aware of the factors related to monitoring diabetic haemodialysis patients.
Intractable trismus in a haemodialysis patient

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Background
Trismus is defined as a limitation of mouth opening due to reduced mandible mobility associated or not with muscular/neurological dysfunction.

Methods
This 87-year-old Caucasian man is known to have longstanding hypertension evolving into end stage renal failure under haemodialysis. His past medical history includes peripheral vascular disease, chronic obstructive pulmonary disease, atrial flutter with blocks reverted by pacemaker insertion, prostatectomy and acquired hypothyroidism. He presented to his regular session with a complain of intractable trismus induced by a dental abscess that responds well to systemic antibiotics.

Results
The most common causes of trismus are infection, dental procedures, post radiotherapy, malignancy of the oral cavity and ankylozed temporo mandibular joint. Patient with end stage renal disease are prone to develop pathologic metabolic bone diseases dominated by secondary hyperparathyroidism and adynamic bone disease. Poor hygiene was found to be the predisposing factor which was complicated by dental abscess.

Conclusion/Application to practice
Regular checkup of the dental cavity allowed us better control of local and systemic illness so as to avoid disastrous complication such as trismus.
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Background
Hydrothorax is a serious complication of peritoneal dialysis (PD). It affects about 2% of all patients started on PD and in many cases leads to technique failure. Over the last decade or so video assisted thoracoscopy (VATS) made it possible for a number of PD patients developing hydrothorax to continue the treatment following endoscopic surgery. The pleuro-peritoneal leak can be sealed preventing further movement of the dialysis fluid into the chest.

Objectives
We present a case of a 49 year old patient who has developed PD related hydrothorax 3 months after the initiation of the therapy. She has undergone a number of interventions to stay on PD.

Results
VATS was performed. During the rest period her PD catheter got dislocated and had to be replaced surgically. 2 months later hydrothorax reoccurred and a second VATS was performed. Back on PD for a short while, hydrothorax developed again. The patient still insisted on continuing PD despite the two unsuccessful attempts and the surgeon decided on open thoracic surgery and partial pleurectomy. After another 2 months hydrothorax has developed for the fourth time and it was the surgeon to give up at this point.

Conclusion/Application to practice
After 10 months of struggle for PD finally the decision was made to give up the modality and the Tenckhoff catheter had to come out. The patient needed to go onto haemodialysis (HD) in order to maintain adequate treatment.

After all she did not give up, performed well on HD and finally received cadaveric kidney transplant after 2 years of dialysis.
A technique for improving patient adherence to phosphate binder therapy

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Background
Hyperphosphatemia is associated with increased mortality in dialysis patients. Hyperphosphatemia contributes to the development of hyperparathyroidism, bone disease, cardiovascular disease, vascular and other tissue calcifications. Treatment with non-calcium containing phosphate binders reduces mortality in these patients. Phosphate binders account for approximately half the pill burden for dialysis patients. Non adherence to phosphate binders is common with reported rates varying from 22% - 72%. In our department patients receive a high protein meal during dialysis. Patients were responsible for taking their phosphate binders. Most patients did not take phosphate binders during the meal.

Objectives
Improving phosphate balance by decreasing perceived pill burden and improving patient participation.

Methods
Dispensing phosphate binders during HD based on quantity of phosphate in meal provided by the dialysis centre. Phosphate level was measured once a month.

Results
17 patients took phosphate binders during their meal on HD. Staff had increased opportunities for teaching, improving patients’ understanding of the importance of maintaining proper level of phosphate. After 6 months of intervention the percentage of patients with phosphate under 5 mg/dl increased from 18% to 65%.

Conclusion/Application to practice
Ongoing conversations with the patients about the significance of phosphate and the importance of phosphate binders increased the interest of the patients in their phosphate levels. Providing the phosphate binders during dialysis may decrease the perceived pill burden and may improve adherence. Dual binder therapy can be provided during dialysis without complicating patients’ home pill regimen.
Use of complementary and alternative medicine in patients undergoing haemodialysis

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Background
Nephrotoxic effect of several complementary and alternative medicine (CAM) methods used in patients with renal impairment could disturb haemodynamics by reducing the glomerular filtration rate. For this, it should be questioned the CAM methods used in haemodialysis (HD) patients.

Objectives
This study aims to evaluate the prevalence and associated factors for the use of CAM in HD patients.

Methods
This study used a cross-sectional, correlational descriptive design. The study included a convenience sample of 268 patients diagnosed with ESRD at HD centres. Subjects were excluded from the study if they were younger than 18 years, had a diagnosis of major psychiatric disorders or cerebrovascular diseases that affect cognitive ability.

Results
It was found that 46.2% (124 patients) of the haemodialysis patients used CAM methods. The mean age of patients was 51.2 ± 14.5 years and 57.3% men and most of these patients were married (82.3%) and unemployed (42.7%). Herbal products were the most commonly used type of CAM (61.3%), followed by mind and body procedures (28.2%). The most used herbal products were garlic, parsley and stinging nettle. CAM users were more likely to be females, married, ≤ 5 years illness duration; and lower education.

Conclusion/Application to practice
CAM is highly prevalent among HD patients. Patients undergoing haemodialysis apply to CAM for many reasons although potential for harm exists. Health caregivers should question patients about used of CAM methods while taking medical history and nutritional habits. Patients should be informed correctly and scientifically about these methods to avoid harmful and unnecessary uses.
P 106
Vitamin D deficiency in dialysis patients before and after native vitamin D supplementation
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Background
The vitamin D supply status is well known to decrease in patients with chronic renal failure.

Objectives
We repeatedly determined the total 25-hydroxy vitamin D [t-25(OH)-D] level of the serum after native vitamin D supplementation in different doses.

Methods
Of the 66 (31 PD, 35 HD) patients tested in 2011, 49 patients (22 PD, 27 HD) remained by 2015. The patients received 1000 IU of native vitamin D daily for one year, then after the measurements in 2012 the dose was increased to 3000 IU.

Results
For a year we administered 1000 IU of native cholecalciferol daily, which improved the mean t-25(OH)-vitamin D levels, but in the PD group the levels of none of the patients normalised while in the HD group 45% of the patients had normalised levels. Subsequently the native vitamin D dose was increased to 3000 IU, and in 2015 the measurement was repeated: 17% of the PD and 58% of the HD patients had normalised serum vitamin D levels. The proportion of patients with severe hypovitaminosis D decreased from 94% to 8% in the PD and from 34% to 14% in the HD group. The proportion of patients receiving also active vitamin D increased in the PD group (58.1→81.8%) but decreased in the HD group (65.7→29.6%).

Conclusion/Application to practice
Vitamin D deficiency is more severe in patients receiving PD therapy than in those treated with HD, and therefore the former require a higher dose of native vitamin D supplementation.
P 107
Reduction of catheter related bloodstream infection in nephrology unit: quality versus cost

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Background
In Emek medical center 45% of the patients (N= 80) have central line catheters. This is considered a major risk factor for sepsis in haemodialysis patients, increasing the risk of morbidity and mortality.

In the last few years clinics in different countries have managed to reduce the infection in central catheters using multidisciplinary interventions by using chlorhexidine gluconate dressings, which is much more expensive than the hypodress dressings.

This dressing has chlorhexidine gel which provides antimicrobial protection and visibility, allowing surveillance and promoting moisture evaporation.

Objectives
To determine if the benefits of using chlorhexidine gluconate dressing in reducing bloodstream infections is cost-effective.

Methods
We organized monthly meetings in collaboration with dialysis unit, administration and infectious unit in order to examine cost effectiveness of the dressing.

We analyzed the central line infection cost which includes hospitalization days, antibiotics, central line exchange, loss of working days for patient and care giver, nurse time versus annual cost of dressing.

Results
Reduction in the incidence of infections from January 2012 until December 2015.

The total incidence of exit site infections in the year 2012 was 24, 14 in 2013, 7 in 2014 and 3 in 2015.

Incidence of catheter related bloodstream infection in 2012 was 11, 5 in 2013, 4 in 2014 and 3 in 2015.

After we had summarized the cost benefit of the dressing, we decided to use it.

Conclusion/Application to practice
Using this dressing has proved to be effective in reducing bloodstream and exit site infections, increasing benefits both for patients and dialysis unit despite the cost.
The influence of different programs of guidelines on compliance in haemodialysis treatment

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Background
Patients with end stage renal disease are exposed to multiple risk factors and it is a big challenge to manage them. Treatment compliance is the cornerstone of medicine in order to achieve optimal health. Compliance includes treatment adherence and persistence, so nephrology staff have to ensure patient ability to comply with guidelines.

Objectives
The aim of this study is to identify the influence of different guidelines: personal and general, on the compliance of haemodialysis patients.

Methods
The study involved 40 patients, divided randomly in two groups: control (50%) who received general guidelines from the staff and study (50%) who received both guidelines. Age was 60.6 ± 11.8 years, female (27%) and male (73%). The research data was collected using a validated and reliable questionnaire that examined influence of the different guidelines on treatment compliance.

Results
Results showed that control group reported a high level of compliance regarding medication treatment compared to the study group. We found that there is no difference between control and study groups for medication care. Both groups reported more compliance following getting guidelines from nursing staff. 50% of study group was without family support compared to control group (20%). The study showed that patients with family support have high adherence to haemodialysis treatment recommendations.

Conclusion/Application to practice
In conclusion, this study is likely to increase the awareness of the nursing staff about the factors that influence compliance and may clear the way for planning nursing interventions (personal training programs) in order to increase the sense of well-being and quality of treatment.
A possible increase in specialist education of nurses for the performance of dialysis work

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Background
The number of nurses interested in work in a dialysis centre is decreasing in the Czech Republic, both as a result of the set-up of the educational system for nurses in general and due to the low awareness on the possibility of follow-up specialist training for the improvement of qualification of nurses already working in nephrology.

Objectives
Improvement of specialist and technical knowledge and skills of nurses working in dialysis centres.

Methods
• Postgraduate study programme – Intensive Care – under the auspices of the Ministry of Health of the Czech Republic
• Certified courses – Organised by Aesculap Academia in cooperation with B Braun Avitum in the Czech Republic.
The programme includes a theoretical part – in the form of lectures, and a practical part – mandatory practical placement.

Results
Specialist education of nurses ensures both better and more effective care of patients in the chronic dialysis programme, but also, generally, of all nephrology patients at all levels of care. In addition, it supports the achievement of professional goals and nursing personnel development.

Conclusion/Application to practice
Availability and form of nephrological nurses’ education, who not only work in dialysis centres, but also in intensive care, is very good in the Czech Republic, and nurses have a large amount of support for improving their expertise from their employers. Improved knowledge of nurses is not only good for the coordination of cooperation between the physician and nurse, but also for the benefits in patients’ nursing care.
Background
67% of CKD patients have poor compliance which leads to life threatening behavior.

CKD patients encounter barriers & difficulties in coping with their disease.

As a nursing team, we have to improve the communication with them and motivate them for better life.

Objectives
TO provide a tool for nurses to motivate & support patients, which leads to improve their compliance, self-efficacy & sense of control

Methods
The change cards project was initiated in 2014, aiming to find a tool to improve patients' compliance and maximize the communication with them.

Several meetings were held between qualified nephrology nurses & organizational consultant.

A tool was designed as a serial of 10 cards; along with each card we give bracelet for commitment. Each card represents a barrier with a different color and one joker for free choice. The cards are named after the 10 barriers and the most difficulties that patients are facing with the diseases:

The tool was based on the Motivational approach theory that deliberates „support accompaniment” instead of „guiding and education” which lead to self-efficacy and sense of control.

Results
The tool was presented to the nurses in dialysis centers in Israel via workshops, Conferences and meetings by the project group. A survey was conducted in 4 dialysis centers to assess its efficiency.

Conclusion/Application to practice
Our aim is to implement the tool in all Dialysis centers in Israel to enable the nursing team to manage a useful communication, acknowledge abilities and improve compliance in many patients’ aspects.
P 111
Never handing story

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Background
Hands, our most important work instrument, play an important role in the transfer of hospital infections. In the healthcare environment, hands transfer micro-organisms that can be highly resistant to disinfection agents and antimicrobial medicines.

Objectives
Proper education of patients and staff in the area of hand hygiene and reduction of the risk of hospital infections.

Methods
Patient education:
A theoretical format using various educational materials to facilitate the understanding of the issues and the learning of proper procedures.

Staff education:
Nursing care coordinator for disinfection and hygiene – self-education, monitoring of news, sharing of experience, active participation in educational activities.
Regular hand hygiene audit – to assess the situations where hand hygiene is required. A tool is available for the documentation of hand hygiene audit results. This tool enables simple recording of the results. In necessary cases, re-education is carried out, followed by a so-called repeated hand hygiene audit.

Conclusion/Application to practice
These procedures lead to increased quality of care and effective prevention of the propagation of hospital contagions and infections. The patients and staff will quickly learn the proper procedures in a user-friendly manner, thus protecting themselves and the surroundings.
Background
Comprehensive patient education is very important as it includes information related to haemodialysis. We have developed a survey focusing on the awareness of the dialysis patients, regarding healthy lifestyle and their attitudes on the issue.

Research problem:
Are patients sufficiently informed about healthy lifestyle? Do they know how to properly eat with kidney disease? Do they have sufficient information on the issue?

Objectives
Check the level of awareness with respect to healthy lifestyle, determine when the information was provided and map the knowledge level of the subjects with respect to nutritional values of individual foods.

Methods
The survey is based on an anonymous graphical questionnaire, interpreted using statistical analysis. As the variables are nominal, we used a non-parametric good compliance Chi-square test at the significance level of alpha = 0.05.

The table provides empirical frequency in subjects in HD program from the street and from the nephrology out-patient office and their views on the acquisition of the initial information on eating habits.

<table>
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<th>No</th>
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<td>0</td>
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<td>0</td>
<td>2</td>
<td>13</td>
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<tr>
<td>Total</td>
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<td>0</td>
<td>3</td>
<td>58</td>
</tr>
</tbody>
</table>

Results
Patient's attitudes towards compliance with healthy lifestyle principles have a significant impact on the quality of dialysis therapy. It is an integral component of the patients' care in dialysis centres.

Conclusion/Application to practice
Based on the outcomes of the survey that we have carried out at the dialysis centres, we have arrived at the following conclusion: „When they have a balanced and varied diet, they do a lot for their health, avoiding complications of dialysis treatment resulting from poor lifestyle habits.”
"Choose Your Own Card for Change” Developing Self-Efficacy and Motivation among Dialysis Patients


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Background
Dialysis patients face physical, emotional and social challenges that impact their adherence to treatment and their coping skills. Literature shows that better adherence to treatment reduces complications and facilitates better adaptation to the illness and its limitations. This is a challenge for professionals as well. Four dialysis units have tested a new therapeutic tool called Cards of Change, designed to improve patients’ coping skills. We will present the tool’s ability to improve patients’ self-efficacy and coping skills.

Objectives
• Increase motivation to change lifestyle through card of change.
• Increase the patient’s sense of responsibility and self-efficacy.
• Identify and resolve gaps between desirable and actual behavior.
• Enhance patients’ adherence to treatment and change while preserving autonomy and right of choice.
• Assess efficacy of the tool among patients and staff

Methods
• Nurses from 4 dialysis units led the process.
• 10 individual meetings with 58 patients, using the cards.
• Develop and map questionnaires before and after the process.

Results
• 83% of patients reported positive impacts and motivation.
• 83% reported improved coping skills.
• 92% of patients reported that they would recommend this tool to others.
• 92% of nurses were satisfied with the process

Conclusion/Application to practice
• The process enhanced patients’ optimism, sense of confidence, self-efficacy, goal setting and progress.
• Patients reported that conversations with the staff made them feel better and take more responsibility.
• Integrate this process for all patients and staffs in other dialysis units throughout the country.

Examine change in coping skills in the long term.
“If you can dream it, you can do it” Walt Disney
P 114
Individual perception of dialysis therapy and transplantation options

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Background
Ageing of the population results in an increasing number of patients with the chronic kidney disease. Dialysis therapy is a change in the life of the patient, affecting the quality of the patient’s life. The patient becomes dependent, possibly affecting his self-confidence, resulting in various defensive reactions. These reactions vary according to the character of the patient, his/her social background and emotional status. The objective of the entire team is to provide information on the disease, on its course and on new developments with respect to treatment options.

We also wanted to know whether the HD patients are even interested in enrolment in WL, or why they prefer dialysis.

Objectives
To identify how kidney disease patients perceive HD treatment.
Find out about the reasons that lead the patient to the decision to undergo kidney transplantation or why they might not be interested in the enrolment in WL.

Methods
To identify the factors affecting the patient’s decision making with respect to his/her therapy, we created a pilot survey questionnaire for dialysed patients at our centre. We wanted to determine the reasons underlying the patients’ choice between dialysis and transplantation.

Results
The survey demonstrated differences in individual positions of the patients on dialysis and on the transplantation option. This analysis demonstrated how the patients perceive the difficulties of transplantation and identified their concerns.

Conclusion/Application to practice
This analysis showed us how to manage and direct education in the area of pre-transplantation preparation. We assume that changes in education will increase the ratio of patients enrolled in the waiting list.
P 115
Using the Patient Activation Measurement to assess self-management related activation in dialysis patients

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Background
Self-management requires activated patients, which means they have adequate knowledge and skills for self-management and enough self-efficacy to apply knowledge and skills in daily life. It can be measured with the Patient Activation Measurement (PAM) [Hibbard 2004,2005], a validated instrument of 13 questions which discriminates between 4 increasing levels of activation. Patients can advance PAM levels through targeted educational interventions.

Objectives
We wanted to assess the activation level of dialysis patients on home haemodialysis (HHD) and in-center dialysis (ICHD) as part of a project to tailor self-management education.

Methods
We used the PAM (cross-sectionally) in our patients and compared the means between ICHD and HHD patients.

Results
PAM scores of 156 patients were received. 80 ICHD and 76 HHD. 15 forms were deleted. Total n=141.

20% of patients scored level 1 (lowest), 22% level 2, 40% level 3, 18% level 4. Only 12% of patients undergoing ICHD scored level 4 compared to 27% on HHD. We saw the opposite on level 2 (ICHD 27%, HHD 13%). Mean PAM-scores for the whole sample was 59.1. Mean PAM-scores for ICHD: 57; HHD: 61.5 [p=0.04]. Activation level is in theory unrelated to treatment modality. Therefore it cannot explain the low ICHD scores on level 4. It might be the attitude of the healthcare team towards ICHD patients which influences this.

Conclusion/Application to practice
ICHD patients have a significantly lower level of activation compared with HHD, especially level 4 scores.

20% of HHD and ICHD patients have the lowest level of activation. We aim for improvement through tailored self-management education.
**P 116**

**Absolute and relative reliability for several functional tests in patients undergoing haemodialysis**

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**Background**

Patients with Chronic Kidney Disease (CKD) are known to have decreased functional capacity that may be associated with low levels of physical activity and can lead to impairment in activities of daily living. We know relatively little about what constitutes a meaningful change in tests that are used to test the physical function of this cohort.

**Objectives**

The aims of this study were to assess the relative and the absolute reliability of the Short Physical Performance Battery (SPPB), one leg stance test (OLS) and Timed Up and Go (TUG); and to calculate the minimally detectable change (MDC) scores for these outcomes in CKD patients receiving haemodialysis (HD).

**Methods**

Twenty-nine CKD patients receiving HD therapy participated. Participants completed two testing sessions performed by the same examiner, 1 to 2 weeks apart, of the following tests: SPPB (n=24), OSL (n=24) and TUG (n=25).

**Results**

The intraclass correlation coefficients computed for the SPPB were 0.94 (CI 95% 0.86 to 0.97), with TUG = 0.97 (CI 95% 0.94 to 0.99), OSL = 0.71 (CI 95% 0.44 to 0.86). The minimal detectable change (MDC) was calculated to be 1.6 points for the overall SPPB (CI 95% 1.1 to 2.4); 15.6 seconds to the OLS (CI 95% 10.7 to 21.7) and 2.4 seconds for the TUG test (CI 95% 1.5 to 3.5).

**Conclusion/Application to practice**

The SPPB and the TUG test were considered to offer acceptable reliability in this patient sample. The MDC data generated by these tests can be used to monitor “meaningful” change in activity of daily living-related functional capacity of these patients.
Patient involvement supported by information technology

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Background
Patients with chronic kidney disease (CKD) face significant disease-related challenges in their everyday life. Many of them need to follow a tight treatment schedule including frequent visits to their doctor and an extensive medication. Recent evidence suggests a positive influence of active patient involvement. Therefore, there is a need to develop new tools to empower patients’ ability to contribute to their own successful treatment course including improvement of self-care.

Objectives
To develop an information technology (IT) method that allows patients to actively contribute to their own treatment. Patients should be able to achieve information, to measure clinical parameters, which only requires one registration and to communicate timely information to health professionals.

Methods
A web-based application (App) was developed in interdisciplinary cooperation between health professionals, patient user groups and IT specialists. The implementation of the App included support offered to patients with respect to both, hard ware (including suitable blood pressure monitors) and software use. In order to cover patients’ experiences of using the App a survey will be conducted.

Results
We successfully developed an App for patients with CKD. It allows an immediate data and parameter availability to the health care professionals in the electronic patient record. After 3 months 72 patients had been introduced to the App, and it seems as the App is a great tool for patient involvement.

Conclusion/Application to practice
Implementation of an App improves involvement and self-care for patients with CKD.
Dialysed patients and home care

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Background
Dialysed patients suffer with complications resulting from the dialysis treatment. Also with other associated diseases. Dialysis therapy is time consuming and physically demanding, our patients do not have the opportunity to address their problems outside of the dialysis centre. Practice lead us to refer the patients to other specialized departments to indicate the necessary home care, but failed to fully consider the specifics of nursing care.

Objectives
To provide for continuous care of patients whose health and social condition requires regular intervention of the home nursing agencies.

Methods
Contact the home nursing agencies in the vicinity of the dialysis centre.
Define the scope of the required services.
Obtain the documentation from the GP for the purposes of indication of home nursing care.
Train the home nursing care staff in the specific activities.

Results
Cooperation was initiated with a home nursing agency. In the period between June 2015 and December 2015, 3 patients were indicated for home nursing.
1. anxious disorder, emotional instability – administration of psychiatric medication in home environment
2. Recurrent AVF thrombosis – application of LMWH
3. acute graft rejection condition – application of antibiotics – intravenous, follow-up on physiological functions, re-dressing

Home nursing care was provided over the period of 11 weeks to 3 patients.

Conclusion/Application to practice
Direct cooperation with home nursing agency was fruitful. We allowed our patients to remain in their home environment while receiving good quality nursing care which could not have been provided during dialysis therapy. Communication with the home nursing agency appears to be the best solution.
P 119
Nutritional intervention to hospitalised nephrology patients
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Background
Nutritional screening of patients has been going on for years at Aarhus University Hospital. The Department of Renal Medicine has conducted audits on documentation of nutritional screening in the patient records. Patients with nephrological conditions are at high risk of not getting sufficient nutrition during hospitalisation. Symptoms of uraemia such as nausea, constipation, and reduced appetite make it challenging to meet the nutritional needs of these patients.

Objectives
To obtain more knowledge of patients’ nutritional status during hospitalisation, including possible barriers influencing patients’ energy intake. Moreover, how the nurses managed eating situations.

Methods
We shadowed five randomly selected patients during one day (from 7 am until 9 pm). Statements from both patients, staff and observers’ thoughts and reflections were noted as field notes in a specifically developed observation guide. Patterns and themes were derived from the observed data.

Results
We found the following patterns and themes:
• The dining room - used but not sufficiently
• Preunderstanding of the patients
• Caregivers’ focus on nutrition
• Nutritional supplement - or real food?
• What kind of food can we offer and what do we actually offer the patients?
• Interruptions during meals
• Suggestions for specific interventions

Conclusion/Application to practice
We have increased and identified some issues on the basis of the results and can implement some specific actions and interventions to optimise patient care and treatment.
P 120
Managing pain in the dialysis unit
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Background
Pain is one of the most common symptoms in dialysis patients and has a significant effect on their quality of life.

Research shows at least half of all dialysis patients suffer from medium to severe pain.

In our unit we observed that caregivers often only relate to pain if the patient complains. Patients may avoid reporting pain because they are unaware of existing treatments or they are afraid of taking additional medication or of addiction.

Objectives
To implement pain management by:
• Identifying patients who do not report pain
• Assessing pain
• Increasing the caregivers’ awareness of pain management

Methods
We used a pain assessment tool evaluating the type, duration, place and intensity of pain. We related to the patients’ pain during dialysis and compared it to their pain at home. We clarified the source of their pain and gave the appropriate treatment. Nursing staff were encouraged to evaluate pain by this assessment tool during each dialysis treatment.

Results
180 patients participated. 17% complained of pain. However, after our pain assessment, we found that 40% suffered from pain. Of these patients, 43% suffered from severe pain and 57% suffered from medium pain. 7% suffered from pain that increased during dialysis. 7% sometimes avoided dialysis treatments due to pain. 29% suffered from medium to severe untreated pain. 15% of these patients reported an improvement in their level of pain after beginning pain treatment.

Conclusion/Application to practice
Nurses must be aware that assessment and treatment of pain in every dialysis session has a positive impact on patients’ quality of life.
Assessment of pain experienced by dialyzed patients

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Background
The number of people treated with dialysis who are, at the same time, suffering from pain is increasing. Among patients there are many chronic health problems, which may cause pain and suffering.

Objectives
Analysis of pain in patients on dialysis.

Methods
The study was conducted from June to October 2011 in SPSK Nr 2 in Szczecin, Poland. The study group included 75 dialysis patients. During the research the following standardized research tools were used: the Acceptance of Illness Scale, the Short Form McGill Pain Questionnaire, the Beliefs about Pain Control Questionnaire, the Pain Coping Strategies Questionnaire and Kidney Disease Quality Of Life.

Results
The study demonstrated that haemodialysis patients complained more about pain than peritoneal dialysis. Observed statistically significant differences between these two groups in the perception of intense, stabbing, strong and comprehensive pain. Patients undergoing renal replacement therapy frequently reported symptoms associated with muscle contractions, muscle pain, dry skin and numbness in the legs. It was also observed statistically significant differences between the perception of pain during the last week and professional activity, the conviction that no pain is happiness, the belief that suffering does not depend on the behaviour.

Conclusion/Application to practice
1. Pain is widespread and continuously accompanying dialysis patients, affecting their quality of life and level of acceptance of the disease.
2. The method of renal replacement therapy has an influence on the intensity and kind of pain, as well as quality of life. Patients receiving peritoneal dialysis experience less pain than haemodialysis patients.
P 122
Nurse-led clinic to assist patients in decision making regarding renal replacement therapy
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Background
The choice of renal replacement therapy (RRT) is a crucial decision in the treatment of patients with advanced chronic kidney disease (ACKD), which has an impact on the patient’s and carer’s quality of life. Patient’s engagement in treatment decision making is associated with improved healthcare outcome. The provision of realistic and structured information is essential in the decision making process.

Objectives
The objective is to present our nurse-led clinic to assist patients with ACKD in choosing the best RRT option.

Methods
In January 2014 we implemented a nurse-led clinic for patients with ACKD. The nurse performs individualised education to help each patient together with a family member in making decision regarding RRT option which will be needed in the near future. This education process is structured into 3 visits:
- Patient’s values and lifestyle are explored and determined.
- Treatment options are informed and discussed.
- Deliberation phase where decision on treatment option is made.

Results
During the past 2 years, a total of 137 patients with a mean age of 67.4 ± 12.4 years were attended. 22.3% of these patients were older than 80 years. 48.9% chose haemodialysis (HD), 38.6% peritoneal dialysis (PD), 12.4% conservative treatment and 10.3% had the option for living donor transplantation. Preferences on treatment choice will be presented.

Conclusions/Application to practice
Our experience suggests that an education process centred on the individual’s values and lifestyle helps each patient to choose the best RRT. Therefore, patients’ preferences should be considered in deciding RRT option as this will enhance treatment adherence and/or quality of life.
Haemodialysis patient’s satisfaction regarding nursing care in Greece

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Background
Although several articles related to End Stage Renal Disease have been published, few studies, especially in Greece, have investigated satisfaction regarding nursing care among haemodialysis patients.

Objectives
To explore the level of satisfaction of haemodialysis patients on nursing care.

Methods
Between January 2015 and June 2015, 284 haemodialysis patients completed the Greek Version of SDIALOR (Dialysis Patient Satisfaction Questionnaire). The study conducted in 14 Dialysis Units of Hospitals of the Athens and Peloponnese Region. Socio-demographic data of patients, individual clinical and nursing history were recorded. Statistical analysis was performed using the IBM SPSS Statistics version 22. P-value < 0.05 was considered as statistically significant.

Results
A high level of patient satisfaction is observed in the environmental of haemodialysis session (functionality of the equipment: 75.4%) as well as in terms of time, in which nurses are changing sera or intravenous solutions (94.6), the technique by which nurses cared central catheters (90.7%) and the technique by which nurses made puncture arteriovenous shunt (fistula) or arteriovenous graft (90.5%). Levels above the average were observed in the fields of the care that patients receive from the medical staff (84.1%), the discretion of doctors and nurses during the clinical examination (80.9%) and the sense of security they feel during the treatment process (79.4%).

Conclusion/Application to practice
The findings of this study can be used in the improvement of haemodialysis unit environment for the care of patients. Nursing staff should adopt strategies to improve quality of nursing care and increase patient satisfaction.
P 124
Exploring the impact of a university educational programme on the renal nurse’s practice

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Background
The development of this qualitative study has been prompted by the paucity of research studies which seek to explore the specific development experiences of renal nurses. As a consequence, of the above and in relation to professional practice; nursing and teaching perspectives, there is a critical need to explore and interrogate professional teaching practice. In doing so, the body of knowledge in relation to educational practice may be enhanced. A wider research aim would be to improve delivery of healthcare through the continual improvement in nurse education. As a means to redress the balance, the proposed study will present the findings of a qualitative research study exploring the impact of University of Central Lancashire’s (UCLAN) educational programmes on the renal nurse’s practice. As a means to explore such factors, this study aims to provide insight, through phenomenological exploration into the effectiveness of an educational programme of study on the renal nurse’s practice. Through exploration and engagement with the research findings, it is envisaged that available conceptual frameworks will assist in constructing meaning from the data obtained during the course of this study. The subsequent research findings will be utilised to make recommendations for future pedagogical practice. Finally, a process of engagement in one’s own practice, through a process of research will facilitate reflection on teaching practice and may assist in advancing the development of post registration nursing education.
P 125
Reception of a new patient in the dialysis unit
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Background
Starting dialysis is difficult for the patient and requires proper guidance to adapt to the new situation. Information provides the means for understanding the disease and improves the ability to cope, thereby raising the quality of life. In our department, there was no structured procedure for receiving new patients.

Objectives
Providing a structured training program about their new lifestyle, with an emphasis on issues raised by patients, leading to the prevention of deterioration of quality of life, better adherence to treatment and prevention of family members exhaustion. Reducing the intensity of patient and family stress by creating mutual trust and cooperation.

Methods
A clinic for new patients was built, including two nurses, a senior nephrologist, dietician and social worker. The initial reception period ranged from a month to a month and a half, allowing the patient and his family to become acquainted with the team and with the new routine. At the end of the reception period, the patients filled out a questionnaire and received a nurse and senior physician responsible for the management of their treatment.

Results
According to the questionnaires, patients who received this organized program reported high satisfaction.

Conclusion/Application to practice
Patients receiving structured training showed improvement in treatment adherence: more compliance in taking medications and completion of the full dialysis sessions. This was shown by an improvement in blood tests, especially phosphorus. Nurses’ motivation improved due to their active involvement in the project, which has led to professional development and better leadership.
P 126
Clinical incident reporting tool to promote patient safety culture within dialysis clinics
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Background
A clinical incident reporting tool has been in use in a private dialysis network since 2007.

In order to improve the safety of patients, the healthcare personnel adopted a fair and open culture when it came to reporting any incident which occurred in the clinic before, during or after the treatment was essential.

Objectives
Develop and uphold the safety culture and prevent injury and/or illness, by using the clinic incident reporting tool within all dialysis clinics of the Romanian network.

Methods
A prospective cohort study of reported incidents through the online Variance Reporting System.

Results from 2012 to 2015 have been compared. The clinical incident report used is from a computer based tool implemented in all dialysis centers of a network and it features:
- Monitoring of clinical/other incidents Patient harm
- Root cause analysis Corrective and preventive actions

Results
After the first 5 years of using the incident reporting tool, the number of incidents has decreased despite a rise in the numbers undergoing treatment from 40,173 incidents in 2012, to 35,485 in 2013, to 28,861 in 2014 and to 27,700 in 2015. Hypotension episodes, muscle cramps and headaches are the main categories with substantial reductions due to the incident management at clinic level.

Conclusion/Application to practice
Greater rates of clinical incident reporting can contribute to improving patient safety.

A safety culture should be part of the organizational culture and be understood and accepted as being something of high priority because it may enhance patients’ overall recovery chances by preventing the incident from recurring.
Poster Session F – Monday
September 19, 2016, 14:00–15:30

Improving quality of renal care
Paediatric renal care
Peritoneal dialysis
Renal care for an aging population
Safe vascular access

P 127
Nursing discharge summary
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Background
Patient transfer between healthcare institutions may lead to potential vulnerability in health care, consequence of information lost, relevant to the continuum of care. Insufficient interoperability between electronic health records, and lack of standardization in clinical content meant to be shared among health providers, are some of the problems found.

Objectives
To define clinical contents of a nursing discharge summary.

Methods
We searched scientific databases using the keywords „Nursing” and „Patient Discharge Standards” with the purpose to identify existing content in clinical summaries. The results were aggregated according to the Joint Commission mandated discharge summary components. Information items relevance were measured and as criteria inclusion in the summary discharge, scores higher then 50% was used.

Results
The response rate was 100% with 16 forms valid for analysis. Clinical content were grouped in three domains: Procedures and treatments with scores of 25% relevant and 75% very relevant; Health condition with 44% very relevant, 44% relevant and 13% less relevant; Treatment plan scored 25% very relevant, 50% relevant and 25% less relevant. In health condition domain, concept nursing diagnosis, was considered 38% very relevant and 50% relevant. In treatment plan, “interdialytic weight gain objective” and “Prescribed actions to be executed by the patient/caregiver” were included, with both items scoring 25% very relevant and 50% relevant.

Conclusion/Application to practice
The discharge summary expresses the information considered meaningful to the continuum of care, defining a quality information reference with potential to be replicated in other health institutions. The clinical content defined was incorporated in the electronical health record.
P 128
Haemodialysis patient’s self-management
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Background
The haemodialysis patient’s self-management can be defined as the activity and art with which a patient controls their own medical condition, the ultimate goal being to minimize the effects of the disease on their lifestyle.

The five groups of activities that must be controlled by haemodialysis patients are: Vascular access, food intake, administration of drugs/medicine, fluids intake and physical exertion.

Objectives
To improve patients’ rates of self-management compliance.

Methods
The study was conducted over a period of two years. In January 2013, questionnaires were completed and based on the results derived, the initial level of patient compliance was analysed. In the following period of 2013-2014, there were discussions with patients and informational material was distributed, in 2015 the questionnaires were then completed once again.

In order to achieve the objectives of the study using the questionnaires completed by the patients, we analysed the five groups: vascular access, food intake, administration of drugs/medicine, fluid intake and physical exertion.

The information derived from questionnaires and the calculation of the initial results determined our further actions, showing us with whom and how much we need to work on a patient's self-management compliance.

Results
Increase in the percentage of patients who understand and comply with the diet by 26%.
Increase in the patients who comply with the specific medication self-administration by 26%.

Conclusion/Application to practice
In our study, the permanent involvement of health care professionals in patient education in the form of discussions and informational material has led to an increase of their compliance in self-management in most activities, especially in dietary and drug related activities.
Does hand hygiene work effectively?

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Background
Healthcare Associated Infections (HAI) have a substantial financial impact on the patients and on the healthcare systems across the world. However, it has been proven that correct hand hygiene practices save lives.

Objectives
• Compare infection markers before and after the implementation of hand hygiene audits.
• Compare the costs related to the hand hygiene versus the cost of infection treatment.

Methods
Retrospective single-centre study.
Assess and compare the infection markers from 137 patients under chronic haemodiafiltration (HDF), regarding 2012 and 2015, corresponding respectively to the periods before and after the implementation of a surveillance/audit programme.

Results
Data analysis for 2012 versus 2015 revealed:
With statistical significance (p<0.05):
• The hand hygiene adherence was 31% versus 69.4%.

Without statistical significance (p>0.05):
• The pre-HDF average auricular temperature was 36.03°C versus 36.32°C.
• Average CRP (mg/dl) was 10.19 versus 9.18.
• Antibiotic doses [units]: 201 versus 195.5.

Considering the period of 15 days (average length required in order to effectively treat one infection) we found:
• Disinfectant cost for the period: €0.65
• Infection treatment cost (including lab tests): €35.19

Conclusion/Application to practice
Compared to 2012, in 2015 there was an increase of hand hygiene compliance and a decrease of average CRP and consumption of antibiotics, but these results are not statistically significant.

When compared to the cost of hand hygiene, the cost to treat one infection per se is 54 times higher.
Self-care profiles and perceived quality of life in haemodialysis patients

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Background
Self-care empowers families to better adapt to the challenges put to it by health. The patient engagement with self-care and his self-care profile have a significant impact on health outcomes.

Objectives
This study aims to identify self-care profiles in patients with CKD on haemodialysis, assess the patient’s quality of life (QoL) and analyse the relationship between the different profiles of self-care and the QoL.

Methods
An exploratory and transversal study, with 80 patients with different levels of autonomy. We used KDQOL-SF36 and Self-Care of Home Dwelling Elderly - SCHDE.

Results
The self-care profile is predominantly undefined (75%). It was possible to determine 10 cases (12.5%) with a responsible self-care profile.

We identified QoL differences between three groups (p=0.32). Patients from autonomous dialysis programmes (home dialysis and long nocturnal dialysis) were significantly better than the levels of patients undergoing conventional in-centre dialysis.

There were no significant differences between the self-care profile groups found in relation to quality of life (p=0.41). However, there are a group (Indefinite High profiles, Abandonment Pure, Predominantly Abandonment and Predominantly Formally Guided) with the lowest average results and other (Indefinite Low, Pure Responsible and Predominantly Independent), with higher average results for QoL.

Conclusion/Application to practice
We verified a higher QoL in patients included in autonomous dialysis programmes than on conventional dialysis. Other studies with the higher sample and a more regular distribution of participants by different profiles may show differences that already have a statistical significance, to improve approaches to promote self-care in patients with CKD on Haemodialysis.
Central venous catheter and quality of dialysis

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Background
The Central Venous Catheter (CVC) is for some patients the only possible vascular access (VA). This fact led the team to think about the quality of treatment we offer to these patients because the CVC use is associated with the highest rate of morbidity and mortality when compared to other VA types.

Objectives
• To analyse treatment parameters and laboratory values by comparing them with KDOQI recommendations.

Methods
The study included 6 patients with CVC as definitive VA. We analysed treatment parameters and laboratory values over 14 months retrospectively.

Results
On average, the 6 patients (3 females) were 73.17 years old, had a haemodialysis vintage of 124.83 months, a CVC vintage of 74 months and an age-adjusted Charlson Comorbidity index of 8.3.

The analysis of the dialysis treatment and adequacy parameters fully complied with the recommendations from the guidelines.

Effective weekly treatment time: 788.37 (±80.46) min/week,
Qb: 325.27 (±17.11) mL/min,
Processed blood volume: 256.11 (±24.49) L/week,
Kt/V in-line measurement: 1.70 (±0.21),
Effective infusion volume HDF: 19.75 (±1.99) L/session
Ferritin: 569.49 (±129.85) g/L
Haemoglobin: 10.85 (±0.53) g/dL,
K: 5.22 (±58) mEq/L
P: 3.82 (±0.84) mg/dL
Infection Episode: 0.065/1000 days of treatment,
Hospitalization: <15 days/patient/year.

Conclusion/Application to practice
Although patients were old and had a higher CVC vintage, as well as age-adjusted Charlson Comorbidity index, treatment parameters, and laboratory values were above those within the recommended KDOQI guidelines.

The number of infection episodes was lower than reported in other studies, and this may be related to our CVC connection/disconnection.
Impact of team analysis and discussion moments on treatment quality and outcomes
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Background
Dialysis quality requires fulfillment of objectives and influences the patient’s quality of life. Several studies show that parameters such as dialyzed blood volume, substitution fluid, effective treatment time, Kt/V, among other things, have a significant impact on morbidity and mortality. Healthcare teams awareness about goals and achievements may impact patient outcomes.

Objectives
- Check how the analysis/discussion of results in the healthcare team influences the achievement of treatment goals.

Methods
Defined goals:
- Treatment time: ≥240 min, 3x/week
- Substitution volume ≥20 l.
- Qb optimisation according to VA pressures, AP ≥-230 mmHg and VP ≤270 mmHg
- Kt/V ≥1.4.

Initial healthcare team training.

Monthly assessed topics:
- Percentage of treatments that achieved all the objectives (tmtOK) during five years (2011/2015)
- Impact of each team analysis/discussion moment on new achievements of tmtOK

Results
During the five years revision, after each team analysis/discussion moment we found:
- An increase in the percentage of tmtOK.
- On average during the first year, the increase of tmtOK was higher (4.9%) than in the following three years (±2.0%). In the fifth year, there was another increase (5.9%).
- Annual overviews showed that after three months of each team analysis/discussion moment, there was a trend for decreasing percentages of tmtOK.

Conclusion/Application to practice
Team involvement in the analysis/discussion of results is critical to goals achievement.

A routine analysis/discussion of implemented practices seems important to achieve a continuous improvement.

With time healthcare team awareness about the goals tends to decrease.

It would appear that a well-trained and motivated team results in an increase of treatments that achieve all objectives.
Influence of dialysate flow-rate in the consumption of concentrated acid and the dialysis dose

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Background
Concentrated acid used in haemodialysis is a product that is not valued clearly in uses and consumption. Nurses who handle acid should be aware to take action, and avoid excessive expense.

Objectives
1-To quantify acid consumption depending on the concentration, the dialysate fluid flow rate (Qd), the dialysis time and the kind of carafe (small or 500 litre barrel).
2-To find evidence in order to make good use of acid by nurses and recommend a Qd pattern more cost efficient.

Methods
Prospective study performed during one year in four dialysis units (47,167 sessions). Calculated and processed in Excel:
- Time dialysis
- Dialysis dose (KT)
- Dialysate fluid flow rate (Qd)
- Annual consumption of acid concentration 1:45

Results
Canisters consumption of 500-1000 Litre is similar compared with the small carafes (3.5 Liters), with no differences in the time of dialysis or the dialysis dose measured (KT).

There is a significantly greater consumption of acid dialysis (21.1%) with the fluid flow manual of 800ml/min, with no differences in the dose of KT and with a similar time of dialysis.

Conclusion/Application to practice
If the monitor does not set the Qd automatically, to increase it in more than 500ml/min does not produce a much higher dose of dialysis, but greatly increased the acid consumption (and litres of water).

The large carafes of 500-1000 Liters are suitable to reduce the nursing workload, but for small carafes it is very important to end up the whole liters of acid in order to decrease the costs.
Self-dialysis: Project implementation


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Background
CKD patients on dialysis experience significant changes in their daily lives as a result of disease. Living with many stress factors, they become more passive, they lose self-control, self-esteem, motivation, and a sense of dependency inevitably emerges.

Supporting CKD patients in self-care includes making them an active element in their own treatment of the disease, which impacts patients’ independency and self-esteem. It has to be individually evaluated which activities can be performed by the patient themselves.

Objectives
• To develop and follow-up on actions to involve sick people in health care.

Methods
10 people have been included according to the following criteria: bringing forward of the buttonhole cannulation technique; cognitive fitness; sustained motivation; low level of limiting comorbidity according to Charlson comorbidity scale; integrated manual dexterity in functional status, monitored through the Karnofsky performance scale, with a total score ≥100. Patients were trained and cared for in a co-managed environment with the multidisciplinary team.

Results
This project began in 2012, and included a total of 10 people. 5 of them were transplanted, 3 people perform self-dialysis at the moment and 2 are integrated in the design phase. The average time on haemodialysis has been 21 months (1-3.5 years). The learning time of each patient has been very variable, but with an overall average of 6 months (4-12 months).

Conclusion/Application to practice
The partnership in care management between the multidisciplinary team and the patient motivated and committed each patient. This resulted in an increase of each patient’s autonomy and, as expected, in a better quality of life.
Implementation of Nursing Standards in a Dialysis Network

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Background
Nursing is a science and an art. As scientists, nurses engage in research, development, implementation, and analysis. Improving patient safety by promoting quality in nursing care and nurses’ work has become a priority for all healthcare organisations. Both quality and healthcare experts advocate improving nursing quality through quality measurement, research and collaborative learning. A nursing project team, involving several countries across in Europe, developed and revised nursing standards. This resulted in quality directives, part of the network integrated management system and the subject of annual auditing.

Objectives
Implementing nursing quality standards for hygiene and infection control and good dialysis care in a dialysis network.

Methods
The implementation process was scheduled for a one-year time frame and included mandatory steps of developing the local language version in each country, training the staff, and checking the training results by means of theoretical and practical questionnaires. The results were anonymously collected and a copy was sent to the document owner. The implementation process was completed when the country-specific final report including the results of the questionnaires was released and approved by the local management.

Results
20 countries have implemented the nursing standards. 4 countries are not part of the integrated management system; despite this they followed the same implementation rules. Implementation results were checked by performing expert audits in selected clinics which found only minor deviations from the standard.

Conclusion/Application to practice
Quality standards for nursing care, developed by nurses, were well accepted. The expert audits revealed compliance to quality standards and positive feedback from nurses.
Mind the Gap! A Country Training and Education Manager is essential!
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**Background**
A true collaborative approach to training and education requires a cultural shift in how training can be delivered locally and how training and education is recognised. Nurse training and education is a continuous process and in a dialysis network this is a challenge. The training concept, course and materials required to support a program are produced at a corporate level, but local deployment is an activity that requires customisation.

**Objectives**
To raise awareness and obtain the buy-in of each country management to have a training and education manager. Creating a training and education culture for nursing in each country of the network.

**Methods**
Pilot in 7 countries to show the essential role of a Training and Education manager in implementing the corporate education programme.

**Results**
All involved countries have defined the profile, skills and know-how required for the Training and Education manager function.

**Conclusion/Application to practice**
The kick off meetings revealed the essential role of the Training and Education manager function in successfully implementing and locally managing the nursing education programme. Ideas for further improvement in the programme were identified to support and obtain credits for nursing continuous education at country level.
Validation of The Fluid Intake Appraisal Inventory for patients on haemodialysis in Denmark

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Background
Many patients receiving haemodialysis have problems limiting their fluid intake, and this might be influenced by their self-efficacy (SE). There is a need for validated SE measures as it enables evaluation of fluid management interventions aimed at improving patients’ SE. The Fluid Intake Appraisal Inventory (FIAI) was developed to evaluate patients’ SE with regards to fluid intake.

Objectives
The aim was to translate and validate the FIAI in order to use it in Danish-speaking populations.

Methods
Following conventional steps of forward and backward translation, the Swedish FIAI was translated into Danish. Conceptual and semantic equivalence was established by having three professionals and four patients evaluating the appropriateness and making suggestions for clarity in the translated version. In May 2015, 225 patients from four dialysis centres (including their satellite units) completed the Danish FIAI. Internal consistency and criterion-related validity were evaluated.

Results
The evaluation of conceptual and semantic equivalence of the translated FIAI revealed two concepts needing further clarification, (“myrekryb” (=cramping) and “fest” (=party). The Danish FIAI had high internal consistency; Cronbach’s alpha of 0.97 for the total scale. The criterion-related validity, tested with Spearman’s rho, was -0.141 (p=0.05) for the total scale.

Conclusion/Application to practice
These primary findings indicate that the Danish FIAI can be used in clinical practice as a screening instrument for SE and as an evaluation tool among adult haemodialysis patients with restricted fluid allowance. The comparatively low criterion-related validity indicates that further refinement is needed.
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Digital literacy in patients with Chronic Kidney Disease

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Background

Progression of Chronic Kidney Disease (CKD) can be delayed by adequate treatment and behavioural changes. The implementation of web-based interventions such as electronic health records, telemonitoring and digital coaching can be important tools to help patients become more active participants in their care.

Objectives

The aim of this study is to evaluate the access of patients with CKD to the internet and web-based interventions.

Methods

456 patients with CKD from the University Hospitals of Leuven were included in this study. Patients completed a standardized questionnaire. The study included 205 CKD stage IIIb-IV, 129 haemodialysis, 22 peritoneal dialysis and 100 transplanted patients.

Results

The majority of patients have internet access, this number is the lowest in the haemodialysis (55%) and the highest in the transplanted patients (85%) and peritoneal dialysis patients (91%). Only 23% of CKD patients have a smartphone or a tablet, as opposed to 59% renal transplant recipients. This difference can probably be explained by the age difference. The mean age of renal transplant recipients is 56 years, of haemodialysis patients it is 74 years. Of the transplanted patients with web access 25% were aware of access to their online patient file.

Conclusion/Application to practice

Telemonitoring and web-based behavioural support can improve lifestyle changes with a better outcome as a result. Our findings however suggest that there is a digital divide with the risk of leaving behind a substantial proportion of patients. New strategies must be invented to support these patients and improve their digital access.
Continuous renal replacement therapy in extracorporeal membrane oxygenation pediatric patient

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Background
Extracorporeal membrane oxygenation (ECMO) in pediatric patient with acute cardiopulmonary insufficiency has very high incidence of acute kidney injury (AKI) in 70-85% patient. Mortality in patients on ECMO is associated with the development of AKI.

Results
We want to present our experiences in CVVHD and ECMO in the period 2011-2015. We treated 7 pediatric patients, 6 of them had a fatal outcome and 1 survived. An eight-month baby who previously was healthy had an acute viral infection with myocarditis, unknown etiology, progressed to cardiogenic toxic shock with multiorgan failure. During the resuscitation of 120 minutes, the extracorporeal membrane oxygenation (ECMO) was utilised. As acute renal failure and hypervolemia occurred, continuous venovenous haemodialysis (CVVHD) was commenced x 24 hour during the 10 days. BP rate 50 ml/min, flow dialysate 350 ml/h, UF 10-100 ml/h. Six (6) days CVVHD was worked through ECMO and four (4) days via femoral CVK. Heparin 500 ij/h [depending of APTT >160s] was used through ECMO. Despite the serious complications [3-4 coagulations kits in days, hypotension, bleeding] cardiac and renal function recovered leading to termination of ECMO and CVVHD treatment.

Conclusion/Application to practice
CVVHD and/ECCMO treatment are very complex and needs multidisciplinary modality treatments, high level of knowledge, good communication of critical care and dialysis nurses, perfusionists, intensive care pediatric doctors, specialist nephrologists.
Haemorrhage after Tenckhoff-catheter placement – acquired factor VIII deficiency

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Background
Our dialysis center has provided peritoneal dialysis (PD) since 1978. Previously, Tenckhoff-catheters were placed via an open surgical technique; subsequently, laparoscopic technique for placement have been utilized.

Objectives
Case study

Methods
Z.N., (female), was managed for polycystic kidney disease from 1998 She gave birth to two children (the latter in 2011).

Results
At the start of 2015 we added ZN to the surgery waiting list. On the 1st of April 2014, laparoscopic placement of the Tenckhoff-catheter was performed due to the progression of her illness. Preliminary-routine examinations (thrombocytopenia, INR) did not imply blood coagulation disorder. Haemorrhaging was not in her past history.

Life-treating bleeding occurred after the operation from the abdominal surgical area. Therefore 4 further operations were necessary.

Further investigation showed her aPTI value elongated (107sec), and that the factor VIII (FVIII) deficiency (<25%) was responsible for the haemorrhage.

Haemorrhage was controlled by the administration of transfusion (FFP, red blood cell, platelet) FVIII in combination with prednisolone and cyclophosphamide.

Meanwhile, CAPD on May 12th PD-treatment has begun.

We lowered, then discontinued the dosage of immunosuppressive drugs at the end of June. The FVIII level was resolved (114%), the aPTI value decreased gradually (43sec), immune inhibitor was not detectable.

The patient is well, she is on CAPD. Malignancy, infection or systemic immune disease do not appear to be the cause of the FVIII deficiency.

Conclusion/Application to practice
FVIII deficiency is a rare disease. The causative agents remains unknown in 50% of the cases. The aPTI is now a routine test before surgical interventions in our facility.
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Automated peritoneal dialysis for patients older than 60 years - special aspects of training

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**Background**
With automated peritoneal dialysis a cycler performs nightly dialysis solution exchanges. Elderly patients need more time to become familiar with this cycler. During the training, the nurse must consider a number of special characteristics of elderly patients: fear of equipment, limited movement of fingers, altered mental reactions etc.

**Objectives**
To specify the duration of an effective training program for patients older than 60 years using a self-therapy cycler.

**Methods**
From March 2014 to October 2015, 17 patients began automated peritoneal dialysis (7 patients were over 60) in our dialysis centre. The training program included theoretical and practical parts. Firstly, the patient studied training videos and manuals. Also, he/she observed the actions of nurses. Then he/she prepared the cycler under the supervision of the nurse. As the final step – the patient conducted the procedure himself/herself. When the training is finished the patient must pass tests of theoretical knowledge and practical skills.

**Results**
Average duration of the training is 5 days, but the training of elderly patients takes 8 - 12 days. According to the results of the test, only 55% of elderly patients are knowledgeable about the cycler after 5 days. After 10-12 days of training the result rises to 83.3% and patients demonstrate sufficient skills.

**Conclusion/Application to practice**
This programme is based on a systematic and consistent approach. It helps patients over 60 years to successfully apply acquired skills for self-treatment using the cycler. The nurse encourages patients to get involved in the training process, to acquire skills step by step, and to be satisfied with this choice of therapy.
P 142
A patient with combined CAPD and HD methods
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Background
In a non-functional family background and with CAPD treatment in place, critical situations may arise which negatively reflect in the quality of patient treatment. As a result, a problem with inadequate therapy occurs along with sudden complications, which need to be addressed on an individual basis. In this case by a combination of CAPD and HD. As a result of the partner’s pressure, the patient reduced the number of CAPD replacements during the day. The overall condition worsened, but the patient continued to prefer the PD therapy.

Objectives
Securing the quality of performed treatment, patient’s comfort and respect for family members.
Acceptance of the ill member by the family. Solution of health complications arising from insufficient dialysis dosage. Securing quality functional AVF and patient education.

Methods
Regular check-ups. Evaluation of the present state in performing PD in home conditions.
Problem identification. Preparation of the patient for a combination of PD and HD treatment due to the supplementation of dialysis dosage. A regular check of vascular access and PD catheter, handling complications.

Results
Adaptation to the combined CAPD and HD treatments. CAPD supplemented by two short haemodialyses in a week when the patient did not perform his replacements and the preparation of the patient for a potential future transfer to HD.

Conclusion/Application to practice
Individual approach to the patient is important, it brings positive results in long-term treatment, and when used correctly it ensures both good results of the treatment and stabilisation of the family background and an improvement of the quality of our patients’ lives.
P 143
Improved sweetly taste without diabetes mellitus after switching the mode of dialysis
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Background
Patients with end stage renal disease have a great variability in the perception of taste, mostly due to organic and psychological factors or due to both in some circumstances.

Methods
A 74 year old lady undergoing haemodialysis due to lupus nephritis. She has history of longstanding hypertension, aortic valve stenosis, gastro esophageal reflux and chronic constipation. She was put under automated peritoneal dialysis earlier. She was autonomic in performing her exchanges including physioneal and icodexrin. She started complaining of sweetly taste without smell neither ocular impairment. The symptom persisted until she was transferred to haemodialysis.

Results
Five primary tastes have been described including sweet, bitter, umami, sour and salty. Moreover, dialysis patients frequently reported metallic taste or agueusia. Patient transferred to haemodialysis due to the failure of peritoneal dialysis. By the end of the first, the patient reported the disappearance of the symptoms.

Conclusion/Application to practice
The taste imbalance remains an intriguing complain in patient undergoing dialysis. Further study is required to clarify this condition.
Causes of patient dropout from peritoneal dialysis in the past six years

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Background
The leading causes of patient dropout from peritoneal dialysis due to technique failure are catheter problems (inadequate positioning, leak), infections (tunnel infection, peritonitis), and peritoneal wear-out (AGE accumulation, submucosal thickening).

Objectives
We have reviewed all prevalent patients at our PD unit over the last 6 years to see all the causes leading to patient loss to the PD programme.

Results
At our centre, we followed 72 patients over the past 6 years. During that period 9 patients were transplanted, 3 patients has moved to other dialysis units and 1 patient rejected further treatment. There were 9 patients transferred to haemodialysis for technique failure and 20 patients died.

The causes of death of our PD patients included metastatic tumour [3], infection [2], amyloidosis [1], cardiovascular causes [8] and old age [6].

The causes of their transfere to HD included peritoneal fibrosis [1], pleuroperitoneal leak [1], infection [3], major abdominal surgery [2] and inadequate dialysis [2].

Conclusion/Application to practice
We found that only 9 of 42 patients lost (21%) were related to technique failure. Proper pre-dialysis assessment of the patients can reasonably reduce this ratio. Most of these events were related to unforeseeable events. An increasing number of dropout from the program is related to the increasing number of elderly patients enrolled to PD: older patients have more concomitant diseases and are more susceptible to morbidity unrelated to PD. Therefore, elderly patients require even more complex attention from the PD team.
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Keloid formation of the skin above external cuff of peritoneal catheter
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Background
Herein we present 34 year old, female diabetic patient whom peritoneal catheter was placed in January 2015. During the 24 years of type 1 diabetes mellitus, she has developed all diabetic complications including ESRD.

Objectives
Due to earlier implantation of insulin pump on the right abdominal side, peritoneal catheter was placed on the left side. Two month after the PD catheter placement we observed over granulation of tissue growing on the skin a few centimeters from the exit site -in the tract of the peritoneal catheter, just above the external cuff. After consultation with the surgeon we recognized keloid tissue healing.

Methods
Consecutive superficial pustule with superinfection complicated the regular exit site care. We have managed to preserve exit site from infection for 6 months. She was admitted to the hospital with acute peritonitis, complicated with mechanical complication of the catheter, which was laparoscopically replaced, without formation of the new exit site, but with total excision of the keloid in October 2015.

Results
During that period the patient was temporarily transferred to haemodialysis. After one month we started again with peritoneal dialysis and noticed the same keloid formation on the former excision scar site with consecutive ulceration and superinfection. Presently, the catheter is patent, she had one episode of exit site infection and is on waiting list for simultaneous pancreas and kidney transplantation.

Conclusion/Application to practice
Keloid in type 1 diabetic patient could complicate the nurse exit site care.
The Importance of Different Learning Styles in Peritoneal Dialysis Patient Training


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Background
Peritoneal dialysis (PD) offers the opportunity of a better quality of life and successful treatment with PD depends in great degree on good training of a patient.

Objectives
In this report, with three patients having different learning skills we want to find out the importance of different learning styles in peritoneal dialysis patient training.

Methods
Patient 1: 24-year-old male, after one year because of complications related to electrolyte imbalance during haemodialysis, PD treatment has been recommended. At the end of training he brought his drawing describing the PD when he came to the hospital.
Patient 2: 47-year-old female, when the PD training finished, she brought a six page text prepared by herself about PD and diet.
Patient 3: 67-year-old male, because of the visual defect in his eyes training program was given to his wife and daughter. They took notes during training and also they have recorded to the camera.

Results
We use books, videos and lectures during the PD training. According to the learning style; our patients were drawing pictures, writing text or recording. This topic draw our attention because knowing patients style of learning help the PD nurse which way she can train the patient and which materials she can use. Commonly; learning styles are divided into three groups; Visualising, Auditory and Kinesthetic Modality.

Conclusion/Application to practice
From the predialysis stage if we determine our patient learning style; we can provide effective learning in a shorter time, compliance to the treatment may increase.
The influence of baseline serum phosphorus on first peritonitis in peritoneal dialysis patients

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Background
Peritonitis is one of the major complications of peritoneal dialysis (PD). A number of factors can contribute to the development of peritonitis. The aim of this retrospective study was to evaluate the relationship between different non-infectious clinical and biochemical factors and first peritonitis episode in all PD patients who started with PD in our centre between May 1998 and October 2015.

Methods
A total of 41 patients (25 males, 16 females; age 41.4±13.4 years at the start of PD) were the study subjects. Laboratory data 1 month after the start of PD treatment were analysed. During follow-up of 35.9±32.7 months, 10 patients developed peritonitis (peritonitis group).

Results
At the start of PD treatment mean eGFR (CKD-EPI creatinine equation) was 6.6±1.9 ml/min/1.73m2, mean serum creatinine 746±178 μmol/L, mean serum albumin 38.3±5 g/L, mean hemoglobin 117.5±17 g/L, mean serum potassium 4.6±0.7 mmol/L, mean serum phosphorus 1.63±0.44 mmol/L and mean iPTH 395.5±315 pg/ml. Using independent samples T-test we found statistically significant difference between both groups only in serum phosphorus at the start of PD treatment (P=0.023). Mean phosphorus in peritonitis group was 1.9±0.5 mmol/L, and in non-peritonitis group 1.5±0.37 mmol/L. There was no difference in other factors between both groups. With multiple regression analysis (included variables: age, eGFR, hemoglobin, albumin, phosphorus, iPTH) peritonitis as the dependent variable was associated only with phosphorus (P = 0.011).

Conclusion/Application to practice
Serum phosphorus at the start of PD treatment is related to the development of the first peritonitis episode.
The national project of assisted peritoneal dialysis in Slovenia

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Background

The population of patients with end-stage renal disease in Slovenia is older. The average age of patients who start dialysis treatment is 67 years. PD uptake is 3%. We have identified reasons and barriers why older people cannot choose the PD. We started activities and an integrated approach to solve this problem at a national level. We have proposed the introduction of assisted PD with the help of community nurses and the nurses in elderly care homes.

Results

We have joined the Slovenian Nephrology Association and the Association of Slovenian dialysis nurses to achieve a common goal of assisted PD. Project assisted PD was presented and it was accepted at the Ministry of Health as a project of assisted PD in Slovenia. The Ministry of Health proposed to make a financial evaluation of PD implementation in the home care. Plan for professional training and use of educational materials was made by nurses. The National protocols (NP) in the field of PD was approved by Ministry of Health. The NP covers organizational, professional and educational spheres of health care in PD. We developed a protocol: Positioning of treatment of patients with assisted PD with ESRD. This protocol will be used for all nephrology departments in hospitals in Slovenia. Special knowledge will be gained by PD nurses working in dialysis department, home care nurses and nurses in elderly care homes.

Conclusion/Application to practice

In 2016, we will see an increase in the integration of the elderly with assisted PD and consequently a decrease in burden and costs to dialysis centers.
Perception of peritoneal dialysis among nephrologists in Turkey

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Objectives
Aim of this study is to investigate the perceptions of Turkish nephrologists about peritoneal dialysis as an option of renal replacement therapy (RRT).

Methods
One hundred-fifty participants were included in the survey. 21 = professors, 32 = associate professors, 9 = assistant professors, 61 = nephrology specialist, 27 = nephrology fellows. All participants completed a questionnaire consisting of 35 questions.

Results
76.7% of nephrologists stated that patients respected the expert opinion of the nephrologists on the selection of RRT, 52% of nephrologists remarked that it should be the patients themselves as a decision maker on the selection of RRT, 46% of nephrologists stated that it should be the physician as decision-maker. Questions asked included: which option is the best starting dialysis method? Which one has better early survival rate, residual renal function to be protected longer period, anemia to be controlled better, improved patient satisfaction and quality of life? In addition, 74% of nephrologists stated that haemodialysis is superior in terms of RRT methods and 46% of them denoted that haemodialysis provides better volume control.

Conclusion/Application to practice
Nephrologists support the peritoneal dialysis option for patients with end-stage renal disease. But, among dialysis options in Turkey, why peritoneal dialysis option is preferred but there is a lower rate should be investigated in more detail.
Active approach to senior patients requiring nephrological care – continued project
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Background
The age of the population continues to increase and along with it also the number of the diseased whose health condition does not enable them to take care of their treatment themselves.

Objectives
Follow up of our project from 2014-2015. Continue to monitor and provide nephrological care to patients who we have actively located in seniors’ centres. At the same time, our vision was to train personnel in the home care agencies to perform assisted peritoneal dialysis.

Methods
Monitoring 54 patients [creatinine above 220 mcmmol/l] in the nephrological surgery in regular intervals and eduction for RRT. 8 home care agencies were addressed with the offer of training personnel in performing peritoneal dialysis.

Results
- Duration 12 months, 54 clients, out of which 21 ill and 4 with CKD
- After 12 months, renal function worsened to the stage of CKD 5 in 5 patients
- HD commenced by 3 patients, assisted PD commenced by 2 patients
- Complete training with issuing certificates on performing peritoneal dialysis in home environment in 5 home care agencies

Conclusion/Application to practice
We have arrived at the conclusion that the treatment in the patient’s home environment and to a certain extent also the adaptation to the treatment regime and patient’s individual needs is one of the large advantages of assisted peritoneal dialysis. In addition, this project enabled us to cooperate with home care agencies and consequently we have established a functioning multi-disciplinary team of healthcare professionals.

Disclosure: No conflict of interest declared
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CVC exit site care: setting standard for frequency and type of dressing

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Background
Patients with CVC are more prone to catheter exit-site related infections which are in turn associated with higher morbidity, mortality and costs.

Objectives
To identify the best type of dressing to be used at the catheter exit site of haemodialysis patients and the frequency in which dressings should be replaced.

Methods
Data collection related to the type of dressing and the dressing replacement frequency using a clinical database.

Results
Data were extracted for 184 patients with a CVC. Dressing Type distribution was as follows: gauze dressing 76.1%, transparent dressing 18.5% and other dressing used 5.4% of patients. The dressing replacement frequency distribution was as follow: every treatment 84.8%, twice per week 1.6% and weekly 13.6%. The most frequent association was gauze dressing and every treatment for 73.5% of the patients.

Conclusion/Application to practice
Future studies need to evaluate outcomes in the CVC focusing on the type of dressing and dressing replacement frequency with careful assessments of complications, functionality, cost benefit, and last but not least, the patients’ preference and quality of life. Ultimately, this information will provide relevant indication to individualise and optimise the exit-site care to reduce morbidity, mortality, and increase the quality of life in this patient population.
The comparison between bioimpedance parameter and M.I.S* in dialysis patients

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Background
Malnutrition is an important cause of morbidity and mortality in dialysis patients. Early diagnosis of malnutrition in dialysis patients is extremely important for success of nutritional therapy. Malnutrition-inflammation score is a useful, simple, but time consuming questionnaire for diagnosis of malnutrition, sarcopenia and cachexia.

M.I.S* = method – malnutrition, inflammation – the validation of malnutrition

Methods
Malnutrition-inflammation score and bioimpedance body mass indices: phase angle (Phi) as prognostic indicator, lean tissue index (LTI), fat tissue index (FTI), over-hydration status (OH), are compared in one haemodialysis centre in Ljubljana (203 patients).

Results
Results of linear correlation between MIS and Phase angle are on the picture. High MIS suggests a poor prognosis for malnutrition and quad vitam but low value of Phi has similar meaning. Value of Phase angle (Phi) is positive dependent of lean tissue index (LTI), but negative with fat tissue index (FTI), and over-hydration status (OH).

Conclusion/Application to practice
Negative significant correlation between Phase angle and malnutrition-inflammation score is present. Low values of Phi with negative prognosis in dialysis patients are connected with high malnutrition-inflammation score, which also results in a poor prognosis. Phi is useful, simple and fast in showing malnutrition and poor prognosis in dialysis patients. Malnutrition therapy should therefore be started based on bioimpedance body mass compositions results. BIA has good reliability as compared to other accepted methods of body composition analysis. Phase angle is a good marker of nutrition status in haemodialysis patients and patients with low values of phase angle need more intensive observation, diagnostic and nutritional intervention. Acknowledgement.
Impact of nurse dietary education on potassium levels in patients at nephrology outpatient clinic

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Background
Patients with chronic kidney disease (CKD) often need to limit certain eating habits and products that potentially increase serum potassium level. Hyperkalaemia can cause arrhythmias or even sudden death. The aim of our study was to determine the impact of nurse dietary education on potassium in CKD patients at Nephrology outpatient clinic (NOC).

Methods
In two months we screened 284 patients’ potassium from blood samples taken one week before these patients visited NOC and enrolled 35 patients with CKD stage 3 and 4 who had potassium >5 mmol/L. Three nurses evaluated patients’ eating habits by an interview and performed dietary education. Nurses conducted a nutritional assessment of these patients and gave them written instructions (type of food with a lot of potassium and those which are suitable to digest). After two weeks we controlled potassium level.

Results
At the day of visit at NOC 11 patients had potassium <5 mmol/L and 24 patients remained with potassium >5 mmol/L (mean 5.5±0.23 mmol/L). Two weeks after nurse dietary education we monitored potassium for all 24 patients again (mean level 4.9±0.28 mmol/L) and found statistically significant decline of potassium in our patients (p<0.0001; Paired sample t-test). Mean decline of potassium after dietary education was 0.48±0.33 mmol/L and in only one patient increase of potassium by 0.27 was found. During the study no changes of regular therapy was made.

Conclusion/Application to practice
The results of our pilot study showed that dietary education has a significant impact on the serum potassium level in patients treated at NOC.
Evaluation of nutritional status using a malnutrition inflammation score protocol

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Background
Malnutrition is prevalent among dialysis patients and a strong association exists between poor nutritional status, morbidity and mortality. For overall quality of care in this population, early preventive measures and monitoring of the nutritional status are as important as haemodialysis treatments.

Objectives
To assess the nutritional status in dialysis patients and implement adequate actions.

Methods
The malnutrition inflammation score (MIS) protocol monitors 10 parameters (changes in dry weight, appetite, gastrointestinal symptoms, exercise capacity, comorbidity, physical inspection, BMI and laboratory findings). Each parameter is scored from 0-3. A total score <5 reflects normal nutritional status (screening every 6 months); total score of 6-8 indicates early signs of malnutrition (screening every 3 months) and possible introduction of nutritional supplements; total score >9 indicates monthly assessment with introduction of nutritional supplements and detailed nutritional counselling.

MIS scores of 41 patients (average age of 68 years; 37% diabetics; 63% males) were evaluated every 3 months over one year.

Results
At study start the average MIS score was 6.1, after one year it was 4.8. Out of 41 patients, 14 (36%) patients were using nutritional supplements. Nutritional supplements were consumed by 8 (20%) patients only during HD treatments, by 5 (12%) patients at home and by 1 (2%) patient at home and in the clinic.

Conclusion/Application to practice
Frequent monitoring of dialysis patients’ nutritional status with timely actions and individualized counselling has led to a lower average MIS score, which reflects a better nutritional status. All of this may have a positive impact upon patients’ quality of life and life expectancy.
Analysis of nephrology’s nurses preparation to conducting nutritional education to patients with CKD
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Background
Key words: nutritional education, diet, chronic kidney disease
Nutritional therapy is very important in the education of patients with Chronic Kidney Disease (CKD). A balanced diet helps to reduce the development of renal complications.

Objectives
The aim of the presented research was to assess the knowledge of nephrology nurses necessary in nutritional therapy education.

Methods
The research covered 237 nurses working in the nephrology and dialysis wards. A method of diagnostic survey was implemented with the use of the author’s questionnaire. The study was conducted between December 2014 and March 2015.

Results
In opinion of 81.9% of the respondents keeping an optimal health condition in predialysis period is dependent on limitation of protein supply.

68.4% of the respondents indicated the right way of taking medications, that bind phosphorus in the alimentary canal by haemodialysing patients and 73.4% of them knew a proper way to eliminate potassium out of the food.

51.89% of the respondents didn’t have an opportunity to cooperate with a dietician and 84.81% of them expressed willingness to participate in additional courses in the area of dietetics.

Conclusion/Application to practice
Most of the nurses displayed good knowledge of patient nutrition in the treatment of CKD. The knowledge was closely dependent on their education, work experience and a place of employment. Most of the respondents agreed that additional courses in the field of dietary counselling are needed and expressed willingness to participate in those courses.
Prolonged malnutrition in haemodialysis patients due to Clostridium Difficile infection

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Background

Over the last decade Clostridium Difficile (C.Diff) infection has occurred more often secondary to antibiotic therapy. C.Diff infection can result in life threatening condition via continuous diarrhoea secondary to pseudomembranous colitis. The infection can be more serious in dialysis patients who have an impaired immune defense due to their chronic disease.

Objectives

We have collected data on patients at our dialysis unit who have suffered C.Diff infection over the last year and nutrition parameters were analyzed.

Results

During the 1 year period 4 of our 126 patients in the chronic haemodialysis program has suffered C.Diff infection. The acute phase of the infection was usually prolonged with relapsing diarrhoea. The nutritional status of the patients has dropped. The average weight loss was almost 10%, the decrease of serum albumin level was 33% and the decrease in Hgb level was 23%. We have lost 1 of the 4 patients while recovery of the others took 5 to 7 months for the above parameters to return to their baseline level.

Conclusion/Application to practice

Most important is the prevention of the infection although it usually occurs at inpatient wards. Once C.Diff is acquired adequate antibiotic therapy is necessary to eliminate the enteric pathogens. Patient should be treated in isolation in order to prevent further contamination in the dialysis unit. Having the infection eliminated the most important task is achieving positive protein balance in order to improve the nutritional state of the patient as soon as possible.
Comparing the nutritional needs of a healthy person and a patient receiving dialysis

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Background
Patients, receiving regular dialysis have to get used to a new lifestyle. One of the concerns is about following the necessary dietary measures. But is there really a reason to worry? What are the differences between dietary habits of a healthy person and those of a patient receiving dialysis?

Objectives
Numerical comparison of the needs of the healthy person and a patient receiving dialysis with the aim of proving that the intake of main nutrients differs only in the loss of nutrients during the dialysis itself and in the case of an unexpected secondary disease as a prevention of malnutrition.

Methods
Using numerical calculations and available dietary recommendations we compare the intake of individual nutrients in the diet of a healthy person and a patient receiving dialysis.

Results
Calculations confirm that a patient receiving dialysis has slightly increased intake of proteins, but only to compensate for the losses due to the dialysis procedure or due to secondary diseases.

Carbohydrates and fats are flexible components of the diet that depend on the current condition of the patient and the amount of phosphorus and potassium received.

Conclusion/Application to practice
Dietary measures during dialysis lead patients to better choices when it comes to the quality of food.

Diet must meet not only dietary needs of human organism, it must also be perceived positively. Stress affects negatively metabolic processes in body and thus contributes to the development of obesity. The way patient is educated about dietary measures is therefore very important.
Influence of protein intake during dialysis in patients receiving haemodialysis

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Background
Chronic Kidney Disease patients in pre-dialysis status have a restricted protein intake. When they commence on dialysis their albumin level can be very low and they have a restrictive diet, additionally dialysis implies a protein loss. All this makes it difficult to maintain proteins at optimal levels.

Objectives
To improve albumin levels by education and training and the use of a protein supplement during a six months period.

Methods
We performed education to all patients with an albumin level of less than 4 g/dl, explaining the importance of a diet rich in protein. We also provided them with a list of menus prepared by us, to guide them which foods they should consume throughout the day.

For patients with an albumin less than 3.5 g/dl, we provided them with 10 g of a protein supplement at each dialysis session.

Exclusion criteria: patients who have protein intolerance and patients who have refused to take the protein supplement.

Results
We studied the intradialytic levels of albumin during the six months before taking protein supplement and six months after. We observed a slight improvement in the albumin level; although this improvement was conditioned by PCR level. The improvement was more significant in patients with normal PCR.

Conclusion/Application to practice
We intend to roll out this initiative to other clinics.
Reduction of the use of phosphate binders by the haemodialysis patient through nutritional education

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Background
Promoting patient education in the correct use of phosphate binders can help create efficiency savings and nurses have a key role in the education of patients and their relatives.

Objectives
Undertake a comparative study on the effects of phosphate binders consumption between clinics where education for phosphate binders is performed and another where no education is performed.

Methods
- DESIGN: Analytical quasi-experimental study.
- SAMPLE: Study group from one dialysis centre and control group from another centre.
- PROCEDURE:
  1. Selection of the members of the study.
  2. Study group completes a pre-knowledge questionnaire.
  3. Study group completes a weekly menu.
  4. Study group undertakes education session.
  5. Monthly review of phosphorus levels, nutritional habits and compliance with phosphate binders.
  7. Study group completes a post-knowledge questionnaire.
  8. Review of a weekly menu for a study group.
  9. Comparison of results.

Results
At the end of the study, the patients in the study group have reduced the consumption of phosphate binders in relation to the control group. In addition, the patients in the study group have improved their knowledge and nutritional habits.

Conclusion/Application to practice
Generally, there is a physical, mental and social improvement by regularizing the levels of phosphorus, this lead to patients feeling more involved and motivated in their treatment and to a reduction in the costs of their disease.
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Initiating person centered care at a multidisciplinary centre in Sweden
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Background
To coordinate medical treatment and nursing care around patients with heart disease, reduced kidney function and diabetes (HND) a multidisciplinary clinic was established in Stockholm. The care at the clinic was based on person-centered methodology, which was new for some staff and possibly new for the patients also.

Objectives
To study health care professionals’ way of working person-centered at the HND-centre.

Methods
An observational study was conducted using a non participant observation technique, including first time visits, referrals and regular patient encounters between doctor/nurses/ paramedical staff and/or patients. The observer took also an active part in coffee breaks and at lunch discussions with the health professionals.

Results
Twenty-nine patient encounters were observed (20h 42min). Other observations, such as coffee breaks, lunch discussions, other conversations and telephone calls were observed for approximal 20h. The observations showed that the way of working person centered varied among the staff. The staff had a tendency to fall back into traditional roles. In 17 meetings some questions were left aside unanswered. When a family member was present, the patients tended to take a more passive role.

Conclusion/Application to practice
Categorizing the degree of person-centeredness in complex meetings is in itself a challenge. This pilot study demonstrates a large spread regarding how health care professionals use person-centered care (PCC) in patient meetings. This indicates that when implementing PCC, it is important that staff involved share an understanding of how to use this new approach. Furthermore PCC must also be explained to and accepted by the patients.
Burnout and job satisfaction among nephrology staff
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Background
Dialysis nurses in hospital-based nephrology unit work in a special environment including high technology equipment, intensive care and long-term interaction with patients and families. Studies talk about burnout among dialysis nurses, workload, autonomy, job satisfaction, communication ability with demanding chronic patients over the years.

Objectives
To determine the most influential factors on job satisfaction and burnout among nephrology staff in comparison with internal-medicine wards (IMW) and intensive-care unit (ICU) nurses in our hospital.

Methods
Across sectional study, 112 items Questionnaire included demographic and work information, examination of autonomy, workload, job satisfaction, peers and supervisors support, motivation, attitudes towards patients, perception of patient satisfaction and burnout (Maslach).

Results
110 questionnaires: 26 nephrology staff, 7 ICU and 77 IMW. Pearson correlation (PC) showed negative correlation between job satisfactions and burnout: -0.53, -0.76 and -0.58 respectively in Nephrology, ICU and IMW (all pv<0.05).

Job satisfaction in Nephrology most influenced by autonomy (PC=0.54), supervisors support (PC=0.51), burnout (PC=0.53); while burnout mostly influenced by perception of patient satisfaction (PC=0.53), attitudes toward patients (PC=0.75), and autonomy (PC=0.67), all pv<0.05.

ICU nurses’ burnout and job satisfaction was influenced by autonomy, motivation and interaction with patients, while IMW by motivation and patients’ interactions. Surprisingly workload and peers support didn’t influence on work satisfaction & burnout.

Conclusion/Application to practice
Encouragement for autonomy and improved relationship with patients may promote job satisfaction and reduce burnout.
The influence of training and family support on treatment adherence of haemodialysis patients

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Background
The family support for patients with Chronic Kidney Disease is essential for the patient to feel supported in order to face the new lifestyle changes such as, dietary habits, vascular access care, compliance with medication, etc.

Objectives
To achieve a decrease in biological parameters as Phosphate, Potassium, and overhydration.

To increase patients’ and their families’ knowledge regarding the correct dietary habits and vascular access care.

Methods
Two groups of patients were selected, a study group and a control group. Study group (including patients’ families) was provided with information about vascular access care and dietary habits (PO4, K+ and fluid restrictions) and also given advice regarding the use of phosphate binders. Over a 5-month period biochemical parameters for PO4, and K+, interdialytic weight, appearance and assessment of vascular access were observed in the study and control group.

Exclusion criteria:
Patients with language, cultural and intellectual barriers, patients in nursing homes and psychiatric and dementia patients.

Results
After 5 months of study, it was concluded that patients who have family support with training on selected subjects have an increased compliance with treatment regime. The improvement in dietary habits; medication compliance and vascular access care, was reflected in the biochemical parameters of monthly blood tests and improved status of vascular access.

Conclusion/Application to practice
Transforming the study in dialy activity.
Nurse role in diagnosis and treatment of patients with primary aldosteronism - case report

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Background
Nonsuppressible (primary) hypersecretion of aldosterone is an underdiagnosed cause of hypertension. The classic presenting signs of primary aldosteronism (PA) are hypertension and hypokalemia. The most common subtypes of PA are aldosterone-producing adenomas (APAs) and bilateral idiopathic hyperaldosteronism (IHA). Adrenal vein sampling (AVS) is a standard confirmatory test for unilateral adrenal disease and unilateral adrenalectomy is a treatment of choice in these patients.

Methods
A 32-year-old man with a 10-year history of arterial hypertension was admitted to our Hypertension unit for evaluation of resistant hypertension. Previous medical records showed an adrenal tumor, but no further investigation was performed. At admission, he was hypertensive (210/160 mmHg) despite multidrug antihypertensive treatment, with pronounced hypokalemia. After hypokalemia was corrected with potassium supplementation and thiazide discontinued, measurement of the plasma renin activity (PRA) and plasma aldosterone concentration (PAC) in blood samples and saline infusion test were performed. Adrenal CT showed the same sized tumor in the right gland. AVS with cosyntropin stimulation was performed to confirm unilateral disease.

Results
PAC/PRA ratio was ≥30 and saline infusion test was positive (no suppressions). Measurement of aldosterone in samples of AVS, obtained by an experienced radiologist, showed a marked increase in PAC on the side of the tumor. Laparoscopic adrenalectomy was performed. Postoperative blood pressure was significantly lower and less antihypertensive drugs were needed for blood pressure control.

Conclusion/Application to practice
PA is a common cause of resistant secondary hypertension. A multidisciplinary approach is crucial for diagnosis and treatment of the disease and nurses play a very important role in all of them.
Oral hygiene among haemodialysis patients
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Background
Dental and oral cavity diseases are common problems among patients with chronic kidney disease (CKD). Their causes result from CKD disturbances in: calcium and phosphorus metabolism, electrolyte balance, hematopoietic, endocrine and immune system. Oral health is also deteriorated by inadequate hygiene, which leads to inflammation and thus to reduced quality of life and increased risk of cardiovascular death.

Objectives
The assessment of behaviors related to oral hygiene for HD patients

Methods
The study comprised 49 haemodialysis (HD) patients from Bielsko-Biała. The research material was collected by means of author’s questionnaire, SF-36 questionnaire, blood and saliva tests results.

Results
Over 75% of respondents reported problems with oral health, which in most cases appeared after the start of dialysis. The majority surveyed brushed their teeth two times daily, while other hygienic oral treatments, such as flushing or flossing, only occurred in 29%. Respondents most frequently used manual toothbrushes of medium hardness, which was exchanged every quarter. Men were less likely than women to visit a dentist and used removable dentures. Most patients saliva pH normalized after the treatment.

Conclusion/Application to practice
Oral health deteriorates at the start of renal replacement therapy. In order to accurately investigate the health needs in this area it is necessary to perform a thorough dental examination.
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Stress and burnout associated with haemodialysis nursing

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Background
Burnout describes a psychological state caused by continuous struggle with stress factors and is enhanced by lack of job satisfaction and social support.

Objectives
Dialysis nurses are unique in the amount of responsibilities and autonomic authority. This notion was substantiated by an ENRCA survey (2004). This survey also showed that Israeli dialysis nurses received a broader scope of responsibilities during dialysis procedure in comparison with other European countries. We argue that the process of strengthening dialysis-nurse values of job importance and significance increases personal self control and consequently reduces burnout rates.

Methods
Participants - 216 nurses (20% male, 80% female) from 18 dialysis units in Israel. The Pines & Ahronson, “Burnout questioner” (1988) was used as the evaluation tool. This survey was filled out by all participants.

Results
The average burn out score was 2.79 (SD = 0.91). (male nurses - 3.06, female nurses - 2.70). Comparable studies using the same burn-out tool found:
- A German study (Enzman & Kleiber 1989) - 3.2 (SD=0.7).
- A Polish study (Schaufeli & Janczur 1990) - 3.3 (SD=0.7).
- And a USA study (Pines & Kanner 1982) - 3.2 (SD=0.6).

Conclusion/Application to practice
We found lower burn-out rates in Israeli dialysis nurses compared with European and USA studies. Higher responsibilities, broader scope of activities and wide interest in various work aspects are factors leading to higher job satisfaction and lower burn-out rates. Our results reflect the effect of broader responsibilities and autonomic authority in decision making which characterizes the work of Israeli dialysis nurses.
Study of the quality of life (QOL) in dialysis patients

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Background
The achievable quality of life (QOL) is one of the most important criteria for dialysis patients.

Objectives
To assess our patients’ health-related quality of life.

Methods
We developed questionnaires for our patients (also using certain elements of the EQ-5D and SF-36 methods). The responses of 57 patients receiving peritoneal dialysis (PD) and 178 patients on haemodialysis (HD) were analysed.

Results
The patients’ mean age was 66.1±13.9 years, and the proportion of females was 59%. The average time spent on dialysis therapy was 4.4±3.3 years in HD and 2.3±1.9 years in PD. In the HD group 6.7% of patients were disappointed with the results as compared to their initial treatment expectations, while in the PD group there was no disappointed patient. At the time of the survey 93% of the patients considered their health status acceptable in both groups. Twenty-two percent of the patients need help, but only 5.5% are incapable of self-support. During the year before the survey 5% of PD and 26% of HD patients observed a deterioration of their condition. The majority of patients (96.5% in PD and 91.6% in HD) would be willing to undergo this treatment even today, while 7.2% of all patients would reject dialysis at present. Among the patients, 12.3% often feel anxious, while 42.2% never experience anxiety.

Conclusion/Application to practice
It is favourable that the majority of patients consider their health status acceptable. Only a low proportion are disappointed compared to their initial expectations, and 92.8% would opt for this treatment even today.
Background
We often follow the physical status of patients, laboratory findings, care of the complications arising in the course of posttransplant period, but we all pay less attention to the psychological condition of the patient. Mood changes and anxiety disorders are the most common. Apathy, impotence and memory disorders can affect a person’s ability or the motivation for adherence in posttransplant course. In the present study we investigated cognitive status and adherence in elderly patients with end-stage renal disease treated with different treatment modalities.

Methods
We have divided patients in two groups: renal transplant recipients and patients on haemodialysis. Cognitive function was assessed with Mocca test (score > 26 was considered as normal cognitive function) while patient adherence with Morisky scale (high adherence 0, medium adherence 1-2 and low adherence 3-4).

Results
We have enrolled 60 patients. We took into account age, gender, dialysis vintage, comorbidity, number of pills taking etc... There were no difference in the mean Mocca value between two groups, also very low percentage of normal Mocca test results. Very high adherence was reported in both groups.

Conclusion/Application to practice
According to preliminary results, we can conclude that the majority of our patients on renal replacement therapy have serious cognitive dysfunction. Insipid of these results, the majority of them have complete adherence which can probably be explained by overreporting adherence in order to satisfy medical staff. Knowing these, it is extremely important to have different approach to such groups of patients, particularly employing continuous nurse education.
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Bio-psychosocial perspective of excessive fluid overload
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Background
What make a patient walk in for haemodialysis treatment with over 4L of fluid overload? How can we as registered nurses help these patients?

Objectives
This empirical study will explore the multi-factorial problem of excessive fluid overload in patients with ESRD. With support of literature review, the goal is to make a link with theoretical findings and with the reality of being a dialysis patient so that the problem can be approached.

The bio-psychosocial perspective will be used in order to understand the influence of the fluid intake and to use current best evidence when making clinical decisions about patient care in a way to support them to adhere to the treatment.

Methods
The study included 60 patient in total at an FMC satellite haemodialysis unit undergoing haemodialysis treatment for at least three months, three times per week and four hours of treatment. First group involves patients with persistent problems with fluid management. Second group will include patients with noncompliance in fluid intake and with constant overhydration.

Data collection will be performed from medical records and self-report questionnaires which will address details regarding gender, age, occupation, primary renal disease, mental conditions, QoL, family support, religious beliefs. Detailed analysis of these results will be done according to modern statistical methods. The study is currently under way and the initial results are very interesting.
Changes in health-related quality of life in patients after beginning haemodialysis

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Background

Health-related quality of life (HRQoL) measures the effects of an illness or a treatment from the patient’s perspective. Before the beginning of renal replacement therapy (RRT), patients have a number of complaints which limit their activity, disrupting their habitual lifestyle. It leads to depreciation of life quality. Beginning RRT changes a patient’s lifestyle and well-being, and necessitates a re-assessment of life quality.

Objectives

Estimate changes in HRQoL for patients after beginning haemodialysis.

Methods

- Patient survey based on EQ-5D-5L;
- Assessment: physical conditions; dialysis efficiency;
- Monitoring: hydration status; complications;
- Patient’s training.

15 patients were asked to fill in the EQ-5D-5L questionnaire before the beginning of haemodialysis and 3 months later. We evaluated the total health level (on a scale from 0-100) per patient (higher levels reflect a better HRQoL).

Results

Initially, restriction of mobility and usual activities, problems with self-care, elevated level of discomfort and depression were observed; 8 patients estimated their health level as <50 points and only 4 as >50 points. During supervision and performing optimal dialysis programs, over-hydration and arterial hypertension were reduced and patients’ training was conducted. After 3 months, the results of EQ-5D-5L questionnaire evaluation increased significantly: 50-55 points in 6 patients and >55 points in 9 patients.

Conclusion/Application to practice

The results may indicate an improvement of our patients’ HRQoL after the beginning of haemodialysis. A very important role is played in this process by dialysis nurses, who spend the most time with patients. Nurses monitor the dynamics of patients’ complaints and conditions and finally help them to create a new lifestyle.
Activation of the patients during haemodialysis – how to motivate both patients and nurses

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Background
This pilot project examined the potential effect of a twelve week so called intervention activation program (IAP) during haemodialysis (HD). The IAP includes supervised exercise and psycho-social therapy. The aim is to activate the internal driving force and regulate behaviour of both patients and nurses to actively support the therapy with an impact on physical and psychical condition and on maintaining a long lasting self-sufficiency.

Methods
A group of patients (M/F n=15/8; age 60.9±14.7yrs) was randomised into exercise (EG) and non-exercise (CG) group. We used Senior Fitness Test Manual, KDQOL–SF™-SF36 for testing. Exercise intervention was focused on improving joint mobility, muscle strength, nimbleness, dynamic stability and cardio respiratory endurance. Psycho-social intervention included self-reward, structured problem solving, social network reinforcement and relapse prevention counselling.

Results
In general, both the physical and psychological conditions were severely deteriorated in most components in comparison with the non-renal population. In EG we observed physical improvements (p≤0.01), mainly in tests using muscle work of lower extremities and certain physical fitness level. The quality of life in EG improved in the components of physical and emotional limitations of roles (no significance). In CG there was nonsignificant physical impairment and the quality of life was impaired (p≤0.05) in physical and emotional components limiting their roles.

Conclusion/Application to practice
An appropriate IAP during HD may contribute to improve functional and psychological status already in twelve weeks. The IAP should be seen as cost effective, efficient and acceptable for patients.
Social care for dialysis patients in Slovakia

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Background
Dialysis patients must often deal with health, economic and social problems.

The physical and psychosocial challenges presented by regular dialysis treatment, adversely affect not only the patient, but also the lives of their families. The poor health status of the patient can lead to social isolation.

Objectives
Highlight how social care, social services and financial contributions can help to compensate severe disability. It will also illustrate how the BBraun Avitum Slovakian Social Care Specialist Nurse can make a positive impact on the patients quality of life.

Methods
The specialist nurse comes into regular contact with patients during their dialysis treatment. Following assessment, if necessary she will involve the family and relatives of the patient. Where required, the nurse will also assist the patient to identify and apply for financial compensation from the social insurance company.

Results
The role of the specialist nurse in the dialysis center has had an positive and important impact on the patients’ quality of life. The most frequent interventions made by the nurse were:

- assisting with application for the “severe health disability card” for new patients
- arranging financial compensation

communicating with the social insurance company, writing requests and appeals

Conclusion/Application to practice
The specialist nurse needs to deal not only with the physical needs of the patient, but also with the psychosocial demands created by dialysis. An important role of specialist nurse is to increase the patient’s activity and strives to empower them to overcome social hardship, particularly by himself or with the help of his family and relatives.
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Life with dialysis

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Background
The lives of patients who were diagnosed the chronic kidney disease, change significantly. These changes, difficult to cope with, become a standard routine over time. Dialysis therapy represents the major burden for the patients – not only physical, but especially mental. When the patient gets used to the treatment, he/she recognizes that he/she can lead a very good quality life.

This is obviously subject to the highest possible degree of adherence to the treatment. Dialysis in itself provides only for the maintenance of the vital functions, however; the quality of life is up to the patient. One should not forget the impact of these changes on the patient’s mental state, relationships with relatives or intimate contact with the partner

Objectives
• Mapping the main risk factors affecting the day-to-day life of dialysed patients.
• Definition of individual methods for the medical staff to help the patient cope with these changes.

Methods
• Anonymous questionnaire for dialysed patients in order to identify the risk factors.
• Processing and interpretation

Results
Our analysis demonstrated the degree to which the dialysis therapy affects the patient’s habits, changes of the daily regimen and, last but not least, the sexual and partner life of patients visiting our centre.

Conclusion/Application to practice
The results enable us to focus on specific problems that burden our patients. In cooperation with the entire multi-disciplinary team, we can then take steps to improve the quality of life of our patients.
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Celibacy in dialysis era: fact or alienation
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Background
Celibacy is the result of resting mechanisms of self-defense leading to fear, frustration and avoidance.

Methods
From 1985 to 2015, we have noticed many aspects of celibacy in dialysis mode of therapy. We have attributed the definition of primary celibacy whenever, the patient remained celibate the whole life. Secondary celibate is attributed to patient who became celibate as a choice of life. Tertiary celibate is attributed to patient when she/he have lost spouse while being under renal replacement therapy.

Results
The most contributing factors include parental post separation conflict, physical and psychological disability, unavailability of partner and chronic kidney disease at the stage of dialysis.

Conclusion/Application to practice
Celibate patients overcome imposed alienation by facing the fact of co morbidity guided by professional caregivers.
Fear of needles leads patient to decide on peritoneal dialysis
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Background
We present the case of a 35 year-old patient who developed end stage renal disease secondary to chronic glomerulonephritis. Due to family background he had a very unstable psychological state which manifested in a strong fear of needles and denial of any medical interventions. Initiation of his dialysis treatment was delayed and finally uraemic symptoms brought him to hospital. A temporary central venous line was inserted and emergency haemodialysis was started.

Results
Denial of his disease and haggling was ongoing for more than a year. The patient did not agree on AV fistula placement due to his fear of needles. Offer of conversion to peritoneal dialysis was also turned down and he did not undergo necessary investigations for renal transplantation either. Changing his temporary central line to a permanent one has also taken much longer than clinically acceptable.

Having accepted his disease he became more and more approachable and compliant with our recommendations over the past few years. Still there was a great resistance against medical interventions. After 4 years of use his permanent central venous catheter has failed and the removal of the catheter was complicated due to fibrosis and vascular surgery had to be involved in the procedure. The issue of long term dialysis access had to be addressed again.

Conclusion/Application to practice
After 4 years of dialysis the patient became more realistic about his disease and more accepting regarding medical recommendations. Given all options, the patient has decided on peritoneal dialysis at this point.
Dialysis and pregnancy: our experience

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Background
A successful pregnancy is an exceptional event in dialysis but not impossible. A recent Italian study (G.Piccoli, NDT 2014) shows how 23 patients in dialysis carried out a pregnancy between 2000-2012. Two women were followed in our dialysis centre: the first was suffering from LES, the second from Nephrotic Syndrome.

Objectives
Safeguard the proper course of pregnancy and mother’s psychophysical health conditions. To monitor any intradialytic complications and detect early signs of fetal distress. To adjust the dialysis settings to the needs of newborn.

Methods
Multi-professional team work (Nurse, Nephrologist, Gynecologist, Cardiologist, Nutritionist, Psychologist) was essential to create an assistance protocol. Increased dialysis time to 20 hours/week [Kt/v 1.5]; Targeted blood pressure of 130/80mmHg, weight gain of 1Kg/month and general conditions control; blood and microbiological tests every 15 days during the first two quarters and every week during the third quarter; hemogasanalysis every treatment (to avoid metabolic acidosis and respiratory alkalosis); monitoring of anemia (Hb 10-12, Ht 30-35%, TSAT 30-50%).

Results
Despite our major concerns, which were hypertension and poliamnios, at 34th week of pregnancy both patients gave birth to healthy babies by Cesarean section.

Conclusion/Application to practice
Dialysis treatment not only helps people to stay alive, it also helps them to live their life as normal as possible.
Quality of Life of CKD Patient Over Period of 16 Years - Case Study

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Background
We examined the quality of life in nephrological patient in different periods of his life. The patient - male, age 33. 1999 - an episode of acute glomerulonephritis. Haemodialysis 1999 - 2003. In 06/08/2003 the first kidney transplant. In 2010, the patient entered the seminary, he wanted to become a priest. The patient was removed from the seminary because of relapse. In 2011, the start of peritoneal dialysis. From 2013 haemodialysis. In 2013, the patient started his professional career. 25/12/2014 second kidney transplant. 12/26/2014 the patient removed the transplanted kidney.

Objectives
The aim of the study was to show the problems of CKD patient, the patient’s quality of life and the factors that affect the quality of his life.

Methods

Results
As a result of the study, we were able to determine the quality of life of the patient over period of 16 years. The factors that affect the quality of life in nephrological patients.

Conclusion/Application to practice
CKD patient is a patient who needs a psychological support from family, friends and medical staff. A major impact on quality of life has a transplant and work. If the patient receives appropriate support from the environment, the quality of life is better. Such a patient is willing to cooperate with the medical staff. This patient is also a support and model for other patients.
Differences in quality of life and depression between Arab hemodialysis and peritoneal patients

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Background
A high prevalence of depression is observed among patients with ESRD. Several studies show higher incidence of depression in HD patients as compared with PD patients. However, these studies were conducted in certain ethnic groups of patients and could not automatically extrapolate to all ethnicities.

Objectives
To examine whether PD or HD yields any differences in terms of quality of life and prevalence of depression among Arab dialysis patients, and to explore how physiological and social factors influence quality of life in these patients.

Methods
Study included 61 HD patients and 19 PD patients. All Arabs from the Lower and Western Galilee region, patients of the Dialysis Institute at the English Nazareth Hospital and Naharea Hospital.

The subjects have completed two questionnaires:
1. Beck Depression Inventory (BDI) for measuring the severity of depression
2. Kidney Disease Quality of Life Short Form (KDQOL-SF, Version 1.3)

Results
The sense of well-being was low in both groups. Depression was higher in HD group, which has a female majority. Social support was high among both groups, but higher in HD patients. A health status, which interferes in occupational functioning, was found to be lower in HD patients. More severe pain found in PD group. High sexual function and better nutrition was found in the PD group.

Conclusion/Application to practice
Prevalence of depression is higher among HD patients, which has female majority. Moreover, significant differences in quality of life in favor of the PD group were documented. PD should be recommended.
Depression in chronic kidney disease: a systematic review of meta-analyses

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Background
Patients with chronic medical diseases carry a high risk for depression and other psychiatric disorders. Under-recognition of depression in patients with chronic kidney disease may contribute to poor compliance with treatment and deterioration of quality of life.

Objectives
To study the clinico-epidemiological characteristics of depression in patients with chronic kidney disease and dialysis patients.

Methods
We searched pubmed for meta-analyses published in the last 5 years regarding depression in these patients. Key-words were depression plus chronic renal failure, chronic kidney disease and dialysis.

Results
Our search yielded seven studies. Two of them were excluded due to the fact that they were not relevant to our study. Among the remaining five, three studies were about mortality and depression (1 in dialysis patients, 1 in chronic kidney disease, 1 in general community versus patients with specific illnesses), one study was about psychosocial factors in dialysis patients and one was about the prevalence of depression in chronic kidney disease. No meta-analysis regarding treatment of depression in these patients was found.

Conclusion/Application to practice
Depression is frequent in chronic kidney disease and dialysis patients and may lead to increased mortality. Nurses should have high clinical suspicion about this and recognize it promptly. Recognition may lead to early intervention, proper treatment, and beneficial effects both for patients and their families, as well as health care professionals.
The meaning of life, depression and quality of life in haemodialysis patients

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Background
The haemodialysis patient’s quality of life (QoL) does not only depend on external factors (professional level of the medical team, the quality of the medical actions, the advanced technology and the financial resources), but it also depends on how the individual affected integrates dealing with the disease into their life.

Objectives
The study wants to highlight the links between the meaning of life, the profile of the meaning sources, depression and the QoL of the haemodialysis patients (HD), as well as the ranking of the sources of meaning in lives of haemodialysis patients.

Methods
The study was carried out with a group consisting of 70 haemodialysis patients (average age = 54.55 ± 11.70). The following questionnaires were used: MLQ for Sources of Meaning and Meaning in Life, SOMP-R for Multifactor Leadership, SF-36 for health related QoL, BDI for depression.

Results
Depression negatively correlated with the physical and mental health domains of QoL, collectivism negatively correlates with depression; the individualism positively correlates with nature were the most representative sources with respect to the meaning within their lives. QoL was not influenced by the meaning of life, gender or the environment.

Conclusion/Application to practice
Our patients’ QoL was not influenced by their meaning of life, gender or environment, but increased with decreasing values of depression. Relationships to persons and/or nature and satisfied daily needs are the most important sources of meaning in their lives. However, this study is only relevant for the participating study subjects.
Relationship between stress and medical transport in Haemodialysis patients

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Background
Haemodialysis patients’ attend a dialysis clinic at least three times a week to receive their treatment. Most patients’ live so far away from the clinic that they need to travel long distances, in some cases around 100 kilometers per day.

Objectives
The goal of this study is to verify if patients, who need to travel such a long distances in medical transport, have a stress and anxiety level different from those who live nearby, and if treatment tolerance is similar among them.

Methods
Two groups of patients were selected; the first group was those patients who travel less than 30 minutes to reach the clinic and the second group was those patients’ who travel more than 30 minutes. The stress and anxiety level were measured through a test.

To study the treatment tolerance we used the data from a clinical database to capture all the incidents reported at each dialysis session including hypotension, muscle cramp, hospital admissions, dizziness, vomiting and ultrafiltration rates.

Results
At the end of the study, the conclusion showed a slight difference between the two groups but there were no significant differences in treatment tolerances.

Conclusion/Application to practice
In the future we plan to extend the study, to see if it is possible to reorganise medical transport in order to optimize transport times for the patients.
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Psychological assessment of our dialysis patients
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Background
Depression suffered by patients battling chronic kidney disease as a result of their disease status, as well as the economic hardship they experience, negatively influences their day-to-day lives, self-esteem and outlook. The bio-psycho-social well-being of these patients is managed in conjunction with a multidisciplinary team. Besides nephrologists, these teams should consist of psychologists, physical therapists and social workers. However, these are often missing from the system.

Objectives
To assess the social background of haemodialysis patients.

Methods
The social situation was assessed with questionnaire. We assessed demographics, marital status, income, employment and we looked at whether patients understood what they were entitled to regarding their social assistance options.

Results
103 out of 106 patients filled out the questionnaire. All patients were affected to some degree by the lack of knowledge regarding their options, and this was irrespective of age, gender or level of education. Of the respondents, there were 14 socially deprived patients, 18 were employed and 3 received social assistance.

Conclusion/Application to practice
Patients primarily need to improve their knowledge base and to identify their options in order to meet their social needs and improve their circumstances. If the care team lacks key personnel then it should be the rule that other members of the team assume tasks. This puts an extra psychological burden on the shoulders of those dedicated team members who are dealing with social issues. The training of nurses responsible for social work is important.
Anxiety, depression and quality of life in patients undergoing chronic haemodialysis; observational cross section study

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Background
Patients undergoing chronic haemodialysis treatment can suffer different stressful and threatening situations. The impact of emotional disorders can be a determinant to the progress of the chronic illness.

Objectives
1. Describe quality of life and the level of anxiety and depression. 2. Explore the correlation between anxiety and depression with quality of life levels. 3. Analyse the predictor factors between quality of life and anxiety and depression.

Methods
This was a quantitative, cross-sectional study. 138 patients were interviewed in Spain. The Kidney Disease Quality of Life short form (KDQOL-SF) questionnaire and the Hospital Anxiety and Depression Scale (HADS) were used for the data collection.

Results
The results show that 15.9% of patients suffer clinical depression and 19.6% suffer clinical anxiety. The levels of quality of life are significantly below the average population. Findings suggest that anxiety and depression have a negative correlation with quality of life levels. The ANOVA studies between anxiety and depression and quality of life show significant differences with nearly all the scales of quality of life.

Conclusion/Application to practice
An initial and ongoing evaluation of patients’ emotions should be performed. It is fundamental that nursing care planning is constant to improve quality of life and avoid emotional disorders, considering a holistic view of the patient. A nurse-led nephrology nursing practice program should be considered, offering social choices and psychological support based on an individualised evaluation of the needs.
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Living with chronic kidney disease: is it possible to adapt?
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Background
One of the consequences of the increasing average of life expectancy of the population is the increase in patients with Chronic Kidney Disease (CKD) who, as a result, require renal replacement therapies. Older people on dialysis frequently have additional comorbidities that worsen their condition, their capacity to be independent is reduced and consequently they require consistent care.

Previous studies found that people with CKD suffer because of the time they spend undergoing haemodialysis treatment, a situation beyond their control to which they have to adapt.

In addition they feel a loss of freedom as a result of being „tied” to the dialysis machine. Psychologically it is also a constant reminder that time is limited.

Objectives
• The purpose of this study is to understand the experiences of people with CKD by hearing them describe it in their own words.

Methods
This is a phenomenological descriptive, exploratory, qualitative study. Six CKD patients who had recently been transplanted were included in this study. Open interviews were conducted, recorded, transcribed verbatim and analysed using the hermeneutic framework.

Results
The analysis of the experiences of people who had attended a regular haemodialysis programme was synthesised to provide thematic and structural descriptions. After analysing the interviews, three main themes emerged and included: Disruption of Life, Adaptation and The (re)start, each divided into sub-grouped themes.

Conclusion/Application to practice
This research has strong implications for nursing knowledge and will possibly improve the care provided to people who experience this transition, and hence to experience that in a healthier way.
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Attitudes of health workers and citizens of Podgorica Montenegro on transplantation and organ donation
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Background
Since September 2012, only 300 citizens from Montenegro have donated organs through a donor card which is an extremely low figure compared to the adult population in the country.

Objectives
To determine under what circumstances would these two groups have donated their organs, and to whom
To determine whether gender, age, religion, residence, education and occupation of respondents have an impact on attitudes about transplantation and organ donation.

Methods
The research was conducted at the Clinical Center of Montenegro and its capital, Podgorica.
The sample was randomly formed and included 400 adult citizens from Podgorica. The study included 200 health workers employed at the Clinical Centre of Montenegro in Podgorica and 200 adult citizens of the city of Podgorica.

Results
The highest percentage of health workers willing to donate their organs only in special circumstances (43.6%), while 11.3% would donate organs regardless of the circumstances. On the other hand, 17.9% of respondents from the general population would donate their organs regardless of the circumstances, 34.6% of respondents from this group would have donated organs only in special circumstances. The difference between the groups was not statistically significant.

Conclusion/Application to practice
In relation to the research described in the literature, the subjects in our study have a high percentage of resistance to organ donation.
There was no significant difference in the attitude that relates to organ donation regardless of the circumstances, between health workers and the general population.
Knowledge of health workers and citizens of Podgorica Montenegro on transplantation and organ donation

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Background
Research on this topic has not been carried out in Montenegro before.

Transplantation in Montenegro began in September 2012. Since then only one cadaveric kidney transplant has been performed which was in 2013. Until December 2015 there was no cadaveric transplantation surgery in Montenegro.

Objectives
To determine whether knowledge has an impact on attitudes about transplantation and organ donation.

Methods
This research was conducted at the Clinical Centre of Montenegro in the capital, Podgorica.

The sample was randomly formed of 400 adult citizens from Podgorica. The study included 200 health workers employed at the Clinical Centre of Montenegro and 200 adult citizens from Podgorica.

Results
To the question „What does the term organ donation mean?,” 100 respondents (50%) were health workers and 80 (40%) were from the general population. The difference in the number of correct responses between these two groups was statistically significant. Analysis of the data on knowledge of the respondents about organ donation revealed that respondents from urban settlements had a total of 767 (62.5%) of correct answers, while respondents from suburban areas had a total of 427 (54.7%) of correct answers. The resulting difference in the number of correct answers between the examined groups of respondents is statistically significant.

Conclusion/Application to practice
The younger generation of respondents had a higher level of knowledge about transplantation.

Respondents who came from urban areas and those with higher educational attainment had a greater degree of knowledge about transplantation.
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Do renal transplants with CKD5 achieve similar national standards as patients with native CKD5?

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Background
Renal Transplant Recipients (RTR) with failing kidney function are a high risk for Chronic Kidney Disease (CKD) related complications. It is not known whether they have the same quality of care as native CKD patient.

Objectives
This retrospective study sought to compare the achievement of clinical targets in anaemia, and Mineral and Bone Disorder (MBD) management based on the UK guideline (2010), between transplant CKD stage 5 (CKD5T) and CKD5 patients at a single centre under the care of the same nephrologists.

Methods
All adult CKD5T and CKD5 patients between 2011-2014 were considered. Patients on conservative management, Acute Kidney Injury, less than 6 months post-transplant and acute rejection were excluded. Ethical approval obtained. 21 CKD5T and 42 CKD5 patients matched for age, sex and underlying kidney disease were included. The average of two values three months apart for anaemia and MBD were considered for statistical analysis (McNemar test, Odds ratios).

Results
A total of 76.2% of CKD5T achieved the recommended Hb target versus 50% in CKD5 group. Achievement of target Ferritin level in CKD5T and CKD5 groups were 90.5% and 71.4% respectively. 61.9% of patients with CKD5T and 87.7% of those with CKD5 achieved the target range calcium level, target phosphate was 61.9% and 57.1% respectively. For PTH, 57.1% of CKD5T patients achieved the target range; and 81% of the CKD5.

Conclusion/Application to practice
Anaemia management was superior in CKD5T patients, while their MBD management targets were underachieved. Design and implementation of an MBD protocol at transplant clinic may improve this. Transfer of care of RTR5T to native CKD5T clinic is another option.
New results in kidney transplantation-accession to Eurotransplant

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Background

Since July the first 2013, Hungary is a member of Eurotransplant, and thus the chances of patients waiting for a kidney transplant have improved.

Prior to this date, fewer patients had given their consent to the examination for getting on the list. The waiting time was longer. The patients had been uncertain, as they often did not have adequate information.

Objectives

To study how our patients’ chances for a kidney transplant have changed since the accession.

Methods

We collected data from the years that have elapsed since the accession, and compared them with the results of the previous period. We evaluated the causes of the differences.

Results

Data of our dialysis centre – 2014: number of new patients getting on the list: 14; number of transplantations 11. 2015: number of patients on waiting list: 19; transplantations: 10.

The number of successful transplantations has increased since the accession. More patients gave their consent to being put on the list. The patients’ confidence increased. Through patient forums held by the Transplantation Foundation, the patients have become better informed and their interest in living-donor transplantation has increased.

Conclusion/Application to practice

Since the accession to Eurotransplant a continuous increase can be seen in the number of patients getting on the waiting list and in the successful kidney transplantations. We strive to improve physician–patient and nurse–patient communication, to carry out the necessary examinations rapidly, and to provide patients with the opportunity to attend as many forums and presentations as possible.
Fate of our patients undergone a kidney transplantation 1976-2015
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Background
Our nephrological centre – which is responsible for the care of a quarter million citizens – started its work in 1976.

Objectives
The follow-up of our patients’ fate who had undergone a kidney transplantation.

Methods
Along the study of 40 years, 202 of our patients had 232 kidney transplantation (Tx). 98% of transplantations was done in Budapest.

Results
In 7 cases preemptive Tx was necessary: 195 person was dialysed (31 came from peritoneal dialysis); in 10 cases the graft came from living donors. The number of kidney+pancreas transplantation was 4.

Between 1976-1995, 60 patients had 69 Tx, in the following 20 years, 142 patients had 163 Tx. 173 patients had 1, 27 patients had 2 and 3 patients had 3 Tx done. From the patients undergone a transplantation 104 (51%) are still living (9 in dialysis, 95 with grafts), 9 of them had transplantation between 1986-1995.

The survival of the patients who are still alive in renal replacement therapy (RRT) are between 3,5-31,1 years, the people who have died were between 0,7-36,1 years.

The number of prevalent patient in RRT in our area of care at the end of 2015, was 1400/1 million people – 27% of them is living with a transplanted kidney.

Conclusion/Application to practice
Though in the last 10 years the number of our transplanted patients is continuously growing, the number of transplanted from a living donor is minimal. The majority of patients in RRT are still being made out of dialysed people.
Implementing new decision-making methods in counselling for renal transplantation: Role modelling

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Background
Kidney-related diseases have plagued the world and Oman is no exception. More than 1,600 patients suffering from kidney-related ailments, children constitute 5% of the kidney patients in the country. Nearly most of these patients need kidney transplantation which is the best modality of Renal Replacement Therapy as it ensures maximum life span with the best quality of life, and is the most cost effective. So we implemented new methods in counselling our patients for kidney transplantation to encourage them to do kidney transplant.

Objectives
1. To improve our counselling sessions for best service.
2. To increase patient’s convenience towards transplantation.

Methods
We conducted counselling sessions for our patients by using a role modelling. Each session lasts for 1 hour, these sessions were evaluated by the patients themselves verbally and by writing. We measured the convenience of the patients before and after the sessions to insure goals obtained.

Results
Based on 162 patient’s feedback about the counselling sessions that were implemented for 1 year in our institution, the outcome found that more than 70% of the patients were convenient and worked-up for kidney transplant, in addition, renal transplant statistics in our country for living donors increased for about 20% more than previous years.

Conclusion/Application to practice
To conclude, the method used was much helpful based on the results, this can be utilized more effectively when a specialized nurse is trained to conduct these sessions. I recommend to conduct group sessions as well, hoping that Oman will have further development in renal transplantation.
Strict monitoring of isoagglutinin levels is required for ABO-incompatible living-donor kidney transplantation

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Background
Due to the shortage of organs from deceased donors, kidney transplantation from living donors has been developed. Besides standard kidney transplantation from living donors, HLA-incompatible and ABO-incompatible (ABOi) kidney transplantation have been developed. Hence, French authorities allowed ABOi transplantation in 2011.

Objectives
Since 2011, the Department of Nephrology and Organ Transplantation (Toulouse University Hospital) has performed desensitization protocols to enable ABOi transplantation.

Methods
Desensitization protocols included apheresis sessions (immunoadsorption), rituximab, and intravenous immunoglobulins. The number of apheresis sessions was chosen according to the isoagglutinin level needed for ABOi transplantation. Isoagglutinin levels were also determined daily within the first days post-transplantation, weekly during the first month, and then monthly for 1 year. An increased isoagglutinin level prompted physicians to modify immunosuppression and/or to conduct immunoadsorption sessions to avoid acute rejection.

Results
Between March 2011 and December 2015, 55 ABOi kidney transplantations were performed in our institution. Only three graft losses occurred. Of these, only one was related to chronic antibody-mediated rejection. Monitoring isoagglutinin levels allowed us to determine the best pre- and post-transplant therapeutic options.

Conclusion/Application to practice
Monitoring isoagglutinin levels is mandatory when performing successful ABOi living-donor kidney transplantation.
Deep venous thrombosis and acute pancreatitis promoted by rapamycin in kidney transplant recipient

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Background
Recently, evidence indicates that rapamycin may contribute to an increased risk of thrombosis. Researchers found that endothelial membrane remodeling induced by rapamycin is crucial for the adhesion of platelets to endothelial cells and thereby for thrombosis. Many investigations showed that rapamycin induces autophagy of pancreatic cells.

Methods
Case report study.

Results
A male patient, 26 years old, was treated with preemptive kidney transplantation from a living related donor. He was treated with thymoglobulin in induction therapy because of donor specific antibodies detected prior to transplantation. He received 100mg of thymoglobulin. Due to surgical complications, he had reperfusion graft injury and delayed graft function. Initial immunosuppressive protocol with thymoglobulin and tacrolimus was converted to rapamycin and dismissal of thymoglobulin. Patient was treated with LMWH (low-molecular-weight heparin) regular in preparation and after intervention. One month after rapamycin treatment he developed deep venous thrombosis of right leg. He was treated with intravenous heparin and symptomatic therapy with successful recanalization of venous vessels. Twenty days after rapamycin usage he developed abdominal pain typical for acute pancreatitis followed by increased serum concentrations of amylase and lipase and urine amylase concentrations. Patient was treated with polysymptomatic therapy with recovery of pancreas function and normalization of serum and urine concentrations of amylase and lipase. Finally, rapamycin was removed from the immunosuppressive therapy. Patient is with stable graft function in the next year of follow up period without thrombosis episodes or episodes of pancreatitis.

Conclusion/Application to practice
All patients treated with rapamycin after kidney transplantation should be carefully monitored for venous thrombosis and pancreatitis events.
Plasmapheresis and rituximab in second living-related kidney transplant patient with recurrent focal segmental glomerulosclerosis

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Background
In focal segmental glomerular sclerosis (FSGS), the success of renal transplantation may be impaired by the frequent risk of recurrence of the disease on the allograft. In the first kidney allograft, 20 to 30% of patients develop recurrence of FSGS. Second grafts, in those who have had recurrence in their first graft, are generally accompanied by a further recurrence.

Methods
Case report.

Results
Male patient, 32 years old, from family with ADPKD. In the same year he developed ESRD and started with haemodialysis treatment. In 29 year he was treated with kidney transplantation from deceased donor. He developed multiple complications afterwards: delayed graft function, proteinuria, vein graft stenosis and ureteral obstruction treated with ureteral stent and ureteroneocystostomy. He was treated with plasmapheresis without success. He underwent 4 graft biopsies with recurrent FSGS findings with elements of acute rejection and acute tubular necrosis. He was also treated with rituximab and intravenous immunoglobulins. Due to many infection episodes and complications in the next period he underwent graftectomy one year after. He was treated with kidney transplantation from living related donor in 2014. Four months after transplantation he presented with proteinuria of 30 grams per day. After biopsy of transplanted kidney recurrent FSGS was pathologically confirmed. Patient was treated with plasmapheresis, corticosteroids, intravenous immunoglobulins and rituximab. Proteinuria was reduced to 0,4 grams per day and graft function is preserved.

Conclusion/Application to practice
In the case of living donation, the possibility of recurrence and its consequences should be clearly exposed to and discussed with the donor and the recipient.
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Kidney transplantation in patient with malignant disease history

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**Background**
Patients with ESRD who have been successfully treated for their cancer are generally considered to be suitable for renal transplantation. The incidence of colon cancer in renal transplant recipients is not elevated during the first 10 years after transplantation. It is recommended to wait at least 5 years before transplantation for patients treated for colon cancer.

**Methods**
Case report.

**Results**
Male patient, 58 years old, was diagnosed with pulmonary sarcoidosis 25 years ago. By the time he developed extra pulmonary manifestations including bilateral kidney calcifications and CKD 23 years ago. He had total thyreoidectomy in 1991 due to medullary thyroid cancer. Six years ago he was diagnosed colon adenocarcinoma in C2pT3N2B stage with secondary deposits in lymph nodes. He was treated with chemotherapy and hemicolecotomy with splenectomy. He stared haemodialysis treatment in 2014. He was diagnosed for diabetes mellitus type 2 two years ago. Control colonoscopy was done a year ago and three polyps, low grade dysplasia, were removed. Tumor markers, CT tomography of whole body showed no recurrence of malignant disease. PET scan of whole body was performed twice in the last year and was negative. There was no signs of progression of pulmonary sarcoidosis.

**Conclusion/Application to practice**
Patient was treated with living related kidney transplantation. Patient is under frequent oncology controls with good graft function. In case of cancer with increased risk of recurrence a longer waiting interval of 5 years should be considered. Risk of tumor recurrence has to be balanced against the benefits of renal transplantation for each individual patient.
Background
Preparation of all necessary conditions for the beginning of transplantation program in Montenegro started in 2006 with different activities including public, legal, medical, educational and international cooperation aspects. The first kidney transplantations from living donors in Montenegro were performed in September 2012. Nurses from Clinical Center of Montenegro underwent education about kidney transplantation in Clinical Hospital Center Zagreb.

Methods
Data referring to the outcome of kidney transplantation program in Montenegro.

Results
In the period from 2012 until now 26 kidney transplantations from living related donor were performed and one kidney transplantation from deceased donor in Clinical Center of Montenegro. In the period of follow up, all patients are in good condition and without serious complication in posttransplant period. There was complication in two kidney recipient in perioperative period who had delayed graft function. In one recipient there was urinoma; in one patient deep venous thrombosis; and in one patient episode of acute pancreatitis after sirolimus introduction in immunosuppressive therapy protocol. There was no episodes of hyperacute and acute rejection and there were no episodes of complications of immunosuppressive therapy. All kidney donors are followed up carefully in our center; their serum creatinine level was in reference level and there was no evidence of impaired residual kidney function.

Conclusion/Application to practice
The development of transplantation system improved many medical fields and continuous education of medical staff. Our next steps are improvement of deceased organ donor transplantation and achievement of higher rate of deceased donor kidney transplantation and kidney transplantation program with incompatible blood groups.
Kidney transplantation - never say never

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Background
In developed countries about 200 patients per million population start renal replacement therapy (RRT) every year. Most of them are faced with the choice between two options – dialysis or kidney transplantation. But sometimes situation can be more complicated, especially if patient’s preference is not clear. In such a case, the dialogue with a nurse may encourage patient and can help to find a solution.

Objectives
We present the case report of a 58-years old patient who has been treated by RRT for 30 years, underwent 4 kidney transplantations and spent almost 9 years on haemodialysis. His first kidney transplantation was performed in 1986, the kidney never recovered its function and after one week was nephrectomized. Second and third transplantations were done in the year 1986 and 1989 with the graft function lasting 3 and 17 years. During the last transplant period he acquired hepatitis C. In 2014, after successful antiviral therapy, the fourth transplantation was done, donor of the kidney was his wife, paired exchange was used for better compatibility.

Conclusion/Application to practice
Our patient’s history demonstrates all the pros and cons of RRT. Kidney transplantation offers better survival and quality of life but also potentially life-threatening complications and psychologically demanding situations for patients and their families. Dialysis is usually preferred by elderly patients who are not willing to risk the transplant surgery, do not have suitable living donor and dialysis unit represents for them a kind of “safe space”.
Transplantation through the decades
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Background
The first kidney transplant in New South Wales was carried out on August 5th 1965 at Sydney’s Prince Henry Hospital. Kidney transplantation has long been promoted as the preferred renal replacement therapy resulting in superior patient outcomes. There is an abundance of research which has examined the health status of patients during the first year post transplant. Studies which have examined long term outcomes are less abundant.

Objectives
The objective of this study is to use narrative inquiry to report the health status of patients across five decades.

Methods
Patient stories were collected from 49 patients who had been transplanted since 1965. The stories were collected through semi-structured interview. The stories were documented verbatim and a thematic analysis was undertaken. Themes relating to the transformative impact of transplantation were generated.

Results
The themes arising from the stories included feelings of intense gratitude and how the transplant had given them back the gift of time. Many participants commented that they didn’t realise just how much time dialysis consumed until they no longer needed to do dialysis. Others expressed a sadness that dialysis was no longer a part of their lives as it provided a social outlet. Many participants identified that they felt disillusioned during the first year post transplant as they were in and out of hospital.

Conclusion/Application to practice
Patient stories provide an innovative tool to educate patients about what to expect following transplantation and that the first year post transplant is a period of adaptation.
Transplantation in organ donation shortage
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Background
Kidney transplantation is the gold standard for patients with end stage kidney disease (ESKD). It provides a better mortality, morbidity and better costings than dialysis treatments. However, in view of shortages of available organs, long waiting time for possible transplantation and strict regulation, many patients with ESKD go for commercial transplantation.

Objectives
This study elicits the reasons and motivations for ESKD patients to go for commercial transplant.

Methods
A questionnaire based evaluation was conducted during the period from July 2015 till the end of December 2015. It consists of 28 questions in the form of multiple choices, and was distributed to all patients who had commercial kidney transplantation.

Results
During the six months period, 150 patients were approached to participate in the study and 106 agreed to participate. Our study showed that 60% of participants were male with an overall average age of 41.5 (SD 14.8) years and ranged from 18 to 83 years. The age of participants was 41.4 (SD 15.5) years for male and 41.6 (SD 13.7) years for female. Majority (82%) of our participants were educated ranging from primary to college level education. The major reason (71%) for these participants to get commercial transplant was stated as non-availability of a living related donor.

Conclusion/Application to practice
In addition to the ongoing ethical debates, the number of patients undergoing commercial transplantation is on the rise every year. The study showed that the most common reason for seeking commercial transplantation was due to the unavailability of cadaveric kidneys from the national transplant program.
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The patient after kidney transplantation - opinion about the transplant
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Background
In Poland, over 1,000 kidney transplants are performed yearly. Only 10% of these transplants are from living donors. Currently in Poland, almost 11,000 patients are the numbers of patients post kidney transplantation. In the period from January to February 2016, a survey was carried out among 100 patients after transplantation. Patients were asked about their problems and expectations and about how their lives changed after transplantation. Additionally, basic knowledge from patients on the transplant was surveyed. Patients were asked about their opinions on family transplants and cross transplants and chain transplants.

Objectives
The aim of the study was to explore the opinion of renal transplant patients on the transplant. We tried to assess the knowledge of patients with transplants from living donors. In Poland in 2015 we saw the first cross-transplants and chain transplants - we asked patients about their knowledge of the subject.

Methods
The research tool was a questionnaire. The survey consists of 30 open and closed questions.

Results
Kidney transplant patients are knowledgeable about the transplantation process. This knowledge comes mainly from the medical staff. Patients learned about the transplant whilst on dialysis, from the doctor, a nurse but also from the Internet and television. Patients voiced interest in the development of transplantation in Poland and in the world. Patients had positive feedback when talking about the transplant.

Conclusion/Application to practice
Knowledge from transplant patients is very good. Patients after kidney transplantation are satisfied with the results of transplantation. Patients report that their quality of life improved. Patients believe that awareness/education about transplantation should be done with children in school.
Background
Transplantation is growing rapidly. This progress is visible in Poland and around the world. However, transplantation is not always understood and encounters various problems. In Poland, we conduct training, educational meetings and tell small children about transplantation. We strive to hit to different environments.

Objectives
We checked the level of knowledge of transplantation in two groups of students: nursing students and students of economics. We wanted to determine whether students of a medical university have a better knowledge of transplantation.
We are trying to determine our plan of action and subsequent educational meetings for those who have insufficient knowledge about the transplant.

Methods
We have prepared a questionnaire with questions about the transplant. The survey contained 30 questions open and closed. The study was attended by 100 nursing students and 100 students of economics.

Results
Nursing students are positive about transplantation. They know what transplantation is and what’s brain death. Nursing students expressed their willingness to donate their organs for transplantation after their death.
Students of economics can’t give a good definition of transplantation. They do not understand brain death. 63% of students don’t want to give their organs for transplantation after their death.

Conclusion/Application to practice
Although transplantation is growing not everyone understands what it is, some people are afraid. Regular training is needed and educational meetings with students of different faculties. We have to help them understand transplantology.
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Treatment of high plasma volumes using specific immunoadsorption for ABOi incompatibility
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Background
In 2010, modification to the bioethics law allowed living-donor ABO-incompatible (ABOi) kidney transplantation in France; however, this procedure requires specific preparation.

Objectives
This includes pre-transplant, Rituximab treatment and antigen-specific immunoadsorption (ASI) to remove isoagglutinins. ASI processes plasma by binding isoagglutinins to a disposable column (Glycorex®).

Methods
When we started ABOi transplantation in March 2011, we used one disposable column per session, and each patient required four sessions. During each session, 3 L of plasma were treated. Since March 2015, we have changed our protocol. Only one ASI column is now used and high volumes of plasma can be treated. The volume of treated plasma is determined according to isoagglutinin level, and ranges between 11 and 18 L.

Results
Between March 2011 and March 2015, 30 ABOi living-donor kidney transplantations have been performed in our centre. Among these, two graft losses occurred. Between March 2015 and February 2016, twelve ABOi living-donor kidney transplantations have been performed using the high-volume ASI protocol.

Conclusion/Application to practice
Modification of the legislation and improvements to technical processes have increased the number of kidney transplantations possible and allowed kidney transplantation despite ABO incompatibility. The use of high-volume ASI has decreased the duration of pre-transplant preparation, and the costs.
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It is with great pleasure and pride we invite you to join us in Kraków next year where our 46th EDTNA/ERCA International Conference will take place. The theme of our Conference is – ‘True Partnership and Global Approach in Management of Renal Care’.

The Kraków Congress Center is the cultural flagship of the city. It is located in the very heart of Kraków and it is a convenient place close to the hotels. The ICE Kraków has a three-level glass foyer, which provides a fantastic panorama view of Kraków as well as an excellent overview and access to the Industrial Exhibition and Session Rooms.

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With very warm regards,

Marianna Eleftheroudi
EDTNA/ERCA President

Anna Klis
EDTNA/ERCA Local Organising Committee Chair