## Transition in Nephrology



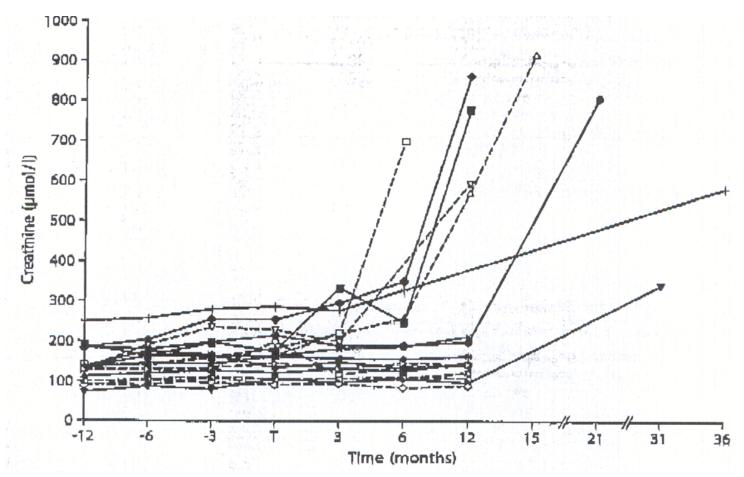




Medizinische Hochschule Hannover

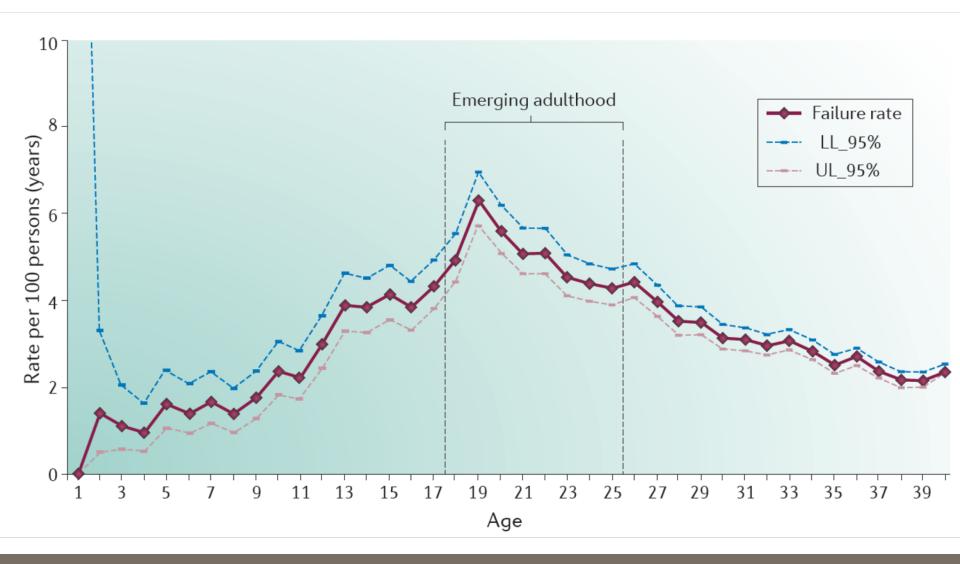


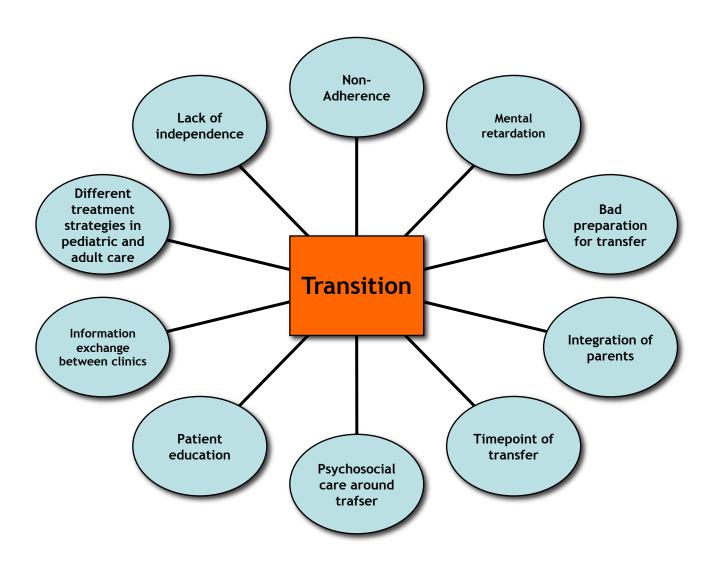
## The problem

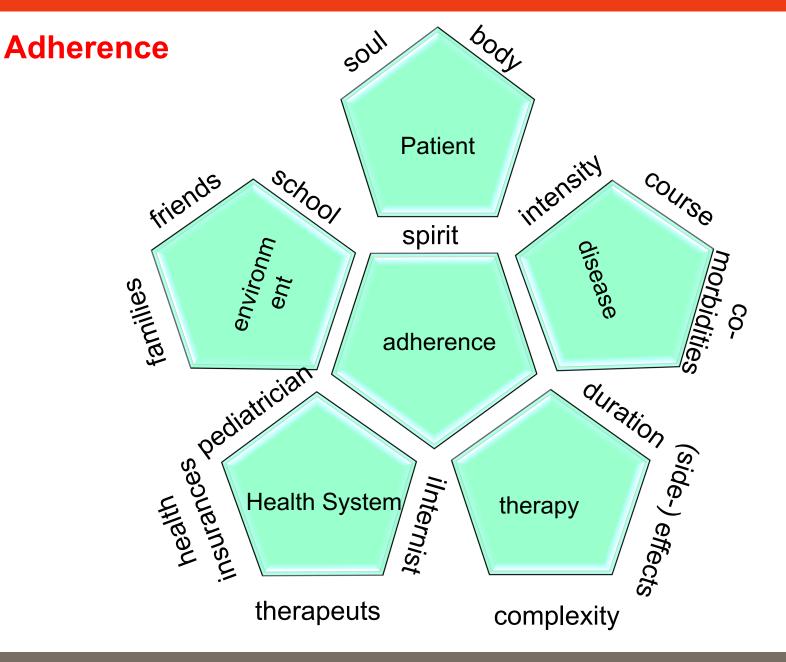


35% unerwartete Transplantatverluste

### Transition and non-adherence







## **Transition models**

Pediatric Nephrology -> adult nephrology

Pediatric Nephrology -> transition clinc -> adult nephrology

Pediatric Nephrology -> adolescent clinic -> young adult clinic -> adult nephrology

Other exaples: CF-centers (cildren and adults), adults with inborn heart disease



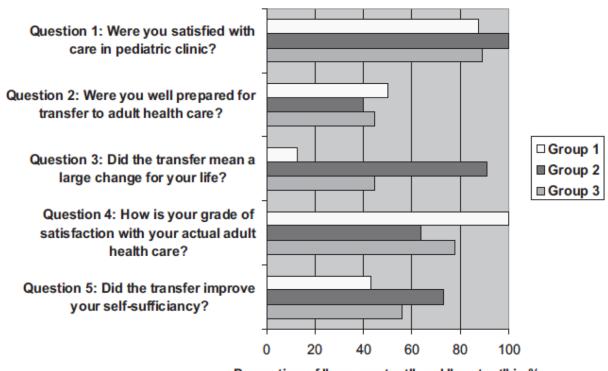
# Different models of transition to adult care after pediatric kidney transplantation: A comparative study

Pape L, Lämmermühle J, Oldhafer M, Blume C, Weiss R, Ahlenstiel T. Different models of transition to adult care after pediatric kidney transplantation: A comparative study.

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Type of clinic	Provider	Frequency of appointments	Affiliation
Group 1			
Transition clinic	One specialized adult nephrologist	Every 4 wk	On university campus but private provider
Group 2			
Adult transplant clinic	Residents in surgery or nephrology	Every 3–6 months plus appointments at family doctor	Part of university clinics
Group 3		•	
Office nephrologist	Several adult nephrologists	Depending on nephrologist every 4–12 wk	No university affiliation

Fig. 2. Responses to the satisfaction questionnaire (response rate 69% in setting 1, 53% in setting 2 and 41% in setting 3). Group 1: transition clinic, group 2: adult transplant clinic, and group 3: office nephrologist.



Proportion of "very content" and "content" in % (or for question 3: proportion of "very large" and "high change")



**OPEN** 

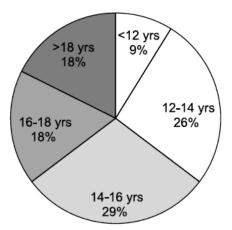
## Survey on Management of Transition and Transfer From Pediatric- to Adult-based Care in Pediatric Kidney Transplant Recipients in Europe

Martin Kreuzer, MD,<sup>1</sup> Jenny Prüfe, PhD,<sup>1</sup> Burkhard Tönshoff, PhD,<sup>2</sup> Lars Pape, MD,<sup>1</sup> and Members of the Working Group 'Transplantation' of the European Society for Paediatric Nephrology

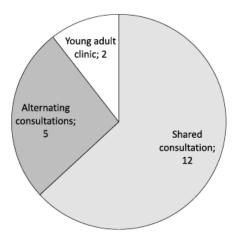
#### TABLE 1.

Components of transition and frequency of use in 31 pediatric nephrology centers in Europe (multiple choices permitted)

Descriptions	Used by
The concept of transition and goals in self-management to acquire are explained to the patient (and family) in early adolescence.	27/31
An unwritten plan for transition is made and communicated with the patient.	26/31
A written transition plan is made and communicated with the patient.	7/31
From a certain age the patient consults the nephrologist without a parent first—if applicable, the parent joins the consultation later on.	18/31
Individual in-house training courses of transition relevant skills.	10/31
Group training courses of transition relevant competencies at your center.	11/31
External training of transition relevant skills (including inpatient rehab programs).	10/31
Written information material about transition/transfer (eg, handout, magazine, flyer, book).	10/31
Transition medical passport.	4/31
Computer-based training/education (eg, software, online/internet/intranet, app, etc).	0/31
Progress of self-management skills is monitored by nephrologist/social worker WITHOUT special tools.	10/31
Progress of self-management skills is monitored by a score-based system.	1/31
Progress of self-management skills is monitored by questionnaire.	9/31
Readiness of transfer is determined by using an appropriate tool (eg, transition scale, questionnaire, self-rating)	6/31



**FIGURE 1.** Age of introduction of the concept of transition to adolescents and young adults after KTx at 34 centers in Europe. The age groups marked in white are recommended by the 2011 ISN/IPNA consensus on transition.<sup>1</sup>



**FIGURE 2.** Types of transition clinics used by 15 European centers (multiple choices permitted).

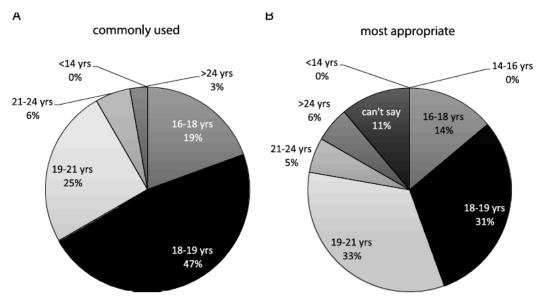


FIGURE 3. Transfer age. Comparison between the age when patients were most commonly transferred (A) and the opinion of the pediatric care provider on the most appropriate age for transfer (B) at 36 European centers.

#### TABLE 2.

Five-level Likert scale medians and ranges on transition policy statements of 31 pediatric nephrology centers in Europe

Policy statement	Median (range)
"At our clinic information about transition is given to the patient in a	5 (3-5)
gradual manner appropriate to developmental state."	
"The transition plan is individualized for each patient."	4 (2-5)
"Progress of self-management skills is monitored on a regular basis."	3 (1-5)

#### TABLE 3.

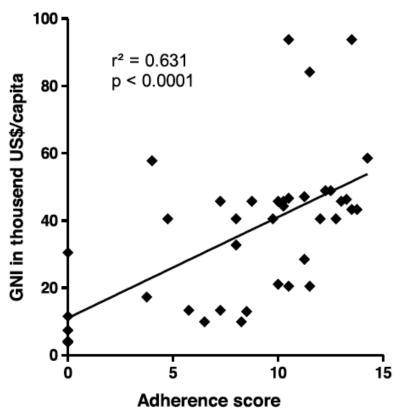
Healthcare professionals actively involved within the transfer process to adult-based care at 34 European pediatric nephrology centers

Profession	Involved by
Pediatric nephrologist	33/34
Adult nephrologist	31/34
Family doctor/general practitioner	3/34
Pediatrician	4/34
Psychologist (pediatric)	22/34
Psychologist (adult)	7/34
Social worker (pediatric)	19/34
Youth worker	2/34
Social worker (adult)	6/34
Nutritionist (pediatric)	14/34
Nutritionist (adult)	3/34
Nursing staff (pediatric)	25/34
Nursing staff (adult)	12/34

#### TABLE 4.

Five-level Likert scale medians and ranges on transition policy statements of 34 European pediatric nephrology centers

Policy statement	Median (range)
"Transfer at our center is individualized for each patient after s/he has completed a transition plan; this will depend upon completion of physical growth and, where possible, educational, social and psychological attainment".	4 (1-5)
"Transfer at our center is agreed upon jointly by the patient and his/her family/careers in conjunction with the pediatric and adult renal care teams."	4 (2-5)
"Transfer at our center DOES NOT take place during a period of crises, especially if there is unstable social support."	5 (2-5)
"Transfer at our center takes place after completing school education."	3 (1-5)
"We take into account treatment plans by other subspecialties (eg, urological supervision)."	4 (2-5)



**FIGURE 4.** Spearman correlation between the GNI and the guidelines adherence score in 39 European pediatric nephrology centers. GNI, gross national income.

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### **PRACTICE**

QUALITY IMPROVEMENT REPORT

## Bridging the gap: an integrated paediatric to adult clinical service for young adults with kidney failure

P N Harden consultant nephrologist and transplant physician<sup>1</sup>, G Walsh paediatric transplant nurse specialist<sup>2</sup>, N Bandler adult transplant nurse specialist<sup>1</sup>, S Bradley paediatric transplant nurse specialist<sup>3</sup>, D Lonsdale youth development worker<sup>1</sup>, J Taylor consultant paediatric nephrologist<sup>2</sup>, S D Marks consultant paediatric nephrologist<sup>3</sup>

Oxford Kidney Unit and Transplant Centre, Churchill Hospital, Oxford OX3 7LJ, UK; <sup>2</sup>Evelina Children's Hospital, London, UK; <sup>3</sup>Great Ormond





Table 1| Outcomes for young adult kidney transplant recipients before and after introduction of integrated transition from paediatric nephrology care to adult care and a young adult clinic service

	Model of transfer from paediatric to adult care		
	Direct transfer	Integrated transition and young adult service	
Time period	2000–05	2006–11	
Transfer process and adult care team	Single referral letter, 6 adult nephrologists	Young adult team (1 nephrologist, 1 nurse specialist, and 1 youth worker)	
No of patients (male, female)	9 (3 male: 6 female)	12 ( 7 male: 5 female)	
Median (range) age at transfer to adult care (years)	18 (16–18)	17.5 (16–18)	
No (%) of late acute rejections	3 (33)	0	
No (%) of renal allograft loss	6 (67)	0	
Median (range) time to renal allograft loss	40 (1–62)	_	
No of deaths	1 (due to miliary tuberculosis)	0	

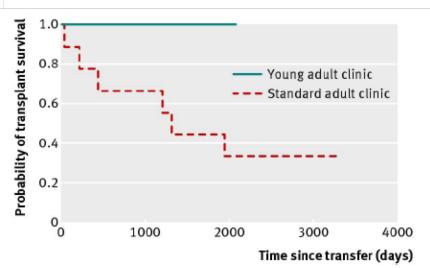
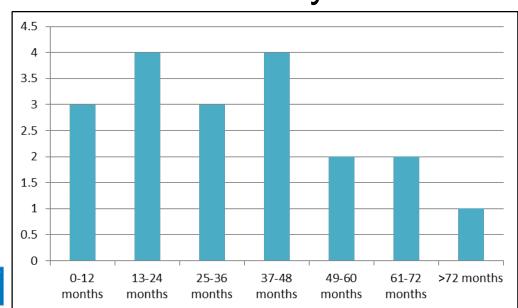


Fig 3 Renal allograft survival (days) before and after introduction of an integrated paediatric to adult transition and young adult clinical service for patients with end stage kidney disease (log rank test, P=0.015).

## **GOSH transition programme cohort:** 25% (131/505 total) pRTR transferred

- Patient survival = 99%
- Graft survival = 83%
- Median age = 18 y
  - range = 15 24 y
- 17% (19/112) grafts failed post-transition over 8 years
  - 5 second grafts

- Graft survival = 9.7 y
  - range = 0.0 20.6 y
- Median time to graft failure = 2.9 years



Great Ormond Street Miss Hospital for Children







#### Shared Management Model Age and **Provider** Parent/Family Youth Time Major Provides care Receives care responsibility Support to Manages **Participates** Parent/family & child/youth Consultant Supervisor Manager Consultant Supervisor/CEO Resource

#### **Transition Clinic**

**Information for Youth and Parents** 

What is the "Transition Clinic?"

Good 2 Go offers a weekly (Tuesday) clinic for SickKids patients (ages 12-17) who want to learn more about transitioning and develop skills to feel prepared. In some circumstances, we can also work with parents and caregivers on transition related concerns or include parents in discussions (with consent of the patient).

#### **Transition Tools**

Validated instruments created by the STARx Program to measure self-management and transition readiness.

Since 2006, our interdisciplinary STARx Team at UNC has created (and continues to validate) two tools to measure health care transition readiness - the provider-administered TRxANSITION Scale and the self-report STARx Questionnaire.

#### 1. The TRxANSITION Scale™

The TRXANSITION Scale is a 10-domain, 32-item questionnaire measuring transitions readiness that is administered by a trained professional. Administering the instrument takes about 8 minutes and can be done either in person or over the phone. The TRXANSITION Scale™ Educational Handouts provide patient education that corresponds with each subdomain of the instrument.

#### 2. STARx Transition Readiness Questionnaire

The STARx Questionnaire is a 3-domain, 18-item self-administered questionnaire measuring overall transition readiness. Patients can complete the STARx Questionnaire in 3 minutes on paper or on the computer.

#### 3. Nephrology Medical Passport™

The Nephrology Medical Passport™ is a portable health summary the size of a driver's license that a patient can carry with them in their wallet. The passport can be used for patient education as well as a tool for communication between patient and provider.



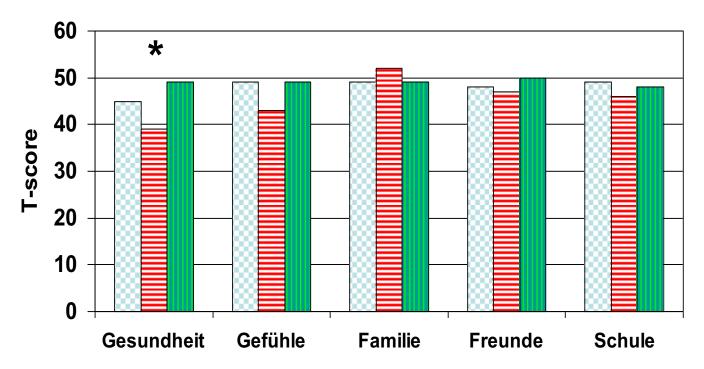


## Transition program "endlich erwachsen" (finally adult) started 2003

- Primary one week seminar for adolescents > 16 years
- Workshops on different subjects for adolescents
- Weekend workshops for parents
- Pediatric dialysis workshop for nurses and physicians
- Communication: internet forum / homepage

## Quality of life (HRQoL): Kidscreen 27

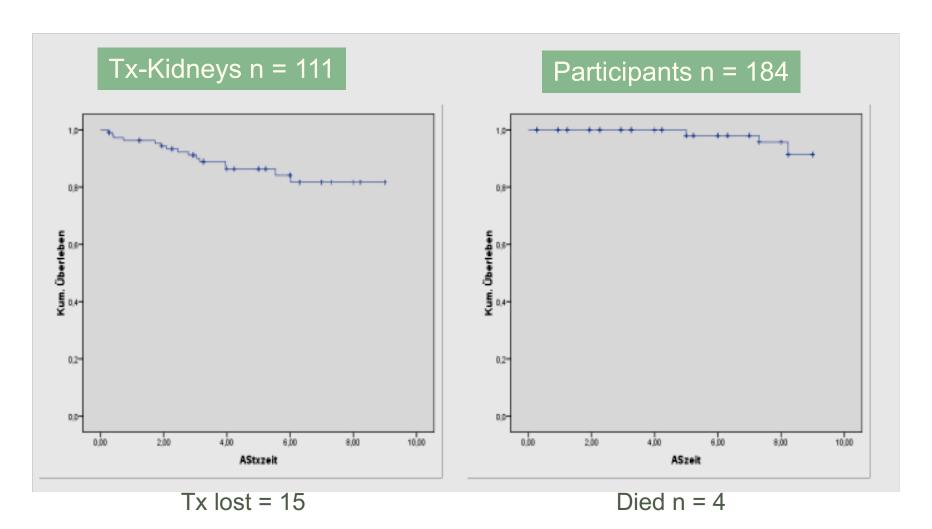


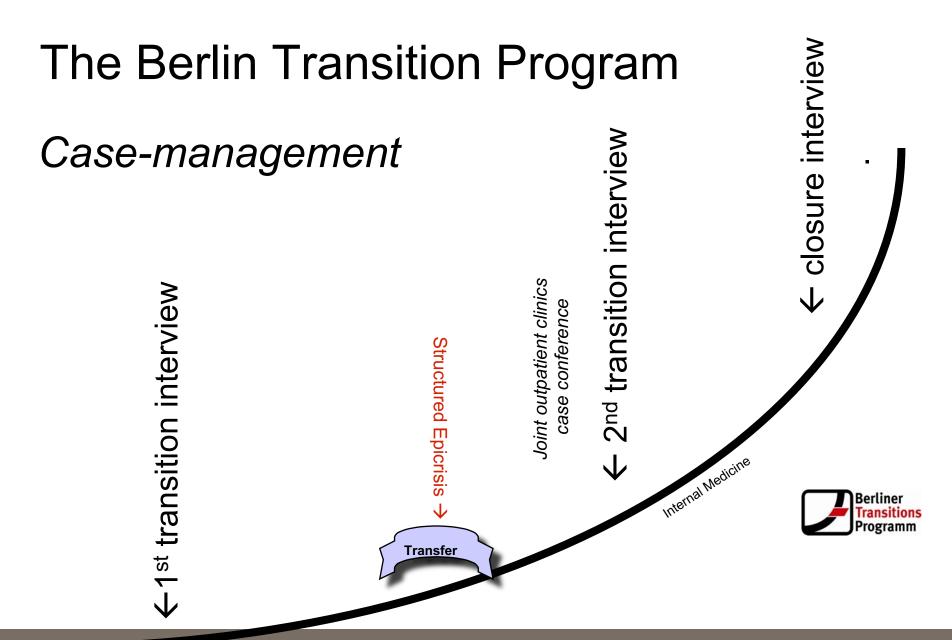


★ Effect Size 0,43 Teilnehmer vs Kidsreen

Questionnaire 09/2007 - 01/2010

## Survival













#### **OPEN**

## Transitional Care and Adherence of Adolescents and Young Adults After Kidney Transplantation in Germany and Austria

A Binational Observatory Census Within the TRANSNephro Trial

Martin Kreuzer, MD, Jenny Prüfe, PhD, Martina Oldhafer, PhD, Dirk Bethe, Marie-Luise Dierks, PhD, Silvia Müther, MD, Julia Thumfart, MD, Bernd Hoppe, MD, PhD, Anja Büscher, MD, PhD, Wolfgang Rascher, MD, PhD, Matthias Hansen, MD, Martin Pohl, MD, PhD, Markus J. Kemper, MD, PhD, Jens Drube, MD, Susanne Rieger, MD, Ulrike John, MD, PhD, Christina Taylan, MD, Katalin Dittrich, MD, Sabine Hollenbach, MD, Günter Klaus, MD, PhD, Henry Fehrenbach, MD, Birgitta Kranz, MD, Carmen Montoya, MD, Bärbel Lange-Sperandio, MD, PhD, Bettina Ruckenbrodt, MD, Heiko Billing, MD, PhD, Hagen Staude, MD, Krisztina Heindl-Rusai, MD, Reinhard Brunkhorst, MD, PhD, and Lars Pape, MD, PhD

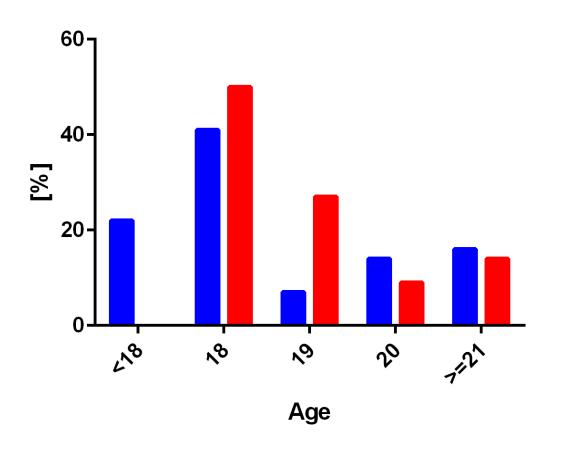
TABLE 2. Pediatric Nephrology Unit Staffing

Profession	Median Number	Range
Physicians	1.9	0.6-4.0
Nursing team	3.25	0.25 - 8.5
Psycho-social team*	0.5	0-2.5
Others <sup>†</sup>	0.1	0-1

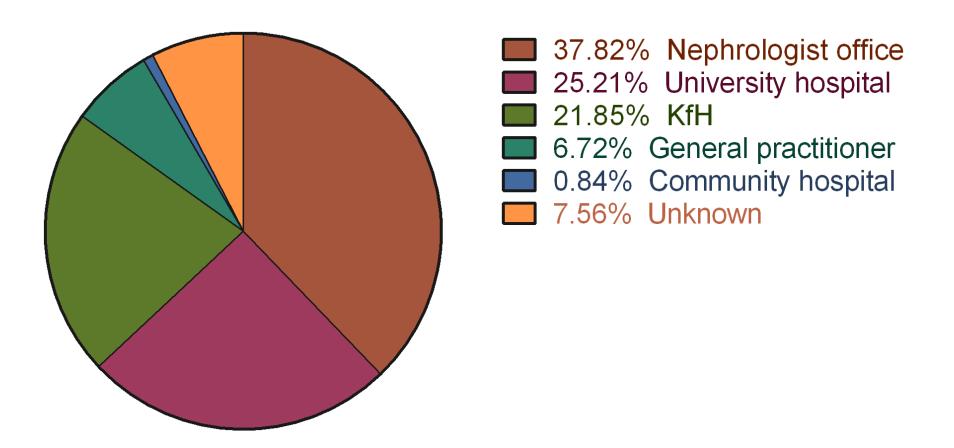
Data are given as proportion of one full-time position.

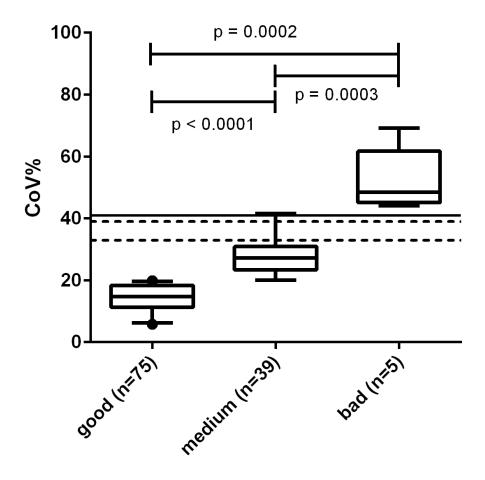
<sup>\*</sup> Psychologists and social workers.

<sup>&</sup>lt;sup>†</sup>Total of other health care specialists, for example, nutritionist, educationalist.



actual transfer age [%]rated transfer age [%]





Trough level variability and adherence

## Veröffentlichung

**Open Access** Research

**BMJ Open** Transition structures and timing of transfer from paediatric to adult-based care after kidney transplantation in Germany: a qualitative study

> Jenny Prüfe, Marie-Luise Dierks, Dirk Bethe, Martina Oldhafer, Silvia Müther, Julia Thumfart, Markus Feldkötter, Anja Büscher, Katja Sauerstein, Matthias Hansen, <sup>10</sup> Martin Pohl, <sup>11</sup> Jens Drube, <sup>1</sup> Florian Thiel, <sup>12</sup> Susanne Rieger, <sup>13</sup> Ulrike John, 14 Christina Taylan, 15 Katalin Dittrich, 16 Sabine Hollenbach, 17 Günter Klaus, 18 Henry Fehrenbach, 19 Birgitta Kranz, 20 Carmen Montoya, 21 Bärbel Lange-Sperandio,<sup>22</sup> Bettina Ruckenbrod,<sup>23</sup> Heiko Billing,<sup>24</sup> Hagen Staude,<sup>25</sup> Reinhard Brunkhorst,<sup>26</sup> Krisztina Rusai,<sup>27</sup> Lars Pape,<sup>1</sup> Martin Kreuzer<sup>1</sup>

Table 1 IPNA consensus statement and its realisation in Germany		
1. Transition to transfer	Aimed for by	Fully applied by
Delivery of necessary patient care information to the receiving adult service	21/21	21/21
2. Transfer from paediatric to adult nephrology should		
be individualised for each patient after s/he has completed a transition plan depending on completion of physical growth and educational, social and psychological attainment	21/21	1/21
poyonological attainment		

**Results** This study highlights that professionals working within paediatric nephrology in Germany are well aware of the importance of successful transition. Key elements of transitional care are well understood and mutually agreed on. Nonetheless, implementation within daily routine seems challenging, and the absence of written, structured procedures may hamper successful transition.

with specialist nurses for adult patients who liaise with specialist nurses from the paediatric unit can ensure continuity of care	no data	0/21
providing a comprehensive written and verbal summary of all the multidisciplinary aspects of the young person's care including medical, nursing, dietary, social and educational information	21/21	0/21 (summary available but not as part of transition clinic)
offering a transition pathway to assert their autonomy and help provide the relevant information about themselves	21/21	0/21 Not standardised

IPNA, International Pediatric Nephrology Association.



## Randomized trial

Hand out patient information

Consent of adolescent patients and their parents



Randomisation

#### Intervention group

Control group

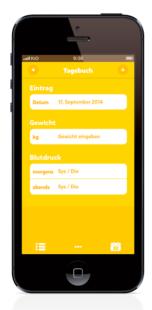
Informed consent, gathering of baseline data, 1st issuing of questionnaires (T0)

Gathering of clinical data
/ laboratory values for eCRF
2nd issuing of questionnaires (T1, 12 months)

T R A N S F E R

Recording and contacting of physicians to whom transfers are made

Collection of clinical data and laboratory values for eCRF 2<sup>nd</sup> issuing of questionnaires (T2, 24 months) rRANSNephro 2nd phase



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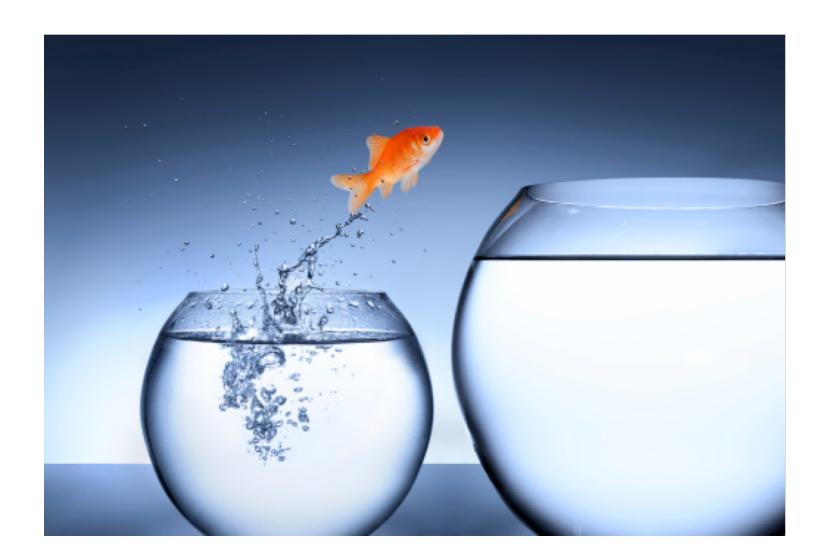
Hannove

irticipation in the "Berliner



### Task force Transition and quality of life

- Challenges and concepts for structured transition of patients with rare kidney diseases
- Survey on current transition practices in ERKNet centers based on TRANSNephro Survey
- Financing of transition in different European countries / healths systems
- Survey on patient expectations and experiences
- Survey on parents expectations and experiences
- Survey on perspectives of adult nephrologists on transition



#### **Next ERKnet webinar:**

Feb 05 2019

"Management of X-linked hypophosphatemic rickets in children and adults"

by Dieter Haffner (Hannover, Germany)