

Why stimulating home based therapies is an economical imperative with ethical consequences



KU LEUVEN



B. Bammens

June 6th 2018

**UZ
LEUVEN** BELGIUM

self-care dialysis
symposium

**4th self-care
dialysis symposium**
6th & 7th June 2018
SQUARE-BRUSSELS MEETING CENTRE
MONT DES ARTS, B - BRUSSELS - BELGIUM

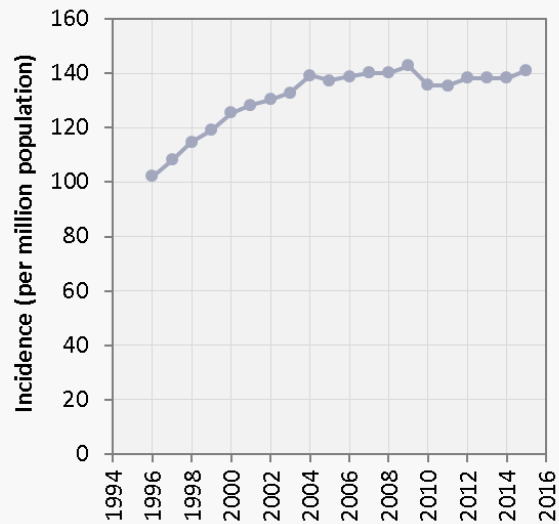


ESRD: if not incidence, prevalence increases

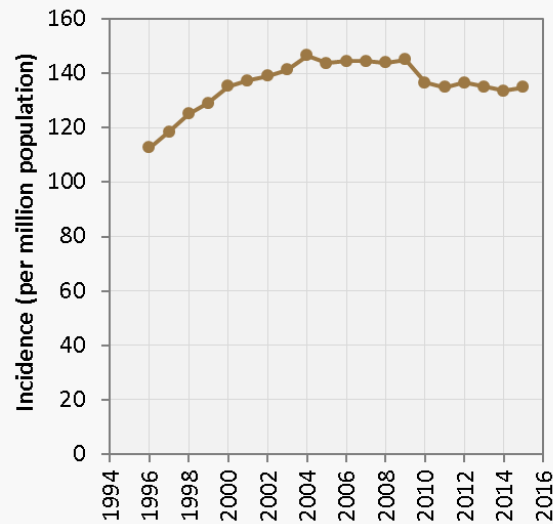


Incident patients accepted for RRT, at day 1 *last 20 years (1996-2015)*

Unadjusted incidence over time
all patients starting RRT



Adjusted incidence over time
all patients starting RRT

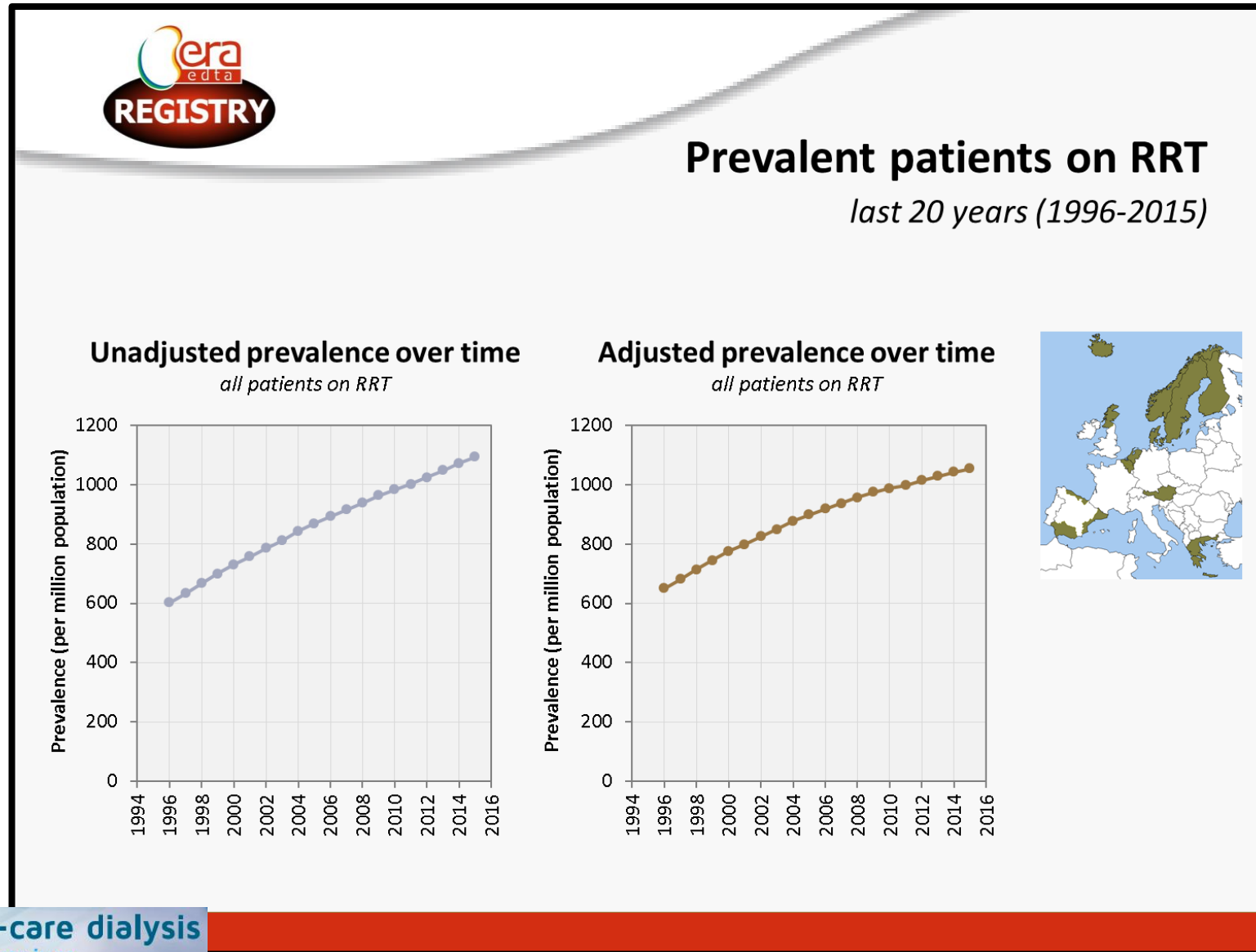


Incidence





ESRD: if not incidence, prevalence increases



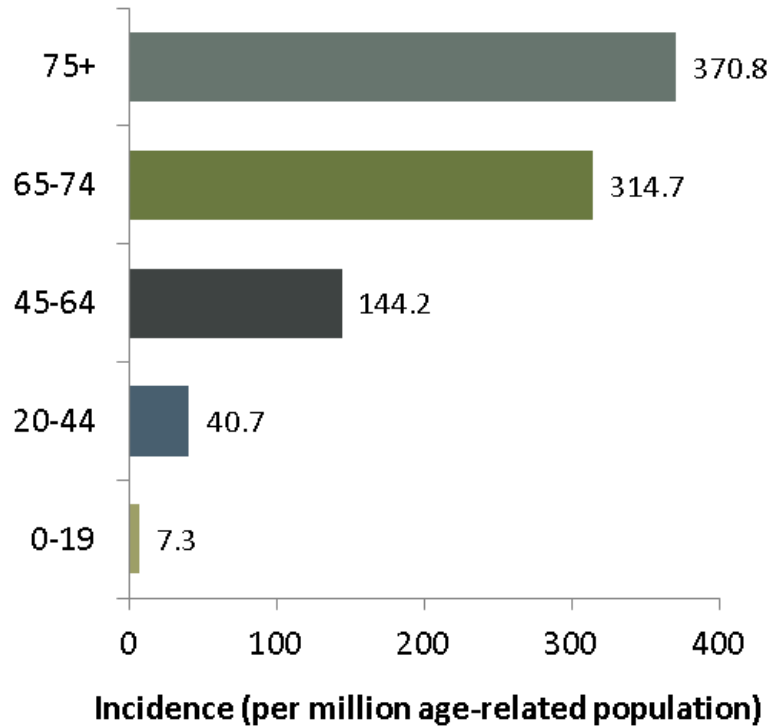
Prevalence



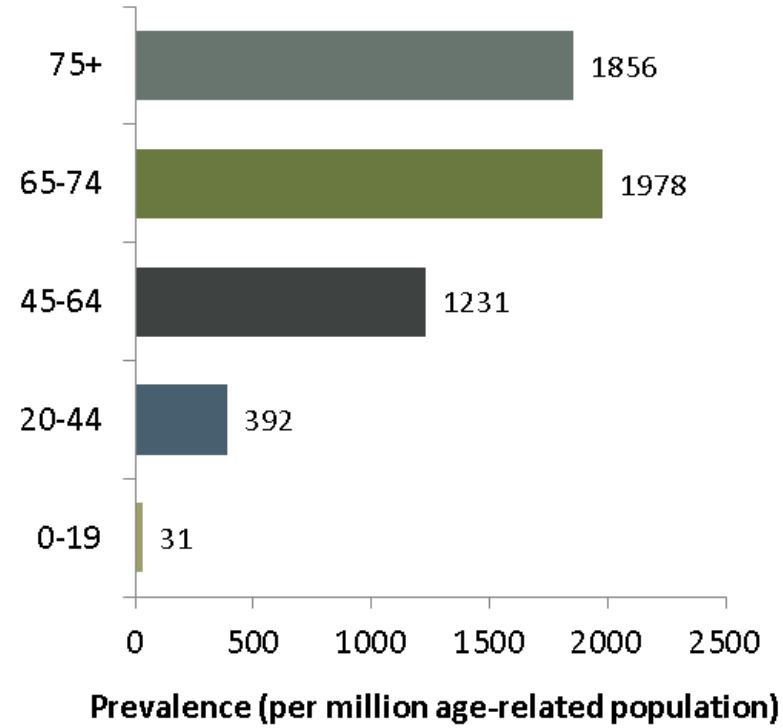


ESRD: if not incidence, prevalence increases

Incidence by age category
for all registries



Prevalence by age category
for all registries





Cost of healthcare – Cost of ESRD care

Dialysis is resource-heavy,
costing up to

In general, RRT consumes 2% of overall healthcare expenditure in Europe, for only 0.1% of the population. The total 'direct' cost of RRT across Europe is unknown, but one estimate puts it at up to €15 billion per year.

EUR per year, per patient, depends on the country and method.

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How are we supposed to deal with that?

ALLOCATION, ALLOTMENT, RATIONING, QUOTA

“the action of apportioning or assigning to a special person or purpose”



I approach the topic of resource allocation for patients with end-stage renal disease with trepidation and chagrin. The trepidation comes from the difficulty of the topic, one that becomes harder, not easier, as time goes on. More people need dialysis, more can benefit from it, more seem inappropriate users, and more and more money is needed to pay for it. How are we supposed to deal with that? The chagrin comes from the fact that I have been saying for at least 20 years, in a voice reminiscent of Chicken Little **‘this can’t go on, it just can’t’**. But it has gone on and, in the near term, will no doubt continue to go on.





Tactics for the control of costs

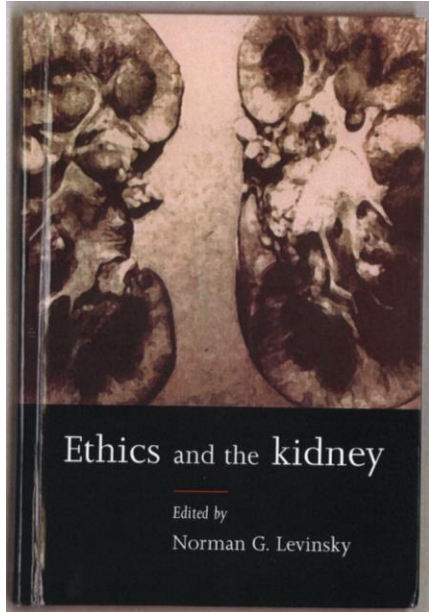


Medical criteria for treatment eligibility enforced by law

Age limit enforced by law

Budget cap on expenditures, choice of eligible patients up to physician discretion

Means-testing approach: co-payment according to ability to pay



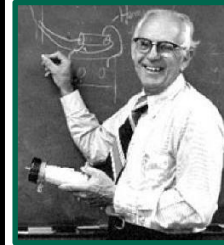


Tactics for the control of costs



OMG!

The GOD Committee



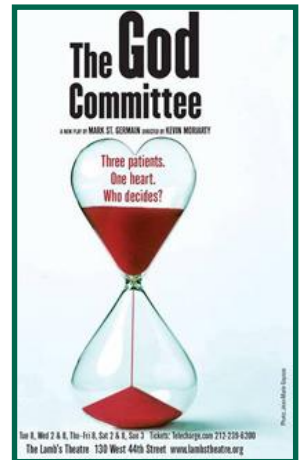
Dr. Belding Scribner

Simple, but revolutionary: 'the Scribner shunt'
Chronic dialysis available for only 1 out of 50!

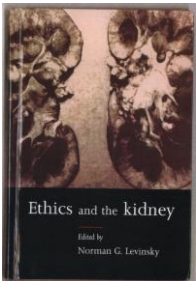
1961 'Admissions and Policies Committee of the
Seattle Artificial Kidney Center'

Lawyer, minister, banker, housewife, state
government official, labor leader and surgeon

Age, sex, marital status, number of dependents,
income, emotional stability, educational
background, occupation, past performance and
future potential, references



Tactics for the control of costs



Medical criteria for treatment eligibility enforced by law

Age limit enforced by law

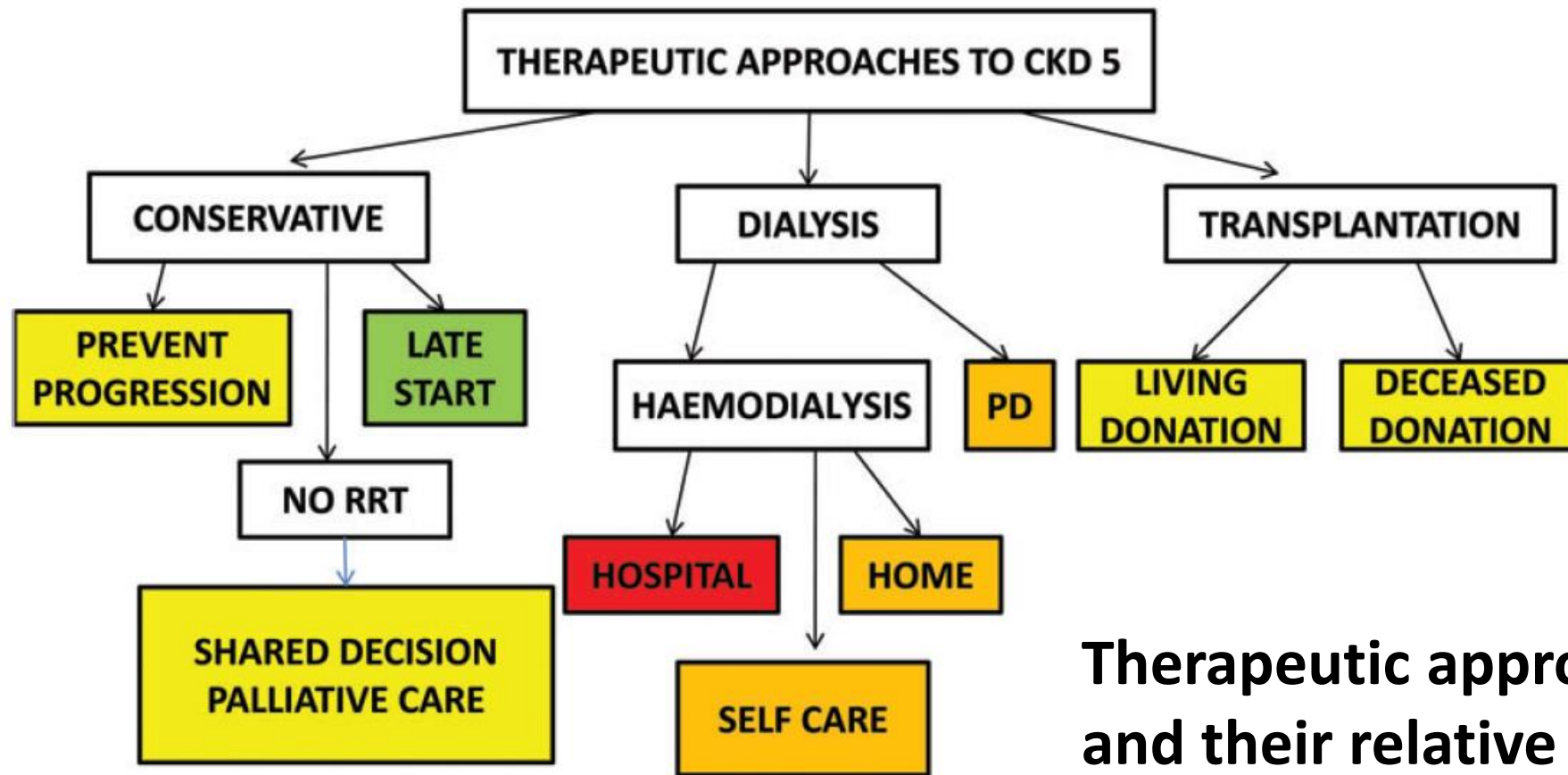
Budget cap on expenditures, choice of eligible patients up
to physician discretion

Means-testing approach: co-payment according to ability
to pay

Daniel Callahan in Ethics and the Kidney, Ed. N. G. Levinsky, 2001



Tactics for the control of costs



Therapeutic approaches to CKD 5 and their relative cost

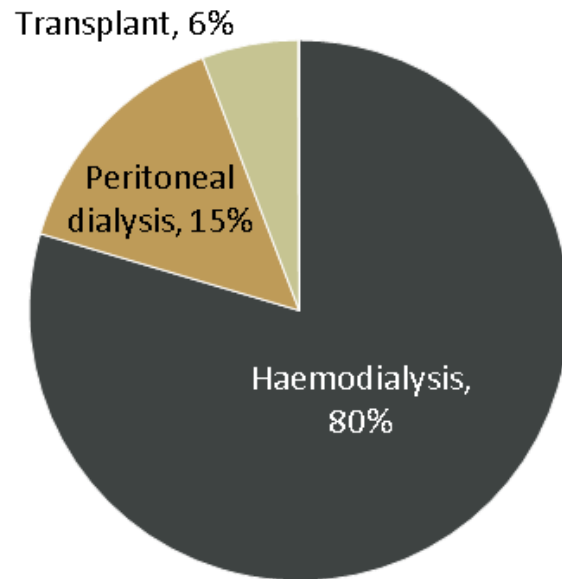


ESRD: if not incidence, prevalence increases

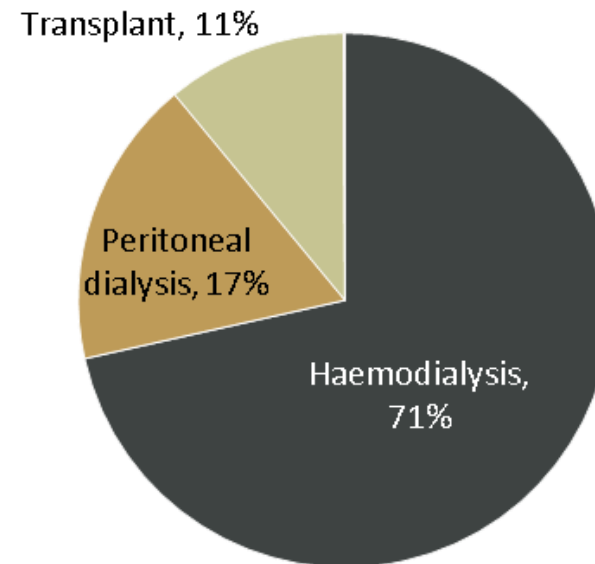
Incidence at day 91 by established modality

patients from registries providing individual patient data only

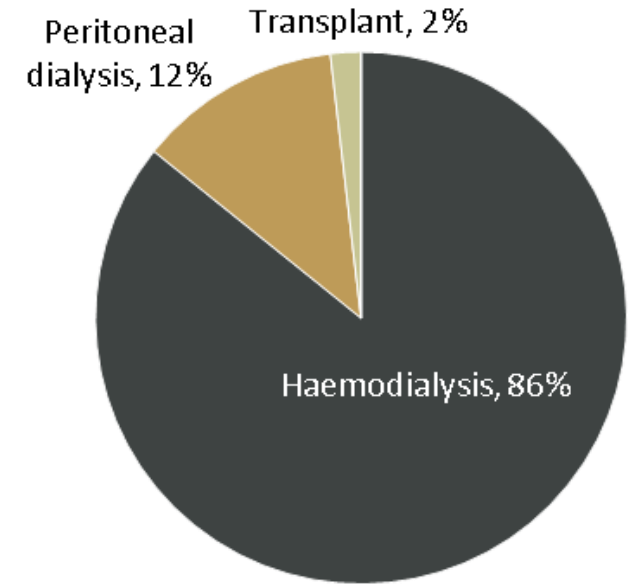
all patients



patients younger than 65 years
of age at the start of RRT



patients aged 65 years or older
at the start of RRT





Tactics for the control of costs



Cost of renal replacement: how to help as many as possible while keeping expenses reasonable?

Raymond Vanholder¹, Norbert Lameire¹, Lieven Annemans² and Wim Van Biesen¹

Strategies to increase transplantation rates

Financial incentives (bundling, green dialysis, for-profit vs. nonprofit)

Education (caregivers & patients)

Timely referral

Prevention of CKD progression

Assisted home therapies

Non-start/withdrawal

Later start

Reuse (?)



Tactics for the control of costs



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Tactics for the control of costs



Review Article

Addressing the burden of dialysis around the world: A summary of the roundtable discussion on dialysis economics at the First International Congress of Chinese Nephrologists 2015

The roundtable discussion was attended by experts from Hong Kong, China, Canada, England, Malaysia, Singapore, Taiwan and United States. Potential solutions to cope with the heavy burden on dialysis include the prevention and retardation of the progression of CKD; wider use of home-based dialysis therapy, particularly PD; promotion of kidney transplantation; and the use of renal palliative care service.



Home treatment = lower cost!





Home treatment = lower cost!



RAPPORT D'ÉVALUATION MÉDICO-ÉCONOMIQUE

Évaluation médico-économique des stratégies de prise en charge de l'insuffisance rénale chronique terminale en France

Octobre 2014

HAS

HAUTE AUTORITÉ DE SANTÉ



agence de la
biomédecine



Home treatment = lower cost!



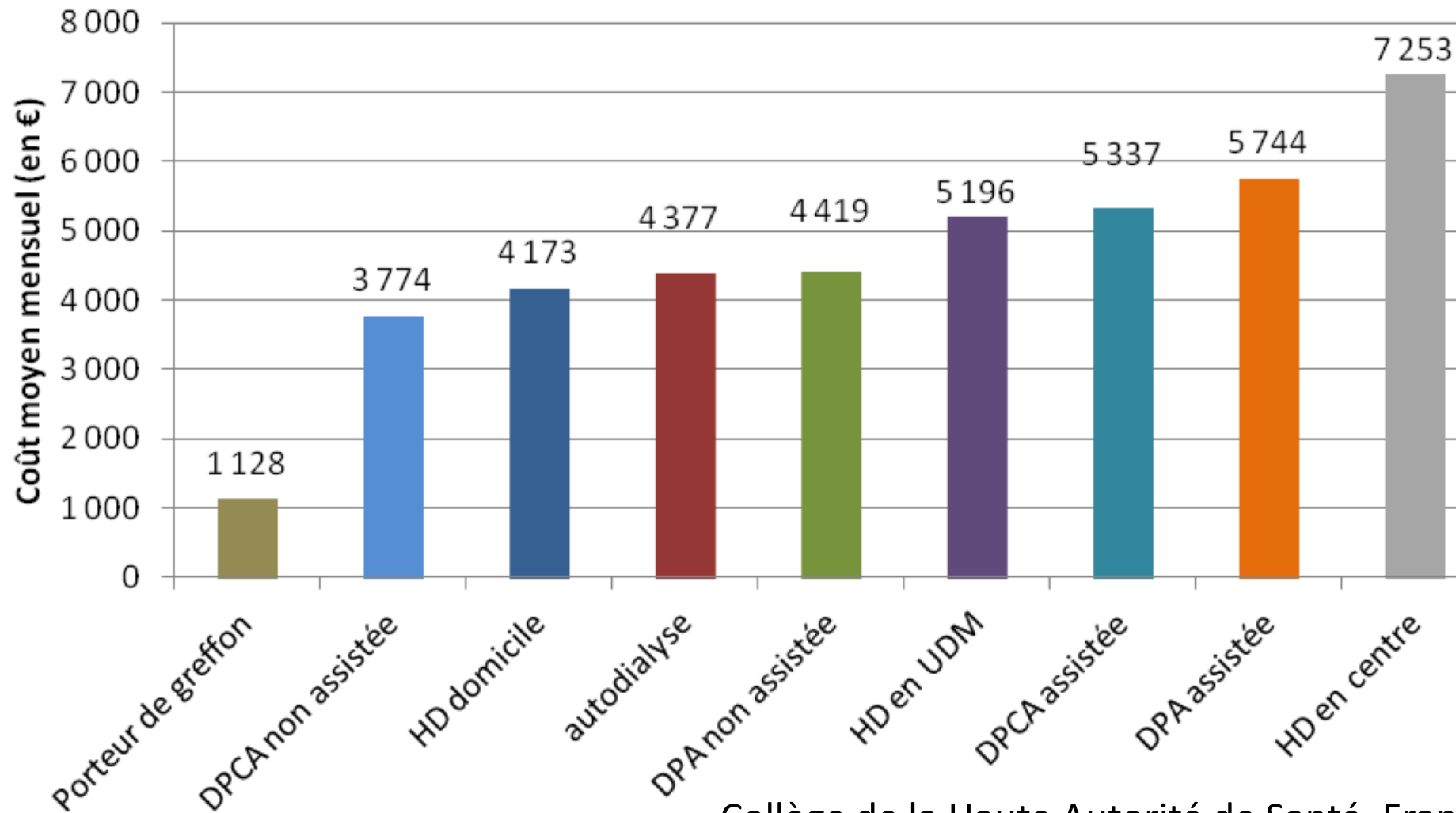
- hospital care, medical and paramedical fees for hospital and outpatient care
 - medical goods (drugs and medical devices)
 - laboratory tests
 - transport
 - personal autonomy allowances
- (for dialysis or transplant but also comorbidities and other medical complications)



Home treatment = lower cost!



Monthly cost in €





Home treatment = lower cost!



Economic impact of a modification of the treatment trajectories of patients with end-stage renal disease

Cécile Couchoud¹, Anne-Line Couillerot², Emmanuelle Dantony^{3,4}, Mad-Hélénie Elsensohn^{3,4}, Michel Labeeuw⁵, Emmanuel Villar^{4,6}, René Ecochard^{3,4} and Isabelle Bongiovanni²

- France
- Prediction of 15 year trajectories and outcomes of incident ESRD patients
- 6 subcohorts by age and diabetes
- Based on 67258 REIN and 65662 French national health insurance data



Home treatment = lower cost!



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Status quo

= current initial modality distributions, transition rates and costs

vs.

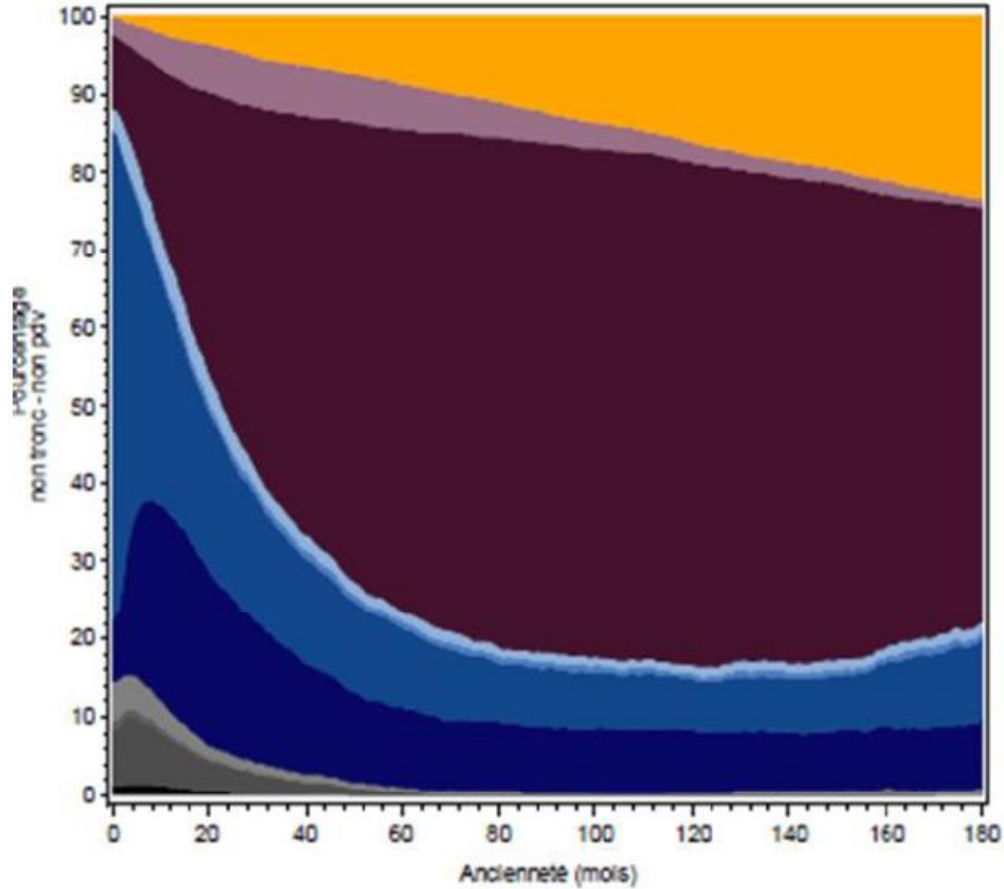
New strategies



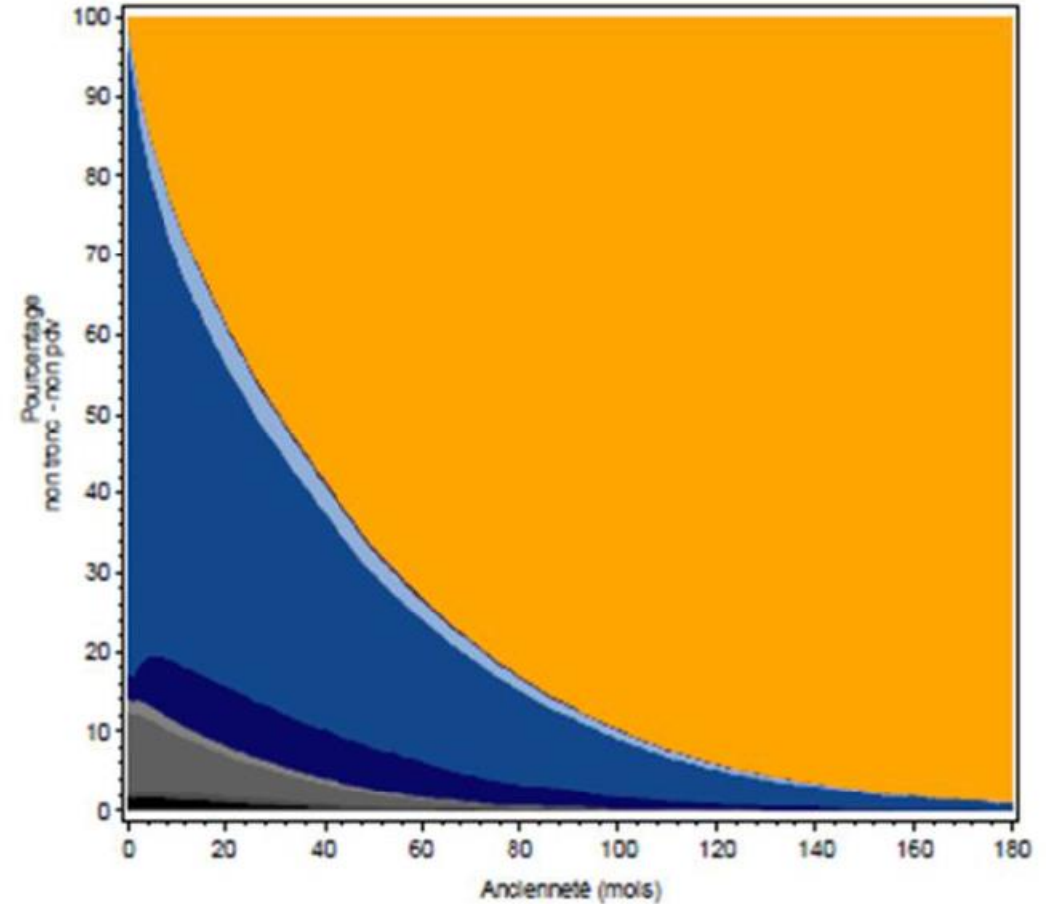
Status quo



Age 18-44 years @ start of RRT



Age ≥ 70 years @ start of RRT



New strategies

Age 18-44 years @ start of RRT – non-diabetic

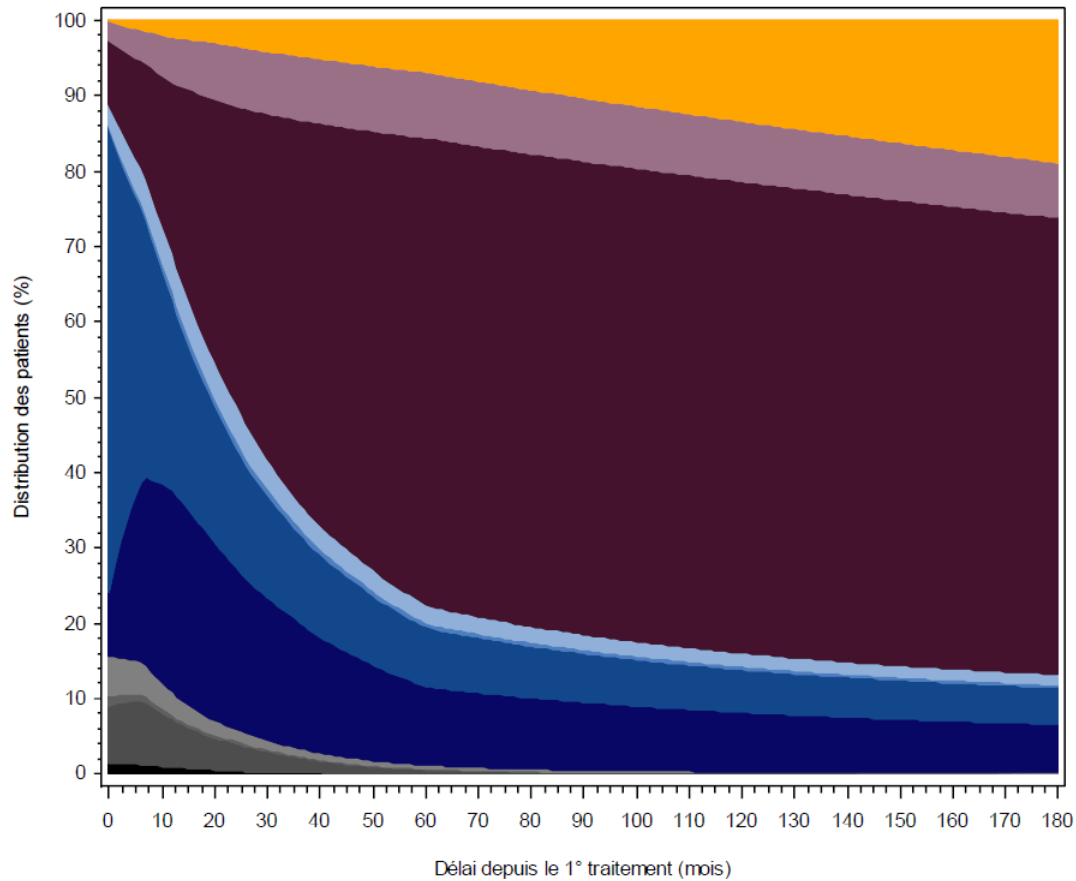
Cohort = 823 incident patients	Status quo	Renal TR, all donors	Renal TR, deceased donor	Renal TR, living donor	Combined: CAPD, APD and home HD	Non-assisted CAPD, transfer to self-care unit	Non-assisted CAPD, transfer to home HD	Non-assisted APD	Non-assisted APD, transfer to home HD	Non-assisted CAPD	Non-assisted APD, transfer to self-care unit	Home HD	Daily home HD
Cost/months (euros) for 1 patient	2684	2216	2233	2443	2584	2618	2618	2619	2623	2625	2624	2656	2714
Comparison with status quo (euros/months)		-468	-451	-240	-100	-66	-65	-64	-61	-59	-60	-27	30

Renal TR, all donors	Renal TR, deceased donor	Renal TR, living donor
2216	2233	2443
-468	-451	-240

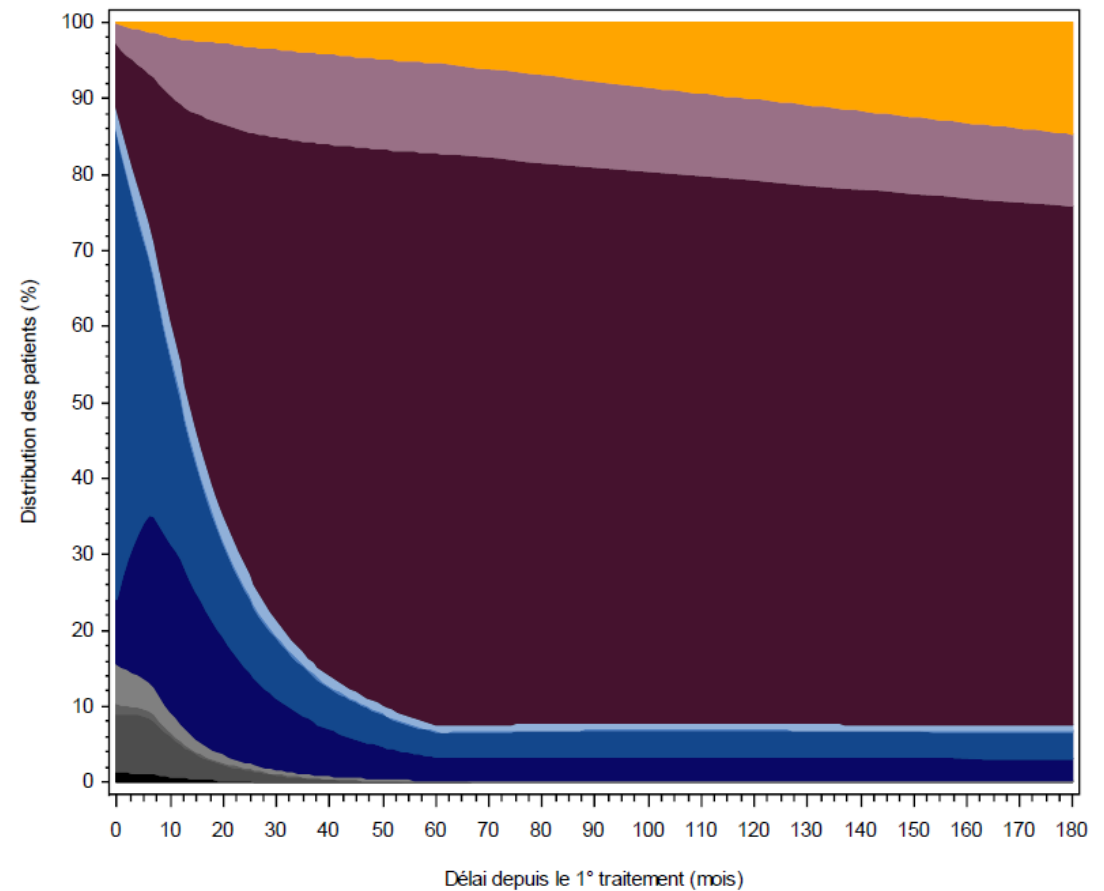


New strategies

Age 18-44 years @ start of RRT – non-diabetic



- DPA ass
- AutoD
- Centre
- HD dom
- TX dcd
- TX viv
- DCD
- DPCA ass
- DPCA aut
- UDM

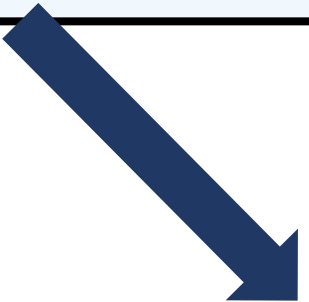


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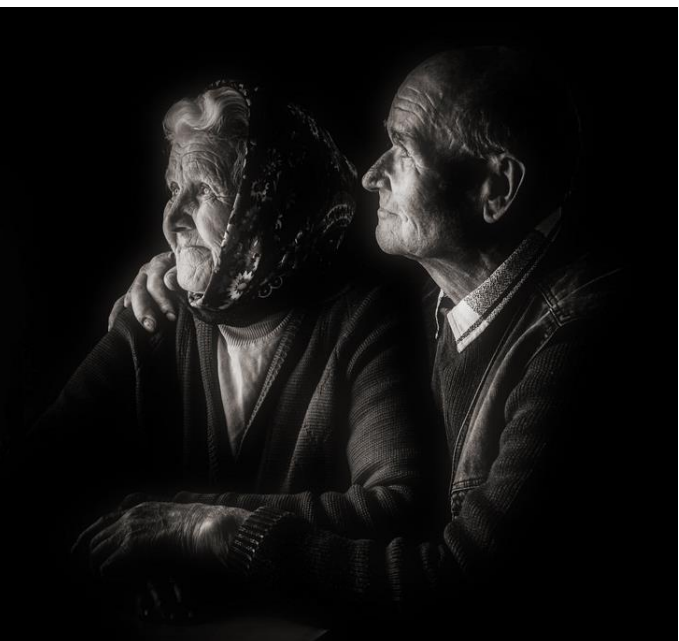
New strategies

Age \geq 70 years @ start of RRT – diabetic

Cohort = 2096 incident patients	Status quo	Renal TR, deceased donor	Combined: CAPD, APD and local facility under medical supervision	Combined: CAPD, APD and facility under medical supervision	Local facility under medical supervision	Facility under medical supervision	Local facility under medical supervision, transfer to Hospital-based HD	Facility under medical supervision, transfer to hospital-based HD	Assisted CAPD, transfer to facility under medical supervision	Assisted CAPD	Assisted APD, transfer to facility under medical supervision	Assisted APD
Cost/months (euros) for 1 patient	7361	6882	6917	6949	7015	7051	7053	7086	7222	7243	7304	7314
Comparison with status quo (euros/months)		-479	-444	-412	-346	-310	-308	-275	-139	-119	-58	-47

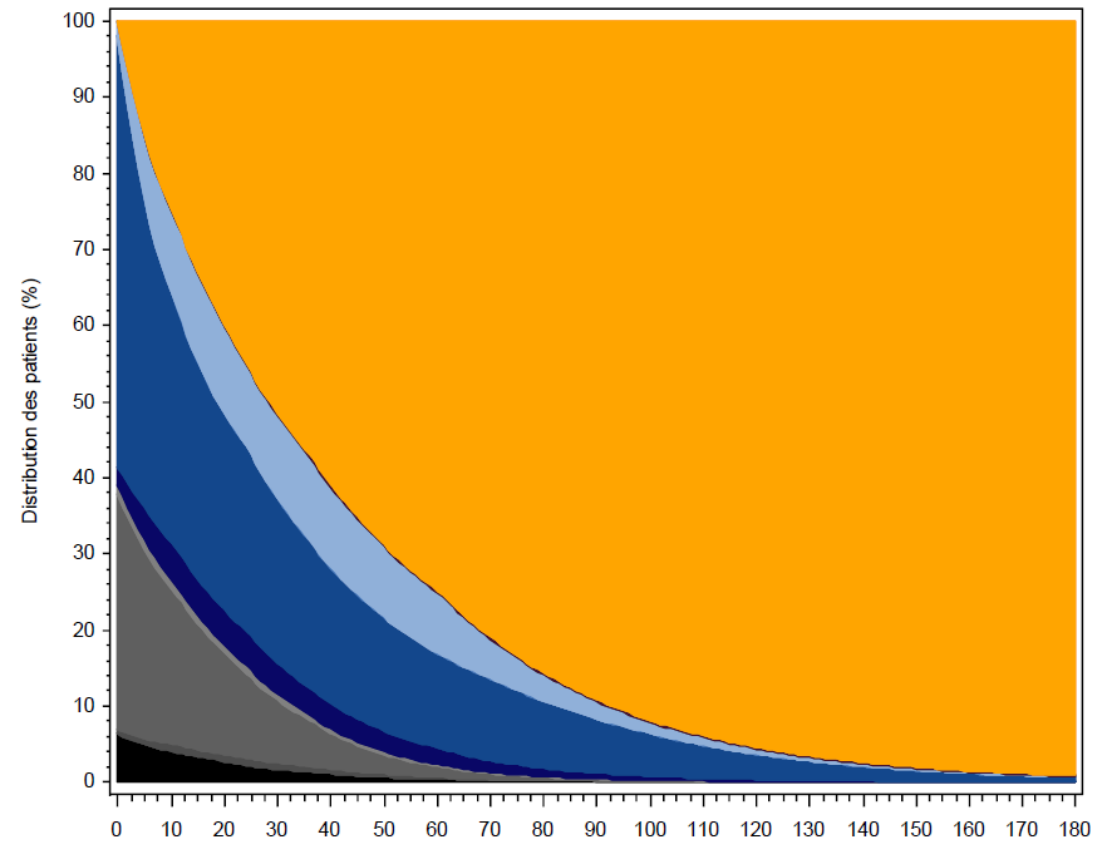
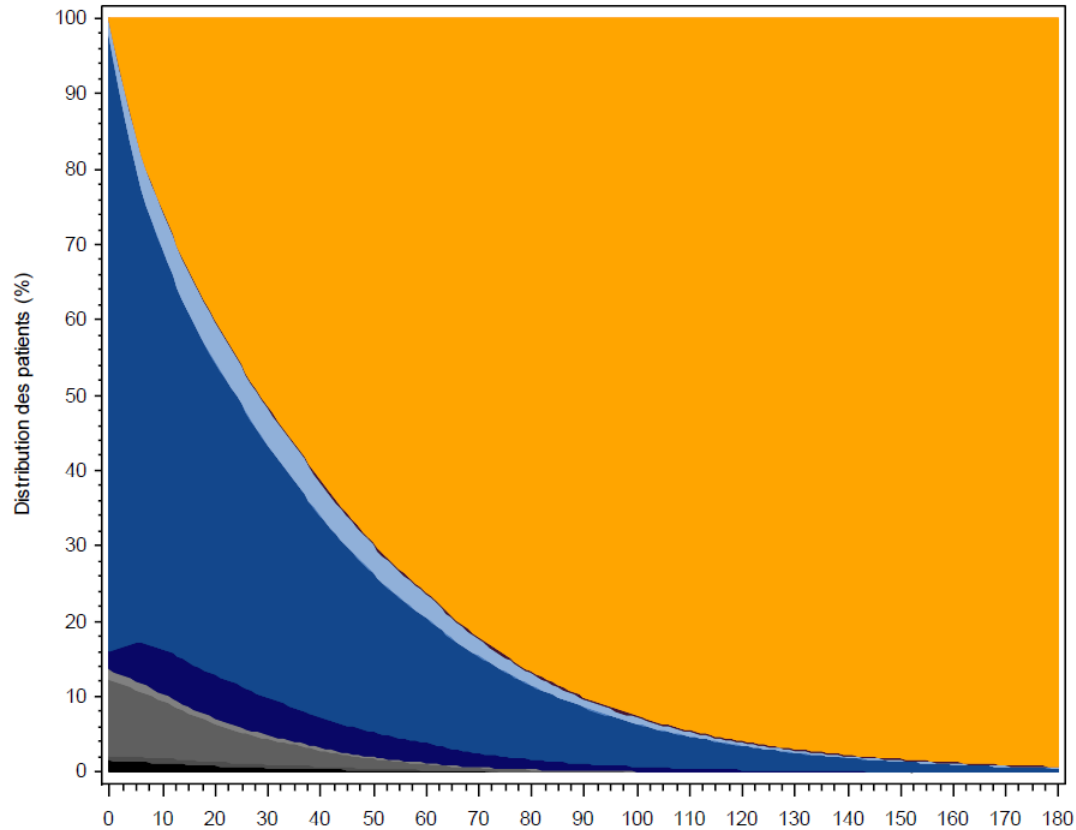


Combined: CAPD, APD and local facility under medical supervision	Combined: CAPD, APD and facility under medical supervision
6917	6949
-444	-412



New strategies

Age ≥ 70 years @ start of RRT – diabetic



■ DPA ass	■ DPA aut	■ DPCA ass	■ DPCA aut
■ AutoD	■ Centre	■ HD dom	■ UDM
■ TX dcd	■ TX viv	■ DCD	

To treat the elderly at home...

How come you never say that you love me anymore?



I told you once. If anything changes, I'll let you know.

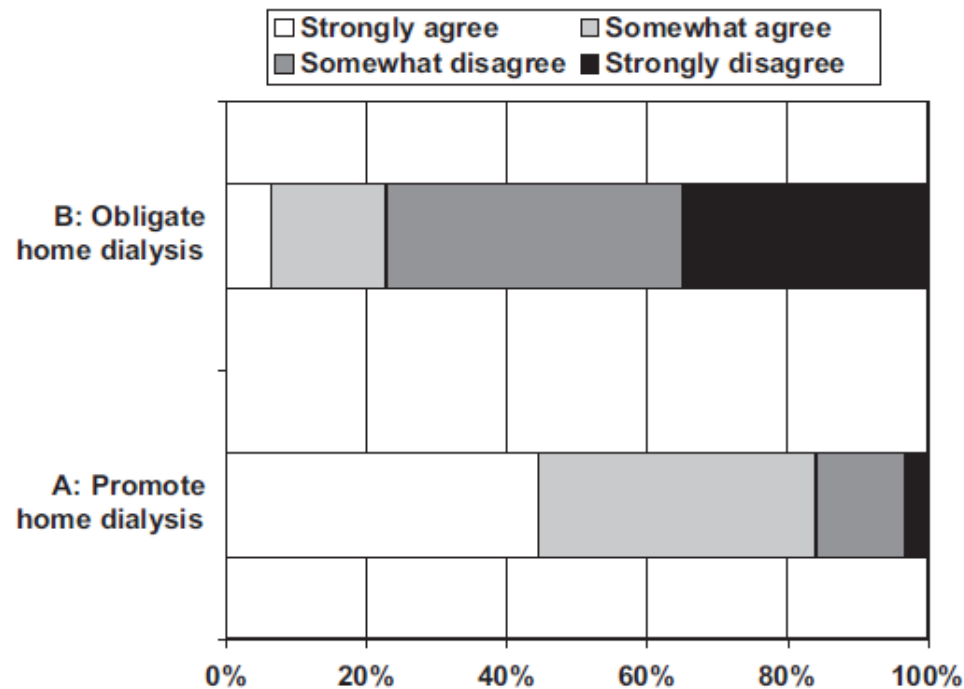
...that is the real cha(lle)nge!



Can all patients be treated at home?

DEBATE: Should Dialysis at Home be Mandatory for All Suitable ESRD Patients?

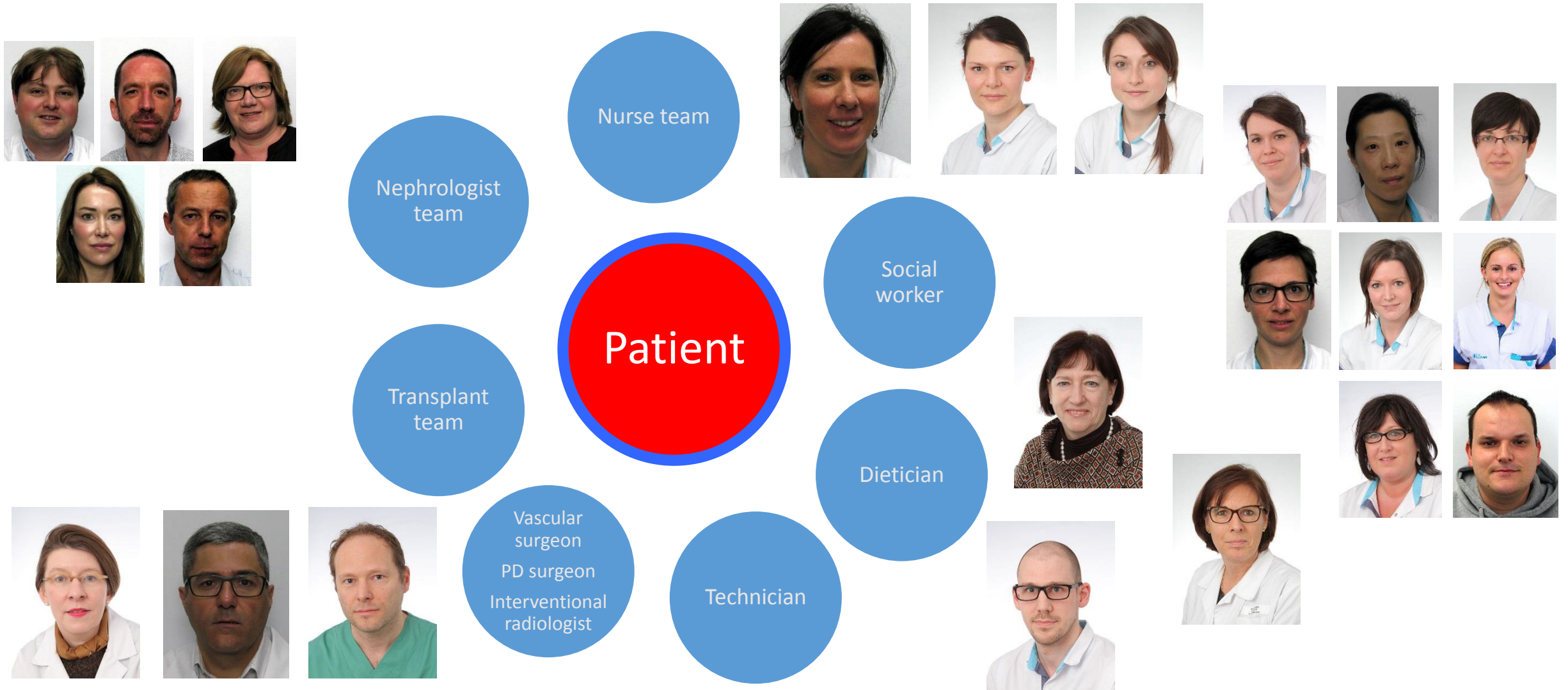
Patients Should Not Be Forced Onto Home Dialysis



What is your opinion about these aspects of CKD care in Canada?

Can all patients be treated at home?

UZ Leuven multidisciplinary predialysis clinic





Can all patients be treated at home?

ASSISTED PERITONEAL DIALYSIS FOR OLDER PEOPLE WITH END-STAGE RENAL DISEASE: THE FRENCH AND DANISH EXPERIENCE

Clémence Béchade,¹ Thierry Lobbedez,¹ Per Ivarsen,² and Johan V. Povlsen²

- Some of the barriers for PD are non-modifiable, but the majority may be overcome provided that proper support and assistance are offered to the patients at home.
- In France and Denmark, the operational cost of assisted PD is equal or inferior to the cost of in-center HD.





Can all patients be treated at home?

An international feasibility study of home haemodialysis in older patients

Tom Cornelis^{1,*}, Karthik K. Tennankore^{2,*}, Eric Goffin³, Virpi Rauta⁴, Eero Honkanen⁴, Akin Özyilmaz⁵, Vijay Thanaraj⁶, Anuradha Jayanti⁶, Sandip Mitra⁶, Frank M. van der Sande¹, Jeroen P. Kooman¹ and Christopher T. Chan²

- Multi-center multinational retrospective cohort study (Brussels, Groningen, Helsinki, Maastricht, Manchester, Toronto)
- HHD patients ≥ 65 years at time of initiation (n = 79)
- Primary outcome: time to technique failure or death





Can all patients be treated at home?

01/2018

UZ Leuven multidisciplinary predialysis clinic

n = 325 included in the UZ Leuven predialysis program.

PD offered as an option 84.4%

PD chosen by **20.0%**

(This is 23.7% of patients offered PD as an option.)

HHD offered as an option **62.0%**

HHD chosen by **4.0%**

(This is 6.5% of patients offered HHD as an option.)

A realistic view in our approach...

24.0% (incident)
home therapies @ UZ Leuven





Can all patients be treated at home?

01/2018

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HHD chosen by **4.0%**

(This is 6.5% of patients offered HHD as an option.)

5.3% HHD
15.7% PD
= 22.0% (prevalent)
home therapies @ UZ Leuven

A realistic view in our approach...



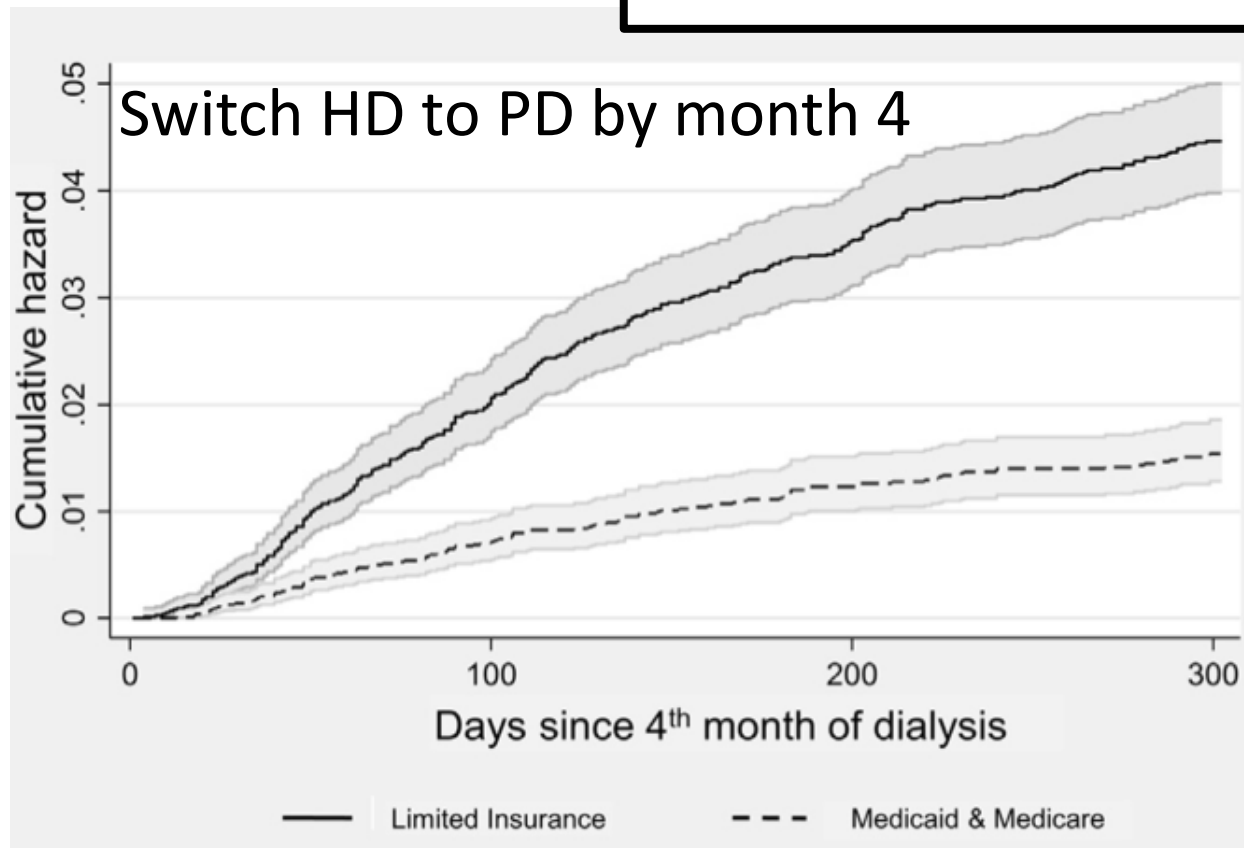
24.0% (incident)
home therapies @ UZ Leuven



Can all patients be treated at home?

Health Insurance and the Use of Peritoneal Dialysis in the United States

Rising Peritoneal Dialysis Tide May Still Leave Some Patients Behind



EXPLANATIONS?

- Providers not aware of Medicare reimbursement policy for home treatment
- Cost of PD catheter surgery
- Health care access before the onset of ESRD

Perez et al. Am J Kidney Dis 71: 479-487, 2018

Turenne Am J Kidney Dis 71: 455-457, 2018



Can all patients be treated at home?

The economic considerations of patients and caregivers in choice of dialysis modality

Rachael C. WALKER,^{1,2} Kirsten HOWARD,¹ Allison TONG,^{1,3} Suetonia C. PALMER,⁴
Mark R. MARSHALL,⁵ Rachael L. MORTON⁶

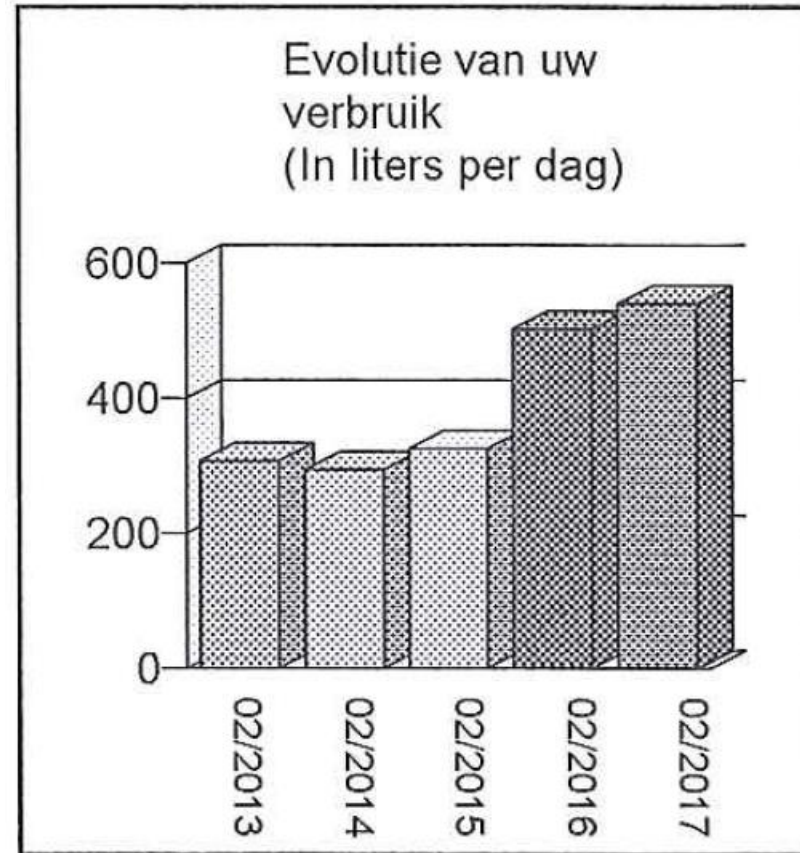
- New-Zealand
- Semi-structured interviews
- Predialysis or dialysis patients (n = 43)
- The patients' caregivers (n = 9)





Can all patients be treated at home?

Use of tap water (L/day)



Source: water bill of one of our HHD patients





Can all patients be treated at home?

DE MEERKOST VOOR WATER IS: 984,09 EURO

WATER

DE MEERKOST VOOR ELEKTRICITEIT IS: 535,48 EURO

ELECTRICITY

DE MEERKOST VOOR VERWARMING IS: 200,26 EURO

HEATING

- Belgium
- Additional yearly cost: € 1719.83
- Yearly fee for home treated patients: € 859.65



Conclusions



- Healthcare and ESRD costs are high and keep on growing.
- Law-enforced rationing of ESRD treatment based on age or stringent medical (or other?) criteria seems ethically inappropriate.
- Strategies should consider both economical and ethical aspects and grow from within the nephrology and patient/caregiver communities.
- Optimizing access to transplantation and to home based therapies will help to keep expenses reasonable and help as many patients as possible.
- Policy makers should create incentives for ALL stakeholders (professionals & education & industry & patients & caregivers) to achieve these goals.

Why stimulating home based therapies is an **economical imperative** with **ethical consequences**



B. Bammens

June 6th 2018

UZ
LEUVEN BELGIUM

 **self-care dialysis**
symposium

**4th self-care
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6th & 7th June 2018
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