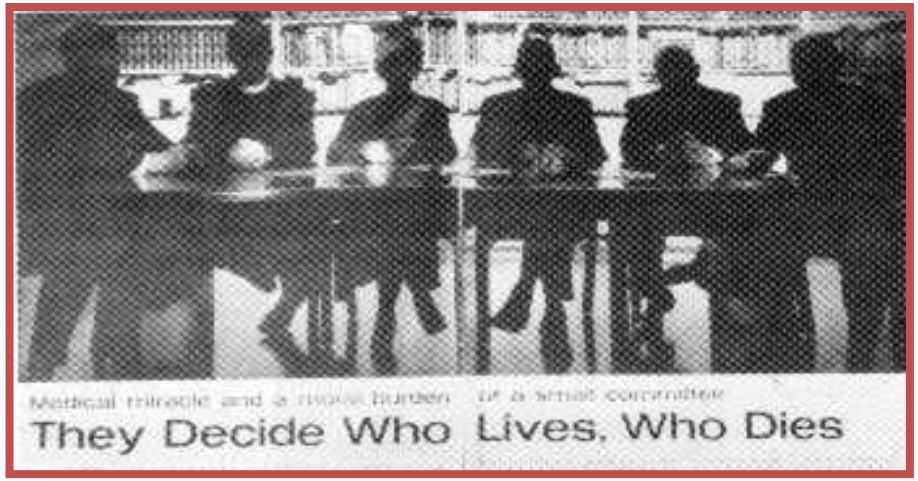
Emodialisi domiciliare: quando e a chi proporla

R. Corciulo

Divisione di Nefrologia, Dialisi e Trapianto
Università degli Studi
Bari

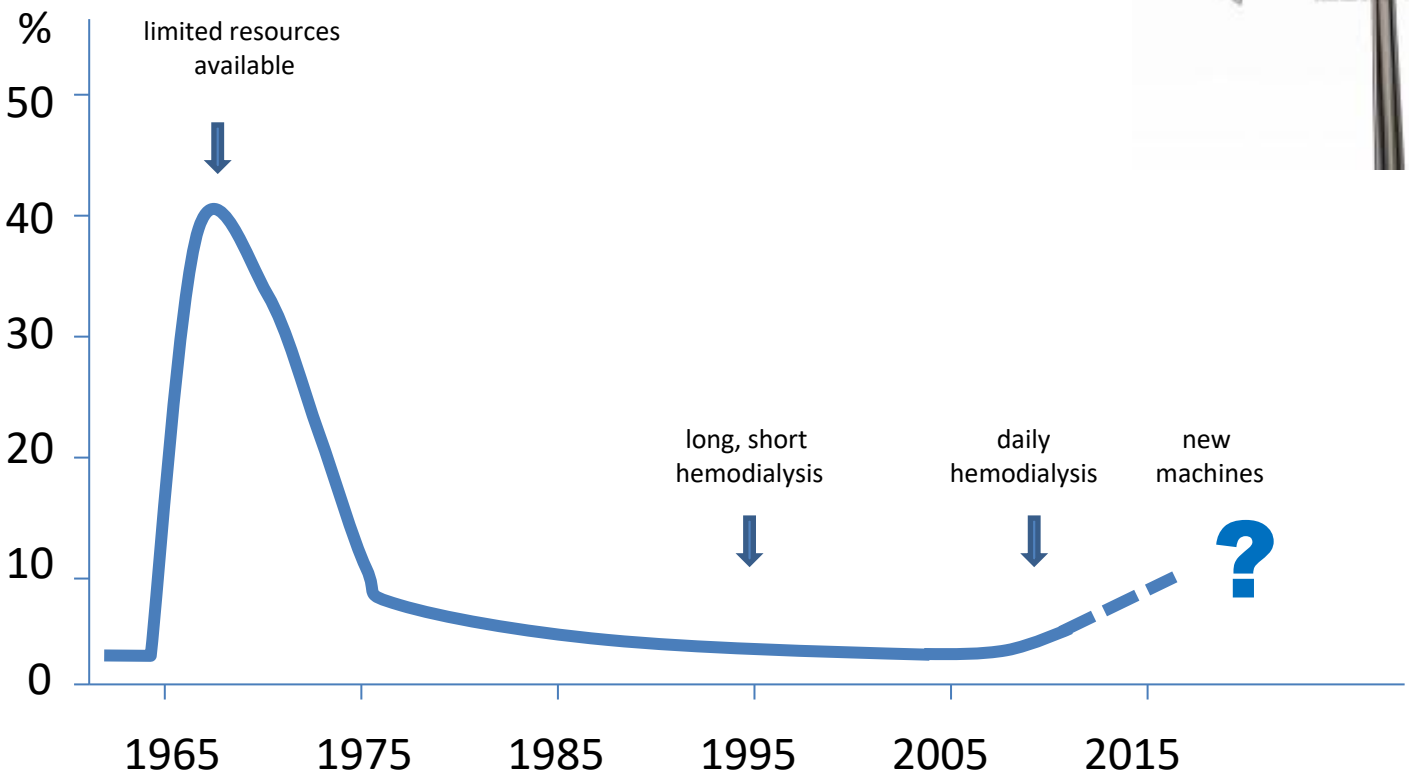
Il Dramma dell'Uremia e la nascita dell'emodialisi domiciliare



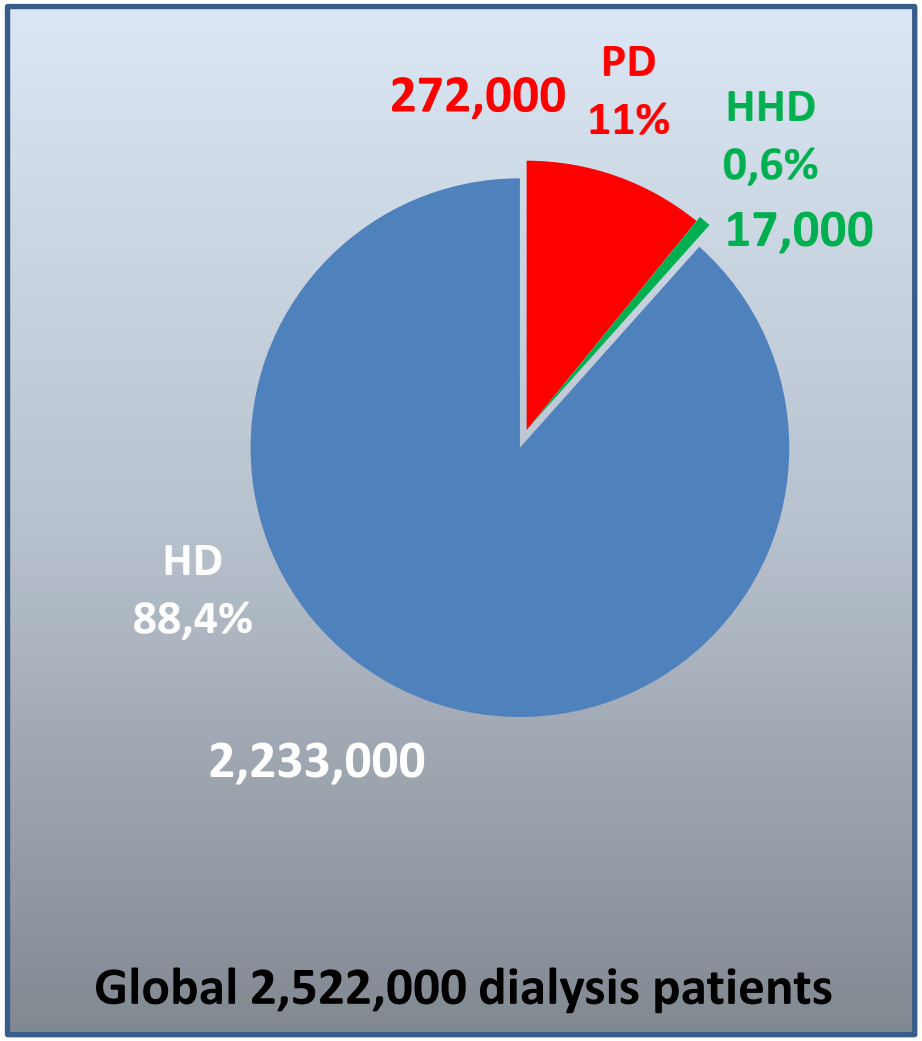
- Nel 1963 fu rifiutato il trattamento dialitico dall'Admission Commettee alla figlia quindicenne di un collega e amico del prof. Babb, stretto collaboratore di Scribner. La paziente fu avviata al trattamento domiciliare nel 1964 con un prototipo delle moderne macchine da dialisi

Fox RC, Swazey JP. The courage to fail: A social view of organ transplants and dialysis. 2nd ed. Chicago: University of Chicago, 1974

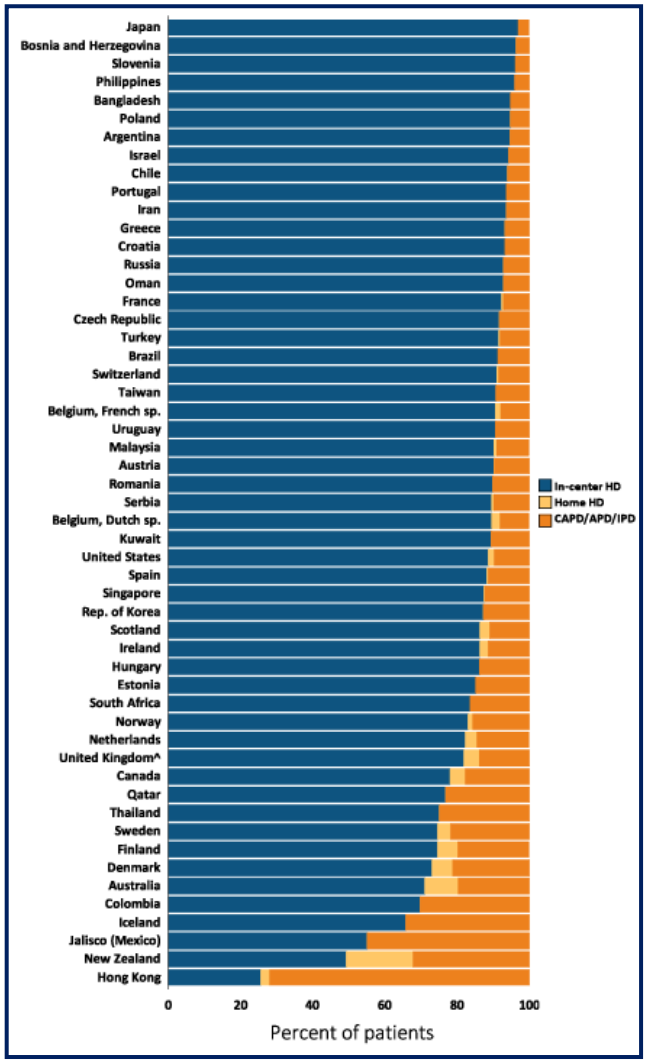
Trend of HHD in U.S.



Global overview of dialysis patients prevalence at year-end 2013

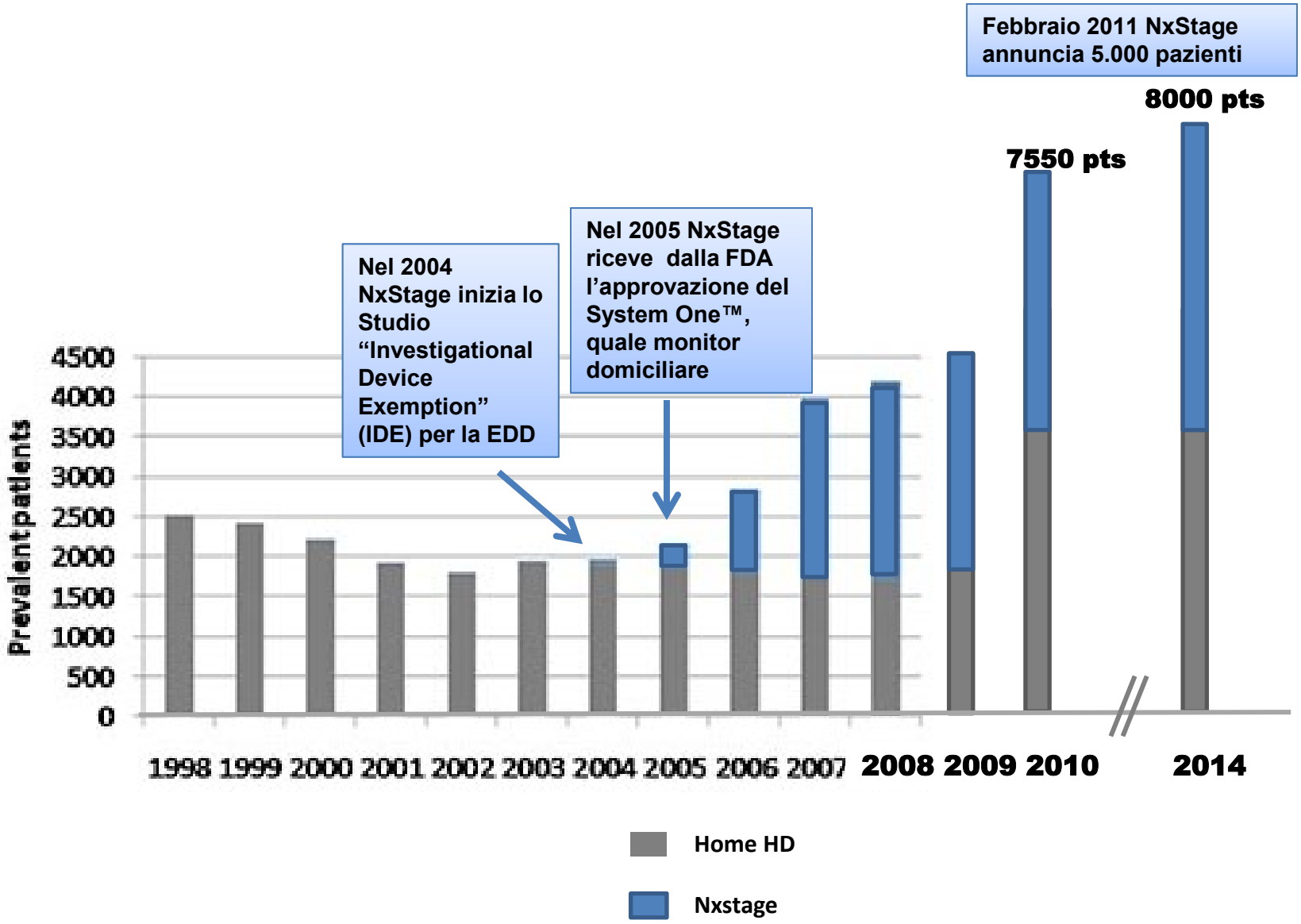


modified by Fresenius Medical Care 2013



UNITED STATES RENAL DATA SYSTEM 2013

L’andamento dell’HHD negli US



NxStage System One

1.Più piccola rispetto alle tradizionali macchine (31,7 Kg)

2. Approvata per la HD domiciliare quotidiana

3. Elimina la necessità di modifiche ai collegamenti elettrici ed idraulici

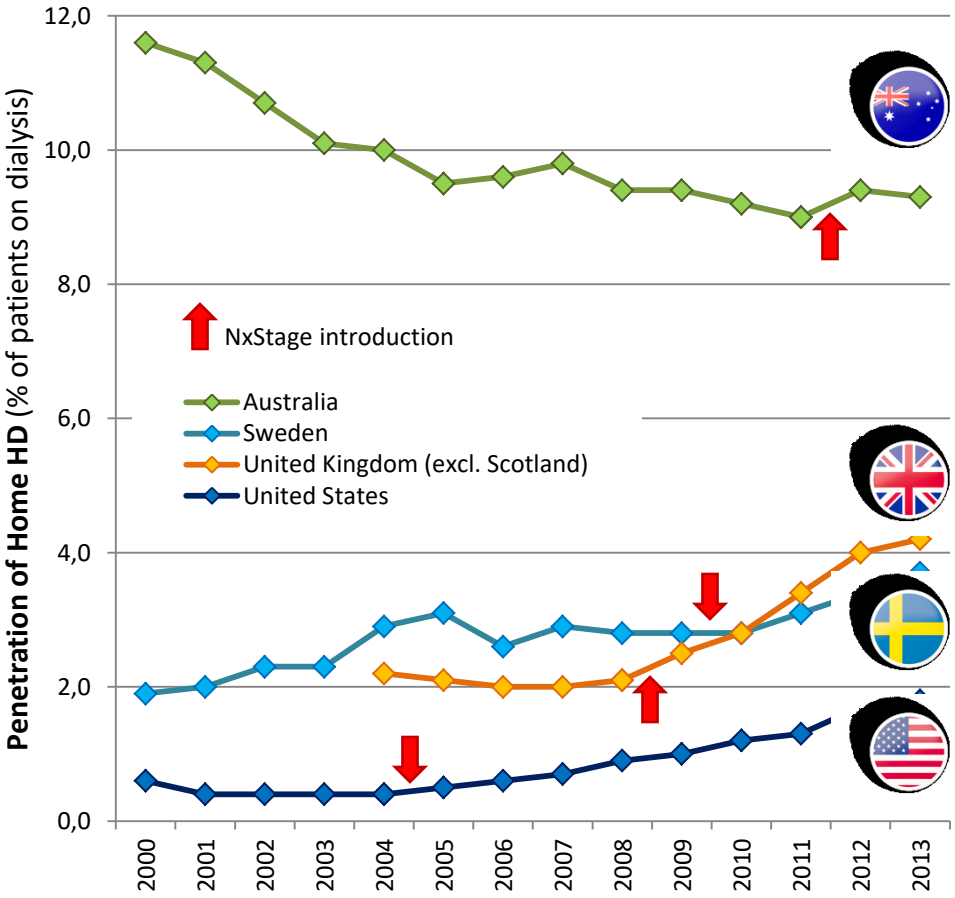
4. Utilizza sacche da 5 L di dialisato ultrapuro (per effettuare la dialisi lontano da casa)

6. Produzione di dialisato on line per i pazienti che hanno bisogno di un aumento della clearance (NxStage PureFlow SL)

3x/sett.	Frequente	Notturna
✓	✓✓✓	✓✓✓

Le dialisi più frequenti e più lunghe mimano la funzione renale

Changing trends in Home HD markets



- Some countries have shown a decreasing or flattening trend of Home HD penetration[1].
- In these countries, growing trend restarts as soon as NxStage is introduced ⬆[1,2].

1. USRDS Annual Report 2015, Vol.2 Chap.1 / 2. Nxstage company data on file.

The FREEDOM Study

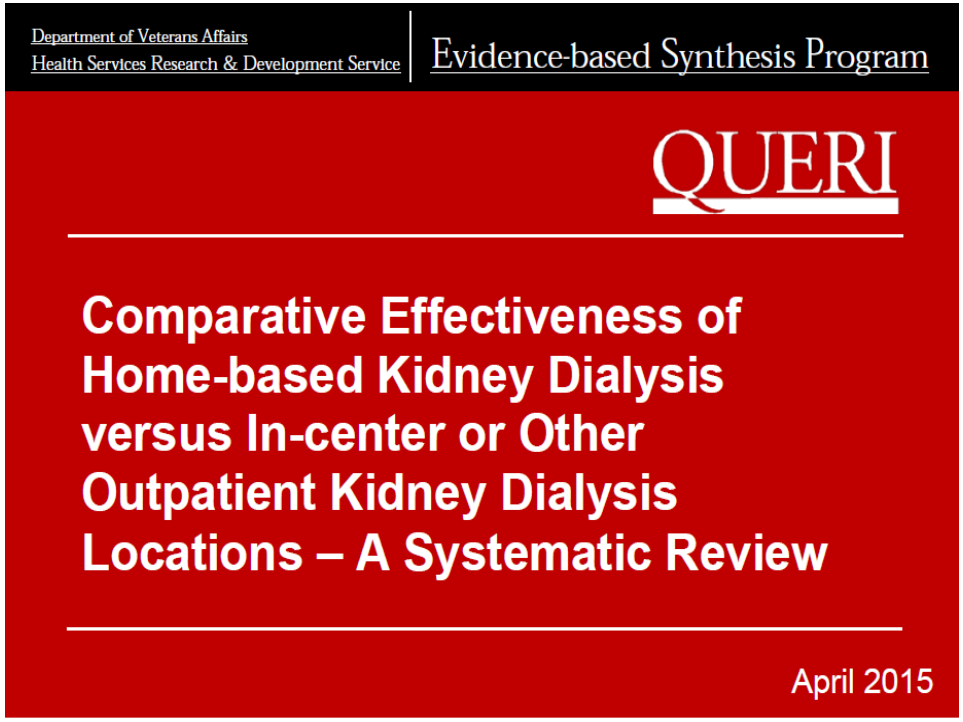
Design & Protocollo di studio

- Studio multicentrico prospettico di coorte. I pazienti sono il controllo di se stessi.
- Arruolamento sino a 500 pazienti provenienti da un massimo di 70 centri dialisi. Minimo di 1 anno di follow-up.
- I pazienti eleggibili sono pazienti adulti con ESRD che necessitano di dialisi
- ***Studio sponsorizzato da NxStage Medical, Inc.***

The FREEDOM Study

Interim Measure	Baseline	Month 12	P - Value
Beck Depression Inventory Score[1]	11.2	7.8	P < 0.001
Post Dialysis Recovery Time (min)[1]	476	63	P < 0.001
% of Patients Reporting Symptoms of Restless Legs Syndrome[2]	36%	26%	P = 0.0495
# of Prescribed Anti-Hypertensive Medications[3]	1.7	1.0	P < 0.0001
% of Patients NOT Prescribed Anti-Hypertensive Medication[3]	21%	47%	P < 0.002
MOS Sleep Scale - Sleep Problems Index I[2]	39	33	P = 0.001
MOS Sleep Scale - Sleep Problems Index II[2]	41	34	P < 0.001
SF36 - Physical component scale (PCS)[4]	34	38	P < 0.0001
SF36 - Mental component scale (MCS)[4]	50	52	P = 0.01

[1]Jaber B, et al. Improvements in Depressive Symptoms and Post-Dialysis Recovery Time. Am J Kidney Dis 56:531-539, 2010.
[2]Jaber B, et al. Improvements in Restless Legs Symptoms and Sleep Disturbances. Clin J Am Soc Nephrol 6: 1049–1056, 2011.
[3]Jaber B , et al. Poster presentation. SDHD Reduces The Need for Anti-Hypertensive Medications ASN Renal Week 2009.
[4]Finkelstein F, et al. SDHD Improves SF-36 Health Survey Domains. Poster presentation ADC 2011



AA. identified 130 articles (3 of which were systematic reviews) meeting inclusion criteria. For Key Questions 1 and 2, are included data from 32 registry studies, 3 RCTS, 3 CCTs, and 4 reports from 2 clinical cohort studies with enrollment at least 1,000 patients

Key Question 1. **What are the benefits and harms** (*ie, all-cause mortality, cardiovascular events, hospitalizations, quality of life, etcc…,*) **of in-home compared to in-center HD?**

Key Question 2. **What are the benefits and harms** (*ie, all-cause mortality, cardiovascular events, hospitalizations, quality of life, etcc…,*) **of PD compared to in-home HD or in-center HD?**

Key Question 3. **What are the a) health care system, b) provider, and c) patient factors associated with selection of and technique survival for home-based dialysis (including PD)?**

Key Question 4. **In the published literature, what are the costs of home HD or PD compared to in-center HD?**

Department of Veterans Affairs
Health Services Research & Development Service | Evidence-based Synthesis Program

QUERI

Comparative Effectiveness of Home-based Kidney Dialysis versus In-center or Other Outpatient Kidney Dialysis Locations – A Systematic Review

April 2015

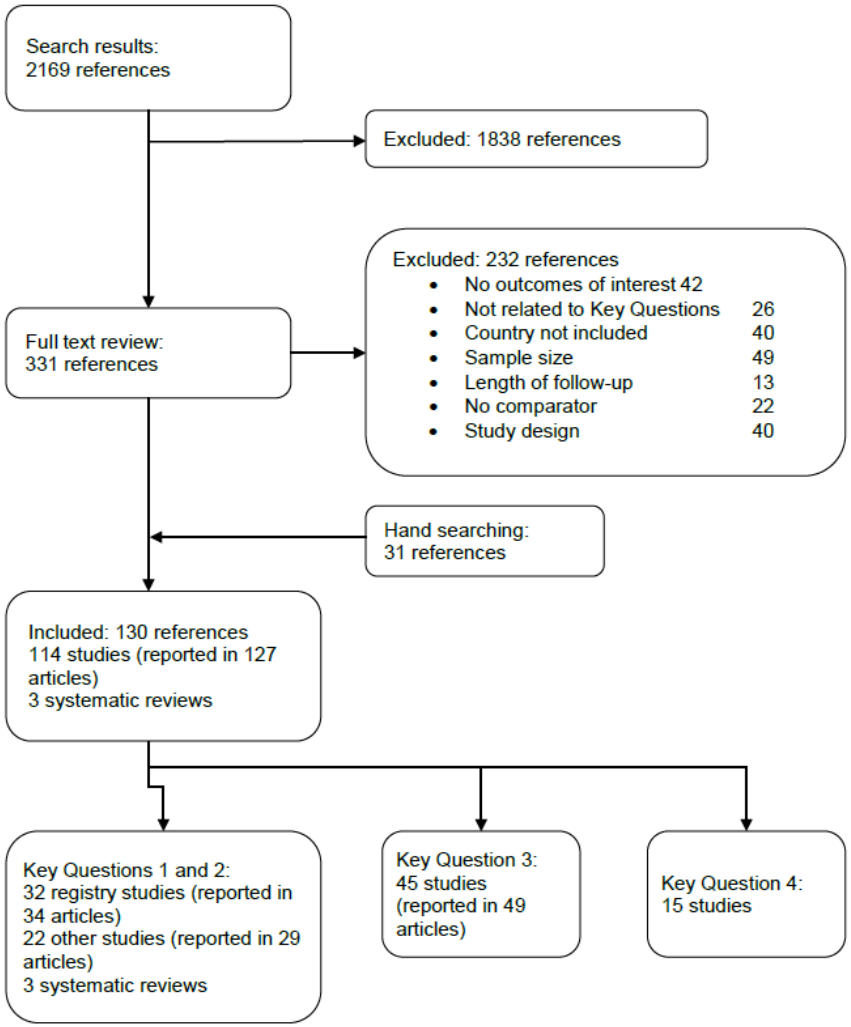
Prepared for:
Department of Veterans Affairs
Veterans Health Administration
Quality Enhancement Research Initiative
Health Services Research & Development Service
Washington, DC 20420

Prepared by:
Evidence-based Synthesis Program (ESP) Center
Minneapolis VA Medical Center
Minneapolis, MN
Timothy J. Wilt, MD, MPH, Director

Investigators:
Principal Investigator:
Areef Ishani, MD, MS
Yelena Slinin, MD

Co-Investigators:
Nancy Greer, PhD
Timothy J. Wilt, MD, MPH

Research Associates:
Roderick MacDonald, MS
Joseph Messana, MD
Indulis Rutks, BS



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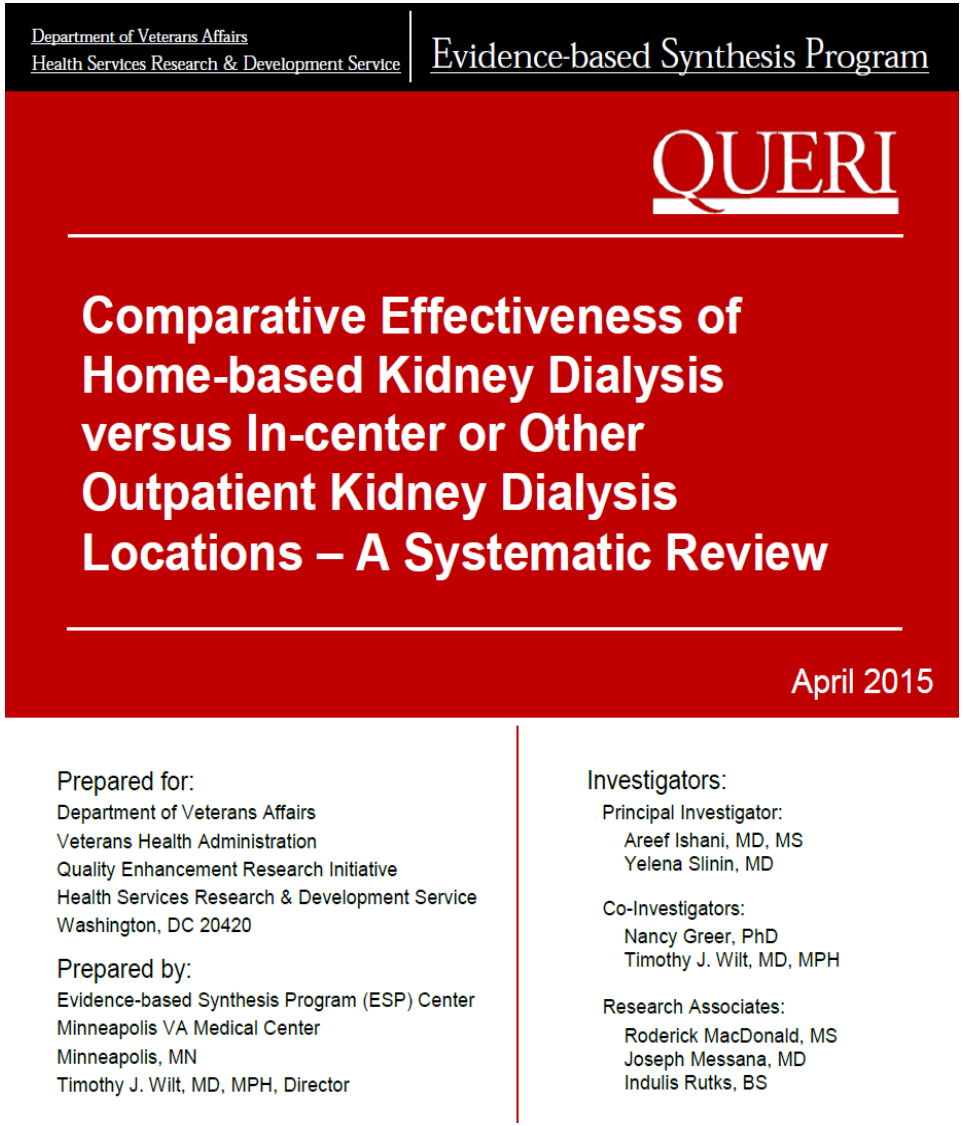

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Conclusions

Evidence suggests that home-based dialysis may ***provide similar health outcomes and at similar or lower costs for many patients*** compared to in-center HD. Therefore, home-based dialysis may be ***an acceptable and sometimes preferred alternative to in-center HD.*** Information is limited on factors important in addressing selection of and barriers to home-based dialysis and remains an area of important research and health policy.

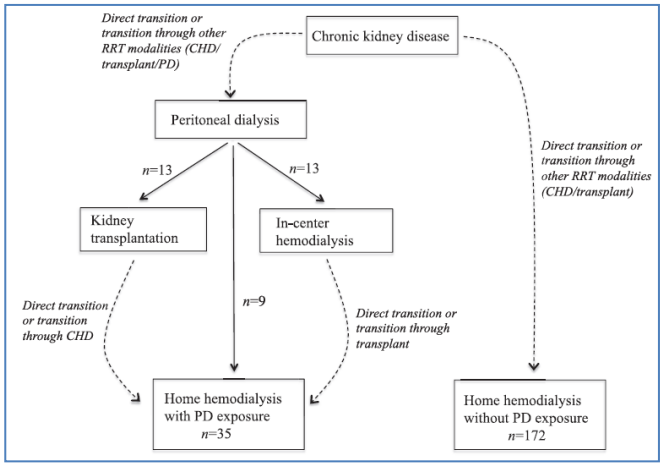
Peritoneal Dialysis International, Vol. 35, pp. 316–323
doi: 10.3747/pdi.2013.00163

0896-8608/15 $3.00 + .00

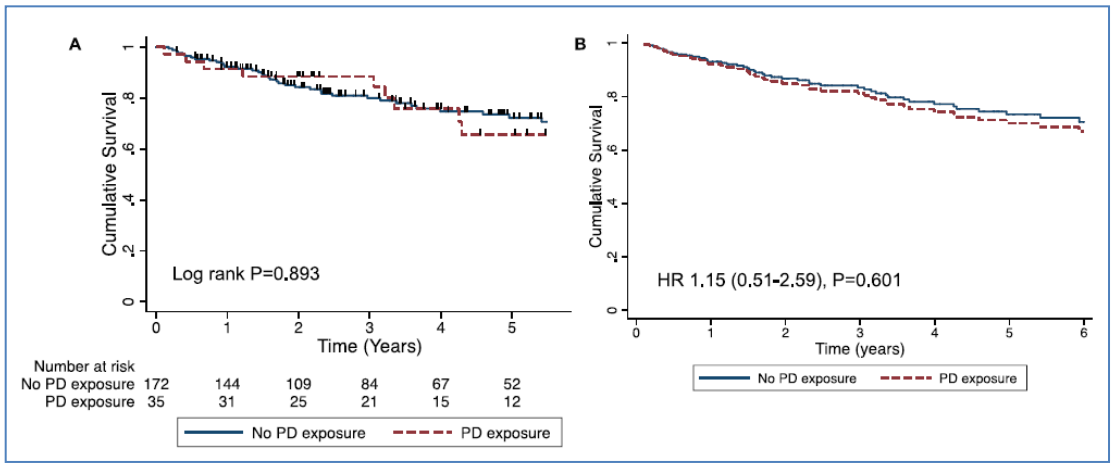
CLINICAL OUTCOME OF HOME HEMODIALYSIS IN PATIENTS WITH PREVIOUS PERITONEAL DIALYSIS EXPOSURE: EVALUATION OF THE INTEGRATED HOME DIALYSIS MODEL

Annie-Claire Nadeau-Fredette, Joanne M. Bargman, and Christopher T. Chan

Toronto General Hospital – University Health Network, University of Toronto, Toronto, Ontario, Canada



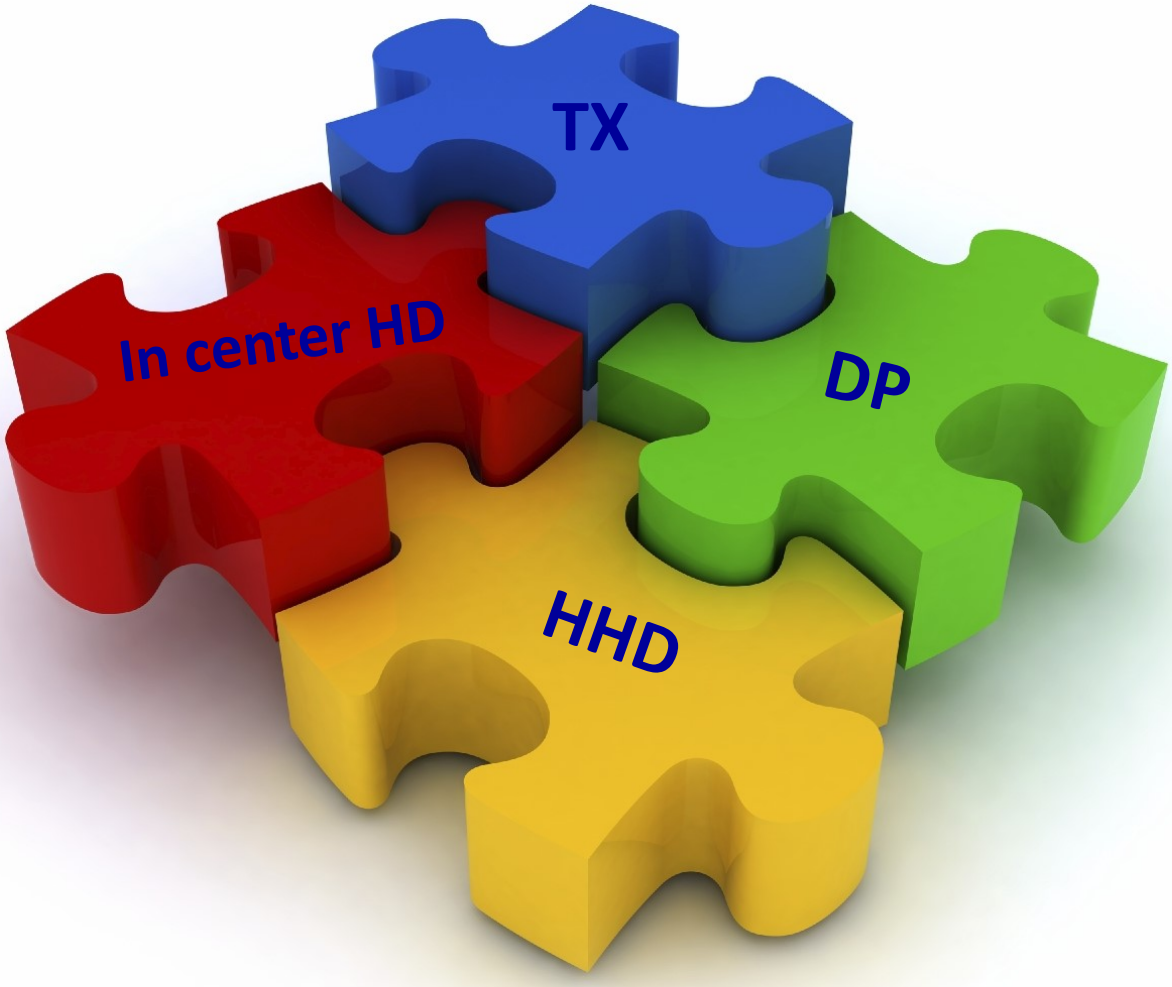
Trajectory before HHD initiation stratified by PD exposure



Primary outcome: Cumulative patient and technique survival. A: Unadjusted Kaplan-Meier curve, B: Cox proportional curve. Other variables in model include: age, renal replacement therapy vintage, Charlson comorbidity index, diabetic nephropathy as etiology of end-stage renal disease.

Conclusion: Despite a higher burden of comorbidity, patients with previous PD exposure had similar cumulative patient and technique survival on HHD compared to those without PD exposure. Whenever possible, HHD should be considered in PD patients in need of a new dialysis modality.

ESRD Therapy tailored to the patient's requirements



Dialisi Domiciliare
Quali sono le criticità

Paziente - correlate

Operatori sanitari - correlate

Istituzioni - correlate

Dialisi Domiciliare
Quali sono le criticità

Paziente - correlate

Invecchiamento della popolazione generale

Oltre il 50% degli incidenti ha un'età superiore ai 70 anni e il 25% dell'intera popolazione dialitica necessità di assistenza (familiare, partner, care giver)

Research Article

Freedom and Confinement: Patients' Experiences of Life with Home Haemodialysis

C. Vestman,[1] M. Hasselroth,[1] and M. Berglund[2]

[1]*Department of Dialysis, Skaraborgs Hospital, 541 85 Skövde, Sweden*
[2]*School of Health and Learning, University of Skövde, Box 408, 541 28 Skövde, Sweden*

Correspondence should be addressed to M. Berglund; mia.berglund@his.se

Received 12 October 2014; Accepted 4 December 2014; Published 18 December 2014

Academic Editor: Linda Moneyham

Patients with chronic end stage renal disease need dialysis to survive; however, they also need a treatment that suits their life situation. It is important that healthcare providers provide reliable, up-to-date information about different dialysis treatment options. Since home haemodialysis is a relatively new treatment, it is necessary to gather more knowledge about what the treatment entails from the patient's perspective. The aim of this study was to describe patients' experiences of having home haemodialysis. To gain access to the patients' experiences, they were asked to write narratives, which describe both their good and bad experiences of life with the treatment. The narratives were analysed with a qualitative method. The results of this analysis are subdivided into five themes: freedom to be at home and control their own treatment, feeling of being alone with the responsibility, changes in the home environment, need for support, and security and well-being with home haemodialysis. The conclusion is that home haemodialysis provides a certain level of freedom, but the freedom is limited as the treatment itself is restrictive. In order to improve patients' experiences with home haemodialysis, more research based on patients' experiences is needed and it is necessary to involve the patients in the development of the care.

Open Access Research

BMJ open accessible medical research

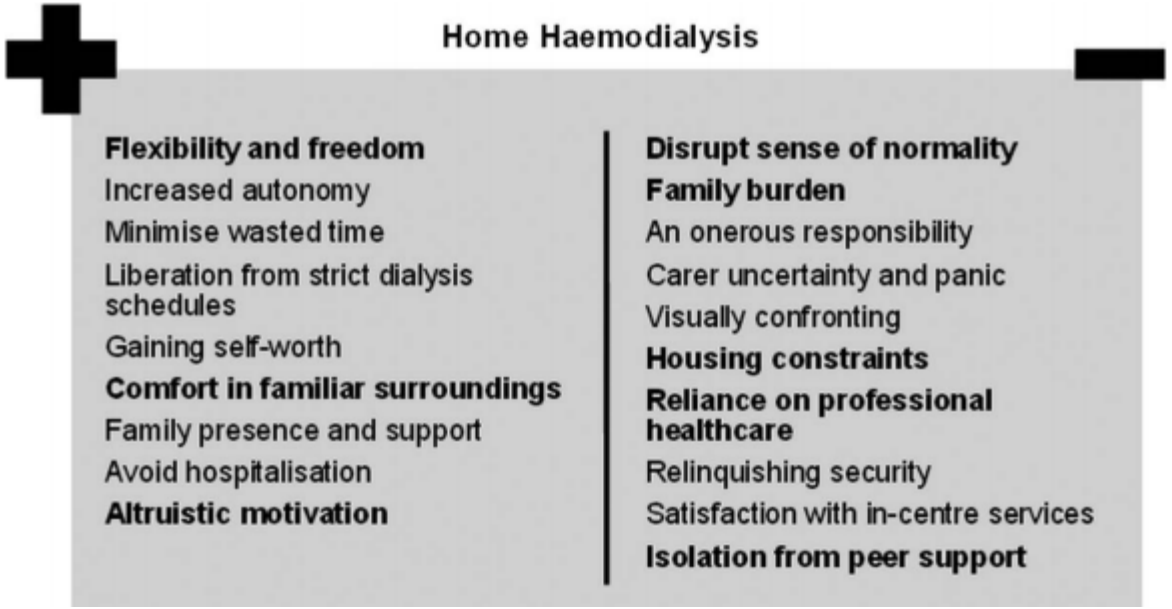
The beliefs and expectations of patients and caregivers about home haemodialysis: an interview study

Allison Tong,[1,2] Suetonia Palmer,[3] Braden Manns,[4] Jonathan C Craig,[1,2] Marinella Ruospo,[5] Letizia Gargano,[5] David W Johnson,[6] Jörgen Hegbrant,[7] Måns Olsson,[8] Steven Fishbane,[9] Giovanni F M Strippoli[2,10,11,12]

Objectives: To explore the beliefs and expectations of patients and their caregivers about home haemodialysis in Italy where the prevalence of home haemodialysis is low.

Design: Semistructured, qualitative interview study with purposive sampling and thematic analysis.

Setting: Four dialysis centres in Italy without home haemodialysis services (Bari, Marsala, Nissoria and Taranto).



Dialisi Domiciliare
Quali sono le criticità

Paziente - correlate

Invecchiamento della popolazione generale

Oltre il 50% degli incidenti ha un'età superiore ai 70 anni e il 25% dell'intera popolazione dialitica necessità di assistenza (familiare, partner, care giver)

Assunzione di responsabilità

Incapacità di gestire a casa un evento catastrofico, i timori e le difficoltà di auto-incannulazione

Pericolo del confinamento al domicilio

Richiesta di supporto (teleassistenza in remoto, assistenza domiciliare)

Aspetti psicologici

Rifiuto delle cure ospedaliere

Strategies and recommendations to promote the acceptability of home haemodialysis among patients and family caregivers

Strategy	Action plan
Education	▸ Discussions about treatment options for end-stage kidney disease that include home haemodialysis should be tailored to the existing haemodialysis experiences of patients and their families ▸ Meet other patients on home dialysis therapies (haemodialysis, nocturnal haemodialysis and peritoneal dialysis) to listen to their experiences
Minimise intrusiveness of home haemodialysis	▸ Use home haemodialysis machines that are less conspicuous (small sized and portable) and require minimal home modifications ▸ Promote awareness about home haemodialysis machines that are smaller and easy to operate ▸ Provide practical tips on minimising the visibility of home haemodialysis within the home
Provide support and respite for caregivers and family members	▸ Increase awareness of home haemodialysis equipment that require minimal or no caregiver assistance ▸ Identify and implement a forum for patients and families/caregivers to discuss experiences and decisions (online/physical) ▸ Appoint a dedicated mental health worker in the clinical team ▸ Ensure access to social work services (caregiver respite and allowance) ▸ Network with caregiver or consumer organisations and identify respite and support services for caregivers and families
Maintain patient access to medical and technical support	▸ Offer home visits as determined on an individual, need-by-need basis ▸ Provide 24 h availability (eg, hotline) of clinical and technical staff
Minimise social isolation	▸ Organise forums or social events for patients and caregivers (eg, face-to-face, telephone and web-based contact) ▸ Consider set up of community homes for haemodialysis
Promote self-efficacy	▸ Use home haemodialysis machines that are intuitive and simple to configure, programme and disconnect ▸ Provide comprehensive and timely home haemodialysis education and training (eg, individual training, forums, question and answer sessions and print and multimedia resources) ▸ Encourage the importance and benefits of independence and self-care ▸ Recruit home haemodialysis 'patient exemplars' ▸ Facilitate opportunities to learn from patients who are successfully performing home haemodialysis

Tong A, Palmer S, Manns B, et al. BMJ Open 2013;3:e002148. doi:10.1136/bmjopen-2012-002148

Determinants of training and technique failure in home hemodialysis

Characteristics of patients who initiated home hemodialysis training

Characteristic	Failure ($n = 32$)	Success ($n = 145$)	P value
Demographics			
Age, (years ± SD)	51 ± 14	45 ± 14	0.04
Male, *n* (%)	20 (63)	89 (61)	1.00
Caucasian race, *n* (%)	14 (44)	84 (58)	0.17
Number of training days, median (IQR)	45 (25–71)	58 (43,78)	0.06
Comorbidities			
Diabetic end-stage renal disease, *n* (%)	14 (43)	19 (13)	<0.001
Prior renal transplant, n (%)	6 (19)	38 (26)	0.50
Diabetes (comorbid illness), *n* (%)	17 (53)	36 (25)	0.003
Coronary artery disease, *n* (%)	11 (34)	17 (12)	0.005
Congestive heart failure, *n* (%)	8 (25)	12 (8)	0.01
Charlson comorbidity index, (median, IQR)	4, 3–6	3, 2–4	0.005

Schachter ME et al., Hemodial Int. 2013 Jul;17(3):421-6.

Dialisi Domiciliare
Quali sono le criticità

Paziente - correlate

Operatori sanitari - correlate

Culturali

Organizzative

NDT Plus (2008) 6: 403–408
doi: 10.1093/ndtplus/sfn148
Advance Access publication 12 September 2008

NDT PLUS
Nephrology Dialysis Transplantation

Special Feature

The best dialysis therapy? Results from an international survey among nephrology professionals

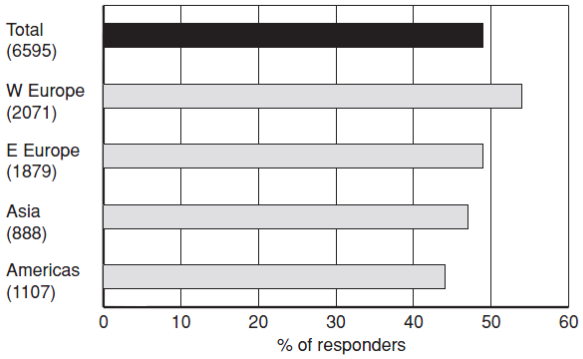
Ingrid Ledebo[1] and Claudio Ronco[2]

[1]Gambro R&D, Lund, Sweden and [2]San Bartolo Hospital, Vicenza, Italy

Congress	*n*	Physicians (%)	Nurses (%)
WCN	1029	78	7
ERA-EDTA	2041	78	3
EuRoPD	772	74	19
EDTNA-ERCA	1634	3	82
ASN	795	78	3
Other	324	35	65
Total	**6595**	**57**	**28**

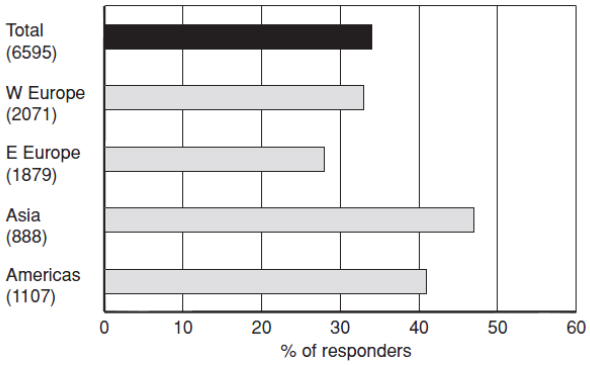
The Best Dialysis Therapy?

Best initial dialysis treatment



Capd/APD

Best long-term dialysis treatment



Home/self-care HD/HDF
>3 times/week

Self-care is preferred by

56%

of renal professionals.

I. Ledebo and C. Ronco NDT Plus 2008 Dec;1(6):403-408

Dialisi Domiciliare
Quali sono le criticità

Paziente - correlate

Operatori sanitari - correlate

L'avvio di un servizio di dialisi domiciliare richiede un investimento in "start up" con impegno in organizzazione, competenze e formazione, che non sempre le strutture sono disponibili o capaci ad attuare, forse per una ***"estrema standardizzazione"*** dell'offerta dialitica ospedaliera.

Dialisi Domiciliare
Quali sono le criticità

Paziente - correlate

Operatori sanitari - correlate

Istituzioni - correlate

“Mission” delle Istituzioni Sanitarie nazionali e regionali

- Qualità delle cure
- Appropriatezza delle prestazioni
- Sostenibilità della spesa

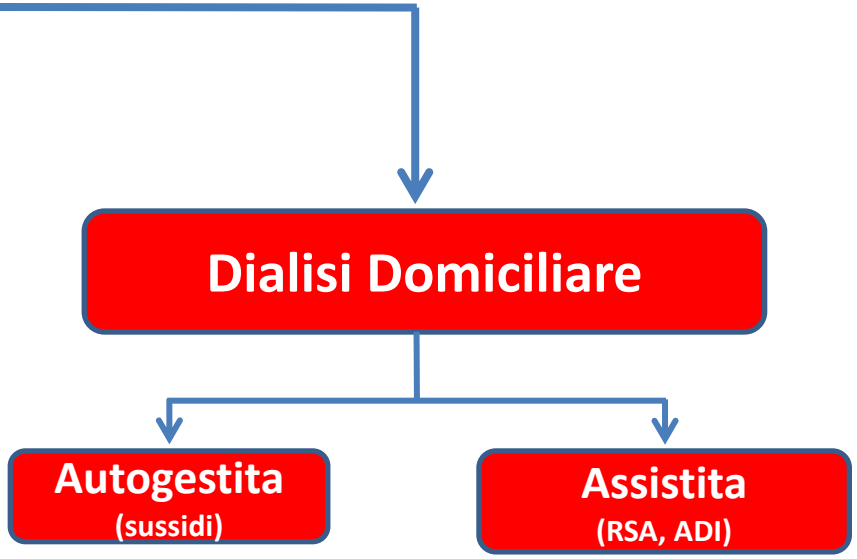
→ Il paziente adeguatamente informato (tempi e modalità) sulle varie modalità dialitiche, nel 20-30% dei casi opterebbe per il trattamento dialitico domiciliare (DP e HHD).

↓

Le Istituzioni sanitarie devono garantire forme alternative all’assistenza ospedaliera

“Mission” delle Istituzioni Sanitarie nazionali e regionali

- Qualità delle cure
- Appropriatezza delle prestazioni
- Sostenibilità della spesa



Anziani assistiti a domicilio in Europa

Nazione	anziani assistiti a domicilio	
	anno	%
Danimarca	2000	24,6
Islanda	2000	18,9
Norvegia	2000	15,7
Olanda	1996	12,0
Svizzera	1992	12,0
Finlandia	2000	10,7
Germania	1996	9,6
Svezia	2000	8,2
Francia	1998	7,9
Regno Unito	1999	7,1
Belgio	1996	4,5
Irlanda	1996	3,5
Austria	1991	3,0
Italia	1999	3,0*
Spagna	1999	1,8
Portogallo	1992	1,0
Grecia	1998	0,3

Dati ISTAT

Assistenza domiciliare e residenziale agli anziani in Europa

ELEVATO		INTERMEDIO		BASSO	
DOMICILIARE 10%+	RESIDENZIALE 6%+	DOMICILIARE 3,1%-10%	RESIDENZIALE 3,1%-6%	DOMICILIARE 0%-3%	RESIDENZIALE 0%-3%
	Norvegia	*Germania*	*Germania*	*Grecia*	*Grecia*
	Olanda		*Regno Unito*	*Portogallo*	*Portogallo*
Svizzera	*Svizzera*	*Irlanda*	*Irlanda*	*Italia*	*Italia*
	Finlandia		Austria	Spagna	
	Islanda		Danimarca	Austria	
	Belgio	Belgio	Spagna		
	Lussemburgo				
	Svezia				
	Francia				

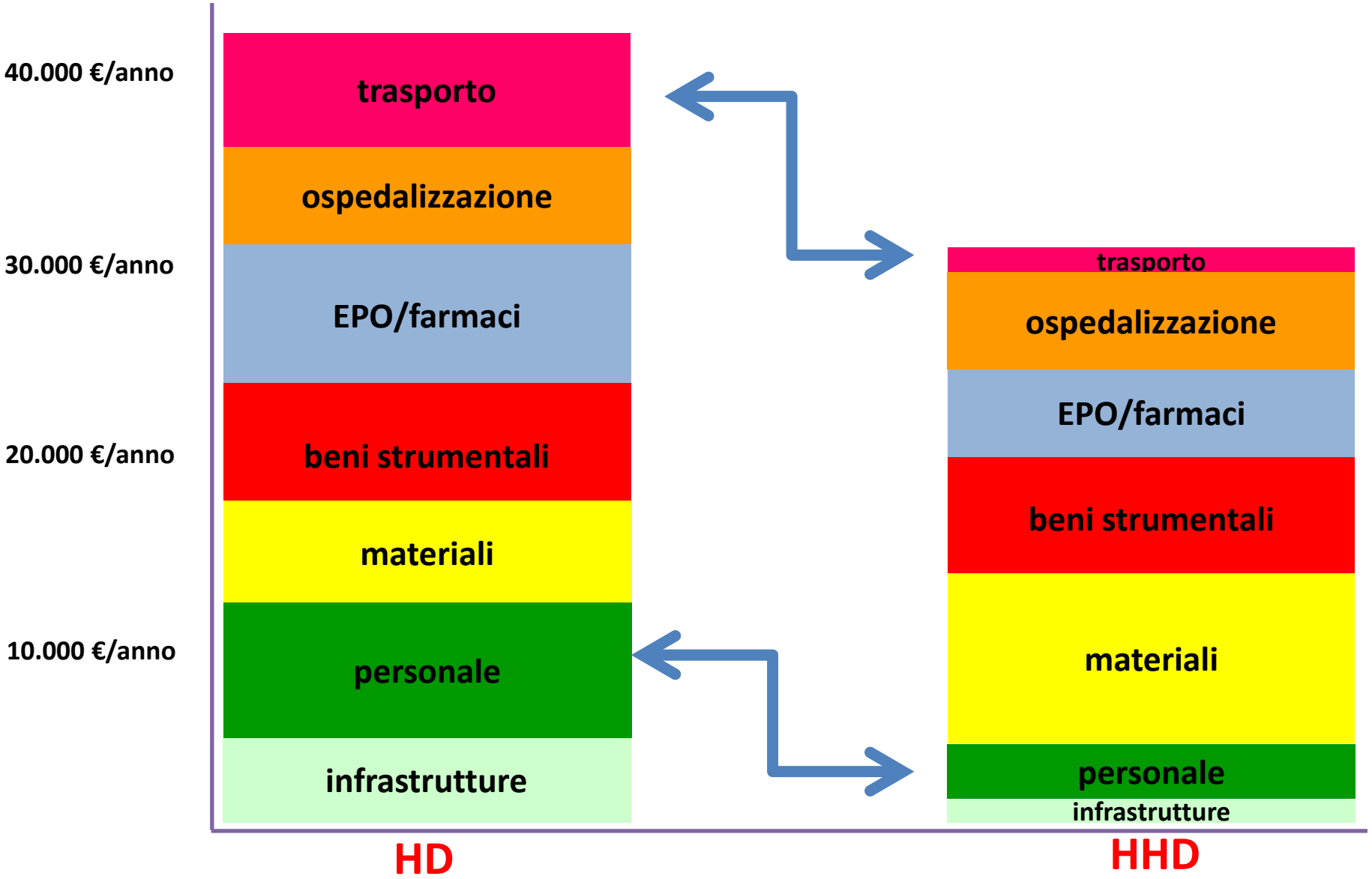
Dati ISTAT

“Mission” delle Istituzioni Sanitarie nazionali e regionali

- **Qualità delle cure**
- **Appropriatezza delle prestazioni**
- **Sostenibilità della spesa**

	Codice	Costo economico per anno/paz.	Trasporto per anno/paz.	Costo totale per anno/paz.
Emodialisi Ospedaliera	39.95.4 e 39.95.5	36.250,35 €	6.000,00 € (n. 156/anno)	**42.250,35 €**
Emodialisi Domiciliare	39.95.3	29.000,00 €	461,00 € (n. 12/anno)	**29.461,00 €**
CAPD e APD	54.98.2 e 54.98.1	28.769,30 €	461,00 € (n. 12/anno)	**29.230,30**

Il costo globale della terapia



Ed allora?

La letteratura scientifica e le conoscenze attuali consentono di affermare che:

- ✓ L'emodialisi domiciliare è un'opzione efficace e fatti
- ✓ Quando effettuata come "*daily dialysis*" i
- ali o migliori di quelli della dialisi "conve
- peggiori
- ✓ Non nuoce all
- équipe sanitarie dedicate alla g
- domiciliari (DP ed HD)
- ✓ I
- comunque inferiori a quelli dell'emodialisi ospe
- ✓ Analogamente alla PD, la scelta non è solo basata sull'efficacia ma deve tener conto anche delle esigenze non cliniche dei pazienti.

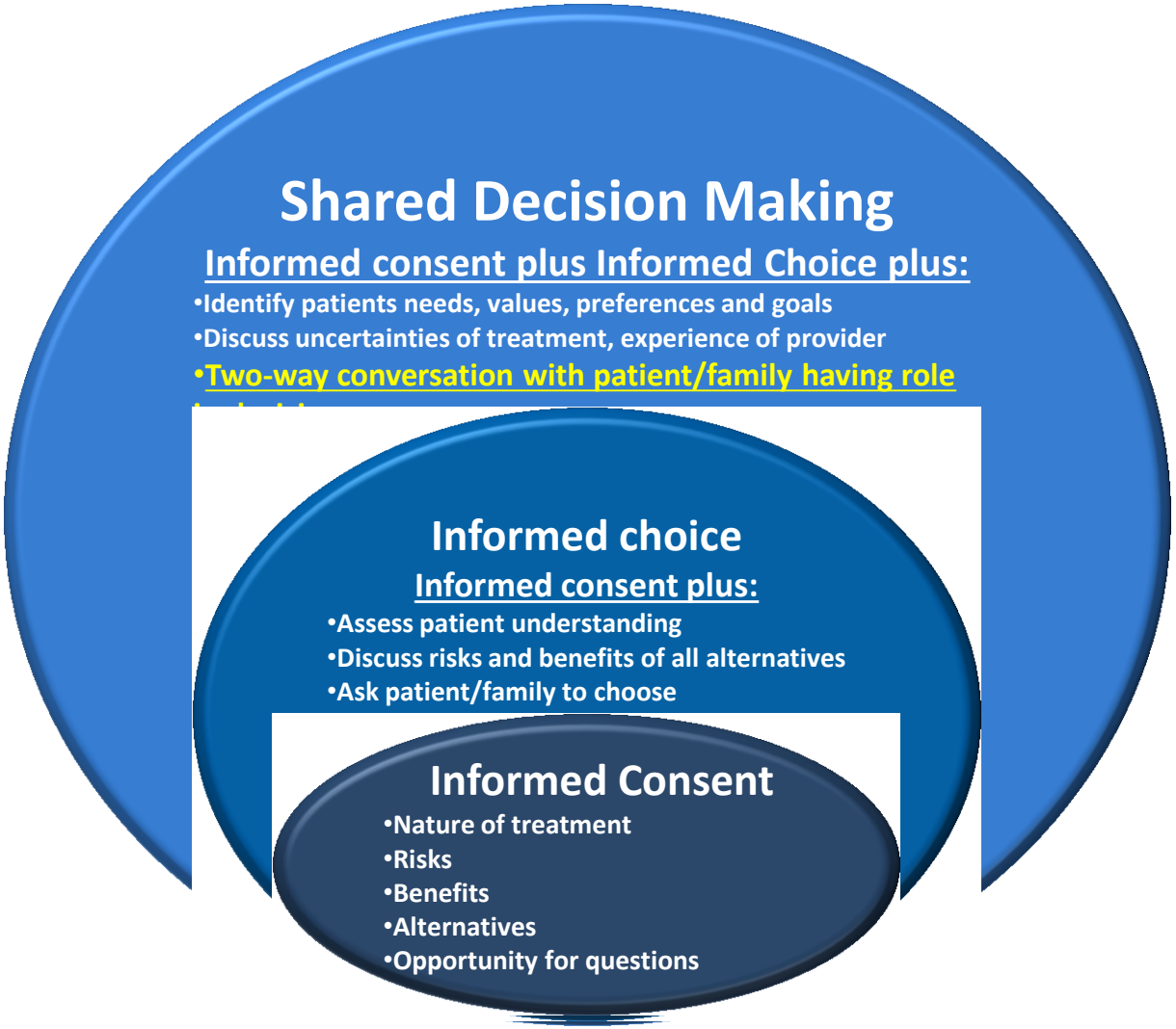
L'emodialisi domiciliare è una metodica con buone potenzialità di diffusione in quanto presenta aspetti clinici, logistici ed economici favorevoli

The EU Commission need to investigate these issues to decide if regulation is required

It's time to provide accurate, tailored and timely information about treatment options to the patient: asks us our ethical duty as well as the patients themselves

Mark Murphy
Vice President
Ceapir
markmurphy@ika.ie

Evolution of concept: "Information and education of patient "

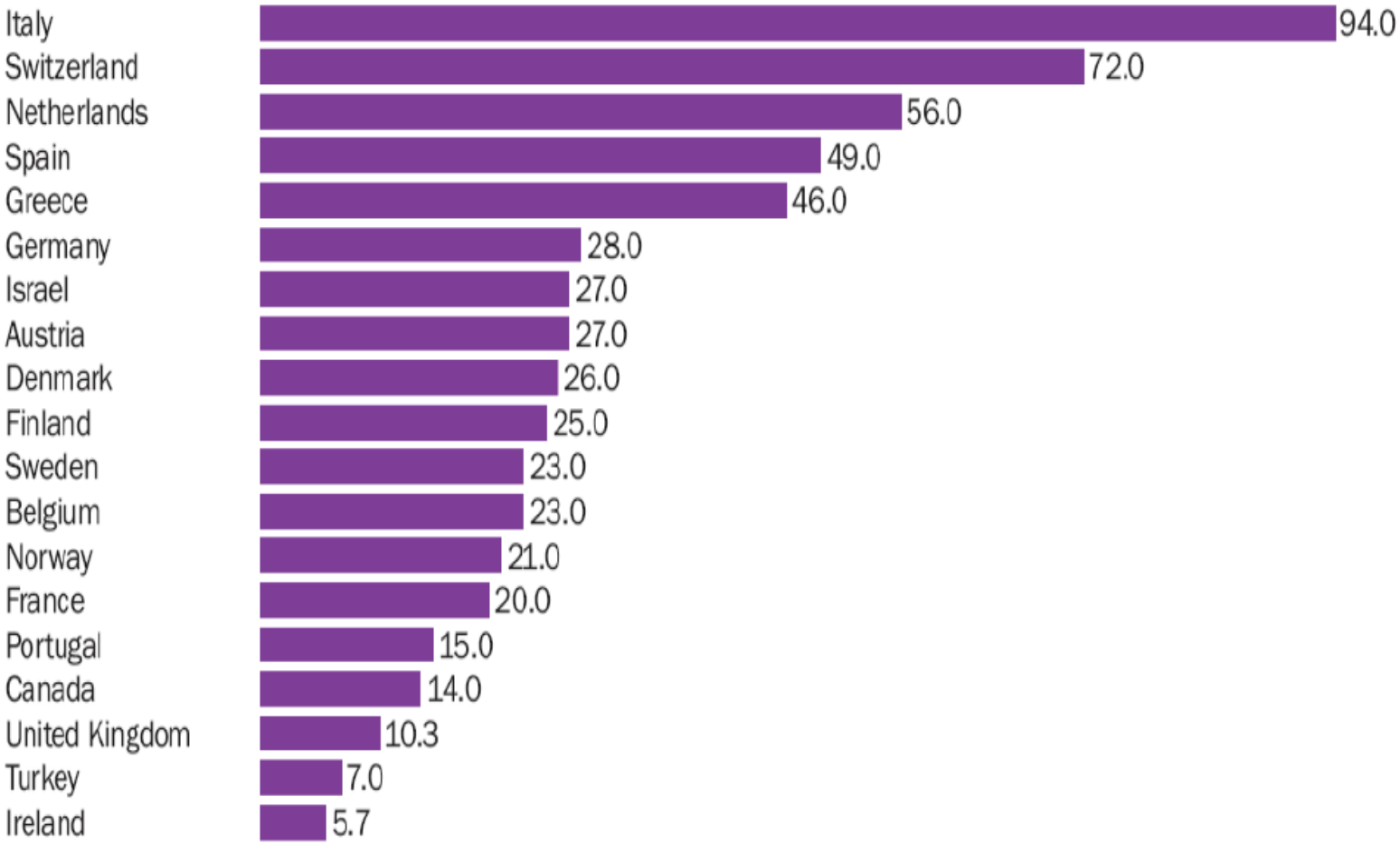


E’ necessario passare da scelte “physician-based” a quelle “patient-oriented” in cui il ruolo degli operatori sanitari (medici ed infermieri) deve cambiare perché:

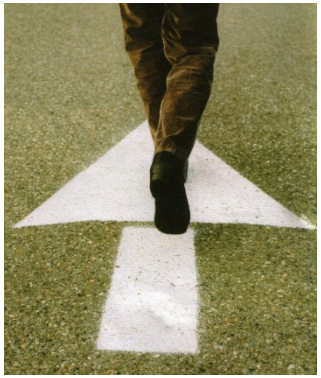
- ✓ non c’è scelta senza informazione
- ✓ non c’è informazione senza offerta
- ✓ non c’è offerta senza innovazione

e non è solo un problema di numeri……

Figure 3.13 Workforce: nephrologists supply, by country (per 1000 ESRD population)



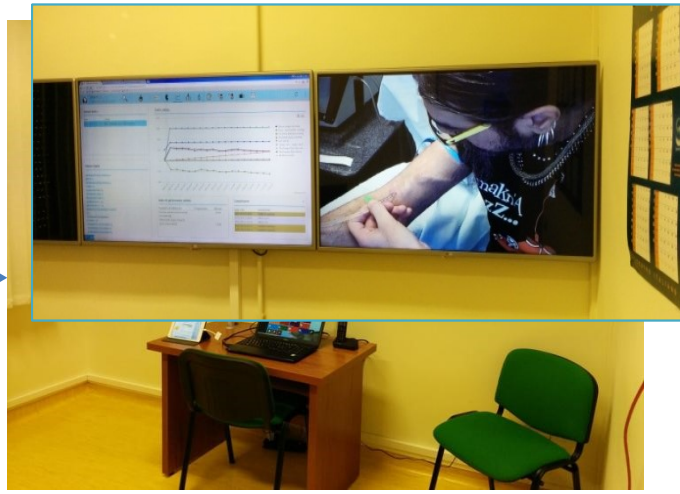
Home Hemodialysis Resource Map



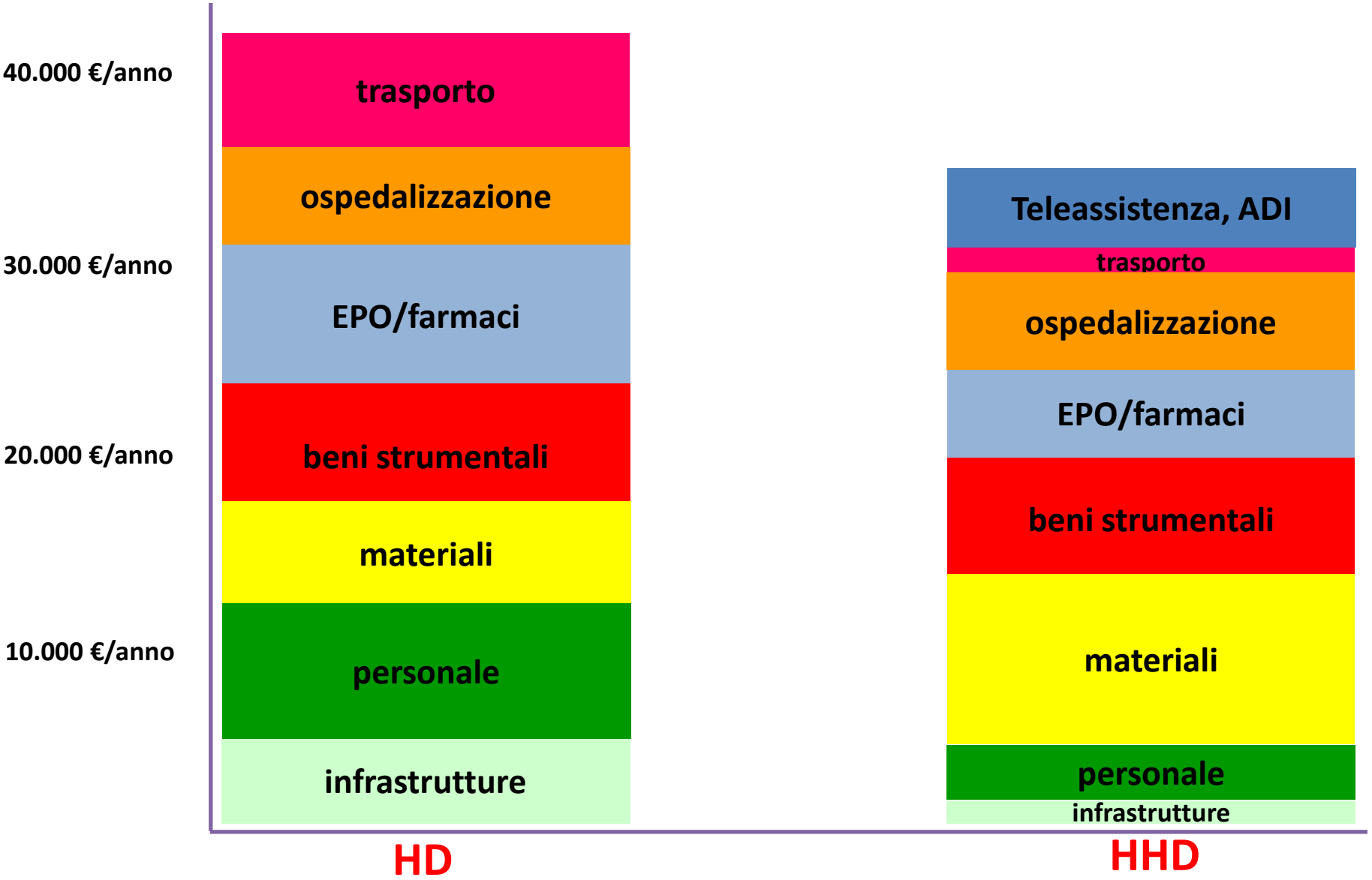
smart health 2.0

- Videocamera
- Point of care testing
- Monitor Dialisi
- Contapassi
- Sensore ambientale
- Bilancia
- Sfigmomanometro
- Glucometro
- Ossimetro
- Termometro
- Elettrocardiografo

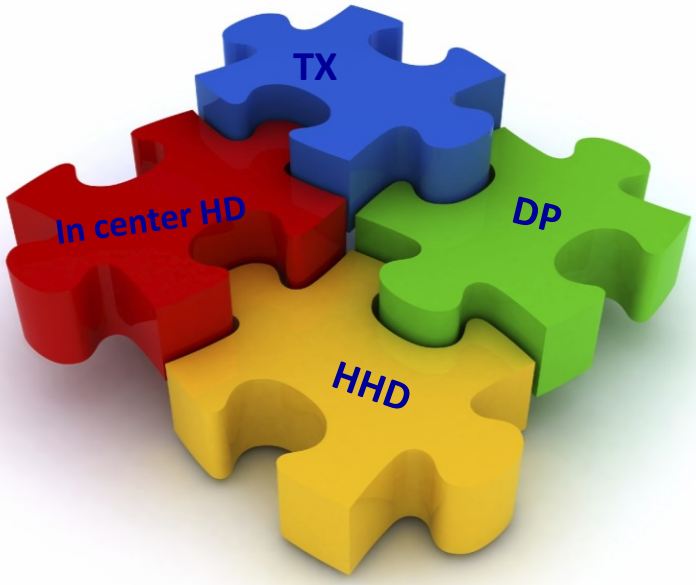
GATEWAY



Il costo globale della terapia



Emodialisi domiciliare



✓ ***La deospedalizzazione della dialisi*** (di cui l'HHD è una delle espressioni) ***è una sfida*** che si può e si deve perseguire con un lavoro di squadra che deve coinvolgere operatori sanitari ed istituzioni per superare tutte le criticità e offrire ai pazienti tutte le possibili opzioni terapeutiche.

✓ Per ottenere tali risultati occorre ***attuare uno sforzo culturale ed avviare percorsi educazionali ed informativi*** per il personale sanitario che deve conoscere ed affrontare le difficoltà organizzative che le nuove opportunità terapeutiche presentano.

Quando sarà superato questo ostacolo***, la risposta alla domanda "quando e a chi proporla" , diventa semplice ed intuitiva.***

Emodialisi domiciliare

✓ Può essere ***proposta in qualsiasi momento del trattamento dell'ESRD soprattutto nelle fasi iniziali*** in quanto, al pari della DP, prolunga la funzione renale residua e previene le complicanze cardiache da sovraccarico.

✓ Può essere il ***trattamento di scelta per i pazienti già in DP*** che, per esaurimento della tecnica, vogliono continuare a gestire il trattamento dialitico al domicilio.

✓ Può essere proposta a ***tutti i pazienti emodinamicamente stabili, con bassi indici di comorbidità e con un caregiver disponibile.***

✓ Può inoltre essere proposta a ***pazienti non trasportabili, con controindicazioni assolute alla DP, con o senza caregiver*** per i quali si possa attivare l'assistenza infermieristica territoriale (ADI).

✓ In tutti i casi la ***teleassistenza con piattaforme informatizzate*** (SH 2.0) potrà contribuire a gestire l'HHD in sicurezza e sostenibilità.


GRAZIE!
IF YOU WANT TO GO FAST, GO ALONE.
IF YOU WANT TO GO FAR, GO TOGETHER.
- AFRICAN PROVERB