

Webtables 1-3: Results of the cost center accounting at the Hospital Elisabethinen Linz (EHL) in 2008 are shown for each renal replacement treatment modality unit separately to make staff costs, material costs, overhead costs comparable between hemodialysis, peritoneal dialysis and kidney transplantation. Subtotals for staff costs, medical consumable goods, administration or energy supply for example are fat marked, sum of primary and secondary costs are underlined with dots, total costs are underlined and total costs less services for other departments in the hospital are underlined double. For some cost variables we could only publish subtotals but no detailed costs due to privacy policies of the EHL.

Webtable 1: Cost variables for peritoneal dialysis patients.

Cost center accounting for Peritoneal Dialysis Unit in 2008.

Cost variabels	Cost in €
physicians	126 163.46
nurses	34 030.33
ancillary staff	26 113.74
administration	26 955.28
personel costs	213 262.81
pharmaceuticals	173.37
blood products, chemicals, reagents	1 060.82
disinfection and dressing material	112.78
suture material	86.62
treatment supply	350.66
labratory materials	4 587.39
radiology material	160.05
instruments	6.98
medical consumable goods	6 538.67
raw materials	0.73
cleaning supplies	63.59
office equipement	1 139.93
non medical disposables	115.89
spare parts	354.26
furniture	491.36
non medical instruments	0
tools	0
kitchen and household appliance	2.94
non medical consumable goods	2 168.7
labratory tests	4 570.73
other medical external services	0
medical external services	4 570.73
maintenance	0
non medical transportation	0
postal service	515.82
non medical external services	515.82

energy	682.91
energy supply	682.91

other costs	495.52
charges and dues	495.52

devices for diagnostics, examination	685.22
devices for therapy	22 810.16
devices for pharmacy and laboratory	492.43
medical instruments	0
specialized furniture	190.62
furniture	1 113.43
non medical instruments and devices	1 562.28
kitchen and household appliance	264.73
calculated additional charges	27 118.87

primary costs	255 354.03
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compensation for retraining	
reduction of costs	-8.33
reduction of costs	-8.33

apportionment for pharmacy	
apportionment for central sterilisation unit	
apportionment for canteen	
medical caused supply and waste removal	10 098.3

apportionment for laundry	
apportionment laundry external	
apportionment stitching	
apportionment for carpenter	
apportionment for plumber	
apportionment for metal working	
apportionment for electrician	
apportionment for medical technical support	
apportionment for technical general management	
apportionment for buildings	
apportionment for cleaning service	
apportionment for gardening	
apportionment for supply management	
apportionment for air conditioning and heating	
apportionment for energy supply and emergency	
power	
apportionment for waste management	
apportionment for car pool	
non medical caused supply and waste removal	49 220.44

apportionment administration	
apportionment for quality management	
apportionment for patient offsetting	
apportionment for personel management	
apportionment for nursing directorate	
apportionment for accountancy	
apportionment for controlling	
apportionment for telefone exchange	
apportionment for porter	
apportionment for canteen	
apportionment for staff association	
apportionment for parking lots	
apportionment for cloak room and charge offices	
apportionment for medical charge offices	
apportionment for safety mangement and company	
physician	
apportionment for medical secretariate	
apportionment for IT and computing	
administration	69 969.12
apportionment for microbiology	
apportionment for serology	
apportionment for cell culture	
apportionment for sanitation	
apportionment for central labratory	
apportionment for radiology	
apportionment for cardiology day ward	
apportionment for central labratory for blood product	
apportionment for nuclear medicine	
other costs	617 456.5
<u>secondary costs</u>	<u>746 744.36</u>
<u>total costs</u>	<u>1 002 090.06</u>
palliative care	
oncology	
cardiology	
pneumology	
dermatology	
urology	
durgery	
ENT	
gastroenterology	
OB GYN	
intensive care unit	
hemodialysis	
nephrology	
nephrology day ward	
service for other departments	-68 294.01
	<u>933 796.05</u>

total costs less services for other departments

Webtable 2: Cost variables for hemodialysis patients.

Cost center accounting for Hemodialysis Unit in 2008.

Cost variables	Cost in €
physicians	650 633.3
pharmacists	3 160.61
nurses	1 438 525.14
ancillary staff	243 536.55
administration	68 137.12
operational staff	104 938.56
other personnel costs	4 189.91
personel costs	2 513 121.19
pharmaceuticals	552 050.25
blood products, chemicals, reagents	14 880.51
sera, vaccines	7 082.24
nutriments	57.75
disinfection and dressing material	10 297.38
suture material	10 076.91
treatment supply	900 609.69
labratory materials	5 484.07
radiology material	206.42
instruments	2 539.74
specialized medical furniture	158.15
medical consumable goods	1 503 443.11
raw materials	10 128.29
cleaning supplies	4 673.96
office equipement	2 534.55
non medical disposables	3 124.07
spare parts	13 544.80
furniture	221.47
non medical instruments	59.33
tools	24.10
clothing, bedding	383
kitchen and houshold appliance	332.94
other non medical disposabels	5 157.53
non medical consumable goods	40 184.04
labratory tests	12 648.19
other medical external services	3 440.52
medical external services	16 088.71
maintenance	
non medical transportation	
postal service	

non medical external services

Energy 45 301.93
Energy supply 45 301.93

public charges 0
other costs 18 282.92
charges and dues 18 282.92

devices for diagnostics, examination 255 109.69
devices for anesthesia 150.89
devices for therapy 276.99
devices for sterilisation, disinfection 2 681.3
devices for pharmacy and laboratory 11 538.3
medical instruments 260.64
specialized furniture 19 439.3
other medical goods 184.6
Furniture 20 303.49
means of transportation 1 326.32
machinery 3 892.21
non medical devices and instruments 15 272.75
tools 174.38
kitchen and household appliance 4 069.09
other non medical goods 17 794.5
calculated additional charges 352 474.45

primary costs 4 498 948.93

compensation for administration
compensation for personnel costs unspecified
compensation for retraining
compensation for personnel costs for registered
nurses
reduction of costs
reduction of costs -4 2110.17

apportionment for pharmacy
apportionment for central sterilisation unit
apportionment for central medical gas supply
apportionment for canteen
medical caused supply and waste removal 350 011.32

apportionment for laundry
apportionment laundry external
apportionment stitching
apportionment for carpenter
apportionment for plumber
apportionment for metal working
apportionment for electrician
apportionment for medical technical support
apportionment for technical general management
apportionment for buildings
apportionment for cleaning service

apportionment for gardening
apportionment for supply management
apportionment for soft water installation
apportionment for air conditioning and heating
apportionment for energy supply and emergency

power

apportionment for waste management
apportionment for car pool

non medical caused supply and waste removal

617 885.59

apportionment administration
apportionment for social service
apportionment for quality management
apportionment for patient offsetting
apportionment for patient administration
apportionment for personnel management
apportionment for public relationship
apportionment for nursing directorate
apportionment for accountancy
apportionment for controlling
apportionment for clinical studies
apportionment for counselling
apportionment for telephone exchange
apportionment for porter
apportionment for canteen
apportionment for staff association
apportionment for parking lots
apportionment for cloak room and charge offices
apportionment for medical charge offices
apportionment for safety management and

company physician

apportionment for central archive
apportionment for IT and computing

administration

486 365.6

apportionment for nephrology day ward
apportionment for microbiology
apportionment for serology
apportionment for cell culture
apportionment for sanitation
apportionment for central laboratory
apportionment for radiology
apportionment for CAT-scans
apportionment for angiography
apportionment for ECG
apportionment for cardiology day ward
apportionment for central laboratory for blood

product

apportionment for pneumology day ward
apportionment for urology day ward
apportionment for surgery day ward
apportionment for ENT day ward
apportionment for endocrinology

apportionment for OB GYN day ward	
apportionment for anesthesia day ward	
apportionment for nuclear medicine	
apportionment for ultrasound	
apportionment for endoscopy	
other costs	228 120.86

secondary costs **1 682 383.37**

total costs **6 139 222.13**

palliative care	
oncology	
cardiology	
pneumology	
dermatology	
urology	
surgery	
ENT	
gastroenterology	
OB GYN	
intensive care unit	
hemodialysis	
nephrology	
apportionment hemodialysis	
service for other departments	-564 049.8

total costs less services for other departments **5 575 172.33**

Webtable 3: Cost variables for kidney transplant patients.

Cost center accounting for Kidney Transplant Unit in 2008.

Cost variables	Costs in €
physicians	416 569.9
nurses	894 219.83
ancillary staff	202 030.46
administration	9 453.9
operational staff	104 097.83
other personnel costs	1 121.32
personel costs	1 627 493.24
pharmaceuticals	288 453.46
blood products, chemicals, reagents	58 982.71
sera, vaccines	994.1
nutriments	562.91
disinfection and dressing material	2 566.92
suture material	11 516.89
treatment supply	19 978.92
labratory materials	8 425.31

radiology material	1 989.21
devices for diagnostics, examination instruments	97.67
specialized medical furniture	603.03
medical consumable goods	767.27
	394 938.4

eatables	1 875.52
raw materials	394.52
cleaning supplies	3 640.73
office equipment	1 867.58
non medical disposables	6 420.61
spare parts	5 949.01
furniture	3 521.3
means of transportation	1 626.2
non medical instruments	425.28
tools	319.3
clothing, bedding	822.11
kitchen and household appliance	1 116.78
other non medical disposabels	1 547.67
non medical consumable goods	29 526.61

labratory tests	79 212.73
other medical external services	4 755.85
medical external services	83 968.58

maintenance	6 212.52
non medical transportation	1 225.16
postal service	227.56
non medical external services	7 665.24

engergy	9 067.67
Energy supply	9 067.67

hire charges	206.61
other costs	12 189.15
charges and dues	12 395.76

devices for diagnostics, examination	5 130.47
devices for anesthesia	507.13
devices for therapy	7 447.17
specialized furniture	5473.8
other medical goods	297.58
furniture	37 954.3
means of transportation	1117.53
machinery	169.23
non medical devices and instruments	23 857.75
kitchen and houshold appliance	6760.65
calculated additional charges	88 715.61

primary costs	2 253 771.11
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compensation for retraining

reduction of costs
reduction of costs -2 127.13

apportionment for pharmacy
apportionment for central sterilisation unit
apportionment for central medical gas supply
apportionment for canteen
medical caused supply and waste removal 285 776.27

apportionment for laundry
apportionment laundry external
apportionment stitching
apportionment for carpenter
apportionment for plumber
apportionment for metal working
apportionment for electrician
apportionment for medical technical support
apportionment for technical general management
apportionment for buildings
apportionment for cleaning service
apportionment for gardening
apportionment for supply management
apportionment for air conditioning and heating
apportionment for energy supply and emergency

power
apportionment for waste management
apportionment for car pool
non medical caused supply and waste removal 373 808.02

apportionment administration
apportionment for social service
apportionment for quality management
apportionment for patient offsetting
apportionment for patient administration
apportionment for personel management
apportionment for public relationship
apportionment for nursing directorate
apportionment for accountancy
apportionment for controlling
apportionment for clinical studies
apportionment for counselling
apportionment for telephone exchange
apportionment for porter
apportionment for canteen
apportionment for staff association
apportionment for parking lots
apportionment for cloak room and charge offices
apportionment for medical charge offices
apportionment for safety mangement and company

physician
apportionment for medical secretariate
apportionment for central archive
apportionment for IT and computing
administration 482 661.49

apportionment for dialysis	
apportionment for nephrology day ward	
apportionment for physical therapy	
apportionment for logopedia	
apportionment for microbiology	
apportionment for serology	
apportionment for cell culture	
apportionment for sanitation	
apportionment for central laboratory	
apportionment for radiology	
apportionment for CAT-scans	
apportionment for MRI scans	
apportionment for angiography	
apportionment for ECG	
apportionment for cardiology day ward	
apportionment for coronary angiography	
apportionment for central laboratory for blood product	
apportionment for pneumology day ward	
apportionment for urology day ward	
apportionment for surgery day ward	
apportionment for ENT day ward	
apportionment for endocrinology	
apportionment for OB GYN day ward	
apportionment for ophthalmology	
apportionment for orthopedics	
apportionment for neurology	
apportionment for psychiatry	
apportionment for emergency department	
apportionment for anesthesia day ward	
apportionment for palliative care	
apportionment for nuclear medicine	
apportionment for PET scans	
apportionment for ultrasound	
apportionment for endoscopy	
apportionment for gastroenterology	
apportionment for oncology	
apportionment for pathology	
apportionment for central Ors	
other costs	2 685 600.02
<u>secondary costs</u>	<u>3 827 845.8</u>
<u>total costs</u>	<u>6 079 489.78</u>
<u>total costs less services for other departments</u>	<u>6 079 489.78</u>

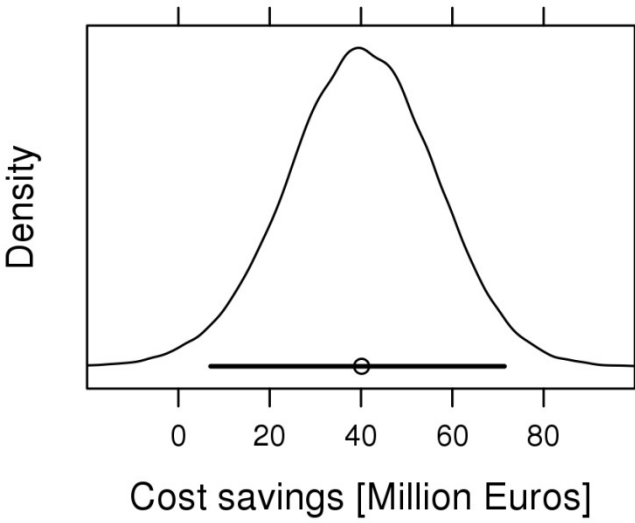
Webtable 4: Estimated therapy costs (in € 100/month) with standard deviations. Data from the EHL and the Upper Austrian Health Insurance were used for the cost parameters. Total annual therapy costs include costs for inpatient and outpatient treatment, including non-ESRD related admissions, costs for medications including ESAs and i.v. iron, costs for transportation to the renal unit as well as costs for renal replacement therapy itself. Costs were distinguished between the first year (0-12 months), the second year (13-24 months) and subsequent years (beyond 25 months) after initiation of the treatment for hemodialysis, peritoneal dialysis and kidney transplantation. Annual therapy costs for kidney transplantation during the first 12 months were furthermore separated depending on the donor source (living donor or deceased donor). Note that the column SD refers to the sample standard deviation and not to the standard deviation of the mean (i.e., the standard error).

	Parameters	Mean	SD
Costs HD (€ 100/month)	hospital HD and hospital care	30.1	9.4
	medication	2.9	3.7
	transportation	3.3	3.7
	Total	36.3	10.8
Costs HP (€ 100/month)	hospital HD and hospital care	27.1	7.5
	medication	2.9	3.7
	transportation	3.3	3.7
	Total	33.3	9.1
Costs HM (€ 100/month)	hospital HD and hospital care	27.6	8.5
	medication	2.9	3.7
	transportation	3.3	3.7
	Total	33.8	10.0
Costs PD (€ 100/month)	hospital care	15.2	18.0
	medications	2.4	2.0
	treatment	2.2	1.6
	transportation	1.8	1.5
	Total	21.6	18.2
Costs PP (€ 100/month)	hospital care	8.9	18.1
	medications	2.4	2.0
	treatment	2.2	1.6
	transportation	1.8	1.5

	Total	15.3	18.3
Costs PM (€ 100/month)	hospital care	10.7	16.5
	medications	2.4	2.0
	treatment	2.2	1.6
	transportation	1.8	1.5
	Total	17.1	16.8
Costs TL (€ 100/month)	living donation	8.1	1.6
	transplantation and hospital care	24.6	9.2
	immunosuppressives	7.2	2.3
	other medications	2.5	3.3
	Total	42.4	10.2
Costs TD (€ 100/month)	deceased donor	2.6	1.2
	transplantation and hospital care	30.1	19.6
	immunosuppressives	6.7	3.2
	other medications	2.6	2.7
	registration fee	0.5	-
	Total	42.5	20.1
Costs TP (€ 100/month)	hospital care	5.3	9.8
	immunosuppressives	7.1	3.6
	other medications	1.9	3.0
	Total	14.3	10.8
Costs TM (€ 100/month)	hospital care	5.3	9.6
	immunosuppressives	5.2	3.8
	other medications	0.1	1.4
	Total	10.7	10.4

Webfigure 1: Probabilistic sensitivity analysis for the policy of increasing PD assignment to 20% and TL to 10%. The model is replicated a large number of times (10^5 replications) whereby in each of these replications every parameter value is drawn from a distribution (see Table 2 and 3). Webfigure 1a shows the resulting distribution of discounted cost savings and Webfigure 1b the resulting distribution of discounted effect gains for the policy of increasing PD assignment to 20% and TL to 10% compared to the baseline policy (annual discount rate 3%). The horizontal bars denote the range from the 2.5% percentile to the 97.5% percentile: 7.1 to 71.4 Million Euros as the range of cost savings and 62 to 4096 QALYs as range for the effect gain. The dots at the bottom of the figures indicate medians: 40.1 Million Euros as the median for cost savings and 2076 QALYs as the median of effect gains.

a)



b)

