Identifying best practices for care-dependent elderly by Benchmarking Costs and outcomes of Community Care

The IBenC method to identify best practices: Integrating quality, costs and staff experiences

Henriëtte van der Roest

VUmc VU University Medical Center Amsterdam

Aim

To identify best practices of community care delivery for care dependent community dwelling elderly

→Benchmark cost-effectiveness of community care practices

→Characterise best practices

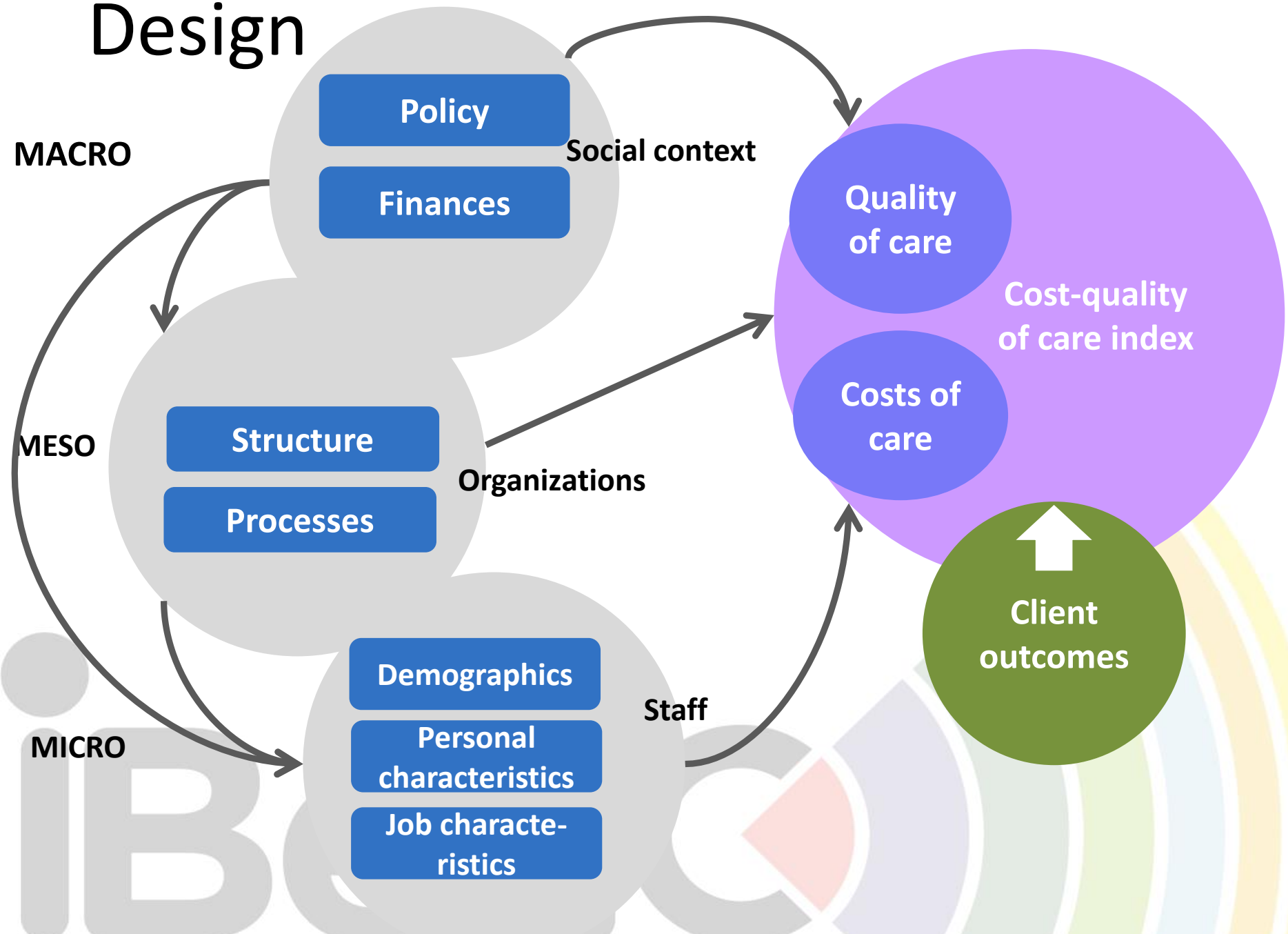


Best practices

- Visible in performance
- Contributors to good performance unclear
  - Integrated team approach (Reiss-Brennan et al 2016)
  - Practice size (Devlin et al 2013)
  - Staffing ratios (Xing et al 2013; Kim et al 2009)

Insight creates learning potential

Design

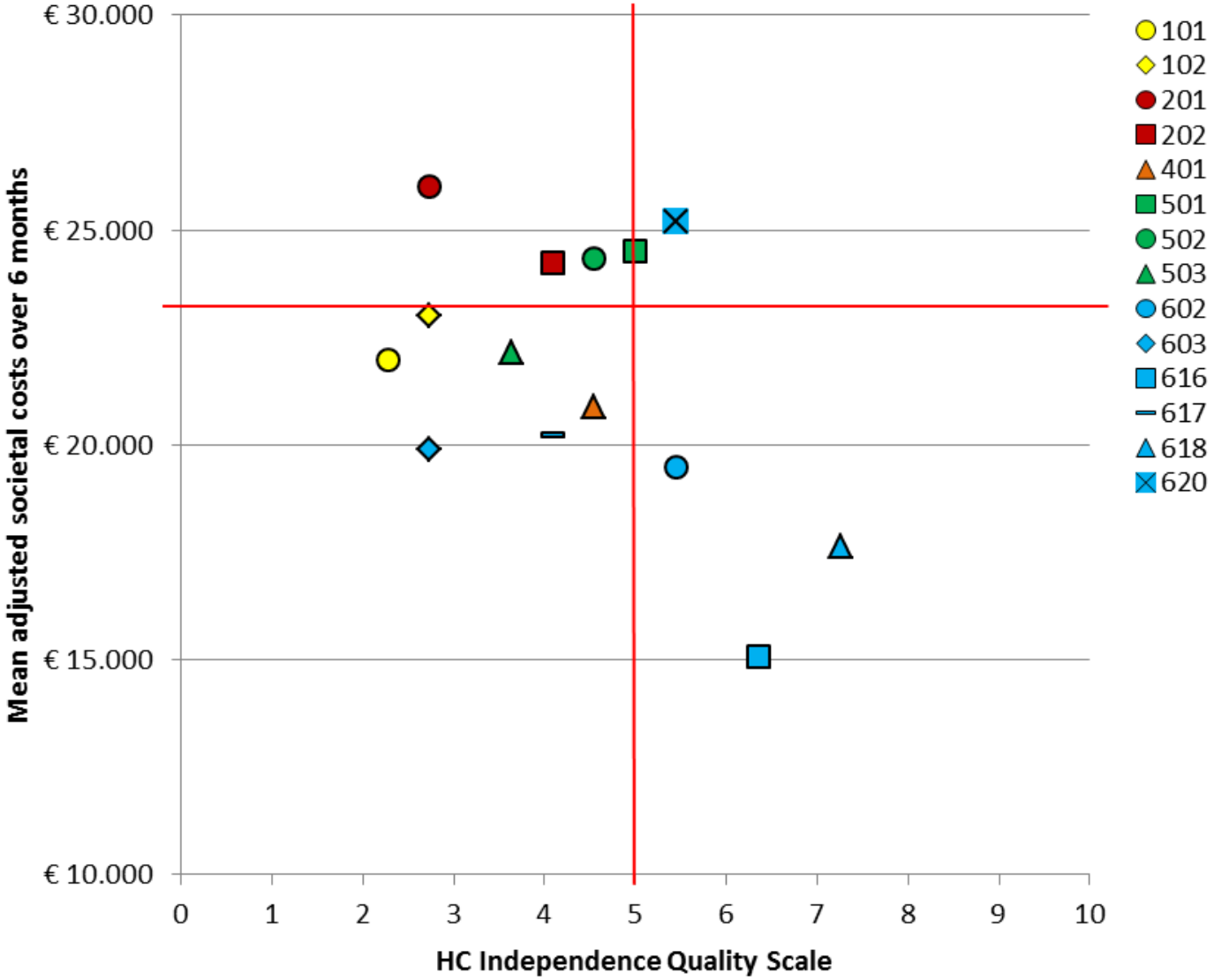

MACRO
Policy
Finances
Social context
MESO
Structure
Processes
Organizations
MICRO
Demographics
Personal characteristics
Job characte-ristics
Staff
Quality of care
Costs of care
Cost-quality of care index
Client outcomes

Quality of care

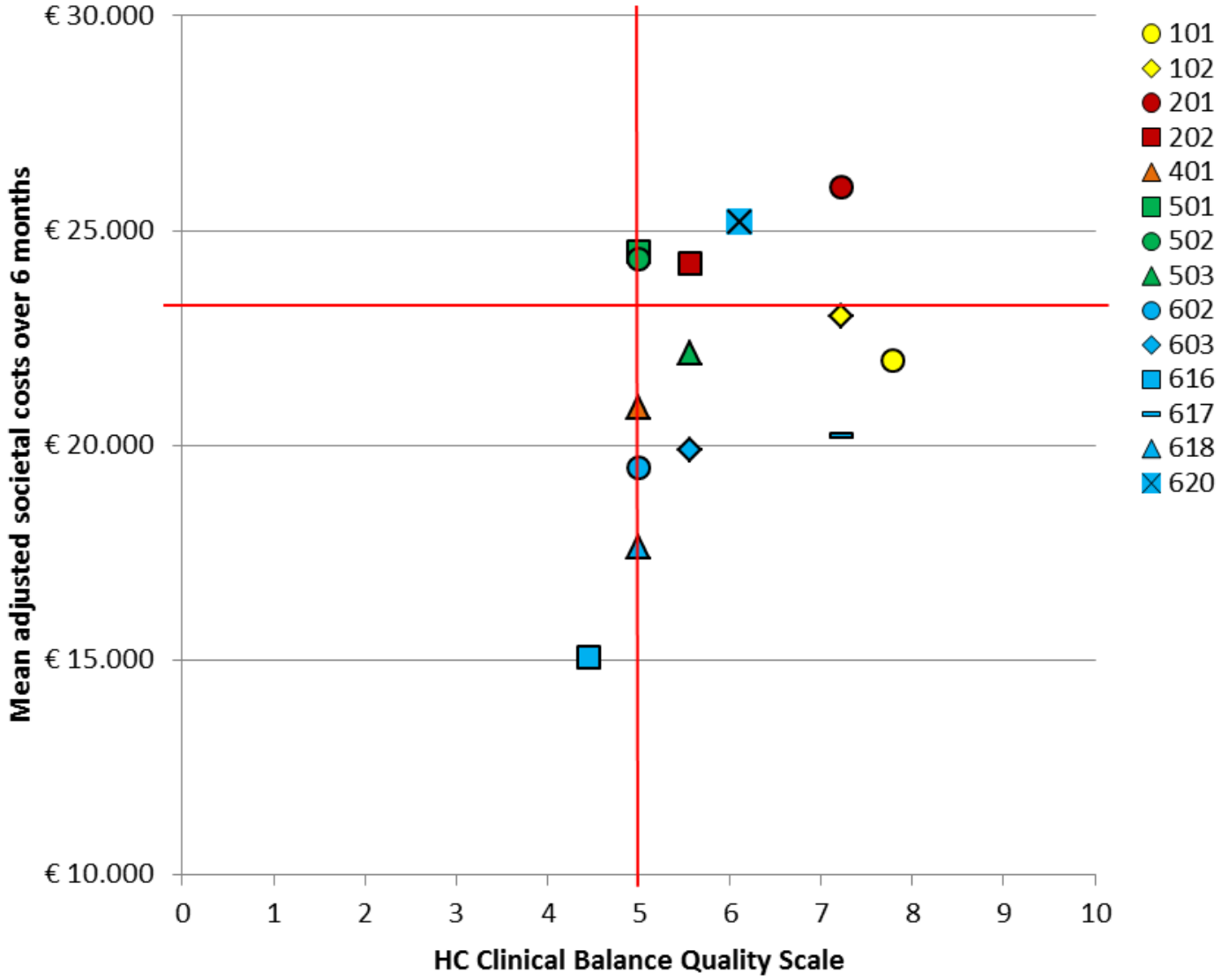
Two summary scales,
reflecting *different* aspects of quality:

- HC Independence Quality Scale (0-10)
  Quality of care associated with prevention of deterioration of functioning
- HC Clinical Balance Quality Scale (0-10)
  Quality of care associated with improvement of functioning and psychosocial well-being

Societal cost and Independence Quality Scale

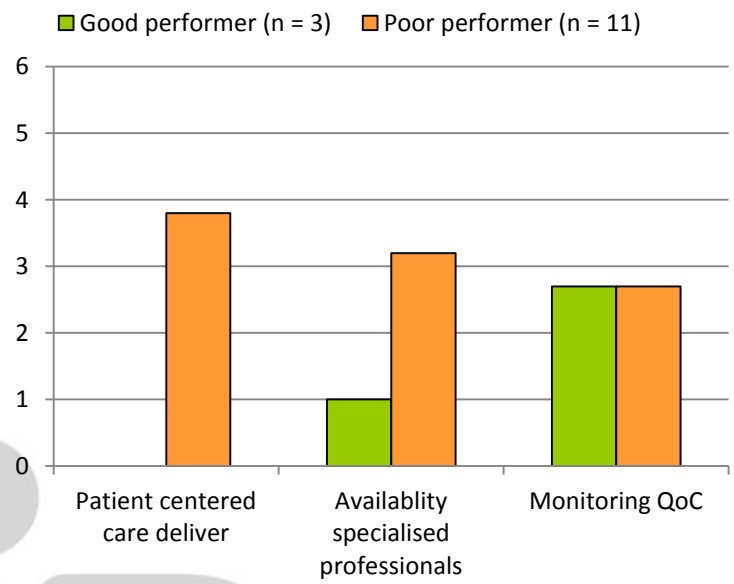


Societal costs and Clinical Balance Quality Scale

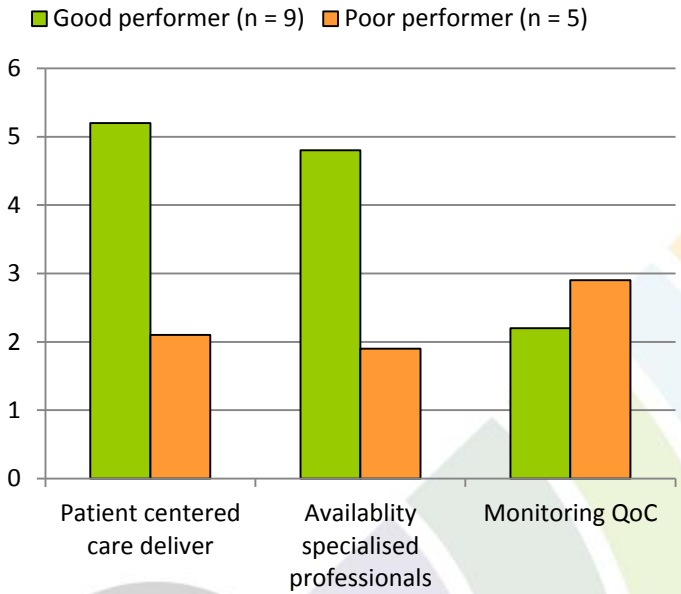


Differences between organisations

Performance IQS index



Performance CBQS index



Cost-quality index

+

- Reflects the balance between costs and performance
- The higher the index value, the better the balance
- Takes into account (un)preferable conditions
- Enables easy interpretation of benchmark

Cost-quality index properties

↑ costs cost component ↓

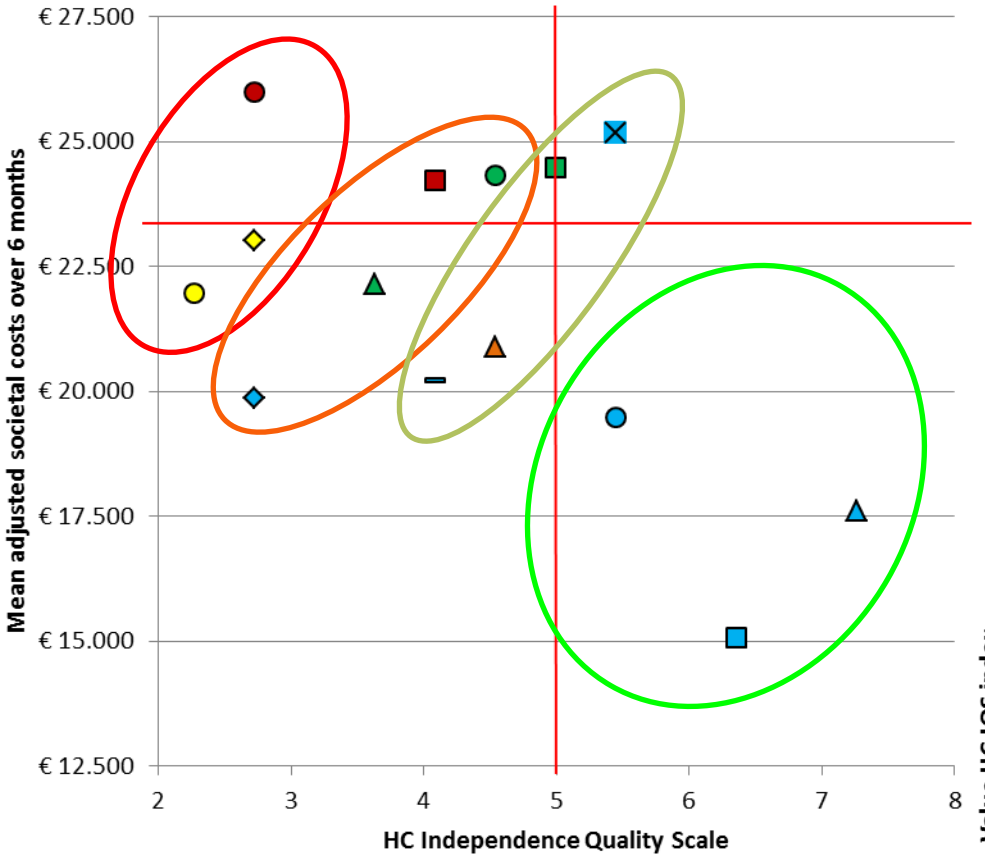
↑ quality quality component ↑

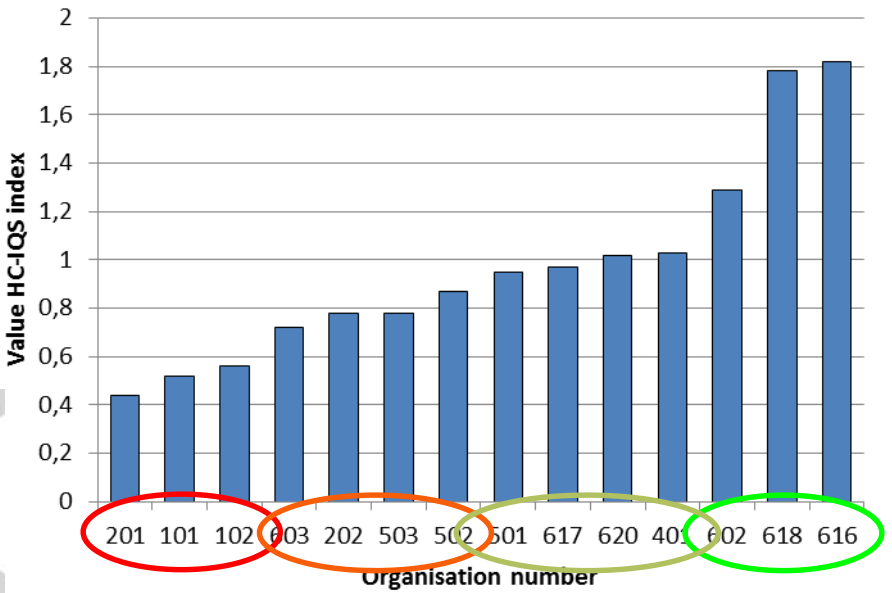
- Index value of 1: medium level of efficiency

  balance between costs and quality around references

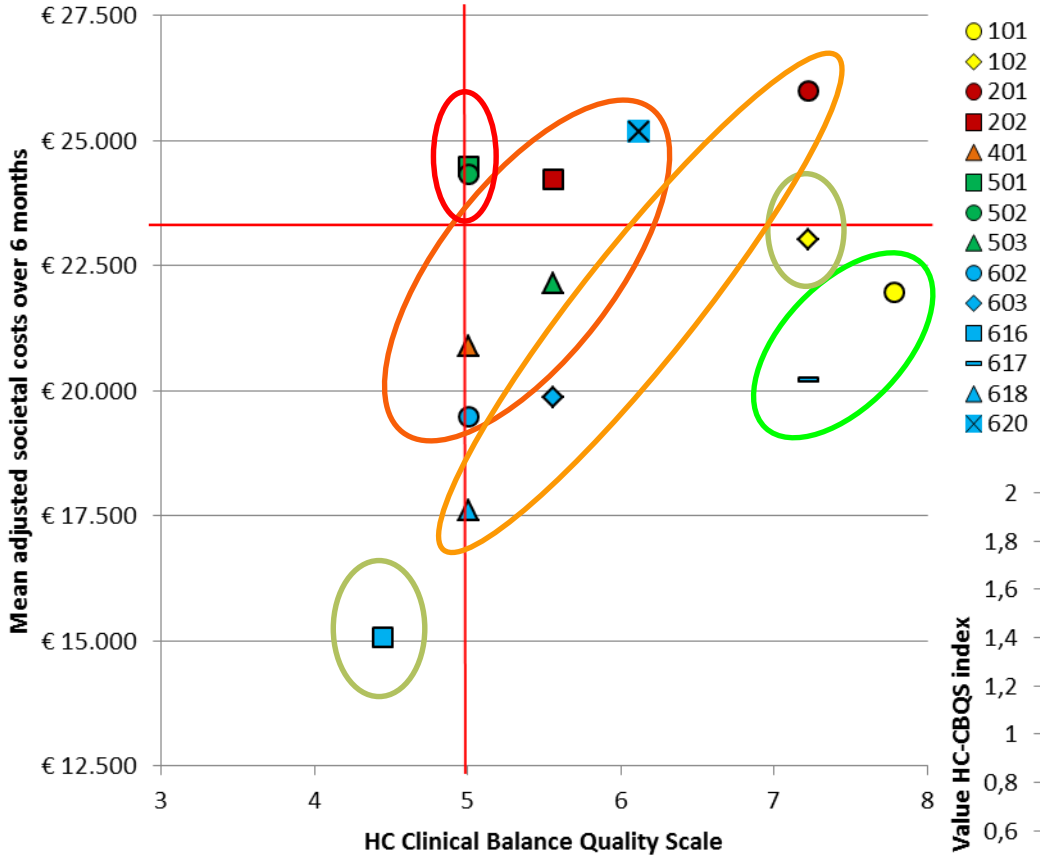
- Higher index values indicate better balance between costs and quality
- If costs are low, the index value increases steeper

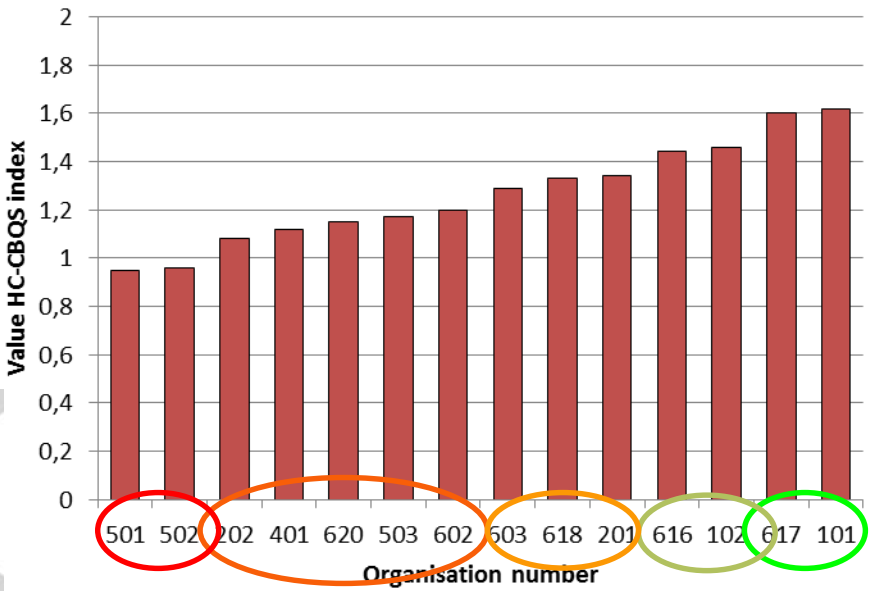
Face validity IQS index

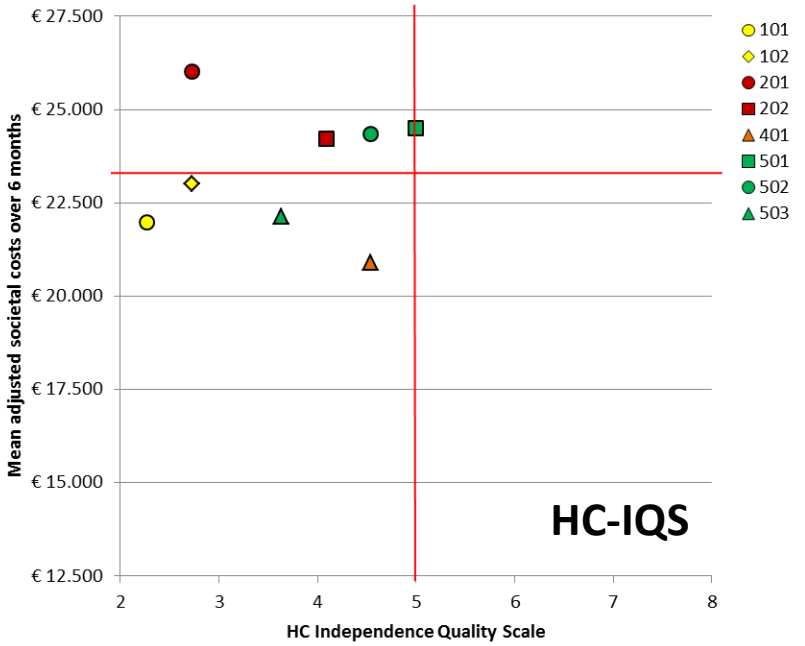


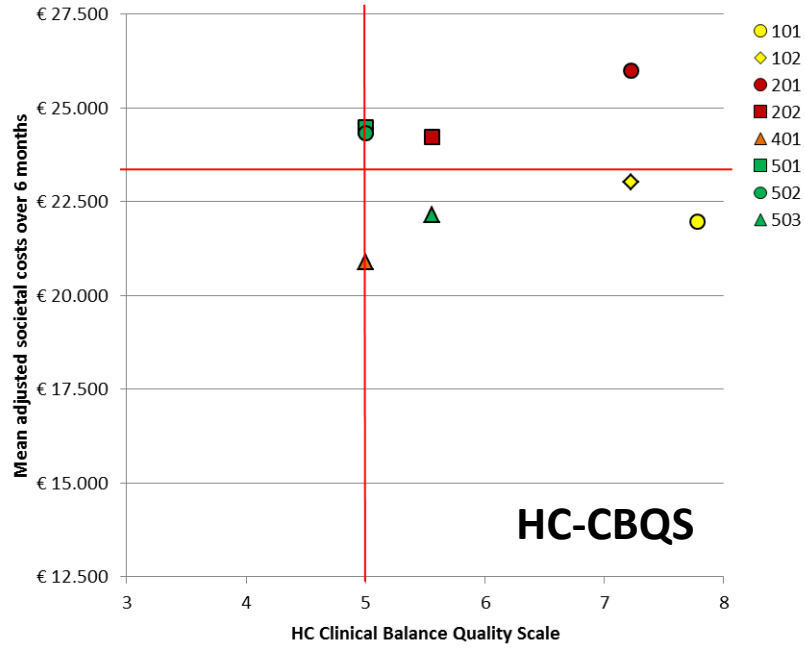


Face validity CBQS index









Method

How to learn from other organisations?

- IQS index
- CBQS index
- organisational characteristics (n = 8)
- staff characteristics (n = 493)

- Stepwise linear regression

Staff characteristics

	Mean ± SD	Interpretation
Personal burnout [0-100]	39.2 ± 17.4	↑↑
Physical workload [0-12]	5.4 ± 2.3	high
Emotional demands at work [0-100]	56.8 ± 16.5	attention
Quantitative demands at work [0-100]	37.2 ± 20.0	favourable
Work pace [0-100]	64.29 ± 19.6	favourable
Influence at work [0-100]	52.4 ± 21.7	attention
Possibilities for development at work [0-100]	76.0 ± 15.6	favourable
Predictability at work [0-100]	57.9 ± 22.2	attention
Payment [0-100]	35.1 ± 28.5	unfavourable
Job satisfaction [0-100]	70.7 ± 21.1	favourable
Sexual harassment at work [0-100]	8.4 ± 17.9	favourable
Work-related burnout [0-100]	34.4 ± 17.5	↑
Client-related burnout [0-100]	30.3 ± 16.4	↑
Recognition at work [0-100]	65.0 ± 21.3	favourable
Quality of leadership [0-100]	56.3 ± 23.7	attention
Vertical trust (management) at work [0-100]	74.0 ± 21.7	favourable
Justice at work [0-100]	62.2 ± 23.0	favourable
Social capital [0-100]	70.4 ± 18.0	favourable

Results IQS index

	Model 1			Model 2		
	B	***SE B***	**β**	***B***	***SE B***	**β**
Constant	1.324	.043		1.230	.059	
Predictability at work	-.002	.000	-.231***	-.001	.000	-.139***
Part time worker	-.112	.016	-.249***	-.176	.014	-.393***
Emotional demands at work	-.003	.000	-.254***	-.002	.000	-.137***
Influence at work	-.002	.000	-.185***	-.002	.000	-.247***
Payment	-.001	.000	-.160***	-.001	.000	-.138***
Physical workload scale	.010	.003	.115**	.007	.003	.072*
Patient centred care delivery				-.085	.008	-.361***
Availability specialised care professionals				.008	.003	.080**
Monitoring quality of care				.190	.013	.443***
R^2	.49			.66		
F	77.79***			110.96***		

***N* = 493**

***p* < .05 **p* < .01 ****p* < .001**

Results CBQS index

	Model 1			Model 2		
	B	***SE B***	**β**	***B***	***SE B***	**β**
Constant	.917	.061		1.612	.057	
Influence at work	.003	.000	.366***	.002	.000	.238***
Part time worker	.058	.016	.147***	.090	.013	.232***
Payment	.001	.000	.104**	.001	.000	.163***
Possibilities for development	-.002	.000	-.197***	-.002	.000	-.136***
Emotional demands	.002	.000	.150***	.001	.000	.103**
Predictability at work	.001	.000	.140**	.002	.000	.207***
Temporary contract	-.039	.019	-.078*	-.031	.014	-.063**
Work pace	.001	.000	.107*			
Physical workload scale	-.007	.003	-.083*			
Sexual harassment	-.001	.000	-.077*	-.001	.000	-.098**
Patient centred care				-.024	.007	-.116**
Av spec care professionals				-.012	.003	-.134***
Monitoring quality of care				-.203	.012	-.540***
R^2	.37			.62		
F	27.95***			73.90***		

N = 493

*$p < .05$ **$p < .01$ ***$p < .001$

Summary results

Efficiency aimed at maintenance/ counteract deterioration of functioning	Efficiency aimed at improvement of functioning and psychosocial well being
- Predictability at work	+ + Predictability at work
- - Part time worker	+ + Part time worker
- Emotional demands at work	+ Emotional demands
- - Influence at work	+ + Influence at work
- Payment	+ Payment
- - Patient centred care delivery	- Patient centred care delivery
+ Availability specialised care profs	- Availability specialised care profs
- - Monitoring quality of care	+ + Monitoring quality of care
+ Physical workload scale	- Possibilities for development
	- Temporary contract
	- Sexual harassment

Conclusions

- Factors within organisations foster or confine efficiency towards maintenance or improvement of functioning differently
- Important factors seem patient centred care, influence, predictability, part time work, and monitoring quality

- IBenC benchmarking method feasible to
  - compare organisations on efficiency
  - look into organisation's black box

Take home message

Continuous benchmarking of care on costs and quality is necessary to gain insight for future sustainable health care systems for care dependent elderly

Use:

- valid instruments
- routine care data
- adjust for case-mix

Thank you

email:
hg.vanderroest@vumc.nl