IBenC Final Conference Summary Report

Document prepared by EHMA

20-12-2016

Abstract

This document is the report on the IBenC Final Conference that took place December 8th 2016 in Brussels. It gives an overview of the contents of the ten presentations that took place and the discussions that took place between presenters and the audience. The full presentations can be accessed through the IBenC website at: http://bit.ly/IBenC2016. During the Final Conference, the IBenC consortium partners presented their findings on their respective work packages' study. The presentations took us through the different steps building up to a method to identify best practices for care dependent elderly in terms of quality of care, cost of care and staff experiences.

Overview of the presentations

- What is the IBenC study about?
  Hein van Hout, VUmc, Netherlands
- Bringing evidence to practice: Using InterRAI knowledge & data infrastructures in Finland and the rest of the world
  Harriet Finne-Soveri, THL, Finland
- Can we characterise organisations in community care? Identifying six care models
  Anja Declercq, LUCAS, KU Leuven, Belgium
- Performance I: Identifying best practices on quality of community care
  Graziano Onder, UCSC, Italy
- Performance II: Benchmarking job related experiences of staff
  Liza van Eenoo, LUCAS, KU Leuven, Belgium
- Performance III: Benchmarking psychosocial needs
  Vjenka Garms-Homolová, HTW Berlin, Germany
- Performance IV: Costs of Care across organisations and care models
  Judith Bosmans, VUmc, Netherlands
- Performance V: The IBenC method to identify best practices. Integrating Quality, Costs and Staff experiences
  Henriëtte van der Roest, VUmc, Netherlands
- Exploring the feasibility of an online tool to benchmark the cost-effectiveness of health care organizations
  Michele Calabrò, EHMA, Belgium

Opening

Prof. Henk Nies, from the Vilans Centre of expertise for long term care in Netherlands, chaired the conference and introduced the IBenC mission as one that seems impossible. It is the 'holy grail' in health care management: to find best practices in terms of cost, of quality, and of staff experiences. The purpose of the study, in Prof. Nies' view, was foremost one of pursuing 'benchlearning'. This term describes a systemic and integrated process of performance comparisons to stimulate learning and identify good practices.

introduction

The IBenC study was then introduced by Project Coordinator Prof. Hein van Hout from the VU Medical Centre in the Netherlands. The project finds its origin with the realisation that the European population is aging and cost of care will continue to rise considerably: by 2060 28% of the population is 65 years and older, and the category of elderly aged 80+ will more than double. This will drastically increase costs of care, and more care dependent elderly will need long term care. One approach to deal with the increasing pressure on health care systems, is through extending the time elderly are treated in their home environments. On the one hand, this is desired by policy makers because it postpones institutionalisation and reduces costs of healthcare. On the other it is beneficial to older people because they can continue living in their familiar environments longer. The IBenC project maps the varying practices of home care in several countries. Its objective is:

*to **benchmark** costs of community care models for care-dependent community dwelling older adults and to **identify and describe** community care models with the lowest societal costs*

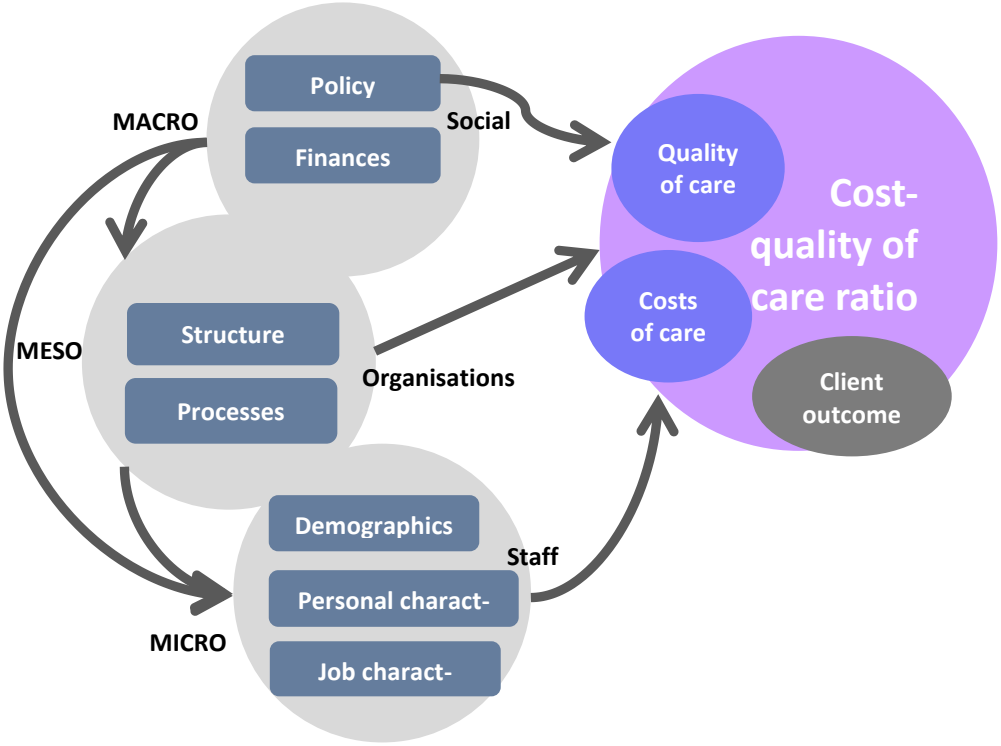
There is a large variety in health care systems across the studied countries. There are differences in terms of population, policy, spending on long term care, reimbursement procedures, availability of formal and informal care, and accessibility and equity of care (Van Eenoo *et al.*, 2015). For example, old age dependency ratio differs significantly, as well as government spending. In the Netherlands for instance, spending is higher, while the old age dependency ratio is rather low. The opposite is true for Italy, where old age dependency ratio is higher but spending relatively low.

Traditional approaches to benchmarking health care focus on either cost or quality of care. IBenC integrates them, together with other key aspects, to arrive at an integrated comparison of care. This may help to realise smart measures to improve quality, it provides valuable choice information for the public, it can be a tool to enhance accountability to government and insurers, and may produce financial incentives to improve care.

Approach

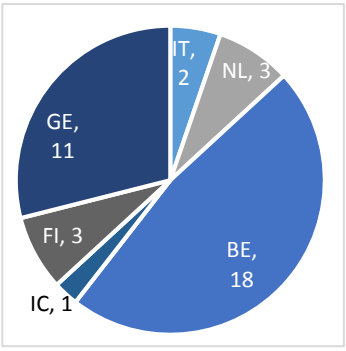
The study incorporated data from different levels to arrive at a balanced picture of cost-quality of care ratio. On the macro level it looked at the social context, studying policy and finance of community care. On the meso level it looked at the structure and processes of organisations. On the micro level, it considered staff characteristics such as demographics, HR and work characteristics. Client outcomes of care were incorporated from biannual patient data collected with the InterRAI-HC instrument. The structure of the research is represented in the graph below, illustrating the different levels and areas targeted in the study to arrive at a cost-quality of care ratio. Data for the quality of care benchmark is

collected during routine care assessments with the interRAI HC (which are common but not present in all care organisations participating in the project).



Study sample

The IBenC study sampled 38 care organisations from Belgium, Finland, Germany, Iceland, Italy and the Netherlands (note: **T**he exact number of care organisations under study slightly deviates from organizations included into the care models). The care organisations were predominantly not-for-profit, and one third were public and profit institutes. They represented large institutes with over 5000 patients, and small ones with less than a 100.



The IBenC study tracked the care of 2884 patients, with the average of 82. For staff experiences, 1067 care employees were surveyed.

interRAI

In the second presentation Prof. Harriet Finne-Soveri, Chief Medical Officer for Elderly care services at Helsinki City and Vice president of interRAI, introduced the InterRAI family of tools used for collecting quality of care data. InterRAI has been around for a while; it was developed in the 1980's to *promote evidence-informed clinical practice and policy decision making through the collection and interpretation of high- quality data about the characteristics and outcomes of persons served across a variety of health and social services settings.*

The InterRAI tool measures quality of care with an assessment of patient experience, records, and staff evaluation. The tool has a core part with questions that apply to all patient groups, and additional instruments for specific care areas. This way the instruments are modified for different categories of

patients. Because InterRAI has been subject to testing for such a long time within large geographical reach (35 countries worldwide!) the tool is extensively validated and highly reliable.

For IBenC, the InterRAI instrument for home care was used, or InterRAI-HC in short. For example, InterRAI-HC measures ADL scales, IADL, pain scale, BMI, depression, cognitive impairment, social activities, health stability and a range of other indicators. Prof. Finne-Soveri highlighted the benefits for care organisations to use the InterRAI tool. She argued that that the measurement of a patient using InterRAI can in the first place serve to plan an individual patient's care. The secondary benefit, most valuable to IBenC, is to have standardised data gathering to allow for comparison and eventually quality of care improvement.

Quality of care models

In the third presentation Prof. Anja Declercq posed the question: Can we characterise organisations in community care? Work Package 6 set out to identify care models based on policy and organisational characteristics. To this end, fifteen items were grouped in three components. The three components are:

- Patient-centred care delivery
- Availability of specialised care professionals
- Standardised monitoring care performance

Using these components, six community care models were identified in the 36 care organisations studied (a graph representing the care performance on these three quality indicators per care model can be found in the annex). There were too few organisations represented in cluster four and cluster 5 to continue with these clusters in the study. Care model 1 is characterised by a good to great patient centred care delivery and standardised monitoring of care performance. It has great availability of specialised care professionals. Care model 2 has great patient centred care delivery and standardised monitoring of care performance, and an average to good availability of specialised care professionals. Care model 3 has a great availability of care professionals, a good to great patient centred care, and a poor standardised monitoring of care performance. Care model 6 has a great standardised monitoring of care performance, an average to good availability of specialised care professionals, and a poor patient centred care delivery. This can be summarised as follows:

Care model	1	2	3	6
Patient centred care delivery	+(+)	++	+(+)	-
Availability of specialised care professionals	++	(+)	++	(+)
Standardised monitoring care performance	+(+)	++	-	++

Prof. Declercq discussed how the geographical spread of the care organisations in the study matched the community care models. All Italian and Icelandic organisations fell in the first cluster. Dutch and Finnish care organisations were spread between cluster 1 and cluster 2. Belgian care organisations were predominantly in cluster 1 and cluster 3, and all German care organisations belonged to cluster 6.

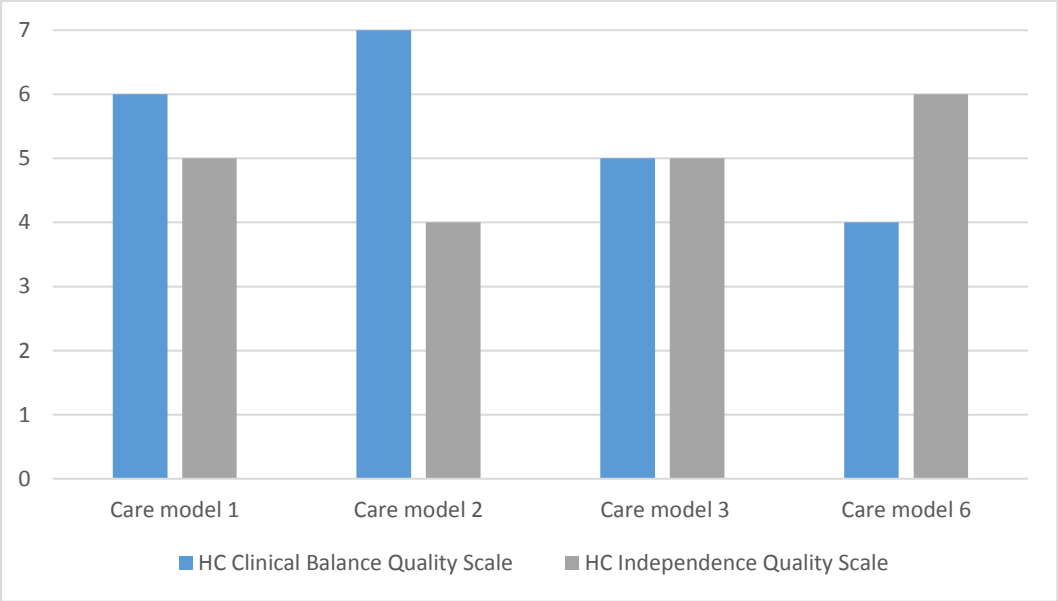
After the presentation Prof. Henk Nies inquired how the uneven distribution of organisations affected the categorisation. According to Prof. Declercq this might indeed have had an influence, but the exact relation had not quite been clarified yet. She also pointed out that the care organisations in Belgium were all positioned on the Flemish side of the country.

Quality of community care

In the fifth presentation Dr. Graziano Onder from Università Cattolica del Sacro Cuore in Italy discussed the method for measuring quality of care. The quality indicators (QI) from InterRAI-HC were reviewed, and supplemented with additional measures identified in a literature study. From this, the study arrived at 44 home care quality indicators in both formal and informal care use. The study benefitted from a previous comparative study conducted into home care across the EU under the 5th Framework Programme. This framework programme ran from 1998-2002. The current study falls under the 7th Framework Programme, rebranded Horizon 2020.

A literature search led to identification of **an already existing summary measure of quality of care** created in 2013 (Morris et al., 2013). The two scales are:

1. Independence Quality Scale (focuses on functional independence and engagement)
2. Clinical Balance Quality Scale (indicates a return to clinical balance)



The study under the work package of Dr. Onder found that the two summary measures assess distinct domains of quality of home care services. Moreover, they were valid in the context of the different countries in the study. These two quality scales might be used to compare organisations and systems to improve care delivery to vulnerable older populations in the community. Moreover, matching these measures to cost-effectiveness of services would also be powerful extensions of the current research and would make arguments to policy-makers more salient.

After the presentation by Dr. Onder there was a discussion on how is it possible that some organizations perform excellently (according to one scale) but under average (according to the other

scale). Differences in national care structures, especially in terms of reimbursement structures, were identified to be of relevance here.

Project Partner Prof. Palmi Jonsson from the Landspitali National University Hospital in Iceland asked what the variability between countries and organisations mean from the clinician's and patient's perspective. Dr. van der Roest explained that the message for clinicians in order to improve clinical quality is to take note of their organisation's performance on either scale, and then zoom in on individual quality indicators for improvement on that scale. The country comparisons are just a 'snapshot' that may be useful to determine whether action is advisable or even necessary. In brief, this index will help show the clinician: 'can I improve?'. How to improve would then be the next step.

Benchmarking job related experiences of staff

In the sixth presentation Liza van Eenoo from the University of Leuven (LUCAS) delved into staff experiences as part of a care organisation's performance. The goal of this presentation was to find out whether there are differences between the care models in terms of work experiences, and whether some staff experiences relate to quality of care. The study targeted a broad range of care staff (1067 in total), surveying nurses and second level nurses, social workers, home health aides, managers with a leading position, supportive administrative staff and other community care professionals. Dominant traits of the sample of care givers were: the majority were nurse, female, aged 45-59 and educated lower than bachelor degree. Conclusions of the statistical analysis can be summarised as follows:

- In all community care models there are unfavourable scores for the physical workload and the work pace.
- Care model 2 and 6 posed significantly higher emotional demands; care model six had the highest demands at work overall.
- Care models 1, 2 and 6 had unfavourable scores on payment, the payment score for care model 3 is situated in the attention zone.
- All care models need to pay attention to control of working time and influence at work
- All models need to pay attention to social support from supervisors; care model 3 scored highest on support at work
- Care model 6 had the lowest job satisfaction, although it still received a passing grade
- Care model 6 had the highest burn-out scores, whereas model 3 had the lowest.

Van Eenoo finished her presentation with the research questions her team is currently working on:

- Which variables on the country level predict quality of care?
- Which variables on the organisational level (structure and care processes) predict quality of care?

Benchmarking psychosocial needs

Prof. Vjenka Garms-Homolová from HTW Berlin in Germany discussed the benchmarking of psychosocial needs. Psychosocial needs concern aspects of interpersonal quality of care, which can be satisfied in the process of the production of care. Key traits are familiarity, social embedding, frequency of contacts, degree of collaboration and presence of caregivers.

The outcomes for familiarity in the home care cases assessed were that care providers seem to know their clients, with average duration of a care relation of just over 45 months (3.8 years). Differences between and within countries were large though, with as a most extreme example in Belgian where care duration ranged between 21 and 109 months.

Care duration depends on certain care characteristics. For one, it depends on embeddedness. Patterns of embeddedness were created by looking at social status, living arrangement, informal caregivers and whether caregivers live in. In the prevalent model, occurring in nearly 41% of the cases, the care recipient was widowed, lived alone, had children who lived externally, and received informal help from them. Patterns for countries were visible, for example, in Italy it was most common for a widowed person live with helping child(ren) in one household. In Finland widows lived alone and received informal help from externally living child(ren). In Germany widows lived alone and were more dependent on formal care. The study found significant results linking social embeddedness to length of stay. Widows without or with externally living children had the longest care duration, as these attributes prolonged care on average 21 and 17 months respectively. Also feeling of loneliness lightly prolonged care.

In terms of health, care lasted longer when the patient suffered from Incontinence (+9 months), risk of falls, pain, and risk of pressure ulcer. Diabetes only slightly prolonged care.

To end, Prof. Garms-Homolová raised the issue of addressing loneliness. This feeling is caused for a significant portion by being alone during the day. Mr. Oomen from the European Specialist Nurses Association added that nurses witness a lot of loneliness, and experience a sense of impotency as they lack the resources to address it. Dr. van der Roest noted that on the care recipient's side there is still a social expectation that formal caregivers are responsible for addressing loneliness, whereas our care systems are not organised in such a way. According to Prof. Garms-Homolová the current practice in many care systems contrasts with another study's findings that that elderly patients tend to choose a lower qualified carer with more time above a higher qualified carer with limited time.

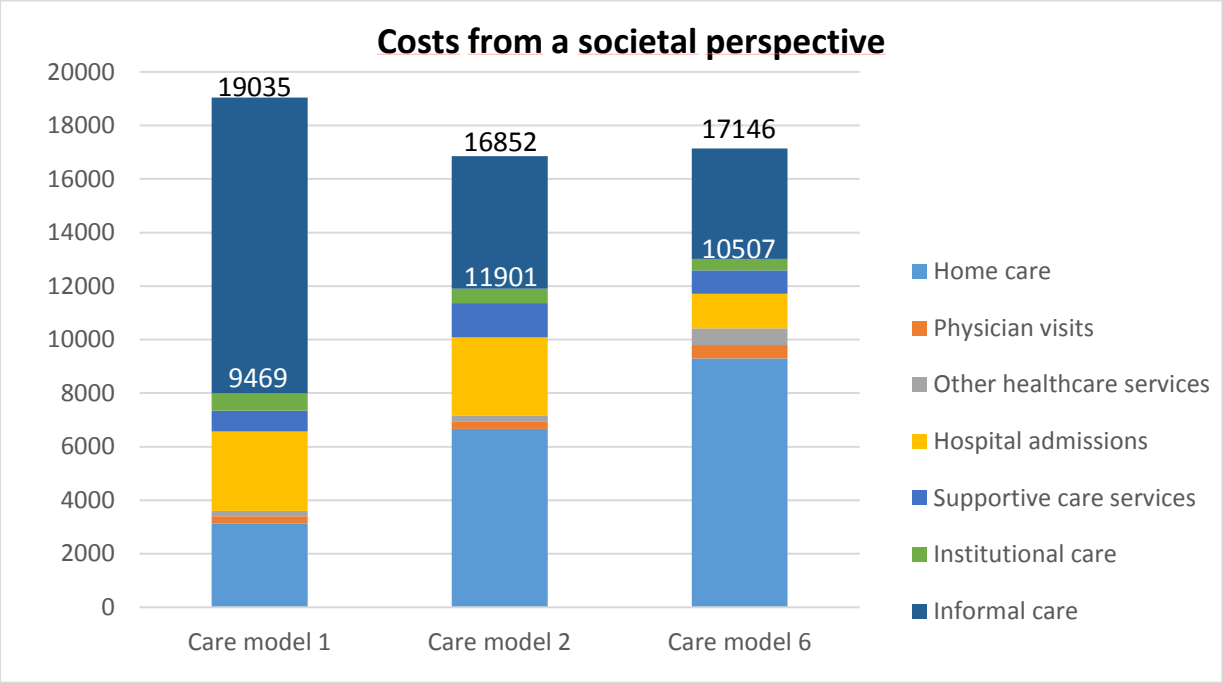
Costs of Care across organisations and care models

In the eighth presentation, Judith Bosmans from VUmc in the Netherlands continued down the path of the previous presentations and linked care models and costs of care. To estimate societal costs, they incorporated the costs of:

- Home care
- Physician visits
- Other healthcare services
- Hospital admissions
- Supportive care services
- Institutional care
- Informal care

This resulted in the following breakdown of costs per care model. The numbers atop the bars in the chart represent the mean adjusted cost of care for one person for 6 months, including all healthcare and informal care aspects, resulting in a total societal cost. The second number halfway down the bars represents the cost of healthcare alone, which excludes informal care (The comparison has been

adjusted for case mix variables: age, sex, living status, cognitive impairment, depressive symptoms, ADLH, IADL, and CHESS).

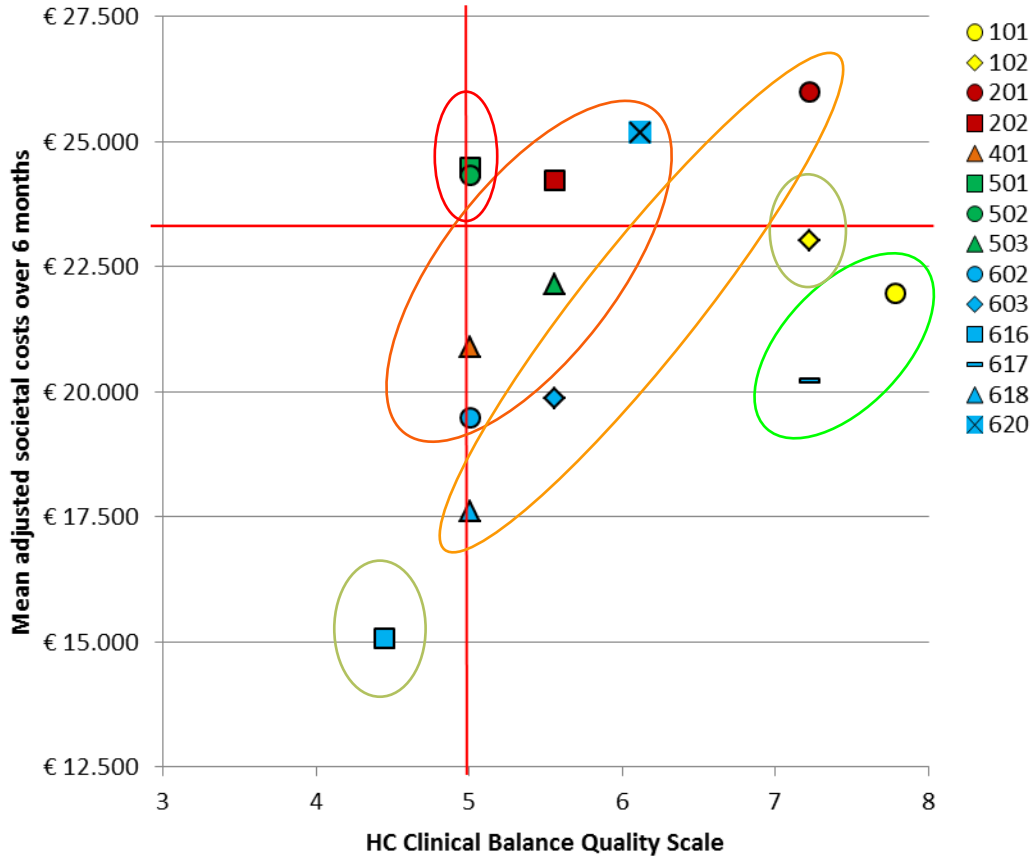


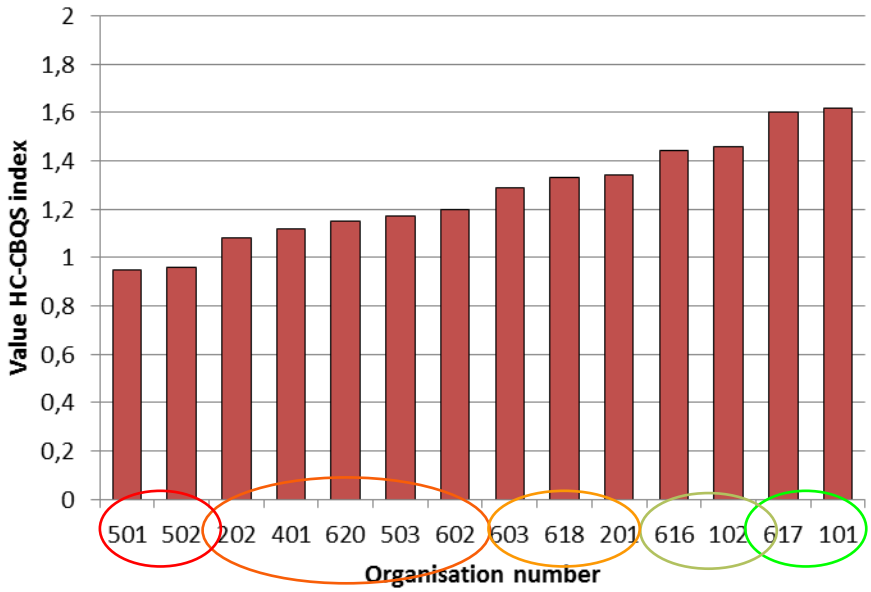
Relating back to the structure of the care models, it can be concluded that a strong focus on patient-centred care is associated with higher societal costs. Other than that, it was Dr. Bosmans suggested it was difficult to pinpoint organisational characteristics associated with care costs. In response to this, Prof. Finne-Soveri asked whether it wouldn't make more sense to focus on lower level comparisons, i.e., on within region comparisons instead of comparisons between nations or care systems. Dr. Bosmans agreed that for improvement purposes on the organisational level, a benchmark on lower levels would also be valuable.

Integrating quality, costs and staff experiences

Dr. Henriëtte van der Roest from the VUmc took upon her the ninth and final step, of integrating all previous aspects of care performance: quality, costs and staff experiences, in a grand comparison of the care organisations in the IBenC study. It applies the distinction between two types of quality as discussed in Prof. Onder's presentation. These scales were the Independence Quality Scale (IQS) and the Clinical Balance Quality Scale (CBQS).

Using the data on cost and quality of care, Dr. van der Roest created an index to identify the cost-effectiveness of home care facilities in terms of IQS and CBQS. The method for the CBQS index are shown in the graphs below. They show how care organisations were grouped in red, orange, dark and light green circles. This grouping shows the novel approach to create a benchmark for care organisations cost-effectiveness. Using the index, organisations can identify how they are positioned in relation to the 'medium level of efficiency' (in this case providing medium quality of care against mean societal costs). Low index values reflect a disbalance between costs and quality, e.g. high costs with low quality of care provisioning, while high index values indicate organisational efficiency, delivering reasonable to good quality of care against relatively low costs.





Next, the following linkages between organisational traits and organisational efficiency on IQS and CBQS were established for the care organisations in the sample, showing factors that foster or confine efficiency. Plusses represent a positive relation, two plusses a strong positive relation, and vice versa for minuses.

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

The table illustrates that positive relations between an organisational trait and one form of efficiency, can have a negative relation with another form of efficiency. A larger sample of care organisations is needed to generate these results. This method of benchmarking provides a deeper insight into the functioning of care delivery systems.

Dr. van der Roest delivered a take-home message to all care providers and policy makers, and urged them to continue to benchmark care on costs and quality to gain valuable insights so we can create a future of sustainable health care systems for care dependent elderly.

Feasibility study

In the tenth and final presentation of the day, Michele Calabrò from Brussels based EHMA presented the findings on the feasibility study. He looked at the feasibility of the implementation of a web-based benchmarking tool that would transfer the IBenC innovative benchmarking method to an online environment.

The workflow for an effective web-based benchmarking tool would be structured in four steps:

1. Data collection and data upload;
2. Data cleansing and validation;
3. Calculation and metrics;
4. Results visualisation.

Dynamic, clear and easy-to-understand visualisations is a cornerstone of the online tool as this will allow for a better understanding with publics and policy-makers to foster a demand side for improvements in care.

The study identified that the Key risks associated with an online benchmarking tool mainly concern all the steps in terms of data handling. In order to provide meaningful results, to avoid data breaches and to comply with current EU and national legislations, the tool should be developed keeping in mind issues as: sensitive data and privacy, safe data storage and retention, data cleaning and correction.

To guarantee wide accessibility and usability, the web-based benchmarking tool should be designed taking into consideration:

- user-friendly digital techniques and responsive design,
- localisation;
- continuous training opportunities for end users;

Lessons for an online benchmarking tool can be drawn from a similar instrument called Your Health System. The Canadian Institute for Health Information (CIHI) developed and manages this tool which is highly comparable to the one envisioned by the IBenC project. It Builds on InterRAI's quality indicators to benchmark acute and long term care. It provides detailed information on the performance of care facilities, and allows comparison to other care organisations on many different levels. The tool is available to the public and CIHI offers support to care facilities to use the information for improvement efforts.

Concerning the production of the tool, the following lessons from Canada give an indication for the feasibility of a similar tool in Europe:

- It took around 1.5 years to develop and launch YHS
- More than fifty CIHI staff members worked on the launch, excluding external subcontractors for the production of the website and graphics
- The production was funded by the Canadian federal government.
- In the current version of YHS the data cleansing, validation and calculation is still performed manually (all steps between uploading and visualisation of data), to achieve full automation will cost another five years.

Representatives of CIHI emphasised the importance of the following aspects when producing an online health benchmarking tool:

- You should guarantee high-standards for data validity and data handling;
- The visualisation of results is key to the success of the tool;
- You will need resources to organise continuous stakeholders training.

These lessons point out that funding is an important aspect of the feasibility of an online tool. In a stakeholder consultation with representatives from universities, care organisations and policy makers, a solution to this problem was proposed in the form of shared investments among stakeholders. Support for such a tool, given both its scope and public health utility, could be shared among

stakeholders (public domain, health care insurers, care organisations) in case of lack of centralised funding.

Aside potential funding difficulties, the feasibility study shows that the development of an online benchmarking tool based on the IBenC methodology is not only feasible, but also helpful to improve quality in healthcare at European level.

Workshop

In the final round of the event, conference participants formed groups of 4 to 6 persons each to reflect on the content of the day's presentations. The groups were asked to discuss the future of an online benchmarking tool as designed under the IBenC study, and identify strengths and weaknesses.

Dr. Stasja Draisma noted on behalf of the first group that it is essential for the future of the tool to translate potential benefits of the benchmarking method to the language of clinicians. On the other hand, they recognised that the involvement of policy makers would be crucial to an international implementation.

Prof. Anja Declercq noted on behalf of the second group that strengths of the tool are that it allows comparison across countries. Also the inclusion of the costs was seen as a strong aspect of the tool. Challenges identified in the second group concerned the comparability between countries with completely different care structures. They also warned that the benchmark might result in the labelling of specific organisations, which may have unintended perverse consequences.

On behalf of the third group, Dr. Ron Handels (Maastricht University) highlighted the potential of the project to gain an in-depth insight in the organisation of care facilities, which can serve to develop targeted interventions. Key challenges were also identified, concerning the validation of care models and the inclusiveness of quality measurement. Finally, the group also proposed to focus future discussions around 'how much are care organisations, or societies, willing to pay for 'one point improvement' in care'?

For the fourth and final group Prof. Rachelle Blake, CEO of Omni Micro Systems, noted as a key strength that the data on staff satisfaction in relation to quality of care could provide a strong impetus for improvements of work conditions staff education and satisfaction. Moreover, the group proposed that the benchmarking tool might perhaps have the best chance of getting implemented by starting with fewer countries with more similar care models, and expanding from there.

Closing

After these insights were shared, Prof. Nies closed the conference with the wisdom: *"the figures can serve as the basis for debate, which his one thing. But to gain a new insight and finding another truth, that is perhaps the most valuable".*

IBenC publications

All documents can be retrieved from http://www.ibenc.eu/results/

Foebel A.D., van Hout, H.P.J., van der Roest H. G., Topinkova E., Garms-Homolová,V., Frijters D., Finne-Soveri H., Jónsson P.V., Hirdes J.P., Bernabei R., Onder G., Quality of care in European home care programs using the second generation interRAI Home Care Quality Indicators (HCQIs). BMC Geriatrics, 2015

Garms-Homolová, V.; Nanna Notthoff, Declercq, A.; van der Roest, H.G.; Onder, G.; Jónsson, P. & van Hout, H (2016): Social and functional health of home care clients with different levels of cognitive impairments, Aging & Mental Health, DOI: 10.1080/13607863.2016.1247426

Van Eenoo, L, van der Roest, H, van Hout, H and Declercq, A 2016 Quality of Care and Job Satisfaction in the European Home Care Setting: Research Protocol. *International Journal of Integrated Care*, 16(3).

Van Eenoo L, Declercq A, Onder G, Finne-Soveri H, Garms-Homolová V, Jónsson PV, Dix OH, Smit JH, van Hout HP, van der Roest HG. Substantial between-country differences in organising community care for older people in Europe-a review. Eur J Public Health. 2016 Apr;26(2):213-9.

Van Eenoo L., Declercq A., van der Roest, H.G., van Hout, H.P.J., on behalf of the IBenC consortium, Identification of organisational community care models for older persons: Summary, IBenC consortium, 2016

Van Lier, L., Bosmans, J.E., Garms-Homolová, V., Declercq, A., van Hout, H.P.J., van der Roest, H.G., Costing guideline for use in cross-European health economic evaluations, IBenC consortium, 2015

Van Lier, L.I., van der Roest, H.G., van Eenoo, L., Declercq, A., van Hout, H.P.J., Bosmans, J.E., Validity of the interRAI-HC formal and informal care utilisation measurement and cost estimates, IBenC consortium, 2015

Van Lier, L.I., van der Roest, H.G., van Hout, H.P.J., Garms-Homolová,V., Declerq, A., Bosmans, J.E., Benchmark community care models for care-dependent older persons on costs of care, IBenC consortium, 2016

Van Lier L.I., van der Roest H. G. , van Hout, H.P.J., Van Eenoo L., Onder G., Declerq, A., Garms-Homolová,V., Finne-Soveri H., Jónsson P.V., Hertogh C.M.P.M , Bosmans, J.E., Convergent validity of the interRAI-HC for societal costs estimates in comparison with the RUD Lite instrument in community dwelling older adults, BMC Health Services Research, 2016

The Canadian tool for care comparison is called Your Health System and is publicly accessible at: http://yourhealthsystem.cihi.ca/.

Annex 1: performance on three factors of care by the six care models