



**Business and Management  
Doctoral School**

## **THESIS BOOKLET**

**Dr. Lantos Zoltán Tibor**

**The community health experience model  
Health transaction network-based  
service development in practice**

PhD thesis

**Supervisor:**

**Dr. Simon Judit, CSc**

professor

Budapest, 2018

**Department of Marketing Research and Consumer Behaviour**

**THESIS BOOKLET**

**Dr. Lantos Zoltán Tibor**

**The community health experience model  
Health transaction network-based  
service development in practice**

PhD thesis

**Supervisor:**

**Dr. Simon Judit, CSc**

professor

© Dr. Lantos Zoltán Tibor

## **I. Research background and explanation of the subject**

According to global and social trend analysts the need for holistic and sustainable health will be one of the drivers of innovation, and health care sector will be the main engine for economic growth in the coming decades. In this process the system of health care services will also transform adapting to the changing environment. Technology is shifting from its central role and develops into a service element of patient-centredness on the one hand, and cost efficiency and effectiveness of treatments will be more important as resource scarcity remains a feature of the public sector, on the other.

In line with growing global trends, the patient—the customer who uses services—has come to the focal point of managing and running health care services. Traditionally, health care viewed medical treatments as a one-way process, health care assumed all the responsibilities, and patients were treated as the subject of the cure. Physicians treat their patients as a ‘kind of heroes’ while focusing on the actual intervention. In the new health care system everything has been shifting towards an interactive relationship and shared responsibility where collaboration with, behaviour and decision-making of patients as customers are becoming of the vital importance. Furthermore, physicians’ individual responsibility is being superseded by therapy-related, and in broader sense, health-related collaboration between physicians of various medicines and health care professionals on the one hand, and with service providers, social actors and civil organizations, on the other.

Paradigm shift also means that curing diseases effectively does not depend on the advancement of and compliance with healing processes only, apart from professionals, patient’s responsibility and active involvement in the therapy is also needed. This is particularly true for health maintenance including prevention and post-rehabilitation. A wide range of professional and technical support has been available for patients to facilitate self-management, enhance motivation and implement continuing activities. Increased role is given to information customized to the customer-patient, and to informed consent and decision-making of the patient about the purpose, potential risks of the treatment and the healing process, as well as about the collaboratively attainable outcomes.

At the system level, intervention-based controls imposed by health care providers lead to decreasingly smaller and smaller efficiency increases; there is one single actor remaining in the system, the beneficiary of the service—the sick, the patient—who has become the key player of an efficient medical treatment and recovery process. Various research studies confirm that coordinated support and service provision to patients, as well as patient-physician collaboration are the largest reserves in efficiency of interventions [Vermeire2001].

Lack of coordination of separate interventions has led to huge deficiencies, and this is one of the key objectives of efficiency improvement. Carefully coordinated interventions can achieve a much higher value than a series of successive or coexisting interventions that are almost independent from each other. Furthermore, there are also serious deficiencies in patients' lifestyle, change of behaviour, adherence to physician's advice and medication, thus the effectiveness of treatment processes is highly unpredictable.

Summing up the history and development of health care services in terms of change directions, the following can be stated:

- In the past fifty years the effectiveness-based approach is increasingly taken over by efficiency-seeking efforts;
- This requires a new—adequate and more regulated—behaviour from service providers;
- Very recent expectation of the patient is to be engaged in the therapy;
- And additionally, individual medical treatments provided by subordinates are replaced by health care services that are based on team work and horizontal collaboration.

Consequently, it can be stated that collaboration is of the vital importance in the health care sector at present will be in the future, the main areas of cooperation are:

- collaboration between service providers,
- collaboration between service providers and patients,
- experience exchange between and network-type collaboration of patients.

## II. Used Methods

Study of the development process phases of the health transaction network-based service model and real-life pilot of the described model.

### I. Construction of the implementation model

Condition-specific transaction analysis according to the Service Dominant Logic with the focus on the condition specific key experience of the customers and on the health ecosystem transactions.

Description of activity chains on selected value chain segments according to the Care Delivery Value Chain, with three activity subchains that cover the activities of the provider, the customer and the supporters of the customer, respectively.

Assignment of realization competencies to activity elements of the value chain segments according to the ARA model.

Competence matrix development by standardization and grouping of the ARA model compatible competencies assigned to the activity elements.

Development of the methodology of individual health counselling as leading contribution to the health co-creation process in the Joint Sphere according to the Service Logic.

Development of the methodology of individual health planning as facilitator instrument to individual value-in-use value generation in the Customer Sphere according to the Service Logic.

Development of the design and operational methodology of the general practitioners' practice groups for resource integration in the Provider Sphere according to the Service Logic.

Development of the design and operational methodology of community-based health services for creation and support of the complete co-creational sphere according to the Service Logic.

### II. Realization of the real-life pilot and evaluation of the results

Examination of the operation and management of the network-based transactional health ecosystem corresponding with the Service Logic in selected epidemics; focusing on main segments of the Care Delivery Value Chain as prevention, diagnosis, preparation, intervention, rehabilitation, health management; separately monitoring the changes of the complete co-creational sphere, the customer sphere, the joint sphere and the provider sphere.

Effects of the transactions in the complete co-creational sphere are determined by the quantitative and qualitative measurement of the specific transactions, with the priority of health experience measurements; and correspondence analysis.

## Methodology

National multicentric non-interventional clinical study with the approval of the National Scientific and Ethical Committee of the Medical Research Council.

- a) Self-controlled study with measurements at inclusion, after 3 months and after 5 months using standard questionnaires.
- b) Comparison of results of patients in the active and the control arm.

## Measured parameters

Condition specific medical indicators

Health experience

Customer experience – Experience at the transaction points

User experience

## Analysis

Practice of the individual health planning based on the indicators of the planning process

Efficiency of individual health counselling

Efficiency of the professional team work

Efficiency of the community health management

Modelling the cost reallocation opportunities

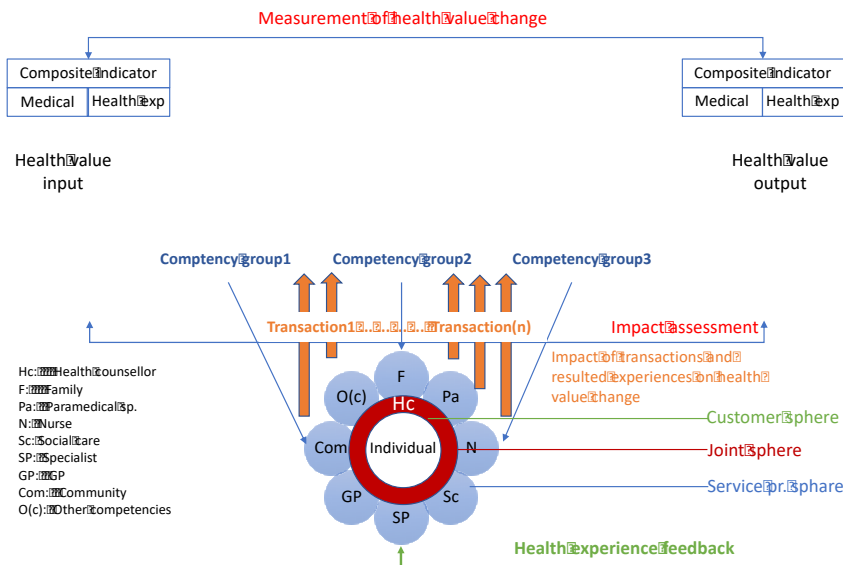
Shapley-value regression analysis was used to investigate what effects exchanges can exert on health value changes in the complex, network-type transaction sphere; this analysis of all regression analyses assesses the contribution of each collaborative actor to the achievement of the stated goal the most accurately [Lieberman2015].

## **III. Results of the dissertation**

### III.1. Experience-based community model of health value creation

To summarize the outcomes of the implemented research and development programme, I have developed a community model based on customer experiences of the care delivery value chain, and I named it ‘Community-based health experience model’.

The model provides a framework to analyse, develop and manage  
competences available in the health-ecosystem,  
to implement a person-centred network,  
to increase individual health value.



Model of individual-focused, community-based health value creation, redesigned by the care delivery value chain in line with Service Logic. Own construction.

The core of the model is that individual's own effort is of the utmost importance to achieve an increase in individual health value. To this, motivation, energy and strengthening are given by individual's positive health experiences. For individuals, there are three large groups of competences to facilitate value-in-use value generation:

1. Competences that individuals have learnt and acquired as part of their health literacy;
2. Competences that individuals receive from the service provider sphere as customers;
3. Competences that individuals receive from experts, experienced people, typically online, in an exchange without money.

Within the framework of individuals' health behaviour and attitude, positive or negative lived experiences, and their extent, considerably affect the use of competences. The more positive the lived health experience, the more the competence is integrated into everyday health-related activities.

Interconnection and interaction between individual health competence spheres result in a **network** of co-creational community-based health spheres. They can operate optimally and efficiently if the whole co-creational sphere together with its components—customer sphere, joint sphere and service provider sphere—can operate as a **uniform** set of competences. This uniform

competence sphere allows that each competence—used to create value-in-use value creation by individuals—in part synergically, can facilitate value increase.

These co-creational spheres are connected to typical **phases of the health value increasing value chain**. For example, fracture preventive health management after the first fracture for women sustaining osteoporosis.

In marketing terms, the **health task** is comprised of a series of activities between the initial and the desired health value—'job-to-be-done'. **Key experience** is part of the initial health experience—e.g. fracture-induced fear and mild physical disability, as a result, the individual becomes aware of tasks to be done.

Identical or similar key experiences associated with the 'health task' to-be-done define the group of individuals who will be the participants of the community-based health sphere. These health spheres tend to overlap each other partly, and undergo **dynamic** and constant changes as participants' health value changes. For example, when the risk of fall is diminishing and regular physical activities are becoming a key experience, or when changes take place into the other direction, and the third osteoporosis-induced fracture happens, serious physical disability and anxiety can be arisen. Thus, two persons previously changing experiences in one community-based health sphere find themselves in two considerably different community-based health spheres.

Regular **feedback** is needed about the degree of value-in-use value creation to efficiently utilize competences of the co-creational community-based health sphere, therefore **measurements** and **analyses** are needed. Joint use of **medical** and **health experience indicators** can ensure that the model integrates service provider sphere organized in compliance with medical criteria and individuals' perception—competences of the customer sphere driven by personal health experiences. The two indicators can be applied when the whole co-creational sphere is in operation. When only the provider sphere is involved in the health value generation, e.g. surgery is carried out in deep general anaesthesia, only the use of medical indicators is justified; while when only the customer sphere is involved in the implemented health value creation, e.g. weekend hikes are done on a friend's advice, only the health experience indicator is to be used.

A **uniform measurement** and **management** framework can ensure that instead of fragmented and rigid processes, the health care provider sphere can provide their customers with network-type and flexible person-focused interactions implemented in professional team-working. In the customer sphere, through feedback on interaction-related outcomes, the measurement and management framework can provide an improved guideline to individuals on the effects of competence transactions, and therefore individuals will consider medical aspects in their choice more carefully than before.



The **health counsellor**, working as a representative of a new profession in the **joint sphere**, plays an essential role in facilitating coordination between the customer sphere and the provider sphere. Using individual **health planning** tools, the health counsellor develops a functional project plan in which the followings are defined: linkage between the provider sphere and the customer sphere, processes to be implemented by the two actors and co-creational tools provided by the service provider, either directly, e.g. group exercise or indirectly, e.g. creating a closed online forum or providing a gym for free.

The job of a health counsellor was developed by merging two previously performed health-related activities. The health counsellor acts primarily as a case manager in the provider sphere and provides support to manage the service plan; and acts as a coach in the customer sphere to facilitate the self-management process of the customer in his/her customer journey to achieve his/her goals.

Health planning also has a role in raising awareness of individuals. Our health-related activities have a fixed starting point and a set goal or goals for each jointly defined phase.

The co-creational learning process, for service providers, is taking place primarily through the knowledge they acquire from feedback on health experiences and thereby affected medical outcomes, and the co-creational process facilitates practical implementation of customer-centredness.

From service provider's point of view, health counselling based on individual health planning, and the co-creational sphere organized thereon, tends to enhance positive health experience; whereas from the customer sphere's point of view, professional foundation is strengthened.

The whole co-creational sphere and all the community-based health spheres have to be organized to bring the model into operation, it is unreasonable to expect self-organization-based operation.

It is useful to delegate a manager to each of the three co-creational sub-spheres to organize and manage the model:

A **professional manager** with a medical degree to manage the provider sphere;

A **senior health counsellor** with a counselling or coaching qualification to manage the community-based sphere;

A **social manager** to organize and manage the framework of the customer sphere.

Furthermore, a **community health planner** should be employed to carry out and support measurement, analysis and planning, and additionally

a **business administrator** to ensure sustainability and to sustain a uniform financing framework.

The basis of measurement and management is measuring composite health-value indicators in line with the care delivery value chain, and thereby to **follow health value changes** both with medical indicators and health experience indicators. The effect of exchanges is studied separately on medical indicators and health experience indicators.

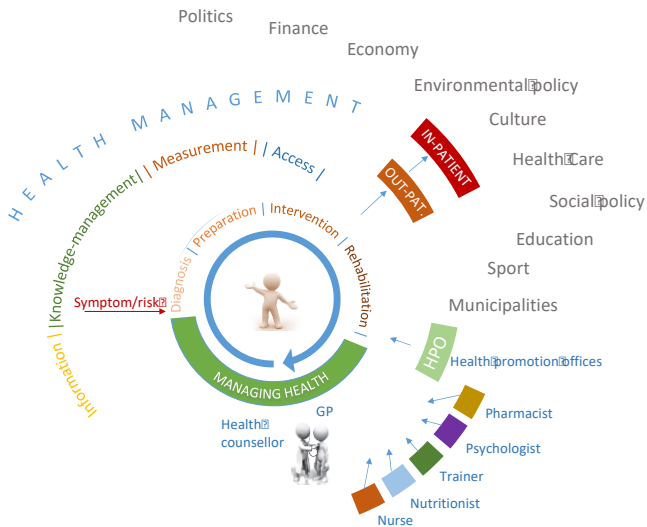
Within the framework of individuals' health behaviour and attitude, positive or negative lived experiences, and their extent, considerably affect the use of competences. The more positive the lived health experience, the more the competence is integrated into everyday health-related activities.

### III.2. Community-based health services

I have designed a network-type operation aiming to create value-in-use of health care services in compliance with the Service Logic, the co-creational service framework developed by Grönroos and Gummerus [Grönroos2014].

1. I have defined the condition-specific 'job-to-be-done' type of needs, which is the experience-based goal of customers, and can establish a co-creative platform.
2. The next step was to define the condition-specific joint sphere, provider sphere and customer sphere including members of the provider team, customers in similar condition and supporters of value-in-use value generation.
3. Integrating health counsellors and community-based health care managers, I have integrated new resources into the current system of health care resources using current expertise and skills extensively.
4. The cumulative value creation process was supported by health counselling sessions.
5. During counselling sessions, positive customer experiences were strengthened to enhance perceived values.
6. Value-in-use value generation was facilitated by planned activities in local co-creational spheres organized by community-based health care managers.
7. I have created and applied online creative platforms, and additionally I have developed and organized co-creative condition-specific group sessions with moderators.
8. Independent co-creational activities of customers were encouraged.
9. Introducing health counselling, I have ensured new resources to support everyday activities of customers.
10. Health counsellors and community-based health care managers helped to involve health care providers into the health-value creation process of customers.

11. With coordinated and goal-oriented activities of the extended provider team, I have strengthened the co-creative platform making it capable of influencing customers' value creation actively and directly.



Individual-focused mapping of the network system of locally-based health care services, as suggested by research findings. Own construction.

### III.3. Real-life pilot: Osteoporosis arm and its results

The primary medical health-value outcome that revealed decrease in risk of falling at 12% of the patients is an outstanding outcome even by international standards. Of all physical activities, only Tai Chi proved to be effective with a 10% decrease some years earlier. The group version of fall prevention exercise provided greater customer experience for the participants than individual home-based exercises, although only less than half of the patients had positive memorable memories of the group exercise (42.5%) and a fairly large rate of them had negative memorable memories (15.1%). During the three-month period, the number of participants who found the group exercise positive grew by 15% to near than one and half times, and those who reacted negatively grew by 8%, more than doubled. This means that self-management and encouragement to be engaged can influence only some of patients positively.

The growth rate of positive memorable experience of home-based exercise was much lower than that of the group exercise, 9% vs 15%, while the growth rate of negative memorable experiences was similar in both cases, 7% vs 8%.

Reasons can be that apart from sharing experience with others, group exercise gave additional impulse to participants in the one hand, and user experience of the training booklet about fall prevention was moderate, on the other. Although the training booklet was prepared by the best professional team in Hungary, it was not found as useful as and could not provide the same user experience than other (online) information materials of the programme.

The secondary medical health-value outcome, the change in number of falls decreased in 4.5% of patients but the three-month pilot period was insufficient to come to conclusion.

The primary health experience health-value outcome, the degree of self-management improved considerably, by 11%, which corresponds with the decline in risk of falling and the experience of GPs. The secondary indicator, the health literacy improved by 5% implying that major change of this indicator cannot be expected within such a short period.

Based on the changes in customer experience values, the service expansion improved the perception of GPs' services most substantially, positive memorable experiences doubled (from 31.5% to 60.3%), and negative ones reduced to the half (from 41.1% to 20.5%). Partly because GPs had a more positive attitude to this task as they could offer real solution and care to their patients, and gradually experienced the positive impact of fall prevention exercises. This is confirmed by the fact that their healing experience improved slightly during a short period of time (5.3%). Their opinion about group exercises also suggests that this opportunity mostly enhanced their satisfaction with their job.

However, in the case of practice nurses, positive memorable customer experience decreased by 10%, and negative memorable experiences increased by 15%. The underlying reason can be that they were the only ones in the service provider team who did not receive special training and had little information about the new opportunities. Patients were encouraged to manage themselves, consequently their questions changed both in terms of numbers and content, and nurses were not prepared to answer them. This experience taught us that if service expansion accompanied by competences expansion, training and information should be provided for every actor.

The online health planning application was received positively. This effect can be observed in the improvement of self-management and health literacy. Nearly half of customer experiences were positive memorable (43%) which is definitely a good outcome a new service with an entirely new approach can achieve. It is particularly true because negative memorable experiences were very few (6%). It is reasonable to consider that half of customer experiences (51%) were not memorable, and about half of them negative, the other half

positive. In everyday sense, half of the users found it nothing special which points to the necessity of customer-focused development.

In comparison, I studied an extensively visited health care information portal on the Internet and searched for customer experience of this nature. In comparison with health planning, the rate of non-memorable impulses was much higher, almost three quarters of the visits (72% vs 51%). The fairly low rate of memorable positive experiences (24%) show that a portal focusing essentially on information provision cannot serve more than only a small percentage of customers, because these days visitors look for different competences, and what they mostly need is to share personal experiences and opinion.

#### III.4. Impact assessment

The analysis—conducted on the database of the National Health Insurance Fund used to assess the impacts [Bacsikai2015]—revealed that the number of encounters in the health care system, the extent of care, showed significant correlation with the degree of patient collaboration. The conditional probability of becoming a member of a collaborative group for patients who were not involved in a care incident was 58%. If the patient was involved in 1 care incident, the same figure was 65%. If the patient was involved in 2 care incidents, the same figure continued to grow, the probability was 68%. In this case the difference was significant ( $p=0.002$ ). If the patient was involved in 3 care incidents, the same figure continued to grow, and amounted to 74%; and if the number of care incidents continued to grow, the probability of becoming a member of a collaborative group grew to 71%, then to 75% and afterwards 87%; outcomes were significant until 6 care incidents.

According to my impact model, the expected probability of fractures in the non-collaborative patient group is 3% in a six-month period, and for the collaborative patient group it is 2.3% respectively.

If the level of care and collaboration achieved in the pilot were applied generally, cost reduction can be further facilitated. In the collaborative group the probability-adjusted costs of inpatient treatments are HUF 20,728 per patient for six months, whereas in the non-collaborative group costs are HUF 27,387 respectively. Taking the difference of HUF 6,659 into consideration, we calculated the costs for the entire population for a 5-year period, and costs can be decreased substantially. I could identify 54,701 patients with two fractures in the entire patient population, thus multiplying the number of patients by cost saving per patient it makes HUF 364,253,959 in a six-month period.

For the whole population in one year: HUF 728,507,918 can be saved

For the whole population in five years: HUF 3,642,539,590 can be saved.

### III.5. Hypotheses verification

H1: The greater the extent of patient involvement in the treatment and care of their diseases in the co-creation process, the higher the indicator-measured effectiveness of health care services.

The rate of patient involvement can be described by a ratio. The number of patient-completed health transactions per individuals relative to the total number of planned health transactions in the 'Don't get broken again!' pilot process.

$$\frac{\sum \text{implemented transaction}}{\sum \text{planned transaction}} = \text{individual involvement}$$

Service effectiveness is defined by the rate of risk of falling, the primary indicator, and the rate of self-management, the primary health experience indicator.

The rate of patient involvement was closely correlated both with the rate of risk of falling and the rate of self-management.

risk of falling                      r=0.78

self-management                  r=0.67

H1 hypothesis is confirmed.

H2: The greater the rate of patient involvement in the treatment and care of their diseases in the co-creation process, the higher the perceived quality of services.

The rate of patient involvement can be described by a ratio. The number of patient-completed health transactions per individuals relative to the total number of planned health transactions in the 'Don't get broken again!' pilot process.

$$\frac{\sum \text{implemented transaction}}{\sum \text{planned transaction}} = \text{individual involvement}$$

I described the patient-perceived service quality as the rate of customer experience and GP's recommendation.

The rate of patient involvement correlated both with the rate of the customer experience composite indicator and GP's recommendation.

customer experience              r=0.68

GP's recommendation            r=0.63

H2 hypothesis is confirmed.

H3: The more fully evidence-based competences are shared in treatment and care processes, and thereon based teamwork, the greater the healing experience of physicians and health experience of patients.

The rate of competence sharing among physicians is described by a ratio. The number of implemented health care transactions by physicians relative to the total number of planned health transactions in the ‘Don’t get broken again!’ pilot process per individual.

$$\frac{\sum \text{implemented transaction}}{\sum \text{planned transaction}} = \text{treatment-care competence sharing}$$

The rate of physicians’ healing experience was defined by the rate of total value of word-of-mouth, therapy loyalty and life quality derived from patients’ answers to the healing experience questionnaire.

The rate of patient health experience was defined by the combined rate of health literacy and self-management.

GPs’ healing experience                      r=0.58  
patient health experience                      r=0.71

H3 hypothesis is confirmed.

H4: The more health-value creating transactions are implemented in the management of collaborative community-based networks, the higher the indicator-measured service quality.

The total number of recorded health transactions in the ‘Don’t get broken again!’ pilot process defined the number of health value increasing transactions in the 20 locations of the pilot.

I described the service quality with the rate of customer experience and GP’s recommendation.

customer experience                              r=0.74  
GP’s recommendation                              r=0.57

H4 hypothesis is confirmed.

H5: The more expansive the community-based local health ecosystem, the more efficient the utilization of available health competences.

The total number of recorded health transactions in the ‘Don’t get broken again!’ pilot process defined the number of health value increasing transactions in the 20 locations of the pilot, and thereby the scope of local health ecosystem.

The utilization of health competences was defined by the rate of risk of falling, used as a primary indicator, and the rate of self-management, the primary health experience indicator.

The scope of the local ecosystem is closely correlated both with the rate of risk of falling and the rate of self-management.

risk of falling  $r=0.81$

self-management  $r=0.78$

H5 hypothesis is confirmed.

### III.6. System impacts

The outcome of my research, the community-based health experience model—based on the experimental trial and test results obtained during the model development process—in my view, corresponds with the Service Logic [Grönroos2014] and its adaptation to the health ecosystem. According to the presented pilot outcomes:

1. **The individual is in the centre of health competence networks** that facilitate health value generation based on and described by the model.
2. The scope of health competences used by the individual has to be described by the **competences of the entire health ecosystem**, which is much larger than the scope of competences available in health care.
3. The holistic approach taking the whole human being into consideration is achieved by the competence network, as defined by the model, in such a way that **health experience** aspects and corresponding indicators are integrated. In contrast with previous integrated health care systems, the primary development lies in the integration of health experiences typical of the entire health ecosystem into the model. Therefore, the community-based health experience model from the standpoint of health care systems can be regarded as health experience augmentation.
4. The **health-related task**, which is perceived and to be accomplished by the individual, is defined in the status survey and goals are recorded in the **health plan**; the task can be performed alone by the individual in individual's customer sphere, or with assistance in the joint sphere, or perhaps in the service provider sphere without the consent of the individual. Activity elements and health-related goals of the individual health plan are derived from the activity chains of the care delivery value chain, and thereby **the health-related task corresponds with a well-defined phase of the care delivery value chain**.
5. The care delivery value chain compliant with the health-related task defines the **to-be-done activity elements** aiming **to create health value**, as well as the corresponding **competences** needed in the customer sphere, the joint sphere and the service provider sphere. The service provider process and the customer journey leading to health value generation are implemented in collaboration with competences in co-creation.



6. Online and offline **customer spheres**—that are **linked to health-related tasks** and in which health experience is the main driver of the transaction—can increase the number and frequency of individual-initiated connections to key competences of the service provider sphere through the joint sphere.

Health counselling based on individual health planning is a new and essential element of service development from the standpoint of health value generation. This is complemented by competences based on value chain processes of health economics and assigned to test processes; and competences are organized in ecosystem-type community-based health spheres through designing and developing community-based health management.

The rate of involved individuals who set their own health-related goal and wrote action plan for themselves increased by almost two-thirds (64%)—and this points to the immediate benefit of individual health counselling. On the recommendation of the GP, 47% of individuals set health-related goals and wrote an action plan, but if individuals—additional to the recommendation of the GP—discussed the role of goals and action plans with the health counsellor, the figure increased to 77%.

Short-term benefit of individual health counselling manifested itself in the achievement of the defined goals. In the three-month follow-up period, one health counselling session was enough to produce changes with 49% of the participants. Changes manifested itself in body weight loss, health risk reduction, life style changes and screening tests patients underwent. These changes are so significant that if health counselling were used in treating diabetes and caring diabetics, if a joint sphere based on individual health planning and health counselling were created to treat diabetes even without restructuring the existing service provider sphere and customer sphere—according to an impact model, about HUF 6.7 billion funding costs could be saved annually.

The estimate of an impact model on diabetes treatment and care showed that professional team-work of GP groups—either in the form of practice groups or group practices—can save an annual amount of HUF 6.2 billion funding costs in the service provider sphere.

Based on the estimate of the impact model, systematic operation of the countrywide network of community-based health care offices and managing the entire health co-creational sphere organized and supported by these offices, HUF 7.1 billion funding costs can be saved annually.

Community-based health spheres—organized in compliance with individual-centred competence network and corresponding to the community-based health experience model—would achieve progress in every co-creational sphere in terms of health value generation.

In the service provider sphere, network-organized competences—as described by professional health care recommendations and in line with care delivery value chains—can increase both the efficiency of value creation and the extent of healing experience, enhance the satisfaction of health care workforce and facilitate customers' satisfaction. Furthermore, the costs of effective use of competences also go down, and thereby available resources can be spent on not yet available competences in the service provider sphere, joint sphere or customer sphere, and the entire attainable health value of the population can be further increased.

By formal creation of the joint sphere, we allow combined implementation of certain phases of service provider processes regulated by professional health care recommendations and of the customer journey carried out in the customer sphere and affected by individual health-related beliefs and health experiences; and additionally, the corresponding competences organized by different logic can be used as much coordinately as possible aiming to achieve health value generation. As regards the entire health ecosystem, the most significant loss in terms of utility is caused by detrimental effects of competences inside and outside the health care system. From physicians' side, patients seem to be ill-informed and stubborn, fail to follow their advice, and are bought into all sorts of quackery, whereas from patients' side, physicians do not even listen to them, prescribe medicine, and nothing else, fail to provide guidance on the usefulness of products and services that are widely available outside the health care system.

The biggest step we can make towards developing substantial health value creation is the integration of the customer sphere into the entire co-creational sphere. We accept that we cannot cure most part of diseases, and that everybody is responsible for his/her health, people can do the most for their own health. The biggest support can be provided to people by their own community and social net. Therefore, activities that are regarded as public health tasks tend to be shifted towards such consideration that people should not be changed, instead opportunities and community-based health spheres should be provided to help them change. A step forward could be if online spheres were designed more purposefully, and if they were connected more closely and organically to the service provider sphere and the joint sphere. 'Patient education' should be given less emphasis, instead participation in the community-based sphere and exchanges of health-related and other experiences could be encouraged. Health planning application in collaboration with [egeszeg.hu](http://egeszeg.hu) portal was one of the online spheres in the pilot.

The development and trial I have carried out so far need further research. It is worth extending the analysis onto the whole database, from which additional experiences can be achieved, on the one hand, and due to a more robust database, conclusions can be firmer and more far-reaching, on the other. Due to

outcomes of various data series, it is more likely that analytical methodology can also be further developed, relationships can be revealed and analysed between health experience and medical elements of health-value outcomes. Furthermore, the body of knowledge about the model can be further advanced by extending processes to be investigated and involving new diseases as well as health hazards, and thus, providing more ammunition to develop a uniform health care system.

#### **IV. Main references**

- [Achrol2012] Achrol, RS., Kotler, P. (2012): Frontiers of the marketing paradigm in the third millennium. *Journal of the Academy of Marketing Science*, January 2012, Volume 40, Issue 1, pp 35-52.
- [Bacsikai2015] Bacsikai, M., Érsek, K., Somfay, I. (2015): A „TÁMOP-6.2.5-B-13/1-2014-0001 Szervezeti hatékonyság fejlesztése az egészségügyi ellátórendszerben – Területi együttműködés kialakítása” című projekt Modellezéssel megvalósított hatásvizsgálata, 2015. november. ÁEEK.
- [Doyle2013] Doyle, C., Lennox, L., Bell, D. (2013): A systematic review of evidence on the links between patient experience and clinical safety and effectiveness. *BMJ Open*. 2013 Jan 3;3(1). pii: e001570. doi: 10.1136/bmjopen-2012-001570. Print 2013.
- [Epstein2010] Epstein, RM, Fiscella, K., Lesser, CS., Stange, KC. (2010): Why The Nation Needs A Policy Push On Patient-Centered Health Care. *Health Aff.* August 2010 vol. 29 no. 8 1489-1495
- [Forget2001] Forget, G., Lebel, J. (2001): An Ecosystem Approach to Human Health. *Int J Occup Environ Health*, Supplemet to Volume 7, Number 2, April/June 2001.
- [Gerteis1993] Gerteis, M., Edgman-Levitan, S., Daley, J., Delbanco, TL (Eds.) (1993): *Through the patient’s eyes: understanding and promoting patient-centered care*. San Francisco, California: Jossey-Bass Publishers.
- [Grönroos2014] Grönroos C., Gummerus J. (2014): The service revolution and its marketing implications: service logic vs service-dominant logic, *Managing Service Quality*, (2014) Vol. 24 Iss: 3, pp.206 - 229
- [Håkansson 1992] Håkansson, H., Johanson J. (1992): A Model of Industrial Networks, in B Axelsson and G Easton, (eds), *Industrial Networks: A New View of Reality*, London, Routledge, 28-34.
- [Lieberman2015] Lieberman, M. (2015): Applying the Shapley value method to marketing research. *Quirk’s Media*, November 2015. Article ID: 20151125-2. <http://www.quirks.com/articles/applying-the-shapley-value-method-to-marketing-research>, letöltve 2016. november 27.

- [Pine2011] Pine, BJ., Gilmore, JH.(2011): Experience Economy. Harvard Business Press, 2011, ISBN 978-1422161975
- [Porter2006] Porter, ME.; Teisberg, EO. (2006): Redefining Health Care; Creating Value-Based Competition on Results. Harvard Business School Press, 2006. ISBN13 978-1-59139-778-6.
- [Rust2010] Rust RT., Moorman C., Bhalla G. (2010): Rethinking Marketing, Harvard Business Review, January 2010
- [Simon2010] Simon, J (2010): Marketing az egészségügyben, Akadémiai Kiadó, Budapest 2010. ISBN978-9-63058-866-9
- [The Health Foundation2008] Co-creating Health, Briefing May 2008, The Health Foundation. [http://www.health.org.uk/public/cms/75/76/313/551/Co-creating health briefing paper.pdf](http://www.health.org.uk/public/cms/75/76/313/551/Co-creating%20health%20briefing%20paper.pdf).
- [Vargo2004] Vargo, SL., Lusch, RF. (2004): Evolving to a New Dominant Logic for Marketing. Journal of Marketing, Vol. 68 (January 2004), 1–17.
- [Vermeire2001] Vermeire, E.; Hearnshaw, H.; Van Royen, P. (2001): Patient adherence to treatment: three decades of research. A comprehensive review. Journal of Clinical Pharmacy and Therapeutics, 2001, 26, pp. 331-342.
- [Wise2000] Wise, M., Signal L (2000).: Health Promotion Development in Australia and New Zealand. Health Promotion International, Vol 15, No 3. 2000

## **V. Own publications in the subject**

### Book sections

- Lantos Zoltán, Simon Judit (2004): A betegelégedettség mérési módszere és az empirikus vizsgálatok tapasztalatai. Marketingelmélet a gyakorlatban, szerk: Berács-Lehota-Piskóti-Rekettye, KJK-Kerszöv, 2004. Budapest, 235-256. oldal
- Simon Judit, Lantos Zoltán (2004): Methodology of measurement and experience of empirical research into patient satisfaction. In: Marketing Theory and Practice, Akadémiai Kiadó Budapest, 2004, 274-295. oldal
- Erdős Gergely, Lantos Zoltán, Bacskai Miklós (2018): Új típusú lehetőségek a humán menedzsmentben – a munkaerő élettartamának növelése. Élni és dolgozni a digitális világban, szerk: Gaál Zoltán, Felsőbbfokú Tanulmányok Intézete, 2018. Kőszeg, 110-120. oldal

### Articles

- Simon Judit, Lantos Zoltán (2002): A betegek együttműködési készségének szerepe az egészségügyi marketingben. Marketing & Menedzsment XXXIV. évf. 2002/2., 26-32. oldal

Lantos Zoltán, Simon Judit (2005): Jól működő egészségügy: értékteremtő szolgáltatások szabályozott versenye vagy irányított betegellátás? Harvard Business Manager 2005. szeptember, 44-51. oldal

Lantos Zoltán (2009): LMWH otthon Kórház, 2009/1-2., 54-56. oldal

Lantos Zoltán (2010): Gyógyszertári marketing – ki az ügyfél és mi a szolgáltatás? Gyógyszerészet 54. 414-415; 418-419. 2010.,

Lantos Zoltán (2011): Az egészség jó befektetés. IME X. évfolyam 7. szám 2011. szeptember, 5-7. oldal

Lantos Zoltán (2011): Egészségügy és eHealth - A betegségek orvoslása nem csak orvosi feladat. IME X. évfolyam 6. szám 2011. július – augusztus, 47-50. oldal

Lantos Zoltán (2012): Egységben az erő – A praxisközösségben rejlő lehetőségek az alapellátásban. IME XI. évfolyam 4. szám 2012. május, 17-20. oldal

Lantos Zoltán (2014): Csak egészség legyen! – De hozzá milyen egészségügy? IME XIII. évfolyam 4. szám 2014. szeptember, 9-14. oldal

Zoltan Lantos, Judit Simon (2018) The Community Health Experience Model - Value Generation from Person-Centered Health Transaction Networks, Public Health Reviews, 39: 2018., October 01, <https://doi.org/10.1186/s40985-018-0105-8>

#### University doctor's thesis

Lantos Zoltán (1996): Gyógyszermarketing-kommunikáció az egészségügyi reformok tükrében. Egyetemi doktori értekezés. Budapest, 1996

#### Poster presentations

Szirmai, L., Lantos, Z. (2000): Manage It Well! First results of a Market Oriented Integrated Hypertension Program in Hungary. Scientific Meeting of International Society of Hypertension, Chicago, 2000

Rusz, A., Gyovai, G., Lantos Z. (2004): Motivational factors of medical treatment among erectile dysfunction patients. 7th European Society for Sexual Medicine Congress, London, 2004

Lantos, Z., Cecchini, I., Graffigna, G. (2013): Patient engagement is determined by personal health energy level – description of public health segments; ESPACOMP (European Society for Patient Adherence, Compliance and Persistence) Conference, Budapest, 2013

Cecchini, I., Graffigna, G., Lantos, Z. (2013): Patient engagement from the patients' eyes: A dynamic experiential model; ESPACOMP Conference, Budapest, 2013

Lantos, Z. (2014): Patients' health related spendings are better predictors for disease screening behaviour than physician office visits; ESPACOMP

(European Society for Patient Adherence, Compliance and Persistence)  
Conference, Lausanne, 2014

Conference proceedings

Zoltan Lantos (2011): AAL Solutions and Social Innovations – CEE. AAL Forum, Lecce, 2011

Zoltan Lantos (2011): New Social Opportunities in Hungary. AAL Forum, Lecce, 2011

Laena Liu, Zoltan Lantos, Stephanie Ludwig (2012): Patient Centric Business Models. The New Way to Generate Value for the Pharma Industry, EphMRA Asia Conference, Peking, 2012

Zoltan Lantos (2013): Marketing Research in Digital Era. Multichannel & Digital Marketing Latin America, Mexico City, 2013

Zoltan Lantos (2013): Multichannel optimization in practice. Multichannel & Digital Marketing Latin America, Mexico City, 2013

Lantos Zoltán (2013): Felelősség, mint a fogyasztás új hajtóereje. IX. Táplálkozásmarketing konferencia, Debrecen, 2013.

Lantos Zoltán (2013): Betegközpontú működés; De akkor mivel keresünk pénzt? Üzenetek a jövőből. Marketinpirula Live konferencia, Budapest, 2013.

Lantos Zoltán (2015): Közösségi egészségsszervezés, Egyéni és közösségi egészségtervekre épülő szolgáltatásszervezés. X. Jubileumi Regionális Egészségügyi Konferencia, Budapest, 2015.

Education textbook

Lantos Zoltán, Simon Judit (1998): Egészségügyi marketing, Oktatási segédanyag az Orvos-Gyógyszerész-Közgazdász hallgatók számára, Budapest, 1998

Lantos Zoltán, Simon Judit (1998): Marketingkutató az Orvos-Gyógyszerész-Közgazdász képzésben részt vevők számára, Budapest, 1998