

# RHÖN-KLINIKUM's campus-concept approach to dealing with an age-dominated healthcare system without economising

Received (in revised form): 23rd November, 2017



## Bernd Griewing

received his MD degree from the University of Muenster. He holds a professorship for neurology at the Ernst-Moritz-Arndt-University Greifswald. From 1998 to 2015 he was chief physician at the Neurologische Klinik GmbH of Bad Neustadt. Since 2002 he has run the Neurologische Klinik GmbH as medical director. He was appointed to the executive board of RHÖN-KLINIKUM-AG as chief medical officer on 1st January, 2016. He led the division of patient safety, quality management and hygiene, the division of medical process management and the division of network medicine and innovation. He is also a member of various boards, including the Muench Foundation or the Centre of Telemedicine Bad Kissingen.

RHÖN-KLINIKUM-AG, Salzburger Leite 1, 97616 Bad Neustadt a. d. Saale, Germany  
Tel: +49 9771 65 1593  
E-mail: Bernd.Griewing@rhoen-klinikum-ag.com



## Lisa Mueller

has studied the healthcare industry at DHBW in Bad Mergentheim (2012). After graduating she focused on project management in national and international projects, quality management and personnel management. In 2016 she successfully completed her Master of Health Business Administration. Since 2016 she has been working in the executive board division of medicine at RHÖN-KLINIKUM-AG, focusing on network medicine, patient services and new care models.

RHÖN-KLINIKUM-AG, Management Board Office, Salzburger Leite 1, 97616 Bad Neustadt a. d. Saale, Germany  
Tel: +49 9771 65 1576;  
E-mail: Lisa.mueller@rhoen-klinikum-ag.com



## Dominik Walter

has studied business administration at the University of Giessen, with a focus on health care and human resources (2010). He has also successfully completed a Master's degree, with a focus on hospital process management (2012). For the past nine years he has been working at RHÖN-KLINIKUM-AG in various positions, including as a manager and in staff functions with process management in hospital care. He currently runs the Department of Medical Process Management, within the medical executive board and is working on new care models.

RHÖN-KLINIKUM-AG, Medical Process Management, Salzburger Leite 1, 97616 Bad Neustadt a. d. Saale, Germany  
Tel: +49 9771 65 1580  
E-mail: Dominik.Walter@rhoen-klinikum-ag.com



### **Harald Auner**

gained his experience in healthcare as a critical care nurse in Munich from 1989 to 1998. He then obtained certificates in healthcare management and quality management and worked as a deputy nursing director in a regional hospital from 2004 to 2008. From 2008 to 2016 he worked as a lead auditor for certification of quality management systems in hospitals, rehab clinics, doctors' offices and several services. At present he is head of the business segment Patient Safety, Quality Management and Hygiene at RHÖN-KLINIKUM-AG, and specialises in the development of quality indicators for medical results, especially across sectors and patient security.

RHÖN-KLINIKUM-AG, Patient Safety, Quality Management and Hygiene, Salzburger Leite 1, 97616 Bad Neustadt a. d. Saale, Germany  
Tel: +49 9771 65 1512  
E-mail: Harald.Auner@rhoen-klinikum-ag.com



### **Sebastian Griewing**

is currently pursuing an MD in Medicine and an MSc in Business Administration at the Justus Liebig University in Giessen, Germany. He obtained a BSc in Business Administration at the WHU–Otto Beisheim School of Management in 2015 and has completed several academic and study-related programmes at Stanford University, Bocconi University, Milan, Bucerius Law School, Hamburg, and the San Francisco General Hospital of the University of California, San Francisco. He specialises in trauma, orthopaedic and plastic surgery in medicine, as well as strategy and innovation in healthcare management.

Justus Liebig University in Giessen, Salzburger Leite 1, 97616 Bad Neustadt a. d. Saale, Germany  
Tel: +49 9771 65 1593  
E-mail: sebastian.griewing@googlemail.com



### **Johannes Marte**

has studied Health Promotion at Fulda (2014). In 2016 he successfully completed his Master of Science in Public Health, with a focus on information and communication technology in healthcare, and has since been working in the executive board division of medicine at RHÖN-KLINIKUM-AG in the field of network medicine, digital patient services and innovation management.

RHÖN-KLINIKUM-AG, Management Board Office, Salzburger Leite 1, 97616 Bad Neustadt a. d. Saale, Germany  
Tel: +49 9771 65 1577  
E-mail: Johannes.Marte@rhoen-klinikum-ag.com

**Abstract** Changes in healthcare are needed, particularly in order to address the consequences of demographic developments. A centralised and integrated healthcare provider, following economic and qualitative aspects and providing both a broad spectrum and highly specialised medicine, could be one solution. The campus-concept used by RHÖN-KLINIKUM-AG is based on the concept of networked medicine. Its primary element is patient navigation, which aims to exploit the assumed potential for efficiency. In the discussion on quality, patients should be not only targets but actors whose needs are taken into account. Patient-reported outcome measures (PROMs), which measure the quality of health care from a patient perspective, should play a major role in the German healthcare system. Forms follow function.

**KEYWORDS:** integrated care, network medicine, campus-concept, coordination platform, process management, patient navigation, full supply model, population-related

## THE ANAMNESIS—TRENDS AND EFFECT

Global, social and societal trends are affecting the healthcare sector, and its economic importance is constantly growing (Figure 1). Owing to changing demographics, demand for health care is increasing, while the supply is shrinking. The 'walk-in clinic' is becoming an ever more popular concept, and high-performing service structures are generally taken as a given.

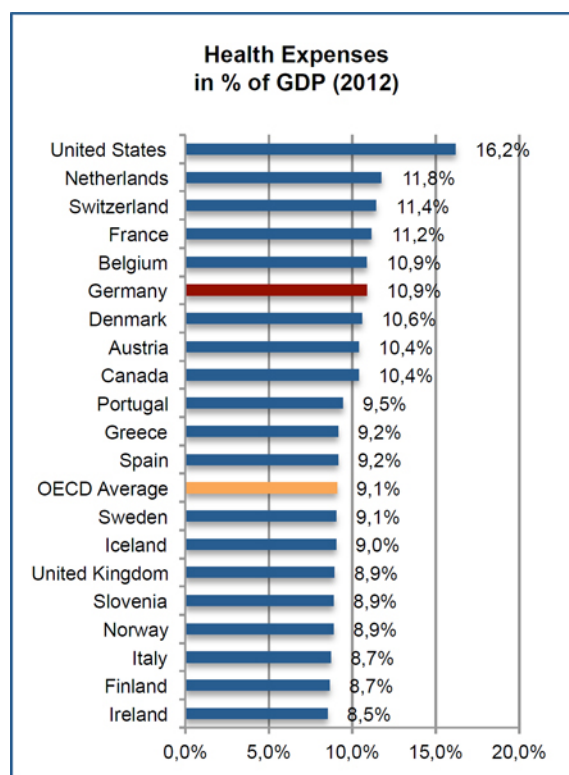
Newer participants in the market have little regard for national customs, and innovation is to some extent leading to disruptive effects. Known economic instruments and mechanisms (such as price) are failing partly or completely. It is not only employers or branches but also cities and local authorities that are competing with

each other. The health service has become a health economy.

## A MOMENTOUS TASK FOR LOGISTICS

The system requires increasing self-participation by the patient, but the system is also used actively if needed. As a self-payer, the patient increasingly invests in health-care services (consume). The often unsuccessful search for the right offer or entry point into the system leads to misallocation of valuable resources. A healthcare system for the future needs to consider not only financial means but all other resources as well.

Solutions for this will have to address both patients and the general circumstances of the population. The working population of the



**Figure 1:** Health expenses as percentage of GDP (2012)  
Source: Bloomberg, 2014.

future will likely be attracted to employment in larger regions or companies that are more attractive (in terms of progression, job security, etc). In order to truly overcome particular factors such as the consequences of demographic development, changes will be needed, which are unlikely to be able to occur without disruption.<sup>1</sup>

## TYPES OF HEALTHCARE INNOVATION

According to Harvard professor Regina E. Herzlinger, the first step towards successful innovation in a healthcare setting is the identification of the type of innovation that is sought to be realised. She proposes three types of innovations that can make health care both better and cheaper: consumer-focused, technology-based and integrator ventures (Figure 2).<sup>2,3</sup>

### Consumer-focused ventures

The first kind of innovative venture mentioned puts the consumer of health services at the centre of the innovation's purpose. The main objective is lowering costs — by providing enhanced productivity in terms of health-care service delivery for the consumer in either of two ways.

First, the consumer should be involved in the health-care service delivery process, thus reducing health-care expenditure and enhancing quality. This process includes

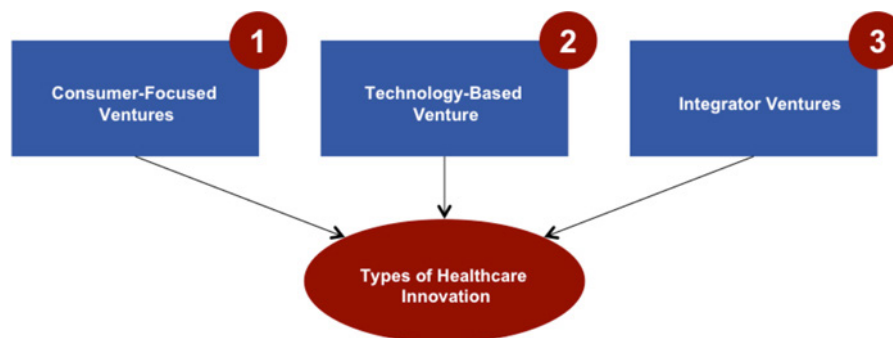
innovations that focus on motivating the patients to take their own health-promoting actions.<sup>4</sup>

By providing applications and technological devices that, for example, enable patients to take over parts of the monitoring process after surgeries, costs can be reduced and the patients' self-action accelerates the recovery significantly.

Second, consumer-focused ventures may increase national productivity by reducing the time that the patient spends waiting, coordinating and travelling. Such innovations take on the service delivery process from the patient's perspective and aim at actively facilitating waiting time for treatment or treatment coordination in a more efficient way.<sup>5</sup>

### Technology-based ventures

The second type of innovation described is technology-based ventures. These innovative ventures are based entirely on technological inventions and discoveries that are suitable for increasing efficiency and lowering the costs of treatment and have been described thus: 'Diagnostics, drugs, devices, and drug-delivery systems [on the one side] enable higher quality care' and 'Innovations in technology that connect the many separate islands of information in the health care system [on the other side] hold the possibility of vastly improving quality and costs.'<sup>6</sup>



**Figure 2:** Types of healthcare innovation  
Source: Herzlinger, 2014.

### Integrator ventures

Lastly, integrator ventures bring benefits of consolidation to the healthcare system. The focus of integrator ventures rests on either horizontal integration and collaboration between hospitals and medical departments on the same level of medical service delivery or vertical integration along the treatment chain in terms of integration of ambulant and stationary service providers, creating a 'seamless system of care', realising higher efficiency and lower costs.<sup>7</sup>

These aforementioned aspects, along with, for example, the system-changed plans in Denmark, have encouraged the authors to think about a new concept for an integrated healthcare service in a rural area.

Moreover, the different types can occur not only separately but also in combination with each other. Thus, for instance, a technology-based venture can be consumer focused, while an integrator venture can also obtain a large portion of technological hardware and know-how.

### THE NETWORK MEDICINE CONCEPT

The campus-concept used by RHÖN-KLINIKUM-AG is based on the concept of networked medicine. An important element is patient navigation, in order to increase productivity and use the assumed potential for efficiency. It also involves the establishment of a quality network of closely coordinated care levels and healthcare providers. This is based on the realisation that the Patientus (lat.) is becoming more 'impatient' and demanding and the relationship between doctor and patient is changing. Doctors have permanent access to detailed healthcare data and continuously send new data regardless of time, weekdays or location, through known and new channels.<sup>8</sup>

The idea of network medicine represents the essence of the experiences and guidelines developed by Eugen Münch, a pioneer of the private hospital industry

and founder of the German hospital group RHÖN-KLINIKUM-AG.

In his experience of over 40 years as a manager in healthcare, he has not only built up the second biggest German hospital group, but has also borne in mind the continuous change that the politically dominated domain of medical service provision needed in order to provide the necessary innovation to enable the highest health-care quality and service standards.

### THE NETWORK COMPONENT

The network component of network medicine, besides being the most complex one in terms of organisational restructuring, is also the most important part and basis for the other two components. The complexity of the component lies in the different levels of innovative service operations management.<sup>9</sup>

### VERTICAL INTEGRATION OF LOCAL SERVICE OPERATIONS MANAGEMENT

The first tier of the network component is based on the vertical integration of the local medical service operations management. This is the level on which the patient enters the system. The entrance points are represented by centres of medical service provision (MVZ) that are able to provide the basics of health service provision in terms of ambulant services, simple surgical interventions and rehabilitative services, though not complex diagnoses having deep knowledge in specific departments of the medical service spectrum themselves.<sup>10</sup>

The MVZs are able to provide a broad spectrum of basic medical service delivery, bringing together a doctoral team of broadly trained physicians. These physicians have obtained special training in terms of communication and operational know-how and act as navigator doctors (ND) that intercept the patient at their entrance to the system at the MVZ and accompany the patient from their entrance, through the

diagnosis, to their final treatment and any follow-up treatments.

Once the doctors are broadly trained in the area of their speciality, they may not be able to set the best diagnosis themselves. Therefore, every MVZ is equipped with an additional telemedical module (TP) that offers the best technological solutions for diagnosis and is able to connect with other doctors from distinct speciality departments from specialised or university hospitals. The TP offers the ability to physically proceed with the examination of the medical symptoms at the MVZ and send this information to the specialised doctors of the partner hospitals in the network.

Thus, without having to physically move the patient, the best diagnosis possible can directly be made on the basis of a single assessment from the specialised physicians. On the basis of this diagnosis, the navigator doctor can now send the patient to the suitable specialised department in a partner hospital or, if the medical diagnosis turns out to be less harmless, the patient may be directly treated in the MVZ.

In this way, expensive double examinations in different hospitals, costly trips to the different specialised doctors and the time necessary to undergo such trips can be avoided, thereby minimising costs, enabling the best diagnosis and follow-up treatment possible, and increasing overall convenience for the patient.<sup>11</sup>

## **HORIZONTAL INTEGRATION OF REGIONAL HEALTH SERVICE PROVIDERS**

While vertical integration of local service operations management focuses entirely on the vertical integration along the treatment chain, creating a 'seamless system of care,' where the patients get accompanied through the whole process of medical service delivery, network medicine not only includes integration on a local level, but aims at expanding across regions, and ultimately the

whole nation, in order to achieve service capability based on the cost efficiency realised in the network conception.

Hence, horizontal integration of regional health service providers tackles the problem of achieving the critical mass in order to seize the economies of scale that ultimately enable the network to work sufficiently effectively.

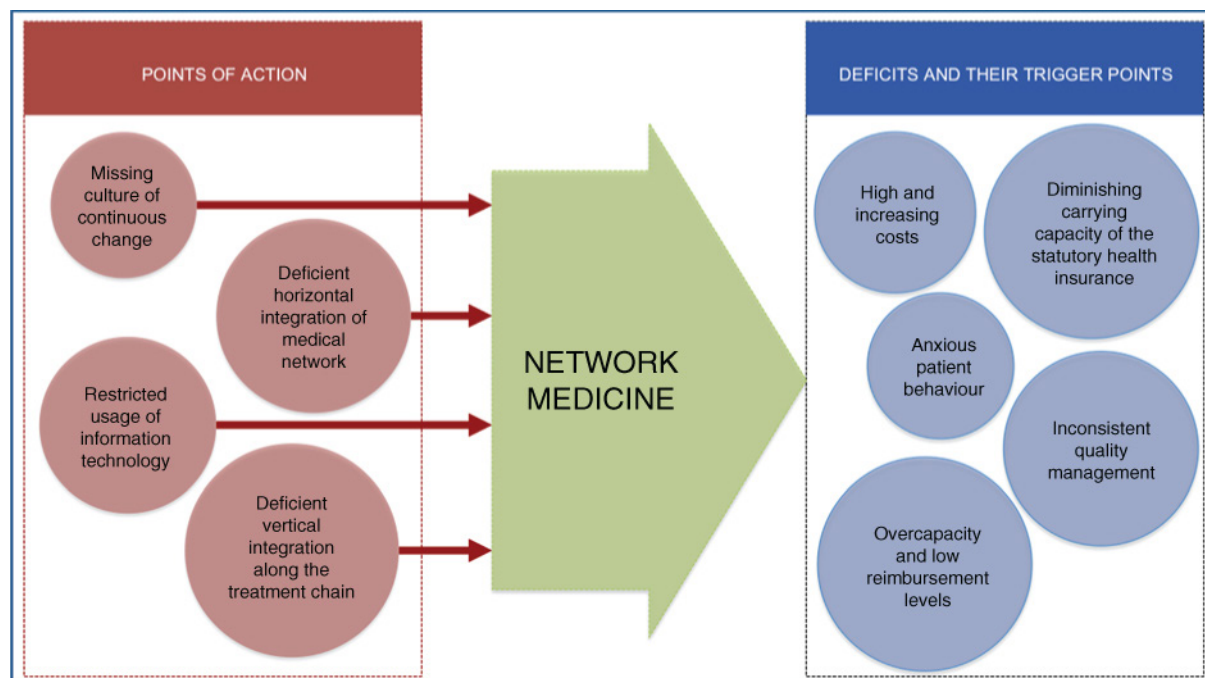
In point of fact, the diversity of different hospital groups and types in Germany is immense. In 2012, about 34.6 per cent of all German hospitals were under private leadership, while around 35.6 per cent followed a non-profit business purpose and 29.8 per cent belonged to the public sector. Not only does the style of leadership differ greatly, but the market is also widely dispersed in terms of the size of the individual hospitals and whether they belong to specific hospital groups or conglomerates.

In order to arrive at a sustainable level of volume, network medicine not only has to change the style in local service operations management of single hospital groups, but also has to combine the local networks with each other in order to achieve a comprehensive network that exceeds the limits of the single hospital groups.<sup>12</sup>

The overarching goal of network medicine is to build a nationwide network of hospitals that are technologically and organisationally integrated with each other, covering every area, including the rural countryside, with at least a basic centre of medical service provision that is able to act as an entry point into the network system.

Network medicine is clearly a consumer-focused venture, as it puts the patient at the centre of the new medical service delivery system. The patient is the one who consciously takes the decisions and initiatives in the course of treatment. Close mentoring by the navigator doctor secures the best movement along the treatment chain, getting the patient in contact with the appropriate doctors and institutions in the shortest possible time, enabling the best and most timely diagnosis for further treatment.





**Figure 3:** Managerial implications from Network Medicine (2015)

The patient gets empowered in their position as the one at the centre of the network's attention and is supported with increased convenience in health-care provision, as was requested in the Six Factors for Successful Healthcare Innovation.

This empowerment of the patient and increase in convenience is actively supported by the technological specifics of the network medicine concept.

The patient is the king of their medical data and has to be the only person to decide on its usage. In the end, patients have every item of medical information about themselves in one place, a collection of their whole medical history, thereby enabling better medical treatment when needed, especially in emergencies.

Prior diagnosis, X-ray photographs, laboratory findings, prior treatments or emergency information about allergies, blood type or chronic diseases are collected, and they face less duplicative and unnecessary treatments, which are not only costly, but also a liability to their health.

Four main points of action derived from the analysis of current deficits and their trigger points in the German healthcare system have been identified, and the importance of approaching them on an innovative level has been underscored (Figure 3).

These four factors are closely related to the concept, as they address the main features of network medicine. As we have seen, network medicine builds its potential on the underlying service operational restructuring in a patient-centred service delivery system, where the seamless patient journey from the MVZ over the tele-module and the specialised hospitals is the backbone of the best possible treatment chain.

Thus, as already stated, network medicine primarily aims at better vertical integration along the treatment chain, while ultimately integrating different hospitals or hospital groups as well, to achieve higher geographic reach and full national coverage in the final stage.<sup>13</sup>

Therefore, probably the most obvious, but also most fundamental, message that network

medicine provides for health management would be the efficient and effective usage of synergy potential in terms of economies of scale, but also a higher patient orientation and organising of the service provision around the patient journey within the possible network, similar to that which can be seen in the fast-moving consumer goods industry with the 'customer journey' perspective, to enable the best seamless flow of the patient through the process of health service delivery.<sup>14</sup>

The RHÖN-KLINIKUM Campus Bad Neustadt currently houses seven specialised hospitals, several institutes and supporting central departments. The groundbreaking ceremony for the campus prototype in Bad Neustadt a. d. Saale took place in December 2015. It is expected to open in January 2019.

### THE NEED FOR A COMPREHENSIVE HEALTHCARE OFFER

The biggest challenge, however, is in the diversity of patients' conditions, with often no difference between patient and customer constellation and the lack of patient navigation within the healthcare system. In urban areas (where there is a confusing oversupply), a trend towards increased use of primary inpatient institutions (eg A&E departments) can be observed.

This is often connected to a lack of knowledge of available walk-in offers with well-differentiated structures. In rural areas (where there is an inflexible undersupply), the same movement towards hospitals can be observed, as it appears difficult to achieve sufficient healthcare supply outside of regular office hours. Patient paths and supply concepts that, in theory, are appropriate are often seen as defragmented and are therefore rarely used.<sup>15</sup>

### COMPONENTS AND GOALS

A centralised and integrated healthcare provider, following economic and qualitative aspects and providing both a broad spectrum and highly specialised medicine, could be one solution.

Campus-concepts employ various approaches and goals nationally and internationally. Often, a region or country aims to provide good and comprehensive health care in a few central locations. Formal mergers of interdisciplinarily and intersectorally coordinated healthcare services (eg accountable care organisations) are intended to lead to increased quality and better economic efficiency by avoiding redundancies and misallocations. In the quality discussion, patients should be not only targets but actors whose needs are taken into account. Patient-reported outcome measures (PROMs), which measure the quality of health care from a patient perspective, should play a major role in the German healthcare system.<sup>16,17</sup>

### CENTRALISATION AND CONCENTRATION OF COMPETENCY

The goal catalogue of the campus-concept is demanding yet promising. The aim is a better regional health-care supply in rural areas. Through sensible centralisation (in medical concept and organisation) and the provision of connected services, the patient receives the required and desired health care on campus. This helps to optimise capacity and discharge planning across sectors, for example by increasing the number of direct transfers to continued treatment. Especially for complex and often causally linked multi-morbid conditions, we aim to ensure complete care across sectors, including curative and preventative components.

### The Five Elements of the Campus-Concept (Figure 4)

- Walk-in and stationary acute and rehabilitative treatment
- Age-appropriate living concepts
- Walk-in and stationary care for the chronically ill
- Tourism, wellness and service
- Prevention and health management involving supporting institutions





**Figure 4:** Logo and Claim – RHÖN-KLINIKUM Campus Bad Neustadt-Medical excellence by tradition (2015)

In a modern, service-oriented environment, the patient or customer works with engaged and interested employees. This includes a living and working atmosphere that supports this motivation. On this basis, we aim to continuously provide medical high-end performance over a long period of time.

This complete care concept is required to responsibly address sectoral deficiencies, including high costs and a lack of highly qualified staff. Entrepreneurial opportunities are created (such as bundled capacities, broad use of e-health applications). Strategic partnerships, for example through selective contracts, become more attractive.

Care is explicitly not provided by one individual but by one network. The goal is high-quality health care in a unique setting.

### **CLINICAL PROCESS MANAGEMENT SUPPORTING PATIENT NAVIGATION**

The campus-concept requires a new understanding of processes by all those involved (including allied interests) to avoid oversupply, undersupply or incorrect supply. Indicators such as process times and costs, complications, return referral, condition at admission and at discharge have to be transparent to all partners. The patient, too, needs to know at what stage of the process they find themselves, and why, as all essential processes focus on them and they are to be challenged as much as possible (cf. Uno-acto principle).

Consolidated process and patient logistics at the beginning of treatment are essential, as mistakes can have increasingly negative effects over time. Necessary, often manual,

processes to fix mistakes (eg searching and fetching) burden all parties involved. On a larger scale, higher costs in one area (eg increased screening) can lead to larger savings downstream. Therefore, investment must be made and resources moved to initial access points in order to gain important data for improved patient navigation, such as through improved anamnesis procedures (cf. ILO principle).

### **THE IDEA OF A NEW COORDINATION PLATFORM—THE WALK-IN CENTRE (ZENTRUM FÜR AMBULANTE MEDIZIN, ZAM)**

The new coordinative and interdisciplinary diagnostic centre on campus bundles many referral streams. It precedes the stationary high-performance sector, in order to quickly provide individual assessment through structured, computer-based anamnesis by specially trained staff in order to decide whether a case is minor or a true emergency or a complex medical situation. The condition of a patient is the primary factor for care and treatment and dictates the order of processes. This matching of care levels is essential for sensible patient navigation and care.<sup>18</sup>

In addition to strict practice management and standardised services for the necessary differential diagnoses, specialist services are available if needed. Open doors and welcoming reception areas are immediately noticed as comforting factors and reflect the new reception and information culture.

A comprehensive digital file and an intelligent archive are also available as knowledge bases, as well as digital help (eg artificial intelligence), allowing a new dimension of diagnostics and real-time evaluation. True competencies that are essential to the medical profession (critical thought and responsible action) will undoubtedly continue to be needed in future. Digitalisation should lead to more safety, higher quality and streamlining of

important processes. Ultimately, this will also bring economic benefits.<sup>19</sup>

With elective or curative treatments, the patient, as consumer, may also be interested in innovative services such as telemedicine, or expanded services such as prevention or wellness.

The patient focus is at the centre of this strategy. This includes a timely mix of service offers, highest possible care quality, patient happiness and individual care.

The campus will become a form of health-care marketplace. Commercial areas will serve basic retail and service offers (eg hairdressers, cafés). Shared accommodation and care options for all life stages (children, adults, elderly) will be available for all visitors. The walk-in centre will be defined as a hub, an all-round service with a wide patient/client base and a sophisticated atmosphere.

### **ADVANTAGES AND DISADVANTAGES OF THE CAMPUS-CONCEPT**

The biggest challenge is to strike the right balance between individual social responsibility and process-oriented standards.

The advantages are primarily in the aforementioned synergies. Networking walk-in care with a stationary treatment supply enables a high level of flexibility and freedom of the individual agent in a cross-disciplinary healthcare network. Knowledge can be shared digitally and used in the interest of the patients. Using this approach, complex walk-in and stationary care develops a regional design with a nationwide effect. The unified design and marketing create a whole image.

The disadvantages of a campus are more accurately described as barriers: the concept is extremely complex and therefore management of cooperation and contracts needs to be a special focus of this new organisational unit. Data protection needs to look more at the life realities of patients.

Decentralised connections (mobility concepts) to the campus need to be created and new job profiles (eg guides) established. This new kind of walk-in care and digital communication will need to be reflected in the development of new medical professions.

The described concept requires significant investment, which has to be sustainable in predictably decreasing profit margins. Nevertheless, investment in modern structures is expected to lead to relative cost advantages, considering increasing demands. For evaluation, the overarching quality management of walk-in services through validated indicators is crucial.

Finally, typical anti-trust issues of such a concept cannot be trivialised. Therefore, clear rules and effective internal competition are required.

The different compensation models of the medical sector and the health professions hinder outcome-related remuneration. Integrated care solutions need supportive financial incentives. Investments in new forms of care are possible only with a sufficient start-up investment. This can be seen, for example, in 'Healthy Kinzigal' in Germany, where a business model was developed in the form of agreed savings agreements between the management company, the health insurance fund and the general practitioner.

Strengthening cross-sectoral education and care, *inter alia*, in the form of health networks, could promote cooperation between service providers. In particular, it requires an overall responsible body that coordinates the supply process.

Organisational features such as single practices or lack of interoperability in information and communication technology continue to hinder coordination efforts.

In addition, cultural aspects play a role in healthcare collaboration. Their willingness to share care responsibilities for patients and entire populations is considered necessary.<sup>20,21</sup>

## CONCLUSION

Overall, network medicine is the summary of the trends that Eugen Münch has experienced in his position as a founder and leader of one of Germany's leading private hospital groups over recent decades, and summarises his opinion about the changes that he awaits to see in future decades. If one point in particular arises from network medicine, it is the need for continuous change in health care on all levels of technological, operational or financial leadership on the health market.

The campus-concept of RHÖN-KLINIKUM-AG is a possible solution to bring the afore mentioned challenges together through the significantly different viewpoints of different agents. As an accessible, highly functional centre, it is intended to avoid rationalisation in patient care and increase potential efficiency by ensuring higher indicative quality and correct and speedy patient navigation. Therefore, it is an attractive alternative to conventional structures in urban areas.

## AUTHORS' NOTE

The authors would like to thank all those involved in RHÖN-Campus-Concept/Network Medicine at RHÖN-KLINIKUM-AG Bad Neustadt a. d. Saale and Stiftung Münch München.

## References and notes

1. Barnes, A.J., Unruh, L., Chukmaitov, A., van Ginneken, E. (2014) 'Accountable care organizations in the USA: Types, developments and challenges', *Health Policy*, Vol. 118, No. 1, pp. 1–7.
2. Herzlinger, R.E. (2014) 'Innovating in Health Care – Framework', *Harvard Business Review*, March 12, 2014.
3. Preusker, U. (2015) 'Das deutsche Gesundheitssystem verstehen. Strukturen und Funktionen im Wandel', 2 Auflage. Medhochzwei Verlag, Heidelberg.
4. Handelsblatt. (2015) 'Wettstreit um die Gunst des Patienten', available at: <http://www.genios.de/pressearchiv/artikel/HB/20150408/wettstreit-um-die-gunst-der-patient/6313A142-E478-4C78-B018-17032406CE7D.html> (accessed 11th April, 2015).
5. Herzlinger R.E. (1997) 'Market Driven Health Care. Who Wins, Who Loses in the Transplantation of America's Largest Service Industry', Perseus Books, New York, NY.
6. Ibid.
7. Ibid., ref. 2 above.
8. Münch, E., Scheytt, S. (2014) 'Netzwerkmedizin – Ein unternehmerisches Konzept für die altersdominierte Gesundheitsversorgung', Springer Gabler, Wiesbaden.
9. Augurzky, B., Holzinger, S. (2015) 'Netzwerkmedizin – Fakten. Diskurs. Perspektiven für die praktische Umsetzung', 2 Auflage, Medhochzwei Verlag, Heidelberg, ISBN: 978-3862162468.
10. Sozialgesetzbuch, V. (2017) 'Sozialgesetzbuch (SGB) Fünftes Buch (V)', available at: [https://www.gesetze-im-internet.de/sgb\\_5/](https://www.gesetze-im-internet.de/sgb_5/) (accessed 22nd September, 2017).
11. Bloomberg (2014). 'Where do you get the most for your health care dollar?', available at: <http://www.bloomberg.com/infographics/2014-09-15/most-efficient-health-care-around-the-world.html> (accessed 1st September, 2017).
12. Klauber, J., Geraedts, M., Friedrich, J., Wasem, G., (2017) Krankenhaus-Report 2017: Schwerpunkt: Zukunft gestalten. Mit Online-Zugang, Schattauer Verlag, Stuttgart, ISBN: 978-3794532292.
13. Von Eiff, W. (2012) 'Wettbewerbsstrategie. Bedeutung des Porter-Ansatzes für Kliniken', *Health Care Management*, Vol. 3, No. 5, pp. 14–17.
14. Christensen, C. (2000) 'Will disruptive innovations cure health care?', *Harvard Business Review*, September 2000.
15. Brandhorst, A., Hildebrandt, H., Luthe, E.-W. (2017) 'Kooperation und Integration – das unvollendete Projekt des Gesundheitssystems (Gesundheit. Politik – Gesellschaft – Wirtschaft)', Springer VS Wiesbaden, ISBN: 978-3658137823.
16. Porter, M.E., Guth, C. (2012) 'Chancen für das deutsche Gesundheitssystem: Von Partikularinteressen zu mehr Patientennutzen'. Springer-Verlag, Berlin, Heidelberg, ISBN: 978-3642256820.
17. Gerlach, F.M., Greiner, W., Haubitz, M., Schaeffer, D., Thürmann, P., Thüsing, G., Wille, E. (2014) 'SACH-VERSTÄNDIGENRAT zur Begutachtung der Entwicklung im Gesundheitswesen, Bedarfsgerechte Versorgung Perspektiven für ländliche Regionen und ausgewählte Leistungsbereiche', Langfassung, Bonn, Berlin, available at: <http://www.svr-gesundheit.de> (accessed 1st September, 2017).
18. Albach, H., Meffert, H., Pinkwart, A., Reichwald, R., von Eiff, W. (2016) 'Boundaryless Hospital: Rethink and Redefine Health Care Management', Springer-Verlag, Berlin Heidelberg, DOI 10.1007/978-3-662-49012-9.
19. Hildebrandt, H., Groene, O., Pimperl, A., Werner, U., Huber, B. (2017). Das vernetzte Krankenhaus der Zukunft. In: Klauber, J. et al. (Hrsg.): Krankenhaus.

- Schwerpunkt gestalten. Schattauer, Stuttgart, pp. 167–183.
20. McClellan, M., Kent, J., Beales, S.J., Cohen, S., Macdonnell, M., Thoumi, A., Abdulmalik, M., Darzi, A. (2013) 'Accountable Care: Focusing Accountability On The Outcomes That Matter', WISH 2013.
21. McClellan, M., Kent, J., Beales, S.J., Cohen, S., Macdonnell, M., Thoumi, A., Abdulmalik, M., Darzi, A. (2014) 'Accountable care systems around the world: A framework to guide reform strategies', *Health Affairs*, Vol. 9, pp. 1507–1515.