Innovation in the healthcare sector: the focus must always be on people

Annekathrin Walter in conversation with Prof. Christian Gerloff
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Prof. Christian Gerloff, MD, currently works as Director of the Department for Neurology, Medical Director of the Head and Neurocenter, and Deputy Medical Director of the University Medical Center Hamburg-Eppendorf (UKE). Since 2021, he has also been president of the German Society of Neurology.

As of January 1, 2023, he will take office as Medical Director and Chairman of the Board of UKE.

Innovation is a term that is used inflationarily. What characterizes a true innovation for you personally?

Prof. Christian Gerloff (CG): For me, a true innovation entails a leap in quality or, in other words, represents the "disruptive" character of a new idea.

What was the last innovation project you worked on?

CG: For example, I've been involved in a project that uses machine learning to predict critical phases of illness in intensive care patients. And - at the moment still evolutionary rather than disruptive - I am working on the implementation of a digital clinical information system with a new data model and workflow engine. In this project, too, I expect a quality leap in the medium term after a successful roll-out.

Why are innovations in healthcare important for our society?

CG: Health is the most important basis for quality of life and thus also for happiness and dignified coexistence. We should use every new idea to improve this. What good is a long life without a good quality of life? What good is prosperity if it is not in harmony with health?

You are a professor of neurology and have been president of the German Society of Neurology since 2021. Neurology is a complex, future-oriented specialty. What innovative developments are you observing in your field that have an impact on society as a whole?

CG: Right. Neurology has undergone an incredibly dynamic development. Viewed over a longer period of time, the revolution in stroke therapy since the 1990s by neurology has certainly had the greatest effect on society as a whole. Whereas at that time patients received no targeted therapy at all, but were placed in remote corners of large wards to await their progress or death, today multimodal therapy is provided in specialized wards, the neurological stroke units. Another example is exponentially increasing ways in which we can target the immune system with drugs, for example in the therapy of multiple sclerosis. And the latest game-changer is definitely that we now have the first approved gene therapies in neurology. After decades of systematic basic research and description of genetic diseases like spinal muscular atrophy, we can now treat them. This is truly disruptive, especially as it also tests the cost structures in the healthcare system. A single injection can cost over 2 million euros. In contrast, even complex surgeries are "cheap".

On January 1, 2023, you will take office as Medical Director and Chairman of the Executive Board of the UKE. What innovation topics is the UKE currently addressing and which ones will you focus on in particular?

CG: Digital transformation and continuous improvement of our clinical and administrative processes are very much in focus.

In the future, medicine will increasingly use the billions of data points, which are currently still largely fallow and growing continuously, to learn from them. There will be assistance systems to help us avoid mistakes. We will have the ability to analyze the effect of our actions from routine data in a fine-grained way, advancing precision medicine. Machine learning can help us make clinical pathways more efficient and safer, and move them into a continuous optimization process.

If we get it right, this will improve working conditions in the healthcare professions, because work can be done more safely and with even better quality. Nothing makes healthcare professionals suffer more than the feeling that they have not done justice to the patients entrusted to their care or, in the worst case, that they have even made a mistake. The UKE has already had a completely digital information system since 2009, has systematically developed it further, and we will now use our experience to take medical work to the next level in a new digital environment.

People must be at the center of all this further development. In the healthcare system in particular, the relationship between technology and people, which is ideally symbiotic in nature, must be handled very carefully, but also innovatively and openly. We must take advantage of the modern possibilities of streamlined digital processes and make ideal use of the transparency and flexibility they create. Change management, a good culture for dealing with mistakes, listening and: taking everyone seriously in interprofessional teams. This will also be my focus.

On a positive note, the pandemic has shown how socially relevant and system-critical our work in the healthcare system is. The meaningfulness of this work is undisputed, and that feels good to me every day at UKE. I see it as an important task to also tirelessly publicize this positive image of working in the healthcare sector, also with regard to inspiring young people to take up our professions.

Innovations can only emerge when an organization is "ripe" for them and sets the appropriate course. What is the UKE doing for its own innovative capability?

CG: First of all, as a university hospital, the UKE has an advantage here. Research and innovation are so deep in our DNA that we wouldn't even breathe without them. Standstill? Unthinkable. In this respect, we have a particularly high density of people who are looking for the new. That makes working at the UKE particularly attractive.

Of course, this does not in any way absolve us from the need to ensure with great sensitivity that all the people involved, regardless of the professional group, are taken on board, that they are made aware of the expected positive effects, and that they are guided and accompanied by common goals. In the current conversion of our digital information system, for example, we have worked out the requirements in interprofessional groups over a period of years, have involved a broad base of employees in the entire procurement process, and maintain this approach throughout the entire roll-out and development process. This means that this new digital world is really "our" new world and not something imposed from above. I would like to emphasize that we have been digitalized since 2009. So we have an enormous amount of experience and a very respectable digital "altitude.

Another important factor is the professional handling of mistakes and failures. If attitudes and actions focus on personal protection, accompanied by a fearful look over one's shoulder, innovations will fail to materialize. A disruptive change is always accompanied by a certain risk. Everyone must know and feel that the backing of their managers is guaranteed. Then entrepreneurial agility will emerge. Employees must also be trusted with new ideas - from the initial idea to implementation. Of course, there are also projects that turn out to be less good in retrospect. Then it's a case of "draw a line under it," learn as much as possible from it, and start a new attempt together.

What role do leaders and role models play in this?

CG: Leaders and role models play the biggest role imaginable.

"Preaching water and drinking wine" is just as unacceptable as a lack of agility on the part of managers in dealing with innovative ideas from the team. Managers must be just as willing to take new paths, even if they involve some residual risk, as they must have the attitude of critically questioning their own actions and openly dealing with their own mistakes.

A good leader should like his employees, recognize the positive and fill his leadership role with love and respect for people. Then everything is easier. She should spontaneously and authentically rejoice in employees' successes and reliably and

effortlessly ensure that recognition goes to those who deserve it. That, too, makes a team agile and innovative.

Is there an experience that you would describe as a real "innovation killer"?

CG: Quite. Nevertheless, I would like to answer the question a little more generally and cite a lack of feedback culture and overregulation as examples.

If an innovative idea is placed enthusiastically by employees, regardless of how, where and when, then it is important to listen and provide feedback promptly. If there is no feedback for weeks, months or even years, or if a suggestion is answered with petty remarks after a long time, then this "kills" the spirit of innovation.

Another example is overregulation combined with excessive hedging behavior. An innovation-friendly climate presupposes that "out-of-the-box" thinking is not immediately labeled as being against the rules.

Do you have a good example of "Innovation made in Germany"?

CG: We have just seen how agile and innovative German research is in the COVID 19 pandemic, when one of the most effective and fastest-approved vaccines came from Germany. When a new class of blood-thinning drugs was introduced worldwide a few years ago and largely replaced the old Marcumar, German companies were also at the forefront. In general, we have an enormously high innovation potential in the field of basic sciences in Germany.

Unfortunately, we are not at the forefront when it comes to digital "big points" in healthcare. What other countries have implemented better is, above all, the cross-sector networking of healthcare data and the linking with patients themselves. Apart from that, the U.S., for example, only uses water and has similar clinical information systems to ours in Germany. So we can catch up well if we prioritize this accordingly.

With a view to further innovation in the fields of activity relevant to you: What do you wish for the future?

CG: I would like to separate this question into internal and external factors.

Within our teams in the healthcare professions, we as leaders still have much to improve in order to make the climate more innovation-friendly and agile. So take a look at your own nose!

In view of external factors and international competition, we must counteract devotional overregulation. Every new regulatory restriction should be accompanied by an obligation to demonstrate possible solutions. We cannot allow absurd regulatory requirements to drive up costs disproportionately. It is already the case today that hardly any individual researchers or research groups can launch a large drug study - it is too costly from a regulatory point of view.

And finally: courage to make decisions and a motivating and forgiving error culture that allows something new to emerge from every failure.