
Focus on In-Demand “Outpatientisation”: How Patient Care at Home Becomes a Success



“Showtime” for digital health innovations for the future at MEDICA 2023

A hundred start-ups and more than 120 high-calibre professional speakers: These are just the “naked” facts which this year’s [MEDICA CONNECTED HEALTHCARE FORUM](#) will present as an established part of the programme at the world’s leading medical trade fair MEDICA 2023 in Düsseldorf from 13 to 16 November, which will feature more than 5.200 participating companies. The agenda at the Forum (in Hall 12), however, also offers multiple content highlights. Among these are, for example, the finals of two start-up competitions: At the 12th [MEDICA Start-up COMPETITION](#) on Tuesday afternoon (14 November from 3 p.m.), the focus is on the entire spectrum of innovations for the healthcare sector: from artificial intelligence (AI) to health apps, solutions for laboratory diagnostics and medical robotics. For the first time this year, “Sustainability” features as a novel category. The 15th “Healthcare Innovation Worldcup” on Monday afternoon (13 November from 1 p.m.), by contrast, focuses instead on intelligent “Internet of Medical Things” (IoMT) solutions like, for example, digital biomarkers, smart bandages and network-connectible wearables.

The broad spectrum of new technologies can open up interesting options for medical care at home. This also supports the goals of the German Federal Government. In their coalition agreement, the ruling parties even explicitly pledged to increase the scope of outpatient medical care. What can modern medical technology do in this setting? “Alternative care delivery models – Balancing at-home technology, outpatient and clinical healthcare” is the title of a Forum session on Monday (13 November from 3 p.m.). In this way, Prof. Martin Holderried in Tübingen pursues innovative approaches. The Managing Director and Chief Medical Information Officer of the central unit at the local university hospital will sketch his ideas regarding patient-centred, quality-focussed, digital and sustainable medicine. For him, digitalisation within hospitals is above all a developmental process of organisation across all professional categories and levels of hierarchy. According to Prof. Holderried, digitalisation affects far more than just IT.

While Dr Roland Strasheim, Marienhaus MVZ GmbH, will explain what could be improved in medical care models, Dr Helmut Hildebrandt will present the concept of “micro hospitals”. Aside from his work as Chairman of the Board of OptiMedis AG, he is especially interested in the conceptualisation and development of regional health care systems and their implementation in German as well as European regions. He is a leading voice in discussions concerning Managed Care programmes, for example “Gesundes Kinzigtal” (healthy Kinzigtal) where, if possible, all health care professions “act in concert”. “Decentralised wound care” is a more specialised topic, presented in the lecture by Dr Sebastian Kersting from the Fraunhofer Institute for Cell Therapy and Immunology. Next, start-ups and scale-ups like ‘Skylabs’ and ‘Garmin’ present their solutions, for example in the field of 24-hour blood pressure monitoring and remote monitoring of patients.

Robotics for coping with daily life and the “all-rounder” AI

Tuesday (14 November from 11 a.m.) starts with robotics. Prof. Robert Riener from the ‘Sensory-Motor Systems Lab’ and ETH Zürich initiated “Cybathlon”. This is the name of a platform intended to drive research in the field of assistive systems for daily living and encourage public dialogue regarding the inclusion of people with disabilities in everyday life. Dr Jaime Duarte, co-founder of ‘MyoSwiss’, will present a wearable exoskeleton in his presentation at the Forum, which can be used as an “e-bike for legs”.

Prof. Paul Lukowicz, head of the German Research Center for Artificial Intelligence and one of the world’s most renowned experts on AI, will then talk about the importance of “ChatGPT” and large language models (LLM) for the future of the health care sector. His opinion can be clearly defined: AI in medicine should be used in cases where its use increases the possible success of a medical procedure and thereby serves humanity. At the MEDICA CONNECTED HEALTHCARE FORUM (14 November) he will offer an update on this. Speakers from well-known companies like GE Healthcare, Philips, Huawei, NextOR, Jeios and Biotronik will give matching short overviews of the role AI is playing already – for example, Biotronik uses it to predict events in the context of cardiac insufficiency – and how this will (probably) continue in the future.

The afternoon will then be wholly given over to the 12th MEDICA Start-up COMPETITION, where starting at 3 p.m., twelve finalists from different categories will pitch to win. And following many exciting presentations, there will be an opportunity for a get-together to network with the young start-up scene in a relaxed atmosphere.

Ways to increase sustainability

The health sector is among the largest consumers of resources and generates a high volume of waste. It follows that any measures targeting this could be especially effective in combating climate change and its consequences. Wednesday (15 November at 11 a.m.) starts with the Forum session "Sustainability in Healthcare – Creating green healthcare initiatives for a positive impact on the environment" and a talk by **Prof. Edda Weimann** at the MEDICA CONNECTED HEALTHCARE FORUM. Prof. Weimann is the director of the Geneva Sustainability Centre. She has many years of experience regarding the topic of how clinics can achieve climate neutrality. The vision presented by the start-up Resourcify sounds nothing less than revolutionary. The team of developers wants to make a waste-free future possible, based on technological progress. Meike Lessau, Head of Circularity at Resourcify, will illustrate their concrete ideas.

"Big emotions" and their benefit in therapy

A symposium on Wednesday, 15 November, starting at 12:30 p.m. will discuss processes within the brain, mental health and neurosciences. **Prof. Malek Bajbouj**, Director at the Clinic for Psychiatry and Psychotherapy at the Charité in Berlin, is researching how emotions, emotional memory and emotional competence are represented in the human brain and how this can be influenced for therapeutic uses.

The work of Prof. Bajbouj goes beyond the classic borders between psychotherapeutic, psychopharmacological and neuromodulation procedures. Similar innovative strength is demonstrated by the young companies 'Earable Neuroscience', 'Finetech' and 'Living brain'. For example, Julian Specht, co-founder of Living Brain, will offer a fascinating insight into the possible uses of immersive virtual reality for neurorehabilitation. The goal: Interaction with a virtual environment is supposed to make training under close-to-real conditions possible while maintaining a safe environment for re-learning activities of daily living at a reduced level of risk compared to the standard level.

Health Metaverse & Co.: the medical benefit of augmented reality

The Forum Wednesday (14 November from 2 p.m.) will focus on the future of immersive health care. The focus will be on the Health Metaverse based on augmented or virtual reality (AR/VR), digital twins and similar technologies. Tibor Mérey from the Boston Consulting Group will describe what is already possible today and what the next steps could look like. He is a Partner & Managing Director of the Boston Consulting Group and has gained a lot of experience in many different metaverse projects. Mérey will present how to identify "golden use cases". These include, for example, training and medical training. The company 'FundamentalVR' uses virtual reality in this context to simulate physical signals, the haptics of surgical procedures, medical instruments and varieties of tissue. Surgeons see the same images, hear the same sounds and above all have the same feeling as during a real procedure. Richard Vincent, CEO & co-founder of FundamentalVR, will also explain how this technology can be used to introduce novel products.

Emergency medicine, diagnostics, cooperation in the team and anatomy – those are areas in which 'i3' offers virtual simulations. DeviKolli, co-founder and CEO of i3 Simulations, will offer an insight into these applications in his Forum talk. Meanwhile, the 'AnimaRES' research team is embracing Microsoft's 'Hololens'. This type of augmentation to reality makes it possible, for example, to view the heart and lungs from all sides – and learn about them. Pablo Olmos from AnimaRES will talk in greater detail about such best practices. Start-ups like Corbit GmbH, which offers a "TeleCare" station for tele-supported care at home – and thereby follows the trend towards outpatientisation of medicine, are also part of the programme on Wednesday. How to transform your home into a new "point of care" will be demonstrated by Siad Saymé, co-founder and CEO of Corbit. Corbit will also present its new developments for the entire duration of the trade fair on the show floor of the MEDICA START-UP PARK, which this year is counting a new record number of 50 participants.

A "pocket-sized" electron microscope – insights into the international start-up scene

The last day of the Forum (16 November) offers further opportunities for the attending professionals at MEDICA to gain information about the newest developments in the start-up scene. The various topics are as different as the young companies themselves. From 11 a.m., for example, the focus will be on introducing developments in diagnostics and health monitoring from Singapore, Spain and Turkey. Afterwards, we recommend the presentation of a new platform for discharge management by Mathias Schmon, CEO of Nubedian GmbH. He will offer an example for cross-sectoral, web-based information exchange between outpatient and inpatient procedures to ensure the best possible follow-up treatment for patients after a stay in hospital.

German start-ups are also heavily involved in the MEDICA START-UP PARK, which is adjacent to the Forum. For example, 'Smart United' is presenting a novel procedure to decontaminate rooms using UV-C light technology, and 'Meiluft's'. "pocket-sized electron microscope" is supposed to detect even the smallest particles contained in air and liquids. This enables a faster analysis of viruses, which could be very beneficial in preventing infectious diseases from spreading. All in all, the device serves to generate an image of, recognise and categorise particles in the range of a hundred nanometres.

The aforementioned examples show that, if you are interested in digital innovations in the health sector, a visit to MEDICA 2023 is a must, especially when it comes to the innovations presented by the various start-ups.

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