

AI-Guard for Patients Warns of Allergies and Drug Interactions

This year's Patient Safety Award from the German Society for Biomedical Engineering within VDE (VDE DGBMT) goes to Dr. Julian Friedrich. The Medical professional at Essen University Hospital will receive a cash prize of 6,500 euros for the Electronic Medical Records (EMR) Guard, which he developed with a team of doctors from various specialties.

(Frankfurt am Main, August 25, 2026) Do you have any known allergies and/or medication intolerances? Who hasn't heard this question during a doctor's visit or a hospital stay? In clinical practice, however, such information is often recorded only as free-text entries in doctors' letters, admission records, or progress notes. As a result, it remains invisible to digital warning systems. Dr. Julian Friedrich and his team set out to close precisely this gap. After all, such a gap in documentation can lead to potentially critical medications being prescribed without triggering a corresponding warning.

Automatic Alerts for Potential Patient Risks

The Electronic Medical Records (EMR) Guard is an AI-powered assistance system that analyzes newly created medical notes and progress documentation for indications of allergies and compares them with pre-structured allergy data. If the EMR Guard detects that an allergy documented in free text is not included in the official allergy list, the system notifies the responsible healthcare providers. "Information about allergies and drug intolerances is among the most important prerequisites for safe patient care. While modern hospital information systems can automatically warn of potentially dangerous medications—they can only do so if the relevant allergies are documented in a structured manner," says Friedrich, explaining the application scenario for the EMR Guard. Friedrich works at the Institute for Artificial Intelligence in Medicine at Essen University Hospital. There, he developed the Guard with the support of Prof. Felix Nensa, Prof. Jens Kleesiek, Prof. Joachim Dissemond, and Dr. Ruth Hecker.

Initial findings from clinical use in two wards at the hospital show that the EMR Guard can improve the quality of allergy documentation. By improving the availability of safety-related information, the system supports existing clinical warning mechanisms and helps identify risks in drug therapy at an early stage. In the long term, more complete and consistent documentation can help reduce allergy-related medication errors and thereby increase patient safety.

Award for Young Scientists and Engineers

The VDE DGBMT Patient Safety Award is sponsored by Dr. Hans Haindl, M.D., who, as a publicly appointed expert on medical devices, has investigated damage to medical devices for over 25 years. The award is intended to promote the goal of ensuring patient safety and the quality of treatment at all times and minimizing the likelihood of errors. The award is intended for emerging scientists and engineers in research institutions, hospitals, and industry, as well as for hospital operators who are responsible for ensuring that medical devices are integrated into reliable processes.

About the German Society for Biomedical Engineering within VDE (VDE DGBMT):

The German Society for Biomedical Engineering within VDE (VDE DGBMT) is the scientific and technical society for medical technology in Germany. It was founded in Frankfurt am Main in 1961.

The VDE DGBMT brings together experts from all areas of technology applications in medicine and deals with the entire range of topics in biomedical technology. It organizes conferences and workshops for expert audiences and is the sponsor of two international scientific journals: Biomedical Engineering and Current Directions in Biomedical Engineering published by De Gruyter Brill. Position papers, statements and expert contributions discuss current topics independently and neutrally. In addition, the DGBMT awards promotional prizes for young scientists, for scientific excellence and innovation, and for patient safety in biomedical engineering. Last but not least, it represents German biomedical engineering in international bodies.

For more information, visit www.vde.com/dgbmt

About VDE:

VDE, one of the largest technology organizations in Europe, has been regarded as a synonym for innovation and technological progress for more than 130 years. VDE is the only organization in the world that combines science, standardization, testing, certification, and application consulting under one umbrella. The VDE mark has been synonymous with the highest safety standards and consumer protection for more than 100 years.

Our passion is the advancement of technology, the next generation of engineers and technologists, and lifelong learning and career development “on the job”. Within the VDE network more than 2,000 employees at over 60 locations worldwide, more than 100,000 honorary experts, and around 1,500 companies are dedicated to ensuring a future worth living: networked, digital, electrical.

Shaping the e-dialistic future.

The VDE (VDE Association for Electrical, Electronic & Information Technologies) is headquartered in Frankfurt am Main. For more information, visit www.vde.com

Press contact: Vanessa Rothe, Phone +49 69 6308-292, presse@vde.com