

Title: How much artificial is human intelligence in healthcare?

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Presentation:

Human intelligence has always been augmented through the use of tools – also very much so in healthcare. As AI systems are considered a tool with more immersive powers than others the interaction and interdependence between artificial and human intelligence needs further inspection. This will be illustrated by various examples from healthcare – both in terms of opportunities and pitfalls showing cases of superiority and inferiority of AI applications when compared with human performance. Human intrinsic factors such as training, skills and self-confidence as well as task complexity will be discussed that reflect how to make best use of AI supported decisions.

While there are various flagship projects using AI tools for patient care it is interesting to investigate how deeply AI applications have penetrated the real world of patient care. Based on recent data of the IT-Report Healthcare 2025, the current availability and utilization of different types of AI systems in German hospitals will be presented and discussed. IT-Report Healthcare captures the state of affairs in inpatient settings in Germany and neighbouring countries for almost 25 years and is grant funded by the government with respondents numbers ranging from 200 to 500 hospitals. In the last years it has monitored the implementation status of health IT applications in hospitals that were funded by a government budget of 4.3 billion Euros. In 2025, five years after making the money available, the large majority of hospitals is still in the implementation phase particularly for digital documentation and admission. Conversely, telemedicine implementations have been finished in 40% of the hospitals and are now ready for use. Over the last years, Clinical Decision Support Systems (CDSS) have been used in about one third of the hospitals only, a rate that has been stable for about 10 years. Regarding AI systems in use, about one fifth of the hospitals are making use of them – mainly in radiology but also for writing the medical summary. Almost 60% of the survey participants reported that they regard these systems as transparent, reliable and trustworthy, have less ethical concerns and worries about de-professionalisation and a loss of jobs.

While using AI systems is one matter, the other matter is developing them. This hinges on the availability of large data lakes and the interoperability of electronic health record systems. The European Health Data Space (EHDS) is a vision and potential enabler for providing patient data in a lawful and safe manner for patient care, quality control and research. This presentation will provide a short overview of the German endeavours towards the EHDS and other initiatives to make data available for research.

Presentation of Ursula H. Hübner

Dr. Ursula H. Hübner is a full professor of Medical and Health Informatics and an associate dean of the School of Business Management and Social Sciences, Osnabrück University of Applied Sciences, Osnabrück, Germany. She is the founder and co-leader of the Research Centre for Health and Social Informatics. She serves as IMIA Secretary and as the Medical Informatics Editor of the journal GMS Medical Informatics, Biometry and Epidemiology (MIBE), and is a Fellow of the International Academy for Health Sciences Informatics (FIAHSI). Her main research interests comprise health IT adoption and maturity models, AI and human interaction in medicine, nursing and physiotherapy, continuity of care including IT standards and education in health informatics.