

Digitalisation in long-term care: An issue for medical writers?

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Abstract

Digitalisation within the healthcare sector, particularly in long-term care, comes with implementation problems. Accepting digitalisation in caregiving as patient and healthcare professional depends on the understanding of the scope and application area of digital supportive systems. Good practice standards in medical writing may help to convey digital health contexts for a wide range of target groups.

When looking at the progression of digitalisation in healthcare, there are vast differences in the social and health systems in terms of connectivity, internet service use and digital technology integration.¹ In the EU, the uptake of digital products and services is diverse with varying degrees of sophistication. Although the number of data-related technology users in the EU is growing rapidly, data use in healthcare still lags behind.²

Digitalised healthcare connects formal (professional) and informal (non-professional) caregivers via digital communication tools and platforms. These systems not only communicate health information but are also intended to improve social interaction via online assistance.³ However, the long-term care sector is a healthcare market where personal relationships between patients and physicians, nurses or caregivers are highly important. Any change process from these personal interactions towards

interaction and communication with digitalised tools is considered critically by all stakeholders. The perceived quality of the healthcare service is strongly linked to the quality of these relationships. Hence, implementation problems and other difficulties slow down the evolution of digitalised health.⁴

Healthcare is an information-driven sector where the choice of adequate communication channels and that of target-oriented content is highly important. However, there are barriers in developing suitable and sustainable “digital communications” in a comprehensive manner in Germany. An example of the current status of digitalisation in different branches for Germany is the D21-digital-index that also analysed acceptance and use of digital health applications (eHealth).⁵

Are medical devices more trusted than home digital assistance products?

A recent computer-based survey in Germany (N=2052, persons aged 14+) asked participants about their current use and perceptions of technologies such as “internet of things”, “artificial intelligence”, “algorithm”, and “bots”. About 20% of the sample considered the mentioned technologies as “rather positive”,

11% as “rather negative”, and 38% felt indifferent or neutral. In the sample, 27% did not know the meaning behind the technologies. The younger the respondents, the more they were open-minded towards new technologies; people with a low educational status were least open-minded.

Intelligent household appliances, even robots, were already used by 6% of the sample, where in comparison, digital health applications were used by 12% of respondents. People feel rather uncomfortable with digitalised assistance products at home but feel rather comfortable with medical devices that deliver medication to the body, supervise clinical parameters, and inform medical staff in case of emergencies

(Figure 1). Acceptance of robotics, however, seems to be limited.⁵

These results show that digitalised services are met with scepticism in a broad part of the German population – but there seems to be a higher degree of trust in digital health services. Personal interaction is the foundation of most forms of health care services where these relationships and interactions are based on information and mutual trust. Both seem to strongly influence the acceptance and usage of digitalised innovation in health care.⁶

Digitalised services are met with scepticism, but there seems to be a higher degree of trust in digital health services – maybe due to the importance of personal relationships and trust.

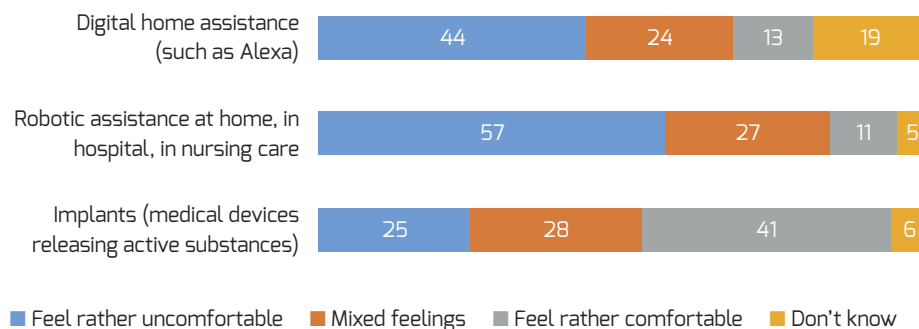
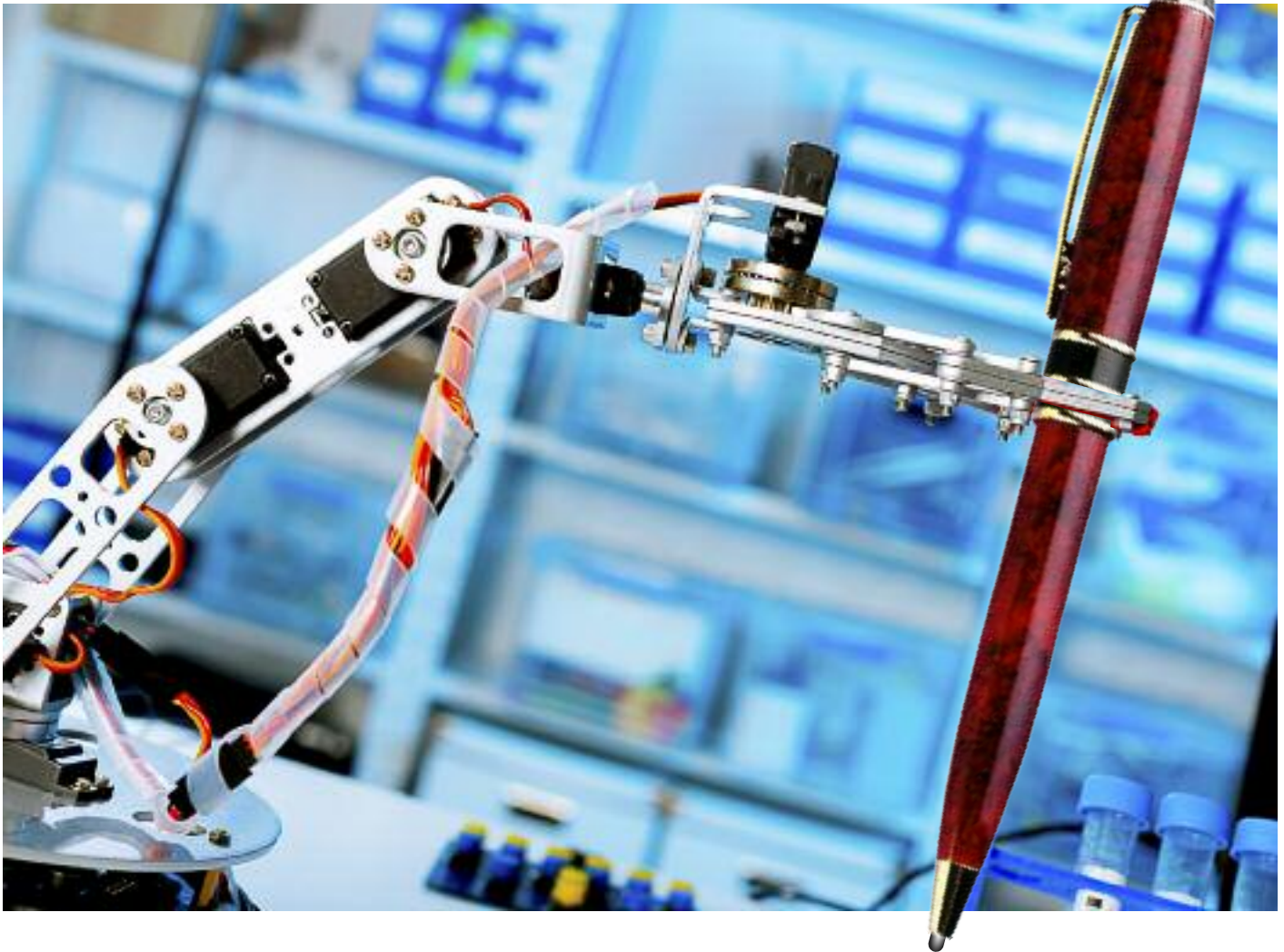


Figure 1. Perception of intelligent devices. Author figure based on data from Initiative D21 e.V., 2019



Higher degree of trust in robotics due to personal relationships in health care

Accepting robots in caregiving is dependant on users understanding their scope of activity and which services the robots will replace.⁷ Providing detailed information about the type of tasks robots are expected to accompany or substitute within long-term care is crucial to promote digital use. Consequently, there is a need for practical and understandable information about the role robots will play in specific caregiving scenarios. Equally so, it is important to understand caregiver beliefs about the impact robots will make, whether as a complement or substitute. A specific healthcare communications approach may help end-users' understanding of new digital technologies such as robots or new digital frameworks as well as to bridge from analogue healthcare relations. These guides may help healthcare professionals to communicate nursing care concepts and also inform patients

about how, and to what extent, digitalised tools and services can help in long-term care environments. Both nurses and informal caregivers could benefit from such support. The challenge will be to properly address health and digital literacy for the various different target groups.

Importance of (digital) health literacy

Health literacy is an individual's knowledge, motivation and ability to access, understand, appraise, and apply health information. Health literate people judge and decide on given options and alternatives in healthcare, disease prevention and health promotion to maintain or improve

quality of life.^{8,9} In a digital context, health literacy needs to be expanded to include digital literacy. This means users need to be able to use

There is a need to provide clearly understandable information about the role of robots in caregiving, and the concept of (digital) health literacy needs to be at the centre of good healthcare writing.

digital devices, and have appropriate cognitive, motor, sociological, and emotional skills.¹⁰ There is no common understanding of digital literacy so far.¹¹ One component, for example, is to understand how and where data are saved as well as how, to what extent and to which purposes, they are processed. Referring to care-related digital solutions, handling of someone's own care needs and potentials can be better matched if those involved are aware of potentials, risks, and pitfalls of emerging digital health care solutions.

It will be a necessity and challenge to address digital health literacy and develop best practices in healthcare communi-

cations. The role of good medical writing will need to convey digital health contexts for a wide range of target groups, their needs and demands.

Conflicts of interest

The authors declare no conflicts of interest.

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- Predatory journals and conferences
- Medical evidence generation – a 360-degree view
- Frontiers of research integrity: artificial intelligence
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*[Reference](#)

Reality check on reproducibility. *Nature* 2016;533:437

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After a brief overview of pharmacovigilance requirements and reporting in the field of human medicines, the session will dive into veterinary products and medical devices. Safety issues in the animal health industry will be discussed by a speaker from Cyton Biosciences (a service provider dedicated to European regulatory affairs and multi-disciplinary product development) and by a pharmacovigilance specialist from Boehringer Ingelheim Animal Health. For medical devices, the session will consider regulations and documents related to pre- and post-market safety reporting, and a speaker from Philips will go into more depth on risk management and the new edition of ISO 14971.

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