



Centrum voor
**Ethiek en
Gezondheid**

Robotisation in long-term healthcare – The ethics of e-health part 2

Summary

A variety of care robots have been developed to support recipients and providers of care in the long-term healthcare sector. Robot buddies like Pepper provide patients with companionship, the Tessa flower pot structures their day by reading out scheduled tasks, and robot arm Obi helps patients to eat. The government has high expectations for the use of these and other digital applications in the healthcare sector and care robot innovation is also being encouraged at the European level. Care robots could help improve the quality of healthcare and mitigate the impending shortage of healthcare workers.

Developments are still at an early stage and it is not yet clear exactly what impact robots will have on healthcare, although it is certain that they will have an impact. It is essential that consideration of all ethical issues relating to the robotisation of healthcare is incorporated into the development process from the very start. These issues will be examined and inventoried by the CEG upon request by the Minister of Health, Welfare and Sport. The CEG will also formulate two reports on the ethics of two other types of e-health: healthcare apps & wearables and the use of sensors in homes to prolong independent living.

Capitalising on practical experience

In practice, care robots are yet to meet the high expectations placed upon them. Very few robots have been able to take over the physical tasks performed by care providers and the ability of robots to provide social interaction and cognitive support is limited. Furthermore, they often do not provide the assistance that is required in practice due to both the current state of the technology and the lack of widespread implementation in practice. Given the substantial ambitions for the field of healthcare robotics, it would be prudent for the government to invest in further professional development in this area. By viewing the use of robots as an experiment rather than as the definitive implementation of a developed product, the government can encourage developers and users to gain and capitalise upon practical experience in order to continually improve healthcare robots. Moreover, further research is needed in order to determine the long-term effects of healthcare robots.

Attention to healthcare values

Healthcare is about more than just performing care duties in practice: it also requires commitment, compassion, responsibility and a keen eye for the effects that certain treatments are having on care recipients. Healthcare therefore involves many core values. As the use of healthcare robots changes the relationship between the care provider and the care recipient, it may cause some of these values to be neglected. As a result, this issue must be continually taken into account during the development and practical implementation of healthcare robots as well as during study programmes in the field of healthcare.

Meaningful contact

There are concerns that the implementation of social robots will result in care recipients having less interaction with people as they can be used as a justification for leaving someone alone for longer periods of time. This should be avoided, as meaningful contact and interaction is essential for patient welfare and quality of life. Meaningful contact does not necessarily need to be interpersonal, and interpersonal contact is not necessarily meaningful. Social robots can also help increase contact, for example, if they encourage or facilitate contact between patients. The CEG therefore recommends exploration and further development of these opportunities.

Dignity

Robots designed to perform tasks such as providing food or lifting a person could give care recipients the feeling that they are being treated as an object. As a result, the use of robots could have a negative effect on the dignity of care recipients. On the other hand, the use of robots can also give care recipients a greater feeling of independence or control as with the assistance of robots, they will be capable of doing more things on their own. How patients respond to healthcare robots cannot be determined in advance. For this reason, care providers, family members and patients must assess all possibilities and preferences on a case-by-case basis. After all, healthcare robots are unable to pay attention to the effect they have on the care recipient.

Autonomy

Robots can boost the autonomy of patients by making them less dependent on care providers, although they can also be programmed in such a way that they reduce the patient's freedom of choice. For example, robots can be programmed to encourage patients to make healthy choices if the developer believes this is the best course of action. However, in such cases, this takes away the freedom of care recipients to make choices themselves. Human care providers are in a better position to evaluate such situations and make exceptions if this will improve the care recipient's welfare. When allocating a robot to a care recipient, continual assessment must be conducted to ensure the care recipient's welfare is not neglected.

Privacy

Healthcare robots can measure and collect a great deal of data and many healthcare providers that use robots are still looking for secure and responsible data processing methods. In this regard, a careful balance must be found between privacy and control of personal data on the one hand and meaningful, effective and made-to-measure robot assistance on the other. In the CEG's opinion, it is vital for the government, developers and care providers to make clear agreements to ensure cautiousness in relation to the collection, storage and processing of data. After all, this concerns data of care providers and care recipients that is extremely sensitive.

Fairness

For whom are healthcare robots intended? Will future healthcare robots be developed as technology for the elite or for less well-off people who can't afford the luxury of a human caregiver? When developing new innovations, it is vital that attention is paid not only to the opportunities offered by the new technology, but also to its goal within the healthcare sector, how the new technology can contribute to this goal, and who will reap the benefits of the technology. It is also essential to ensure that the further development of robotics does not divert attention from possible low-tech solutions or other high-tech solutions to the challenges faced within the healthcare sector.