

Publication

Ethical concerns with the use of intelligent assistive technology: findings from a qualitative study with professional stakeholders

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**ID** 4523819**Author(s)** Wangmo, Tenzin; Lipps, Mirjam; Kressig, Reto W.; Ienca, Marcello**Author(s) at UniBasel** [Wangmo, Tenzin](#) ; [Ienca, Marcello](#) ; [Kressig, Reto W.](#) ; [Lipps, Mirjam](#) ;**Year** 2019**Title** Ethical concerns with the use of intelligent assistive technology: findings from a qualitative study with professional stakeholders**Journal** BMC Medical Ethics**Volume** 20**Number** 1**Pages / Article-Number** 98**Keywords** Artificial intelligence; Assistive technology; Autonomy; Care; Dementia; Ethics; Justice; Robotics

Advances in artificial intelligence (AI), robotics and wearable computing are creating novel technological opportunities for mitigating the global burden of population ageing and improving the quality of care for older adults with dementia and/or age-related disability. Intelligent assistive technology (IAT) is the umbrella term defining this ever-evolving spectrum of intelligent applications for the older and disabled population. However, the implementation of IATs has been observed to be sub-optimal due to a number of barriers in the translation of novel applications from the designing labs to the bedside. Furthermore, since these technologies are designed to be used by vulnerable individuals with age- and multi-morbidity-related frailty and cognitive disability, they are perceived to raise important ethical challenges, especially when they involve machine intelligence, collect sensitive data or operate in close proximity to the human body. Thus, the goal of this paper is to explore and assess the ethical issues that professional stakeholders perceive in the development and use of IATs in elderly and dementia care.; We conducted a multi-site study involving semi-structured qualitative interviews with researchers and health professionals. We analyzed the interview data using a descriptive thematic analysis to inductively explore relevant ethical challenges.; Our findings indicate that professional stakeholders find issues of patient autonomy and informed consent, quality of data management, distributive justice and human contact as ethical priorities. Divergences emerged in relation to how these ethical issues are interpreted, how conflicts between different ethical principles are resolved and what solutions should be implemented to overcome current challenges.; Our findings indicate a general agreement among professional stakeholders on the ethical promises and challenges raised by the use of IATs among older and disabled users. Yet, notable divergences persist regarding how these ethical challenges can be overcome and what strategies should be implemented for the safe and effective implementation of IATs. These findings provide technology developers with useful information about unmet ethical needs. Study results may guide policy makers with firsthand information from relevant stakeholders about possible solutions for ethically-aligned technology governance.

Publisher BioMed Central**ISSN/ISBN** 1472-6939**edoc-URL** <https://edoc.unibas.ch/73806/>**Full Text on edoc** No;**Digital Object Identifier DOI** 10.1186/s12910-019-0437-z**PubMed ID** <http://www.ncbi.nlm.nih.gov/pubmed/31856798>

ISI-Number MEDLINE:31856798
Document type (ISI) Journal Article