

Ethical implications of integrating new technologies in clinical routine: trust and autonomy in the realm of personalised medicine

Lea Wilken, M.A. and Prof. Dr. Sabine Wöhlke
lea.wilken@haw-hamburg.de

Stracyfic – the research network:

UNIVERSITÄTSMEDIZIN GÖTTINGEN : **UMG**

MHH Medizinische Hochschule Hannover

UCL Université catholique de Louvain

INEM INSTITUT NECKER ENFANTS MALADES CENTRE DE MÉDECINE MOLÉCULAIRE



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✓ development of a novel diagnostic test (sweat secretion test) for the diagnosis of the individual severity of cystic fibrosis

Objectives

- (1) identify and analyse ethical challenges in dealing with the new diagnostic tool;
- (2) determine cultural differences;
- (3) better understanding of medical ethical standards applied in practice (focus: trust and autonomy);
- (4) provide best practice examples as training material.

Research question

What ethical implications arise when dealing with new technological artifacts, especially diagnostic tools, in the everyday medical lives of patients and physicians?

Ethical relevance

Ethical challenges (Budín-Ljøsne et al. 2016; Salari and Larjani 2017; Sauerbrei et al 2023; Samerski 2019; Myskia et al. 2022; Williams 2020)

a) of personalised medicine

- public vs. personal health
- achieving equality / equal opportunities
- preventing stigmatisation and discrimination
- protecting individual autonomy and privacy
- creating an environment of trust

b) of technological innovations in medical practice

- changes of the physician-patient relationship regarding
 - patient autonomy
 - transparency of decision-making
 - trust dynamics



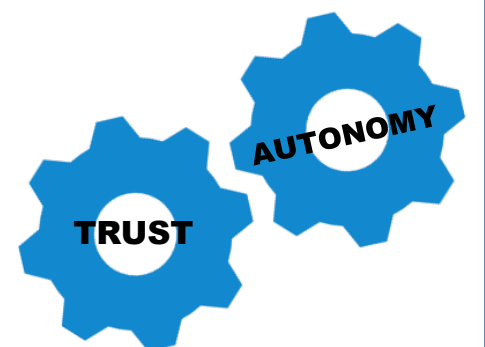
Ethical relevance (Beauchamp and Childress 2001; Myskia et al. 2022, McMillan 2022; Eyal 2014; Steinfath et al. 2016; Locke 1690 and Hobbes 1651)

a) of autonomy

- central ethical principle of medical ethics
- refers to: self-determination, independence, self-responsibility and the ability to act
- not only a right, but also a duty

b) of trust

- fundamental value of medical ethics
- society and medical systems cannot function without trust
- trust between physicians and patients (Lockean sense)
- technical trust, social trust and self-trust



autonomy helps patients to trust their physicians

cognitive trust requires knowledge and understanding, which is the duty of autonomy

exercising autonomy requires a trustworthy infrastructure

autonomy and trust are mutually dependent

they enable effective communications and thus promote medical treatment

Methodological approach

Empirical - ethical study: A mixed-method approach (Schneider et al. 2023)

✓ working together with  : support with translations and interview questions

(1) qualitative empirical-ethical study:

- 25 semi-structured interviews with patients, physicians and technical assistants (5 in each of the partner clinics) (Hopf 2012; Froschauer and Lueger 2003)
- principle of openness and narrative generating function (Flick 2003)
- expectations and attitudes of patients, physicians and technical assistants are analyzed (deductively/inductively) by category and coding system using MAXQDA software (Kuckartz and Rädiker 2022)

(2) quantitative study: online survey

- developed from the results of the qualitative study
- short online survey (6 -10 min.) for patients

Output

➤ shaping the triangular relationship between patient, physician and technological innovation in such a way that ethical challenges are taken into account, so that individual autonomy and a trustful environment are strengthened in order to promote medical treatment through an ethical implementation of the novel diagnostic test

Literature

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