Expectations of patients for the implementation of new nursing technology

Ronny Klawunn, M. Sc. | Prof. Dr. Marie-Luise Diersk

Institute of Epidemiology, Social Medicine, and Health System Research; Hannover Medical School, Hannover, Germany

Background

New technologies are assumed to support professional nurses and improve care quality for patients (Krick et al. 2019). This has implications for patients since they are on the one hand vulnerable due to their health impairment and on the other hand become new users or beneficiaries of nursing technology. That means new demands and challenges for them (Rouleau et al. 2017).

Rational and research question

We know little about patients’ perspectives on emerging technologies in care delivery. In the ‘Centre for Implementing Nursing Care Innovations’ study, hospital patients from a trauma surgical ward were interviewed regarding the

What are patients’ expectations and concerns for the implementation of new technology into care delivery?

Methods

Between August 2019 and February 2020, 17 semi-structured interviews were conducted with patients from a German university hospital. To stimulate a response, eight technology were presented to study participants by video and text (Törrönen 2002). Interviews were recorded, transcribed and coded using evaluative, qualitative content analysis (Kuckartz 2018).

Results

Continuum of anticipated effects

• Possible risk to health
  • Negative social or emotional implications (i.e. loss of autonomy, shame, loneliness)
  • Concerns regarding elderly patients (lack of skills to operate technology, lack of acceptance)

• Replacement of nurses by machines
  • Fear for loss of jobs
  • Increased work pressure due to machine maintenance and novel forms of tasks (incident detection and immediate reaction)

• Quantification of human life
  • Possible surveillance of patients and nurses
  • Fewer contacts between nurses and patients

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• Improvement for health and well-being
  • Improvement of patient experience in the hospital (relaxation, distraction etc.)

• Physical relief and improvement of well-being
  • Better work organization and time relief
  • Educational benefits

• Safety and quality improvement for care provision of patients
  • Informational self-determination

Strategies to mitigate negative effects and foster positive effects while using technology

Technical malfunctions and unintended consequences of technology use

Implication

Patients:

• identify a spectrum of possible implementation effects for themselves and other patients, for care professionals, and toward nursing care delivery,

• critically weigh up opportunities and challenge,

• deriving at strategies to foster positive effects and

• are worried about possible negative unintended consequences of technology implementation.

Patients do not envision the uptake of new technologies in care delivery as fundamentally positive or negative development. Rather they see a positive potential for change in care delivery and support for caretakers by technology uptake that must be enabled by comprehensive implementation strategies. Results of this study can help develop patient-centered implementation strategies.

Contact | Ronny Klawunn, klawunn.ronny@mh-hannover.de

Literature | Krick, Tobias, Kai Huter, Dominik Domhoff, Annika Schrödt, Heinz Rothgang, und Karl Wolf-Ostermann. 2019. Digital technology and nursing care: a scoping review on acceptance, effectiveness and efficiency studies of informal and formal care technologies. BMC health services research 19 (1): 400. Kuckartz, Udo. 2018. Qualitative Inhaltsanalyse: Methoden, Praxis, Computergestützt. 4. Aufl., Wiesbaden. Basel: Beltz Juventa. Rouleau, Geneviève, Marie-Pierre Gagnon, José Cóte, Julie Payne-Gagnon, Emilie Hudson, and Carl-André Dubois. 2017. Impact of Information and Communication Technologies on Nursing Care: Results of an Overview of Systematic Reviews. Journal of medical internet research 19 (4): e122. Törrönen, Jukka. 2002. Semiotic theory on qualitative interviewing using stimulus texts. Qualitative Research 2 (3): 343–362.