TOWARDS A UNIFIED UNDERSTANDING OF eHEALTH AND RELATED TERMS - PROPOSAL OF A CONSOLIDATED TERMINOLOGICAL BASIS

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**Background: Potential of eHealth**

1. **Increasing digitization** in healthcare and rise of concepts like eHealth or telemedicine
2. **High potential** of eHealth and related concepts to improve healthcare
3. **Inconsistent use** of connected terms, resulting in deficient communication impeding the adaption

**Aim & Method: Reviewing Literature**

Consolidated view of terms and relations as an ontology to facilitate communication

1. **Literature study** to identify relevant definitions
2. **Introduction and explanation** of all terms to achieve a broad understanding
3. **Derivation of relations**

**Results: Terminological Ontology**

- **Telematics**
  - Enables bridging of distance (Sood et al., 2007; EC, 2015)
- **ICT**
  - Needs (Hagen, 2017)
- **Digitization**
  - Improves (Alpay and Heathfield, 1997)
- **eHealth**
  - Subclass of (Nacinovich, 2011)
- **mHealth**
  - Subclass of (Sood et al., 2007; EC, 2015)
- **Telehealth**
  - Subclass of (Sood et al., 2007; WHO, 2010)
- **Telemedicine**
  - Subclass of (Sood et al., 2007; EC, 2015)

**Definition of Terms – Extract**

- **eHealth**
  - “tools and services [...] that can improve prevention, diagnosis, treatment, monitoring and management” (EC, 2015) with use of information and communication technology (ICT)

- **Telehealth**
  - Healthcare services delivered over distance by all existing healthcare providers with use of ICT (WHO, 2010)

- **Telemedicine**
  - Healthcare services delivered over distance by physicians with use of ICT (Sood et al., 2007)

**Delimitation of Terms – Extract**

<table>
<thead>
<tr>
<th>Delimitation</th>
<th>eHealth</th>
<th>mHealth</th>
<th>Telehealth</th>
<th>Telemedicine</th>
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<tbody>
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<td>x</td>
<td>x</td>
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<td>x</td>
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<tr>
<td>Mobile</td>
<td>x</td>
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<td>x</td>
<td>x</td>
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<td>x</td>
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<tr>
<td>Professional-centered</td>
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</table>

**Conclusion: Achieving a Better Understanding**

Next steps:
1. **Connect** technological focussed ontology to “real life” (systematic review for terms), e.g. care models with related participants (see grey box in figure)
2. **Verify possible extensions** of proposed ontology (systematic review for terms)

The presented work is intended to further enhance discussion and thereby improve quality of telemedicine research and innovation.


The research group “Care Saxony” is funded by the European Social Fund (ESF) and the Free State of Saxony.