

Mobilgeräte und Apps im medizinischen Kontext

Mobile Devices and Apps in a Medical Context

Towards Digital Health – Delivering safe information on medicinal products in Europe
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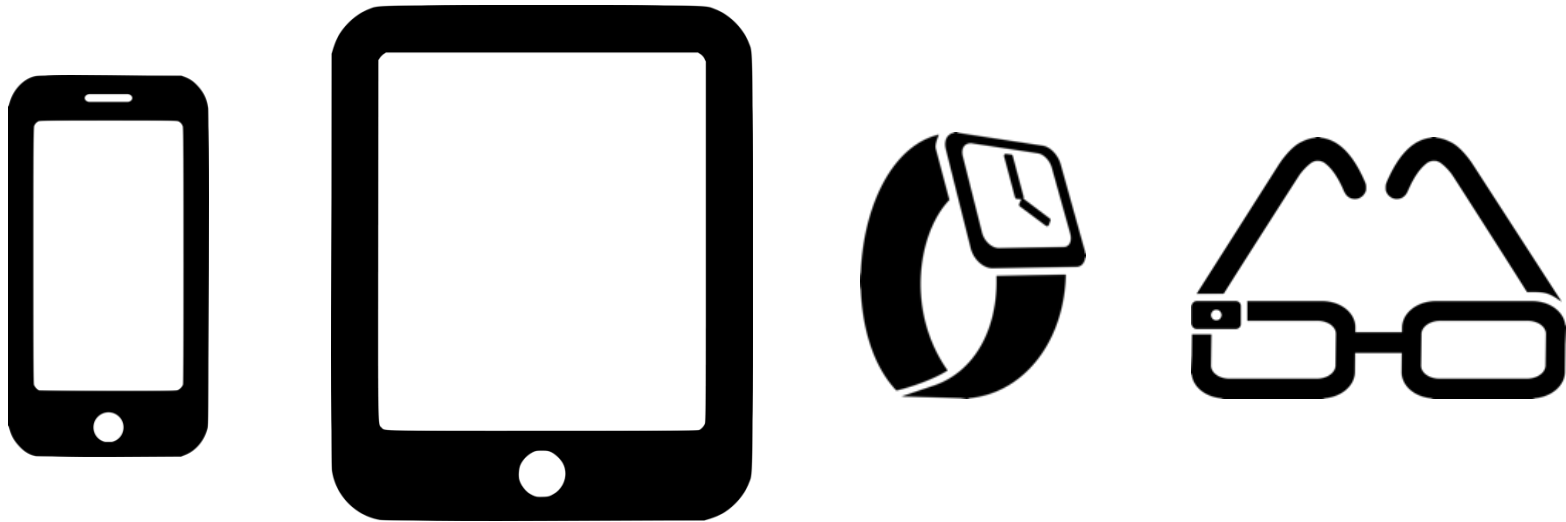
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What are mobile devices?

Mobile devices are mobile computer based systems of varying sizes and form factors with a specific ergonomic design. They offer different input and output functionalities and also include various wireless technologies for connecting with other devices. They are controlled by software, the so-called apps.



What is an app?

An app (short for "application") is software specifically adapted to mobile devices, which is commonly distributed via operating system specific sales platforms, the so-called "app stores". They can be acquired and downloaded and run directly from the mobile devices.

Why is this combination interesting?

- Personalization
- Context related modeling
- Utilisation of internal and external sensors
- (Mobile) activity recognition
- Recognition of special events
- Identification of the exact location and identity
- Communication / data transfer
- Planning tool
- Wide use and good acceptance of the technology
- Already existing and reliable infrastructure
- Good ergonomics

Adapted from Rashidi P, Mihailidis A. A Survey on Ambient-Assisted Living Tools for Older Adults. IEEE Journal of Biomedical and Health Informatics 2013;17(3):579-590

Application areas for mobile health (mhealth)

- Communication
- Information, promoting awareness, providing education
- Remote monitoring of disease progression, general health and activity monitoring
- Support for making diagnoses and providing therapies
- Case management
- Research

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Who uses mhealth?

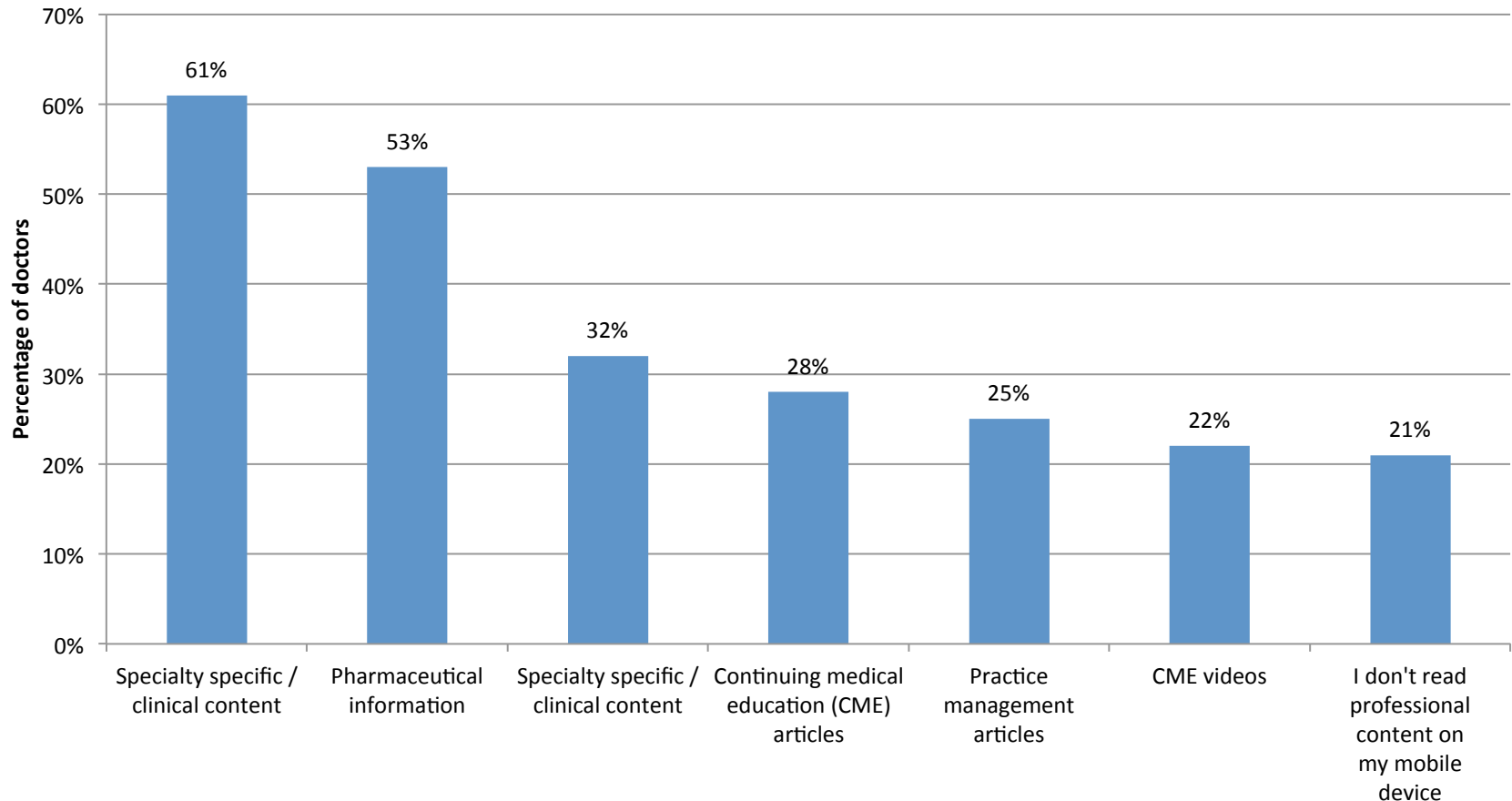
- **Healthy citizens** who are interested in obtaining information about their body as well as health topics in general and would like to maintain their health
- **Patients with an acute illness** who are looking for information for a specific problem
- **(Chronically sick)** patients, who already know their diagnosis and would like to obtain further information
- **Professionals:** Doctors, nursing staff and other health care professionals

Examples of using mhealth in a pharmaceutical context

- Search for health related information: Diagnostics and (drug based) therapy
- Effects and side effects of drugs
- Toxicological effects
- Management of medication / patient diaries
- Finding information about clinical studies, recruitment for clinical studies
- Looking for pharmacies in the area

Mobile Information Search: What Do Doctors Look For?

Percentage of physicians in the United States based on their use of mobile devices for viewing leading types of health-related content, as of January 2015



Statista, 2015

Conclusion: Situation and Chances

- Smartphones, tablet PCs and apps are widely available, popular and are being used by the general public
- The range of available devices and content is steadily growing
- Healthy persons as well patient and medical staff already use this versatile technology
- Mobile technologies build bridges between people and help with reducing access barriers
 - Age
 - Education
 - Language
 - Physical abilities
 - Cognitive skills

Conclusion: Requirements

- Information provided in a health context must be trustworthy
- Quick and easy access, independent of time and location and with any device
- Access independent of education, age, gender, status, physical and mental health
- Full exploitation of the technical potential to enhance the cooperation and exchange between all stakeholders
- At the same time, maximum protection of users' interest (data protection, protection of privacy and identity)