

Cybersecurity in eHealth - United States

Electronic Records: Adoption, Advantages, Types and Risks

ADOPTION

- **Adoption:** as of 2017, nearly 86% of office-based physicians in the US had adopted any EHR, and nearly 80% had adopted a certified EHR*
- **There is a range in the level of implementation.** The HIMSS Analytics Database shows the eight stages of adoption in their United States EMR Adoption Model. Stage 0 implies "All three ancillaries not installed," while in Stage 7 there is a shift to complete EMR.
- Although it can vary depending of the complexity and requirements, it takes **two to three years to implement electronic medical records.**

*Source: U.S. state: National Electronic Health Records Survey, 2017

ADVANTAGES

- Less paperwork, easy access to your medical records, better care coordination among providers, faster and more accurate prescriptions, fewer unnecessary tests and greater control over your health

ELECTRONIC RECORDS TYPES

- **Electronic Health Record (EHR):** Health-related information on an individual that can be created, managed and consulted by authorized clinicians and staff **across more than one healthcare organization** and conforms to nationally recognized interoperability standards
- **Electronic Medical Record (EMR):** Electronic record of health-related information on an individual created, gathered, managed and consulted by authorized clinicians and staff **within one healthcare organization**
- **Personal Health Record (PHR):** Electronic record of health-related information on an individual that be drawn from multiple sources **while being managed, shared and controlled by the individual.** The PHR conforms to nationally recognized interoperability standards

THREATS & RISKS

- Electronic health records, the healthcare infrastructure and individual medical devices **are all targets for cyber criminals**
- The major risks are due to **historic lack of investment in cybersecurity** and **vulnerabilities in existing technology**
- The top cybersecurity threats to EHR are: **Phishing Attacks, Malware & Ransomware, Encryption Blind Spots, Cloud Threats and Lack of Cybersecurity Awareness in healthcare facilities staff**

