

Overview About Cybersecurity in Healthcare

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Abstract :

The huge progress of technology is making our life much easier together with advanced services but at the same time it is joint with threats especially that we are facing the governance of data. Hence data protection is mandatory to enable digital safety exploitation. Therefore, following the great increase of online & remote medical tasks Patient safety is at risk. There is a paradox with technology progress and patient safety.

Cybersecurity in Healthcare Best practices

Cybersecurity is a requirement to benefit for digitalization and redirect it for a value creator. It is about selecting the much safest technology solution. Lack of cybersecurity practices and awareness leads to complex problems related to financial operations especially with the rise of ransomware as a service. In addition, lack of security and data protection at industries is harmful for reputation especially with the Variability of cybercrimes sources. Healthcare organization protection is mandatory in the digital age as it is related to human life.

Data security Cyberattacks could impact real time healthcare operations by disrupting them. In addition, patients' data is the focus of cybercriminals. For this cybersecurity ensuring in healthcare companies is a must have which is based on a specific KPIs such as availability, confidentiality and integrity. Proactive detection is a key for patient protection and ehealth improvement. In other side, healthcare sector is at risk with the emergence Remote medical actions based on IoT devices. The exploitation of Internet of Things technology corresponding to Internet of Medical Things (IoMT) requiring data storage in the Cloud which is the focus of attacks.

The top trends of cyberattacks issues are related to overall supply chain attacks , DDOS threats , phishing, ransomware, DNS redirectivity. Cyberattacks increase with the rise of generative artificial intelligence leading to misinformation.

Specific practices are required to benefit from innovation without making others' life at threat. It starts by cybersecurity culture development requiring training and rising awareness of health staff about the importance of data protection in all healthcare centers. Next, it is about reviewing the connectivity tools which helps to review the cybersecurity strategy such that endpoints protection is a requirement.

Digital healthcare operations users should follow a zero trust for any healthcare operation and application. Following the revolution of artificial intelligence we need to review the adaptability of legacy cybersecurity tools. Restrict the access to digital health operations from devices equipped with specific security tools. Other important tasks of cybersecurity should be followed such as Firewall continuous configuration together with Virtual Private Network (VPN) exploitation, continuous update of passwords and adopt multi factor authentication for any access, check any link before clicking in it, awareness and capacity building is a key to ensure patients' safety, regular update of healthcare software tools, track and control of healthcare staff activities, test any digital application before deployment, continuous backup and restoration of patients' data, collaboration between different players is required about regulations and policies statement, required

collaboration with IT staff, collaboration with international healthcare companies to be informed & updated about cybersecurity incidents, threat hunting and threat intelligence application for Proactive threat detection in which data collection is improved with the integration of artificial intelligence and machine learning. New trends of cybersecurity methods enabling value creation for digital companies in general and healthcare industries in particular which is related to the exploitation of blockchain for encryption, Artificial Intelligence (AI) and Machine Learning (ML) for data collection and proactive threat detection. IT infrastructure segmentation Get inspiration from regulations stated by US organizations such as health insurance portability and accountability act (HIPAA).