

It is worth thinking out of the box on this - for example, one use of such technology is to create wireless-enabled pacemakers. Why would hospitals do that? Does that type of application make any difference to your DREAD analysis and mitigations?"

Why hospital use wireless technology:

1. Location: Patients can be connected remotely while the specialist cannot meet them face to face
2. Access: medical professionals can check patients' data in real time, anywhere
3. Effective communication: Medical professionals can track data from any equipment, from MRI scans and other monitoring device, remotely and effectively, but do not need to visit the medical lab (Samsung, 2021).

Wireless application will make difference to DREAD analysis, comparing with the wired network:

Damage Potential: Compare with wired network, wireless network has higher risk on information disclosure as the hackers can capture the data packets via the air.

Reproducible: Wireless network can reproduce the attack easier than wired once the encryption methodology is cracked unless the hospital deploys more advanced authentication and encryption method.

Exploitability: Wireless network is easier to be exploit than wired network, also more tools to crack the Wi-Fi encryption. Examples are Aircrack-NG, Wi-Fi Password Hacker Pro, etc (alltop9, 2021)

Affected Users: Wireless network should contain more affected users than wired network as everyone can be connected anywhere, while a wired network you need to connect a device on a fixed location.

Discoverability: Wireless network can be discovered easily, as it needs to broadcast its SSID; while a wired network does not need to do so (EC Council, 2020)

References:

Samsung (2018) *3 Key Benefits of Wi-Fi Usage in Hospitals*, Available at: <https://insights.samsung.com/2018/06/01/3-key-benefits-of-wi-fi-usage-in-hospitals/> (Accessed: 12 May 2021).

allTop9 (2021) *7 Best Wi-Fi Password Cracker Software Tools for Windows*, Available at: <https://www.alltop9.com/wifi-password-cracker-software-windows#:~:text=7%20Best%20WiFi%20Password%20Cracker%20Software%20Tools%20for,Wi-Fi%20password%20cracker%20software.%20...%20More%20items...%20> (Accessed: 12 May 2021).

EC-Council (2020) *DREAD THREAT MODELING: AN INTRODUCTION TO QUALITATIVE AND QUANTITATIVE RISK ANALYSIS*, Available at: <https://blog.eccouncil.org/dread-threat-modeling-an-introduction-to-qualitative-and-quantitative-risk-analysis/> (Accessed: 12 May 2021).