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Summary Post

by Yousif Ali Karam Yousif Almaazmi - Thursday, 14 August 2025, 4:00 PM

In the first post, I described the ACM case study Medical Implant Risk Analysis, involving a fictional company, Corazon, that manufactures heart-health monitoring implants. Corazon applied safe measures, including cryptography, encryption of data storage, and a bug-bounty program. When an outside researcher reported a possible vulnerability to the device's security to the company, Corazon engineers considered the threat low (Cano-Martínez et al., 2022). However, the company took a transparent approach, worked alongside the security community, and did not violate any ACM ethical principles, such as avoiding harm, maintaining privacy, and conducting a proper risk analysis. I also pointed out that although it is necessary to be in line with the legal requirements of various laws, such as the FDA and EU MDR, there is a need to be ethically responsible, thereby surpassing those requirements (Tallapaneni et al., 2022). Inability to handle vulnerabilities, even minor ones, may damage the reputation and trust of the company in its devices.

Julius agreed, stating that Corazon was acting in line with many of the ACM Code principles, including serving and improving human welfare (Principle 1.1), collaborating with regulators (Principle 2.3), and cryptographic protocols and vulnerability disclosure (Principles 2.6 and 2.9). He also highlighted reputational risk, which may be used to induce financial loss for the company. Dalbir followed this by stating that what Corazon did was a fine example of technical diligence and ethical responsibility. He also talked about the significance of being transparent and involving oneself with the security community, which corresponds to the philosophies of the ACM and BCS regarding the population's interests and expertise in the field that one practices (Vallet-Regí et al., 2024). Another question raised by Dalbir was whether low-probability threats will always have to be considered or triage will be ethically justified in cases where resources are scarce.

On the whole, the discussion supported the necessity of companies moving beyond legal compliance by prioritizing proactive and values-based decision-making to preserve the faith of the population and the safety of patients.

References

Cano-Martínez, A., Rubio-Ruiz, M. E., & Guarner-Lans, V. (2022). Evolutionary cardiology and experimental research. *Archivos de cardiología de México, 92*(3), 390-398. Available at: https://doi.org/10.24875/acm.210002751(Accessed 13 August 2025).

Tallapaneni, V., Bhaskaran, M., Karri, V. V. S. R., & Parvathaneni, M. (2022). The role of computers and ethics in pharmaceutical research. *NEUROQUANTOLOGY, 20*(11), 7987-8001. Available at: https://www.researchgate.net/profile/Vyshnavi-Tallapaneni-2/publication/366672830_The_Role_of_Computers_and_Ethics_in_Pharmaceutical_Research/links/65ef5dccaaf8d548dcc33809/The-Role-of_Computers_and_Ethics_in_Pharmaceutical_Research.pdf (Accessed 13 August 2025).

Vallet-Regí, M., Alarcón, A. D., Barrena, E. G., Planell, J. A., Silva, J., & Bouza, E. (2024). New materials and complications of prostheses in humans: Situation in Spain. *Revista Española de Quimioterapia, 37*(5), 369. Available at: https://doi.org/10.37201/req/039.2024 (Accessed 13 August 2025).

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