Discussion Topic: Codes of Ethics and Professional Conduct

Response to peers

Initial post by Rory Maclean - Monday, 6 May 2024, 2:03 PM

This post focuses on the “Case: Medical Implant Risk Analysis” case study (Association for Computing Machinery, 2018). Corazón's approach to medical technology aligns with several principles of the British Computer Society (BCS) Code of Conduct (British Computer Society, ND). With the BCS's emphasis on the public interest (Principle 1), Corazón has shown a commitment to public health and security, supported by good product design. Initiatives like providing free access to certain groups aligns with the BCS's aim for equal access to IT benefits (Principle 1d). This aligns with Association for Computing Machinery (ACM) Principle 1.1 (Association for Computing Machinery, ND). BCS Principle 2 is professional competence and integrity. Corazón works within their professional competence (2a), by adhering to regulatory standards and using standard cryptographic algorithms. This aligns with ACM Principle 2.3. The open bug bounty program is an open approach to ongoing improvement (2c), aligning with ACM Principle 2.9 - a proactive approach to identifying potential vulnerabilities. The company has a duty to the relevant authority (Principle 3) and need to use professional judgment carefully (3a). They responded promptly to the vulnerability disclosure which showed professional responsibility (3c). Finally, the company is shown to promote professional standards (Principle 4). Participation in industry conferences contributes maintaining high standards in the industry (4b, 4e).

Response by Alex Mutebe - Saturday, 4 May 2024, 2:36 PM

Hello Rory, indeed, as your submission points out, Corazón's actions are illustrations of ethical conduct and are in accordance to both ACM and BCS principles, however I think you could elaborate more on the legal and social issues. The legal and social landscape surrounding medical implants requires ongoing vigilance and adaptation. Balancing innovation, safety, and equitable access remains a collective responsibility (Droste, 2018).

It is unclear if Corazón adequately disclosed risks, limitations, and data transmission, particularly during informed consent talks, in reference to the company's open bug bounty program, which aims to assist in discovering unidentified vulnerabilities. Dinallo (2021) argues that patient-provider relationships may be affected by diminished trust as a result of problems with cybersecurity. To prevent this, Corazón needs to give moral values a serious thought when designing implanted technology. Ethical design ensures that technology aligns with societal values and respects individual rights (Droste et al.,2021).

Corazón's cooperation with charitable organizations to offer patients who fall below the poverty line free or reduced access shows a dedication to equitable healthcare. Do you believe that in spite of this, achieving equitable access still presents a larger social challenge, Rory?

References:

Droste, W., Hoffmann, P., Olze, H., Kneist, W., Krüger, T., Rupp, R. and Ruta, M., 2018. Interactive implants: ethical, legal and social implications. Current Directions in Biomedical Engineering, 4(1), pp.13-16.

Dinallo, R., 2021. AMA Code of Medical Ethics' Opinions Related to Implantable Devices. Available from: AMA Code of Medical Ethics' Opinions Related to Implantable Devices | Journal of Ethics | American Medical Association (ama-assn.org) [Accessed on 10th May 2024]

Rory, M. (2024) Collaborative Discussion 1: Medical Implant Risk Analysis. Available from: https://www.my-course.co.uk/mod/forum/discuss.php?d=228999 [Accessed 10 May 2024]

Initial post by Sahr Solar Sumana - Monday, 6 May 2024, 11:20 PM

This focal point of this post is on the case of Medical Implant Risk Analysis and Corazón's implantable heart monitoring device (ACM, 2021). Corazón's ethics based around their heart monitoring device aligned with the British Computer Society's (BCS), (2022) principle of public interest where Corazón have practiced this by gaining approval from medical device regulation agencies and worked with charities to provide access to patients below the poverty line (ACM, 2021). Seeking approval from regulators enforced the idea that Corazón are accountable and compliant with regulatory bodies, as well as transparent with all interested stakeholders (Corrêa et al., 2023). Corazón also aligned with the third and fourth rules of the BCS code of conduct; duty to relevant authority and duty to the profession (BCS, 2022). Although an independent researcher discovered a vulnerability in the wireless connectivity of the medical implant, Corazón consulted with the researcher to conclude that the risk of harm was negligible (ACM, 2021). This presented a duty to the profession by having professional standards upheld and maintained by the company without engaging in any controversial practices, and instead co-operating with stakeholders that have made claims about the medical implant, this also relates to the duty to relevant authority as responsibilities were carried out with due diligence and care.

Response by Alex Mutebe - Tuesday, 7 May 2024, 3:37 PM

According to Sahr (2024), Corazón hired a researcher to help with ongoing improvement by searching for potential vulnerabilities in the medical implant's wireless connectivity. In my view, Corazón complied with professional standards, specifically BCS 2.4, by prioritizing security over controversies (BCS, 2022). Even better, according to Pycroft & Aziz (2019), Corazón's developers could have improved patient safety and confidence by developing more reliable and secure wireless technology for their life-saving gadget, Sahr further notes that Corazón requested permission from the appropriate authorities, an act that demonstrates the adherence to BCS Code of Conduct Principle 2.3. Obtaining permission from medical device regulation bodies guarantees legal conformity in terms of the impact on society and regulations (Melvin & Torre, 2019).

References:

BCS. (2022). CODE OF CONDUCT FOR BCS MEMBERS. Available from https://www.bcs.org/media/2211/bcs-code-of-conduct.pdf [Accessed 07 May 2024].

Melvin, T. and Torre, M., 2019. New medical device regulations: the regulator's view. Efort Open Reviews, 4(6), pp.351-356.

Pycroft, L. and Aziz, T.Z., 2018. Security of implantable medical devices with wireless connections: The dangers of cyber-attacks. Expert Review of Medical Devices, 15(6), pp.403-406.

Initial post by Maria Ingold - Friday, 3 May 2024, 11:58 PM

Comparing the two codes, the ACM uses the word “ethic”, while the BCS does not. Furthermore, ACM seems more concerned with psychological safety, professional leadership, and respect for the individual, while BCS appears to focus more on legal compliance. For instance, the BCS discrimination wording appears mostly designed to comply with the UK’s 2010 Equality Act (Wadham, 2021). However, as the ACM is a global organisation, it makes sense that its wording is more general. Psychological safety at work is key to facilitating performance, goal achievement, successful teamwork, knowledge sharing, and innovation (Edmondson & Bransby, 2023). While the abusive behaviour of the team lead violates ethical and professional principles, the enabling behaviour of the team manager perpetuates it. Bancroft (2003) describes abuse as coming from entitlement, control, and ownership, and notes that changing abusive behaviour requires calling it out by peers and superiors, as well as being held accountable with consequences. As raised by the ACM, having and enforcing ethical policies would help the team manager to enable psychological safety.

Response by Alex Mutebe - Wednesday, 15 May 2024, 1:46 PM

Hi Maria, In particular, in the areas of public interest, professional competence and integrity, duty to appropriate authorities, and duty to the profession, TABLE 1 clearly demonstrates how Max's actions and the team manager Jean's response contravene both the BCS and ACM Code of Conduct. In order to preserve the integrity and confidence of the profession, it is imperative that all IT professionals abide by the code of conduct, as implied in your final paragraph (Maria, 2024). It is important to note that the BCS Code of Conduct has stricter requirements and is enforced by disciplinary action, which can lead to membership expulsion (BCS, 2022). According to McNamara et al. (2018), explicitly instructing IT professionals to consider the

code of ethics in their decision making has had no observed effect. Hainadine (2024) makes the case that laws that are both legally obligatory and in accordance with the ACM and BCS standards of conduct ought to be strengthened. In this case study, research should be done to establish if there are other laws that Diane can especially employ in the UK to obtain justice without going against the BCS principles. Maria, do you believe that the BCS code of conduct is sufficient to ensure that UK IT professionals follow it?

References:

ACM (2018). ACM Code of Ethics and Professional Conduct. [online] Association for Computing Machinery. Available from: https://www.acm.org/code-of-ethics [Accessed 13 May 2024].

BCS. (2022). CODE OF CONDUCT FOR BCS MEMBERS. Available from https://www.bcs.org/media/2211/bcs-code-of-conduct.pdf [Accessed 07 May 2024].

Hainadine, C. (2024) Collaborative Discussion 1: Malware Disruption. Available from: https://www.my-course.co.uk/mod/forum/discuss.php?d=228186 [Accessed 15 May 2024].