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Ethical implications of using AI in healthcare research

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The Horizon Europe project irecs focuses on AI in healthcare as one of four new and emerging technologies. Through various scientific methods, such as a literature analysis, consultation with experts, a leadership roundtable and a focus group, several fundamental ethical challenges were identified as well as problems in review processes. [1] The identified ethical challenges include data-related issues such as privacy, security, bias, accuracy, ownership, control-related issues and informed consent. Other concerns that are specifically associated with the use of AI, involve transparency and explainability regarding AI algorithms and learning mechanisms. Additionally, impacted social values and related ethical and legal issues such as trust, justice and fairness as well as autonomy, accessibility and inclusivity, human dignity and environmental impact, were highlighted.

A major issue is the lack of expertise among REC members to assess AI-related research adequately, which can lead to overly cautious evaluations or the overlooking of essential ethical considerations. Such gaps threaten to undermine public trust and the credibility of research institutions [2].

Furthermore, current EU guidelines for assessing AI in healthcare research are often non-binding and only provide recommendations. This results in ethical and regulatory grey zones which can lead to studies involving AI not being assessed by an ethics committee.

To address these issues, it was recommended that RECs should include AI experts. These experts could help in reviewing research proposals involving the use of AI and serve as advisory bodies for policymakers. Uniform and coherent guidelines for AI in healthcare across EU member states were suggested. These guidelines should be reviewed regularly as AI technology advances rapidly. Comprehensive and mandatory training for ethics reviewers on the application of EU guidelines was also recommended [3].

To improve trust, laypeople could be involved in RECs. Moreover, RECs could be engaged in the ethics by design process of projects at the development stage, helping researchers reflect on and evaluate ethical considerations. Their role could continue throughout and beyond the research process, allowing them to respond to emerging ethical challenges.[4].

Based on these findings, irecs has developed training material to help REC members, ethics experts and students to learn about the technology basics and the ethical challenges surrounding research with the help of AI in healthcare. These materials will be partly presented in the presentation.

[1], [3], [4] Aucouturier, Etienne and Grinbaum, Alexei, D.2.2: Recommendations to address ethical challenges from research in new technologies. Horizon Europe irecs project (2023).

[2] Ferretti, Agata, Ienca, Marcello, Sheehan, Mark et al. Ethics review of big data research: What should stay and what should be reformed? BMC Medical Ethics 22 (1), 51 (2021).