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Submission Title: Ethical and Privacy Responsibilities in Computer Vision (Automating delirium severity in the ICU)

SUBMISSION PREVIEW: ETHICAL AND PRIVACY RESPONSIBILITIES IN COMPUTER VISION (AUTOMATING DELIRIUM SEVERITY IN THE ICU)

[Ethical and Privacy Responsibilities in Computer Vision \(Automating delirium severity in the ICU\)](#)

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Case Report Content

INTRODUCTION

Delirium is an acute brain dysfunction affecting 20-70% of ICU patients, linked to poor outcomes. Its fluctuating nature and reliance on bedside assessments like the Confusion Assessment Method-ICU present diagnostic challenges. To enhance early detection and monitoring, we are developing an Artificial Intelligence (AI) algorithm using ambient sensor data from continuous image capture. This includes analyzing facial expressions, behaviors, and movement patterns associated with delirium. This approach raises ethical concerns, such as potential bias, patient autonomy, informed consent, privacy issues, and legislative variations.

DESCRIPTION

This report addresses the ethical challenges in using AI in our trial and proposes solutions. The principle of human-centered design remained a priority. Bias, equity, and fairness were ensured by training a diverse team in principles of diversity, inclusion, and equity. Transparency and explainability were maintained by making the study understandable to healthcare providers, patients, and regulators pre-recruitment. To ensure clear communication, non-English speaking participants were excluded. Blind screening of patients for inclusion, data collection, and analysis were key components. Privacy and security were ensured through stringent data protection measures. Accountability was established by clearly defining responsibilities and ensuring relevant outcomes. Regulatory compliance was achieved by adhering to strict study protocols as defined by the Institutional Review Board (IRB) and standardized questionnaires. Ethical governance was adhered to by following IRB guidelines. Well-being and autonomy were ensured by voluntary enrollment and informed consent.

DISCUSSION

AI in ICUs can improve patient outcomes by early detection of illnesses like delirium. To protect patient rights and public confidence, ethical and privacy concerns must be balanced to ensure impartial, transparent, and comprehensible algorithms with secure data management. As stakeholders we have integrated these principles to mitigate risks and maximize the technology's potential benefits in clinical settings.

Categories

General Classification

Clinical

Patient Type

Adult

Category

Ethics and End of Life

Category Alternate 1

Research

Category Alternate 2

Quality & Patient Safety

Keywords

delirium

ethics and end of life

quality and patient safety

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I agree

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