Resolution 503

Brought to the AMA House of Delegates by the Colorado Delegation

Safeguarding Neural Data Collected by Neurotechnologies

Adopted by Consensus, AMA House of Delegates, June 11, 2025

Whereas, neurotechnologies refer to devices capable of recording, interpreting, or altering the response of an individual's central or peripheral nervous system to its internal or external environment[1]; and

Whereas, neural data captured by neurotechnologies is information coming from the measurement of the activity of the central or peripheral nervous system, is extremely sensitive, and can reveal intimate information about individuals, including information about health, mental states, emotions, and cognitive functioning[2]; and

Whereas, rapid advances in neurotechnologies present great promise and potential risks but have also outpaced regulatory governance at all levels[1]; and

Whereas, neurotechnologies have long been used in medical and research contexts but are rapidly being developed and deployed outside clinical settings[3]; and

Whereas, consumer neurotechnology products have a range of health-related applications, including at-home treatment for ADHD, anxiety, depression, and other mental disorders[4]; and

Whereas, consumer neurotechnology products are generally medical-grade but are not regulated as medical devices, nor is the data they collect protected under the Health Insurance Portability and Accountability Act (HIPAA) or state health data privacy laws[1]; and

Whereas, the growth of the consumer neurotechnology market will contribute to the building of enormous datasets of neural data that will allow for longitudinal insights about both patients and consumers; and

Whereas, consumer neurotechnologies and the data they collect will unlock new insights into public brain health when integrated into clinical research; and

Whereas, neurotechnologies raise particularly pressing privacy concerns given their ability to monitor, decode, and manipulate neural activity; and

Whereas, boundaries must be developed to prohibit neurotechnologies from disrupting individual identity and sense of self[5]; and

Whereas, individuals must also have ultimate control over their own decision-making, without manipulation by neurotechnologies[5]; and

Whereas, the principle of non-discrimination should be built into algorithms for the development and application of neurotechnologies[6]; and

Whereas, there should be established guidelines, based on principles of justice and fair access, for regulating neurotechnologies that provide mental augmentation; therefore be it

RESOLVED, that our AMA support legislative and regulatory efforts to protect the privacy and security of individuals' neurological data as well as protection from discrimination and inequality that may be caused by the use of neurotechnologies (New HOD Policy).

RESOLVED, that our AMA recognizes that neural data is information obtained by measuring the activity of a person's central or peripheral nervous system through the use of neurotechnologies, but neural data does not include data inferred from nonneural information (New HOD Policy);

RESOLVED, that our AMA oppose any efforts to broaden the consensus medical definition of neural data to include data inferred from nonneural information gathered by biosensors (including biometric devices), as this is a distinct category of data with its own independent qualities and regulatory needs. (New HOD Policy)

REFERENCES
1. Pauzauskie S, Genser J, Yuste R. Protecting Neural Data Privacy—First, Do No Harm. JAMA Neurol. 2025;82(3):212–213. doi:10.1001/jamaneurol.2024.4070
2. Grover S, Wen W, Viswanathan V, Gill CT, Reinhart RMG. Long-Lasting, Dissociable Improvements in Working Memory and Long-Term Memory in Older Adults With Repetitive Neuromodulation. Reinhart Nature Neuroscience. 2022; 25:1237-1246. doi:10.1038/s41593-022-01132-3
3. Safeguarding Brain Data: Assessing the Privacy Practices of Consumer Neurotechnology Companies. Jared Genser, Stephen Damianos, and Rafael Yuste. April 2024.
4. Zaeem Ahmed, Aamir Wali, Saman Shahid, Shahid Zikria, Jawad Rasheed, Tunc Asuroglu, Psychiatric Disorders From EEG Signals Through Deep Learning Models, IBRO Neuroscience Reports, 2024 17:300-310.
5. Soldado-Magraner J, Antonietti A, French J, Higgins N, Young MJ, Larrivee D, Monteleone R. Applying the IEEE BRAIN Neuroethics Framework to Intra-Cortical Brain-Computer Interfaces. J Neural Eng. 2024 Apr 4; 21(2). doi: 10.1088/1741-2552/ad3852. PMID: 38537269.
6. Ruiz S, Valera L, Ramos P, Sitaram R. 2024 Neurorights in the Constitution: From Neurotechnology to Ethics and Politics. Phil. Trans. R. Soc. B 379: 20230098.