Liability Allocation for Artificial Intelligence Assisted Triage in United States Collegiate Emergency Medical Services

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Abstract

Artificial intelligence clinical decision support tools are increasingly introduced into collegiate emergency medical services to assist with dispatch prioritization and patient triage. Student run EMS programs operate within universities rather than hospital systems, creating distinct legal and regulatory responsibilities related to supervision, training, and data privacy. This review evaluates how liability is distributed when AI assisted triage contributes to patient harm. Analysis indicates that student emergency medical technicians retain negligence exposure because automated systems remain advisory. Universities and campus EMS agencies face the greatest institutional risk due to control over protocols and oversight. Vendors may incur product liability when software functions as regulated medical technology. Liability is therefore primarily determined by human governance and compliance rather than algorithm performance alone.

Introduction

Artificial intelligence clinical decision support tools are increasingly integrated into emergency medical services to assist with dispatch prioritization, acuity assessment, and destination decisions.[1] Federal regulators recognize that these systems may influence clinical judgment and, in some cases, function as regulated medical software.[2] Early adoption has expanded into collegiate emergency medical services programs, many of which are student run and operate within university governance rather than hospital or municipal systems. This structure creates distinct legal and operational responsibilities related to supervision, training, and institutional risk management.[3]

Unlike traditional healthcare environments governed primarily by HIPAA, campus EMS documentation is frequently regulated under the Family Educational Rights and Privacy Act, which places additional obligations on universities regarding student health records and third party data sharing.[4] Although the Emergency Medical Treatment and Labor Act formally applies to hospitals, its standards for timely emergency evaluation inform expectations for appropriate triage and access to emergency care.[5] As artificial intelligence becomes embedded in frontline decision making, questions remain regarding how negligence, institutional oversight, and vendor accountability intersect when automated recommendations contribute to adverse outcomes.

Methods

A narrative legal and policy review evaluated liability risks associated with artificial intelligence assisted triage in collegiate emergency medical services. Federal statutes and guidance, including FDA clinical decision support policy, the NIST Artificial Intelligence Risk Management Framework, FERPA privacy requirements, and EMTALA emergency care principles, were analyzed and applied to common campus EMS scenarios. Stakeholders were assigned qualitative risk scores using a structured rubric based on degree of legal duty, operational control, supervisory authority, and foreseeable tort or regulatory liability. Scores were defined as follows: 1 minimal exposure, no policy or supervisory authority and low likelihood of direct or vicarious liability; 2 limited exposure, minor operational involvement with advisory or supportive responsibilities; 3 moderate exposure, shared oversight or delegated decision making with potential contributory liability; 4 high exposure, substantial control over protocols, training, or implementation creating predictable institutional liability; and 5 primary exposure, final authority over procurement, governance, or compliance with direct statutory, regulatory, or institutional responsibility. Scores represent relative comparative risk rather than measured outcomes. No human subjects were involved.

Results

Liability exposure clustered across three stakeholder groups. Student emergency medical technicians retained individual negligence risk because artificial intelligence tools served only as decision support and required independent clinical judgment. Universities and campus EMS agencies demonstrated the greatest exposure due to control over procurement, protocols, training, and supervision, creating both direct and vicarious liability. Third party vendors faced potential product and regulatory liability when triage software functioned as medical decision technology without adequate validation. Privacy requirements further increased institutional responsibility. Overall, governance and oversight contributed more to risk than frontline clinical actions.

Liability Risk Matrix for AI Assisted Triage in Collegiate EMS

Scores: 1 = minimal exposure   5 = highest exposure

Stakeholder	Clinical Decision Control	Data Privacy Risk	Policy Control	Product Tech Risk	Regulatory Exposure	Training Responsibility
Student EMT	4	1	1	1	2	2
Campus EMS Agency	3	3	5	2	3	5
University Institution	2	5	5	2	4	4
AI Vendor	1	4	2	5	4	1
Dispatch Supervisor	3	1	3	1	2	3

Risk Domain

Discussion/Conclusion

Artificial intelligence assisted triage in collegiate emergency medical services concentrates liability primarily at the institutional level rather than with individual student responders. Using a structured qualitative rubric, stakeholders were scored from 1 to 5 across legal domains based on degree of operational control, supervisory responsibility, regulatory obligations, and foreseeable tort exposure. Higher scores therefore reflect greater legal accountability and decision authority rather than clinical involvement alone. Institutions with policy and procurement control demonstrated the highest cumulative scores, indicating that governance and oversight contribute more substantially to liability risk than frontline actions. These findings suggest that implementation of artificial intelligence tools should prioritize formal oversight, independent clinical verification, vendor compliance, and structured training to mitigate exposure. This study is limited by its reliance on doctrinal legal analysis rather than empirical outcomes. Future research will evaluate real world campus deployments, validate the scoring framework, and develop standardized risk mitigation strategies to support safe and responsible adoption.

References

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Conflict of Interest

There are none.

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