

U.S. Army Medicine Decision Advantage Strategy

FOREWORD

Army Medicine serves as the decisive element to sustain the health of the force, conserve the fighting strength, and deliver ready medical forces. Accurate and timely medical information underpins the decision advantage that Army Medicine brings to the warfighting force. In the complex environment of multi-domain and large-scale combat operations, health information must enable Commanders to clear the battlefield of casualties, return injured and ill Soldiers to the fight, and overcome contested logistics.

Health information is a complex yet vital element to describe the readiness of our formations from competition to conflict. As information systems evolve, data streams continuously transform, driving the requirement for compilation, validation, analysis, and interpretation of data. Across all components, Army Medicine supports the decision advantage that health information provides. Our thoughtful analysis and interpretation support precise and timely decisions by Commanders regarding the employment of military medical forces.

The information for the decisive advantage resides across multiple systems and organizations. The **Army Medicine Decision Advantage** provides the framework to synchronize, coordinate, and deliver information and knowledge for decision-making. This strategy fully nests with the DoD and Army strategies that outline the way forward for the employment of data, analytics, and artificial intelligence. As this strategy evolves, the knowledge products provided by Army Medicine will enable accurate, informed, and relevant decision advantage.

The Army Medicine Team has a long history of leading innovation and pioneering efforts in analysis for decision-making. As a learning organization, we will link our strategy to the DoD and Army while also taking initiative to lead change when appropriate or necessary. Our efforts begin with the team we have and will identify gaps, bringing on teammates with specialized talents. As always, I am confident that Army Medicine will rise to the challenge in support of our Army and our country.

Combat Ready Care....This We'll Defend



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1. Vision

Army Medicine effectively employs health information, data analytics, and machine learning to enable the health service support and force health protection decision advantage for the Army and Joint and Multinational Force.

2. Mission

To establish a unified data environment and enterprise approach to analysis that ensures data integrity, accessibility, and actionable insights, supporting the mission to sustain the health of the Army and maintain combat-ready medical forces.

3. Decision Advantage Outcomes – Supporting DoD and Army Objectives

1. Battlespace awareness and understanding of health information at echelon that enables Commanders to clear the battlefield, manage casualties, and return injured and ill Soldiers to the fight.
2. Resilient sustainment support that enables seamless coordination between medical and sustainment assets to overcome contested or congested logistics.
3. Fast, precise, and resilient systems of health and medical information that integrate with enterprise command and control.
4. Adaptive force planning and application that supports precise management of combat ready medical forces and supporting medical capabilities.
5. Efficient enterprise business operations supporting the decision advantage across all environments and from competition to conflict.

4. Strategic Objectives

1. **Cultivate Data-Centric Culture:** Cultivate data literacy by furthering education, training, and professional development opportunities for the workforce to advance data related knowledge.
2. **Design the System:** Create a comprehensive framework, that makes our data, Visible, Accessible, Understandable, Linked, Trusted, Interoperable, and Secure (VAULTIS).
3. **Develop Decision Advantage:** Army Medicine will achieve data maturity in the way we assemble, organize, and use data management resources. By directing the implementation of data analytics and management capabilities we will provide

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actionable insights, empower leaders, and drive data-informed decisions throughout the Army Health System.

4. **Employ Enterprise Advantage:** Use data analytics, artificial intelligence, and machine learning to provide actionable insights that enhance operational readiness and health of the force, contributing to Army-wide data-driven decision-making.

5. Key Components to Achieve Objectives

1. Data Literacy and Training:

- Foster a data-driven culture by enhancing data literacy among Army Medicine personnel, aligning with the Army's broader effort to increase digital literacy and data-centric operations.
- Create training programs to enhance data literacy among Army Medicine staff, focusing on data-driven decision-making and analytics skills relevant to combat readiness.
- Incorporation of data literacy training into primary military education and career development for Army Medicine career fields.
- Promote a culture of continuous learning and improvement, emphasizing the importance of data as a strategic asset for Army Medicine and the broader Army.
- Develop resources, guides, and workshops to support data management best practices, aligning with Army-wide initiatives to improve digital literacy.
- Develop pipelines to ensure access to data engineers, data analysts, data scientists, and machine learning engineers.

2. Design the System

- **Data Governance and Policy:**
 - Establish a robust data governance framework that aligns with DoD and Army-wide standards, ensuring data quality, security, and compliance within Army Medicine data systems.
 - Establish a Data Governance Board within Army Medicine that operates in alignment with the Army's data governance framework.
 - Define roles and responsibilities for data stewardship, management, and quality assurance.
- **Data Management and Architecture:**
 - Develop a secure and interoperable enterprise data architecture that:
 1. allows seamless data sharing within Army Medicine, with the Army, and with other DoD entities, supporting the Army's goal of leading multi-domain transformation and applying landpower for maximal effect; and

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2. integrates data from various sources (operational, readiness, and logistical) into a unified system, supporting the Army's need for interoperable and secure data.

- Develop data warehousing solutions that consolidate information for readiness tracking and operational planning.
- Standardize data formats and metadata to improve data interoperability and usability in line with VAULTIS principles.

- **Data Security and Compliance:**

- Protect sensitive operational and health-related data in compliance with Health Insurance Portability and Accountability Act and DoD and Army cybersecurity standards, ensuring data resilience in contested environments.
- Implement robust cybersecurity measures, including encryption, access controls, and continuous monitoring, adhering to the Army's Zero Trust Strategy.
- Ensure compliance with DoD and Army regulations on data protection and cybersecurity, safeguarding data against unauthorized use and manipulation.
- Modernize existing incident response plans to address data breaches, ensuring quick recovery to maintain operational integrity.

3. Develop Decision Advantage

- Establish an analytics platform that supports predictive modeling, risk assessment, and monitoring of force readiness and medical capabilities.
- Use artificial intelligence and machine learning to identify patterns in readiness data, optimize resource allocation, and support preventive health measures for sustained combat effectiveness.
- Provide technological decision aids to medical and non-medical forces clearing casualties from the battlefield, performing triage, and tracking patients.
- Develop dashboards and visualization tools to provide real-time insights to Commanders and other decision-makers focused on force readiness.

4. Employ Enterprise Advantage

- Continuous engagement with external and internal stakeholders to assess requirements and prioritize efforts using a values-based approach.
- Rapidly iterate on emerging requirements and technological advancements to deliver continuous improvements that provide a decision-making advantage.
- Measure the decision advantage through feedback and evaluation of decision timeliness and quality to constantly refine the usability and relevance of data, information, and analytics provided to support decisions.

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5. Partnerships:

- Identify, develop, and strengthen partnerships necessary for Army Medicine to rapidly accelerate our data operations.
- Integrate with data teams throughout the Department of the Army to optimally support the operational force.
- Collaborate with the Defense Health Agency (DHA) and engage in joint initiatives to ensure interoperability of health and readiness data, aligning MEDCOM's systems with DHA's broader health information networks and ensuring consistency and interoperability across the Military Health System (MHS).
- Facilitate data-sharing agreements with external agencies such as the DHA, the Department of Veterans Affairs (VA), and partner nations, ensuring a smooth transition of care and readiness data for Soldiers.
- Develop Memoranda of Understanding (MOUs) and data use agreements that clearly outline roles, responsibilities, and data-sharing protocols with external agencies, ensuring the proper governance and safeguarding of shared data.

6. Conclusion

The successful implementation of this data strategy will enable Army Medicine to support the Army's overarching data-centric transformation, leveraging data as a strategic asset to enhance combat readiness and sustain the health of the force. By aligning with the Army Data Plan and adhering to VAULTIS principles, Army Medicine will be positioned to deliver ready combat formations, routinely make better decisions faster, and support the Army's mission.

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APPENDIXES

i. Levels of data maturity

1. Initial

- Data is siloed, quality is unknown, reporting is informal and ad hoc.

2. Reactive

- Informal data governance.
- Data and analytic initiatives exist in siloes.

3. Managed

- Shared data strategy and vision established.
- Building shared standards, processes, definitions, and frameworks.
- Enhance enterprise data governance.

4. Proactive

- Data management value chain optimized.
- Bolster data literacy in the workforce.
- Establishing culture of data sharing and collaboration.
- Shared standards and data processes are established.

5. Transformational

- Scaled data analytic capabilities.
- Operationalized shared data services.
- Analytic skillsets inherent in all organizations.
- Data is critical to enterprise strategy.
- Data strategy and execution aligned.

ii. Risks and Mitigation

1. **Risk:** Data security breaches and unauthorized access.

- **Mitigation:** Implement multi-layered security protocols and conduct regular audits following Army Zero Trust principles.

2. **Risk:** Resistance to change and low data literacy.

- **Mitigation:** Provide ongoing training, support, and incentives to encourage adoption, aligned with Army-wide digital literacy initiatives.

3. **Risk:** Data silos and lack of interoperability.

- **Mitigation:** Standardize data formats and invest in integration technologies to meet VAULTIS principles.

iii. VAULTIS

1. Make Data **Visible** – Consumers can locate the needed data.

2. Make Data **Accessible** – Consumers can retrieve the data.

3. Make Data **Understandable** – Consumers can recognize the content, context, and applicability.

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4. Make Data **Linked** – Consumers can exploit data elements through innate relationships.
5. Make Data **Trustworthy** – Consumers can be confident in all aspects of data for decision-making.
6. Make Data **Interoperable** – Consumers have a common representation/ comprehension of data.
7. Make Data **Secure** – Consumer data is protected from unauthorized use/manipulation.